Institutions in the Fast Lane?
Strike Petitions and the Electoral Cycle in Mexico

Héctor Gutiérrez Rufrancos

University of Stirling & University of Sussex

Willem Sas

University of Stirling & KU Leuven

Abstract

This paper exploits Mexican administrative data on all strike threats between 1991–2012, a period of political institutional change. This paper asks: Are strike threats partially caused by the political cycle? We develop a political economy model of union influence and find that when electoral institutions become more democratic, and political parties can count to a lesser extent on a guaranteed support base, the importance of relying in the unions to win elections will increase. We validate these findings using municipal electoral data, where we employ a sharp regression discontinuity approach, and find a causal effect from close elections of right- and left-wing mayors on strike threats two years after an election. Narrow electoral victories of the right-wing (left-) party increase the number of strike threats by 1.056 (1.456) per 10,000 of the municipal population two years after the election. This finding is robust to alternate specifications. We suggest that threats may be misused for campaigning in upcoming elections. To test this hypothesis a differences-in-differences model is employed to estimate changes in electoral turnout in narrow win municipalities. We find that electoral turnout is stimulated by strike threats, in the context of tight electoral rules surrounding campaigning, these findings may be interpreted confirmation of illegal campaigning.

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Economics Division, University of Stirling & Department of Economics, University of Sussex. E-mail: hector.rufrancos@stir.ac.uk

Economics Division, University of Stirling & Department of Economics, KU Leuven. E-mail: willem.sas@stir.ac.uk

1 Introduction

There is a large literature which has focused extensively on the importance of institutions for economic outcomes (La Porta et al., 1998; Botero et al., 2004; Djankov et al., 2002; Alesina and Giuliano, 2015; Aghion et al., 2011; Acemoglu and Robinson, 2010; Acemoglu et al., 2003, 2006). North (1990) defines institutions as the 'rules of the game', and there have been numerous studies that examine the formal state institutions and their effects on economic outcomes. There is also another branch of the institutionalist literature that suggests that institutional changes may have long-lasting effects (see Dell, 2010; Nunn, 2009; Acemoglu et al., 2011). The 1990s was a key moment for democratic transitions which saw the collapse of many authoritarian states, largely by mistake (Treisman, 2017). There is a theoretic literature which elucidates the role of transitions to democracy (Linz and Stepan, 1996; Acemoglu et al., 2010). These transitions represent critical juncture in which institutions may change in many directions. Though there is evidence that these critical junctures may be thwarted or co-opted by Elites (Acemoglu and Robinson, 2008, 2012; Bandiera and Levy, 2011; Martinez-Bravo et al., 2017; Batu, 2017). However, there is little evidence of how institutions coevolve with to broader political change. One formal civil society and labour market institution which has been extensively researched is the trade union. This paper investigates this institution and asks how unions behaved over a period in which other institutions were reformed. Roland (2004) notes that there are fast- and slow-acting institutions and suggests that politico-electoral institutions are fast-changing, whereas other institutions may take longer to change. This paper will investigate how quickly private sector unions change their political behaviour in the face of a changing landscape. As is well documented elsewhere unions affect wages, non-wage benefits, inequality, productivity, health and safety (e.g. Freeman, 2010; Freeman and Medoff, 1984; Hirsch and Addison, 1986). These gains are bargained through the threat of strikes—the group withdrawal of labour—and this paper provides a novel exploration of external influences on strike threats.

This study investigates the relationship between the electoral cycle and strike threats. In order to inform upon this subject, we require a large sample of elections in a setting where the following conditions are met: (i) elections are free, democratic and competitive; (ii) they are matched to full information on the collective bargaining between employers and unions; (iii) the elected official has no control over union legislation; (iv) there is sufficient cross-sectional and temporal variation to be able to observe both multiple electoral cycles and business cycles.

The study focuses on Mexico, where due to institutional arrangements, the act of threatening

to strike is recorded as a strike petition. We have access to the administrative records of the local state-level Arbitration and Conciliation Commission on petitions for the private sector in each of the 31 Mexican states. These are tripartite commissions comprised of employer associations, unions, and the local state government. Unions who wish to strike must first set out a petition to strike outlining the reasons for their strike. These petitions are then evaluated by the Arbitration and Conciliation Commission. All strike threats with no legal basis are removed at this stage, and a period of mediation between the union and the employer begins. If this process fails, then a union may strike. All formal petitions are lodged and it is these data that are used in the empirical analysis.

The analysis is structured in three stages. In the first part of the analysis, we formulate a political economy model of union influence. The model is a game of incomplete information between voters and politicians similar to models of political partisanship used in Besley and Burgess (2001), Besley (2007) or Besley et al. (2010) where a fixed share of voters value party ideology over incumbent performance at all times. We innovate by separating the electorate intro three distinct categories: valence voters, partisan voters and union members. Whilst union voters are drawn from the population, we allow these to be targeted by politicians and their votes captured. We find that the larger the degree of electoral competition, coupled with more democratic institutions leads 'bad' politicians to seek to win through capturing union votes.

In the second we form a chain of evidence which isolates the impact of the electoral cycle on strikes threats by focusing on municipal elections. These elections should be low stakes to a union: Municipal Presidents do not have any control in the arena of labour relations, nor regulation, and as such we should expect unions to have no preferences for Mayors, nor should we expect union strike threats to be related to these. We exploit close elections[1] and employ a sharp Regression Discontinuity (RD) approach to compare those locations where there has been a narrow result, and the victor is drawn from one of Mexico's three main political parties.[2] At the margin this allows us to unpack a causal effect from elections to strike threats. The findings suggest that the narrow election of right- (PAN) or left-wing (PRD) Mayors leads to increases in the rate of petitions two years after an election. As the periodicity of municipal elections is triennial, this suggests that unions are increasing the intensity of industrial relations (as measured by the rate of strike threats) to coincide with the following election campaign. We find no evidence for any

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[1]This is defined here as those with a margin of victory of 10 percentage points. For example, a win for a *Partido Acción Nacional* (PAN) coalition by 47 percent of the vote, where the second place winner obtained at least 37 percent of the vote.

[2]*viz.* PAN, *Partido Revoluciónario Democrático* (PRD), and *Partido Revoluciónario Institucional* (PRI)

effects of close PRI electoral victories on strike threats. The interpretation we give these causal findings from the RD clearly suggest that strike threats, an institutional tool to aid collective bargaining, are used by some unions in advance of elections as a campaigning tool.

In order to test this theory the final stage of the analysis models changes electoral turnout using a triple differences-in-differences approach. We compare those municipalities that had a narrow margin of elections, where a right- or left-wing where victorious, relative to those that did not. We find that the increased petition rates in these municipalities lead to large changes in electoral turnout in the following election, implying these elections act as a 'dog whistle' of sorts for organised labour to go and turn out to vote. We suggest that this vote may go to the traditional political masters of the 'officialist' unions (PRI).

The set of results when taken as a whole suggest that strike threats in Mexico are a powerful tool for collective bargaining and react to the business cycle. We argue that during the period of democratisation, although the 'rules of the game' changed, the actors remained committed to their pre-reform behaviour. Thus, whilst the nature of the institutional game is changing, some institutions are more slow changing than others.

This paper contributes to several distinct literatures. First, it adds to the literature on the importance of institutions (Acemoglu et al., 2001; Acemoglu and Robinson, 2010; La Porta et al., 1998; Sokoloff and Engerman, 2000). In looking at the changes in institutions it is similar to the Acemoglu et al. (2011) study on the historical legal institutional changes and subsequent economic growth. Equally, it is similar to the literature that looks at the coevolution of culture and labour regulation as in Aghion et al. (2011). However, in contrast with this literature the work presented here allows us to investigate whether political institutional changes are affecting the behaviour of the 'players' of the game, or *vice versa*. Furthermore, the model presented embeds the insight of Roland (2004) where we allow institutions to coevolve at different speeds.

Finally, this paper contributes to the smaller literature on the interaction between unions and politics. Recent evidence for Mexico shows that some unions act as brokers for votes (Larreguy et al., 2017). There is ample evidence that vote brokerage may lead to clientelistic relationships (Chattharakul, 2010; Pierskalla and Sacks, 2019). Recent evidence for the USA has show that there are consequences to this role. Downey (2017) shows that narrow congressional elections of Republicans lead to increased prosecutions of union officials. Feigenbaum et al. (2018) exploit the introduction of the right-to-work laws in the USA to estimate the geographic discontinuity to estimate the causal effects of union suppression laws on Democratic party vote turnout. We

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contribute to this growing literature by providing a model of the political economy of union influence motivating the clientelistic relationship between unions leaders and politicians. We find that as the degree of democracy in electoral institutions increases, coupled with declines in partisan base lead politicians to seek clientelistic relationships to win elections. We then provide evidence that this is manifested through illegal strike threats.

This paper is structured as follows. Section 2 outlines the institutional background on the state-trade union relationship, as well as a background to the legal framework that unions operate within, and the political framework for Municipal Presidents. Section 4 explains the data sources. Section 5 then looks at the causal effects of Municipal President elections on strike threats. We show that there is a discontinuity in petitions where there are narrow wins for the right- and left-wing parties and demonstrate that this finding is robust to alternative functional form specifications, as well as the size of the bandwidth. Section 6, shows the implications of the result of increased threats by modelling changes in electoral turnout between those municipalities which experienced narrow elections, and those that did not. Finally, Section 7 concludes and discusses the implications of this research.

2 Institutional Background

This section explains the institutional set-up of Mexico. We outline the relevant labour legislation, providing some information on electoral authorities, and finally some details on Municipal Presidents.

2.1 Labour Legislation, Unions and Strikes

Labour regulation is dictated by the Constitution of 1917. Article 123 of the Constitution deals with working hours and workplace conditions, occupational health and safety, minimum wages and overtime pay, educational facilities for workers, labour unions and the right to strike, work contracts, labour Arbitration and Conciliation Commissions, and consumer cooperatives. Whilst the Constitution gives a general outline of a workers rights, these are further detailed in the *Ley Federal del Trabajo* (FLL). The FLL was first introduced in 1931, and received minor changes in the 1970s and 1980s. More recently there has been a labour law reform which came into effect in 2013, although as noted earlier, these reforms changed few things concerning unions and union regulation.

Some of the clauses in the FLL are very favourable to unions, the law was drafted specifically to benefit 'officialist' unions a set of perverse labour institutions that coevolved with the PRI state. For example, the law prohibits employing replacement workers during officially recognised strikes, as well as requiring employers to automatically deduct union fees from workers' pay-cheques and distribute them directly to union officers. As noted earlier, this requirement, along with exclusion clauses, allowed for perverse institutions such as 'ghost unions' to develop. These unions may be unknown to workers, deduct membership dues and, in general, be an approach by which business owners may deny workers their legal right to unionise, and ask for a collectively bargained contract. A landmark 2001 legal ruling by the Supreme Court found exclusion clauses to violate the freedom of association guaranteed in Article 123 of the Constitution (Lastra Lastra, 2002b).[3] However, 'ghost unions' persist, but a worker who becomes aware of them may opt to leave such a union. However, in practice this would almost certainly involve leaving one's job, as employers are under no obligation to renegotiate contracts. In theory, workers in such a firm are able to form another union, and attempt to wrest the collective bargaining monopoly from the 'ghost union' through lengthy legal procedures.

Another example of union favourable legislation is Article 359 of the FLL which states that collective contracts as agreed between management and unions may include 'closed shop' clauses. However, these may not be used against workers who do not wish to unionise, and can apply to all workers after the contract has been agreed. So, workers who join a firm after a union contract has been imposed may be subjected to the contract. The current legal framework does not generate incentives for democratic unionisation to exist. Indeed, 'officialist' unions are beneficiaries from the legal framework as numerous clauses are favourable to both large unions, and undemocratic unions at the expense of smaller independent democratic unions. The law also places restrictions on union formation and internal practices.

The procedures for setting up a union are as follows. A group of at least twenty workers has the legal right to form a union without prior authorisation. Note that the law envisages unions to be founded at an establishment-level. However, gremial[4] unions are also allowed. All unions may associate with larger organisations. A new 'union' cannot begin operations such as negotiating a collective contract with an employer or engage in other activities such as strikes until it is officially registered by an Arbitration and Conciliation Commission. The FLL places regulation of unions are under the jurisdiction of STPS. However, this only applies to certain unions, and in general is

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[3]This ruling however was only possible due to the Judiciary reforms outlined in subsection 2.2.

[4]Guild unions. These are allowed to span multiple workplaces but may only contain a single occupation.

not a straightforward matter. Public sector unions, and those in certain key sectors are subject to federal oversight and thus face oversight from STPS and are subject to the Federal Arbitration and Conciliation Commission. However, the majority of firms, fall under local jurisdiction and thus are subject to state-level oversight under 'local' Arbitration and Conciliation Commissions. These commissions exist in every state, and in most municipalities, and it is these Local Conciliation and Arbitration Commissions that are the subject of investigation in this paper.

Arbitration and Conciliation Commissions are tripartite institutions. The Commission is comprised of a president who is designated by the government and has both voting and tie breaking powers. The remaining members are representatives of large unions and employer organisations. Registration procedures are straightforward, but are subject to 'purposeful administrative delay' and political influence (Bensusán and Middlebrook, 2012c). Once a union has successfully registered with the Arbitration and Conciliation Commission the union is entitled to be involved in collective bargaining. However, the first union to organise labour in a firm receives the monopoly over these negotiations. Other unions may mount legal challenges over this, and usually the monopoly is awarded to the union which represents most workers, but this too is subject to lengthy legal proceedings (Fairris, 2007). It should be noted that independent unions are unlikely to sit in most Arbitration Commissions.

The FLL also regulates the internal workings of unions, it requires that unions have statues and freely elect their officers but the law falls short of explicitly calling for secret ballots. Instead elections of union members are stipulated by law to occur during plenary sessions. This lack of anonymity coupled with exclusion clauses led to a democratic deficit within large unions. This lack of internal democracy allows for union leadership to become unaccountable to the rank-and-file members (Middlebrook, 1995; Fairris, 2006; Bensusán and Middlebrook, 2012a).

An important tool that unions use to exert power is strike action, which is heavily regulated under the FLL. A union who intends to strike must first make their grievances known in writing to their employers. A copy of their grievance letter must then be sent to the relevant Arbitration and Conciliation Commission. The letter must specify when work will be stopped if the grievances are not resolved. The FLL states that this period, termed the 'pre-strike period', must last at least a six working days for private sector firms. This grievance letter is termed a 'petition to strike'. The Commission will then call for a conciliation meeting and during the meeting representatives for the union and the employer will attempt to solve the issue. If the workers, or their representatives, do not turn up to this conciliation attempt, then the strike will be determined invalid by the

Commission and as such illegal. It should be noted that the Commission is legally allowed to call this meeting at any time of day and during any day of the week (Art.928 FLL). If the mediation efforts fail and the prerequisites are met then formal strike action may commence. The mechanism through which the renewal of a collective bargaining contract is signalled is a petition to strike (Barba García, 2004). Thus far, the procedure for strikes has been presented as a mechanical process. In reality this procedure, whilst straightforward is subject to significant levels of discretion by the state governor (Bensusán and Middlebrook, 2012b). Under the framework of the law the only valid reasons for threatening a strike are related to intra-firm complaints. Legally, there is no scope for strikes to be threatened over wider political issues.

A unique feature of the Mexican landscape is the distinct lack of 'wildcat', or illegal strikes. The regulation surrounding the licensing of unions is so stringent, and obtaining registration as a union is so onerous, that there is a distinct disincentive to illegally strike over conditions within the firm. Further legal disincentives for 'wildcat strikes' are in the form of large fines and even the threat of jail time for those illegally striking (Middlebrook, 1995, p.70) In addition to this, the penalties for proceeding with an illegal strike are set out by Article 463 of the FLL. This states that illegal strike action, as determined by the Arbitration and Conciliation Commission, may be used as a legitimate reason for termination of contracts for all union members who take part without the usual redundancy pay and notice period. Furthermore, the FLL guarantees employers the ability to hire replacement workers without any delay if union members are unwilling to return to work.[5] If workers occupy the business premises illegally, this would not be considered a strike, nor strike action, and as is liable to prosecution under penal code.

It is also worthwhile to note that although in many respects Mexico saw a series of institutional changes throughout the 1990s and 2000s, the legislation which oversaw the labour market had not really changed since the 1930s. There were some minor procedural reforms to the text of the FLL in the 1970s and 1980s, but neither of these affected the articles regarding the oversight of unions. Since 2012 there has been a major reform of the FLL, which came into effect in January 2013, which is outside the scope of the present analysis.

2.2   COFIPE, IFE and State Electoral Authorities

In this section we outline the Mexican political system and the nature of the reforms which have taken place since the 1990s.

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[5]However, if there is a legal strike, then employers may not contract replacement workers.

Mexico is a multi-party federal democracy, with three main political parties. These are the PAN, PRI, and PRD. Though there are other political parties, these three account for the majority of seats at all levels of government during the period under analysis for this thesis. Mexico has three levels of government. As a federal state there is the national Government, led by the President, elected every six years. There is the legislative branch, or Congress, which consists of the Chamber of Deputies and the Senate, the upper and lower legislative chambers, respectively. Both of these hold elections every three years, where in each election half of each chamber is replaced. Until 2016, when Mexico city was given State status, Mexico was made up of 31 autonomous States. Each of these states elect a Governor who serves a six year term. Each state has its own unicameral legislative branch which holds triennial elections. The final elected level of government is the Municipality, these elect Municipal Presidents triennially, and represent the smallest administrative unit of government. It is worthwhile to note that the constitution enshrined the *Maderista* ideal of no re-election. The result of this requirement, is that until the 2015 politico-electoral reform, for all political offices there was absolutely no re-election. This means that at every political level there is no continuity amongst individuals, and the political party itself is very important as only they maintain continuity and select candidates. Prior to the 1990s to all extents and purposes that meant the most important elections were those internal to the PRI. One final point is that politicians may move between different government levels.

The road to political reform began at the outcome of the 1988 election, which is generally recognised as being rigged (Camp, 2012). The resulting fallout, and the fractured nature of congress led PAN to agree not to contest the outcome, conditional on meaningful electoral reform, and the recognition of all legitimate electoral victories (Lujambio, 2001). The judicial and electoral reforms witnessed in Mexico in the 1990s were undertaken as a result of the 1988 election, which is generally characterized as being rigged (Camp, 2012). The result of this was the creation of a new branch of government independent of political intervention in the form of the *Instituto Federal Electoral* (IFE)[6], as legally mandated by the *Código Federal de Institución es y Procedimientos Electorales* (COFIPE).[7] This was initially envisioned as another dependency of government, which fell under the oversight of Congress and the Executive branch.[8] Of importance for this paper is the reform of 1996, which required all electoral authorities to become independent of the state and have their own legal personality separate from the state. This in effect converted the previously existing state electoral authorities into a variety of electoral institutes, which oversaw elections for

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[6]Federal Electoral Institute
[7]Federal Code of Procedures and Electoral Institutions
[8]Indeed, the first president of the IFE was the then Interior Minister, Fernando Gutiérrez Barrios.

Governor and Municipal President.

The final piece of reform which is key for the credibility of this analysis is the independence of the Judiciary. Prior to the 1990s the Judicial branch of government was not particularly independent of oversight from the executive or legislative branches. The PRI faced with the increased likelihood of losing the following presidential election of 1994 undertook a series of ambitious reforms as a sort of 'Ulysses pact' (see Eisenstadt and Yelle, 2012). In particular these reforms included gave the judiciary oversight over electoral matters, by creating the *Tribunal Electoral del Poder Jucidial de la Federación* (TEPJF).[9] It was tasked with ensuring election disputes were resolved. A further judicial reform in 1994, ensured that the Judiciary branch of Government was strengthened with the introduction of independent councils ensuring rigorous standards. Finkel (2005) suggests that the strengthening of the Judiciary was a type of 'insurance policy' to ensure that the institutional changes such as the COFIPE would be irreversible, even under a different political administration. Once granted independence, the Judiciary went to great lengths to express its independence by showing it held no loyalty to the PRI party. A prominent example is the 1998 ruling on the unconstitutionality of electoral rules in the state of Quintana Roo, which would have handed the PRI control of the state legislature.[10] It was these types of state level judicial battles, coupled with the COFIPE 1996 reform, which laid the groundwork for the watershed elections of 2000 when the PRI lost the presidency to the PAN party. The introduction of a strong judiciary institution ensures that the elections under analysis in this paper are the result of free and fair elections, and thus are unlikely to be the result of manipulation.

3 The Political Economy of Union Influence

We model an economy which consists of an odd number $n \geq 3$ of lower-level jurisdictions, referred to as municipalities. We consider two time periods $t = 1, 2$, and an election which is held in between both periods.

3.1 Economic and Political Environment

An elected state government decides on the provision of local, growth-enhancing public goods G_i in each state i and each period, after observing unit costs θ_i of public provision. These costs can

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[9]Federal Electoral Tribunal of the Judiciary Power.

[10]This was due to the PRI's introduction of a clause of governability, where the party to gain the largest share of the vote would be allocated the most seats in the assembly, so for example a party winning with 20% of the popular vote would be given over 50% of the seats in the assembly.

only take on two discrete levels, a high value H and a lower value L, where the probability of costs coming in at their highest level is $\Pr(\theta_i = H) = q_i$. We assume unit costs θ_i are independently and identically distributed in each period as in Besley (2007), but are fully correlated across regions.[11] Total tax collections T_i not only finance public spending $\theta_i G_i$ lastly, but also cover any potential diversion of rents r_i by rent-seeking politicians, so that $T_i = \theta_i G_i + r_i$. The amount of rents r_i denotes the level of public revenues siphoned off for private, socially unproductive purposes such as personal consumption, campaign finance, or rewarding cronies.[12]

The spectrum of voters $[0, \bar{n}_i]$ in each state is normalised to 1, with each voter deriving the same utility from public goods, as well as taking into account the marginal cost of government spending in the form of taxes paid. Consequently, when a state government provides an amount of G_i^t public goods financed by tax collections T_i^t in time period t, its voters incur an identical welfare level W_i^t, defined as

$$W_i = G_i - \mu_i C_i(T_i) + U_i. \tag{1}$$

with U_i^t subgroup specific utility. Capturing the individual costs of taxation, $C_i(T_i)$ is a strictly convex, increasing function where the exogenous parameter μ_i denotes the marginal cost of public funds.[13] The spectrum of voters is made up out of three types of subgroups: *valence* voters, *partisan* voters, and *unionised* voters. What distinguishes these types of voters is the fact that valence voters *only* derive utility from the public good G_i, so that $U_i = 0$, whilst both unionised and partisan voters have other concerns as well. First, and even though all voters derive utility from the valence good G_i, partisan voters will derive even more utility from the fact that their preferred party is in power. Hence, we have that $U_i(p, P) >> G_i - \mu_i C_i(T_i)$ whenever their preferred party $p_i \in \{L, C, R\}$ is in power, so that $p_i = P_i$, with κ_{p_i} the average share of partisans of party p_i. If $p_i \neq P_i$, then $U_i(p, P) = 0$. This is similar to models of political partisanship used in Besley and Burgess (2001), Besley (2007) or Besley et al. (2010) where a fixed share of voters value party ideology over incumbent performance at all times. Second, whenever the political targeting process working through the union links is successful, the unionised voters will receive

[11]Since G_i embodies growth-enhancing policies such as productive investment or improved regulation, unit costs can realistically by assumed more or less the same across a federation. This assumption also allows for tractable results in what follows.

[12]This definition of rents, given by e.g. Ahmad (2006) or Besley (2007), can also be interpreted as political 'slacking' in Seabright (1996) or Alesina and Tabellini (2008). Politicians then earn 'ego rents' from holding office, but also incur a 'cost' of having to provide an amount of public goods to attain their position, with r_i the difference between the two. Since rent-seekers will minimise this latter cost, they fail to work diligently in their constituents' interests.

[13]Following Besley (2007), a rise in μ_i captures either an intensification of tax competition, the electoral passage of a (constitutional) restriction on the tax base or tax instrument, or technological and administrative complications in tax collection.

$U_i >> G_i - \mu_i C_i(T_i)$ as well. We assume U_i is of such a large degree for both the unionised and partisan vote, so that the provision of G_i only plays a part in the incumbent evaluation of valence voters. The actual share of partisan and unionised voters is assumed to be a random variable Ψ_i^t and Ω_i^t respectively, both being independent and identically distributed across time periods $t = 1, 2$. We measure the importance of both the partisan and unionised vote by the expected share of partisan voters $\psi_i = \mathbb{E}\,\Psi_i^t$ and unionised voters $\omega_i = \mathbb{E}\,\Omega_i^t$.[14] The valence voters will then be expected to occupy a share $(1 - \omega_i - \psi_i)$ of the voting spectrum.

A municipal administration consists of a group of like-minded politicians of *identical* type $x_i \in \{b, g\}$, either of the 'good' type g, or the 'bad' type b. The good kind of politician is a token benevolent leader, choosing G_i in each period to maximize voter welfare, and hence drawing no satisfaction from rents diverted from public spending r_i. Consequently, and given the unit costs of provision $\theta_i \in \{L, H\}$ and (1), the level of local public goods set by a state government of benevolent politicians enjoying full tax autonomy comes in at

$$G_i^{\theta_i}(\theta_i, \mu_i) = \arg\max G_i - \mu_i C_i(\theta_i G_i), \tag{2}$$

with $T_i^{\theta_i}(\theta_i, \mu_i) = \theta_i G_i^{\theta_i}(\theta_i, \mu_i)$ the resulting level of tax collections financing the total cost of optimised public provision $G_i^{\theta_i}$. Lastly, plugging (2) into (1), we can write voter welfare following from the decisions of a benevolent state government as $W_i^g(\theta_i, \mu_i)$. Unsurprisingly, both $G_i^{\theta_i}$ and W_i^g are decreasing in μ_i, since a higher marginal cost of taxation has benevolent politicians set lower taxes, resulting in lower levels of public provision.

Unlike benevolent politicians, bad politicians behave strategically by maximising rents r_i^1 in period 1 as well as discounted rents $\beta \sigma_i r_i^2$ in period 2, with β the discount rate and σ_i the probability of an incumbent government being re-elected in state i. This re-election rule, as well as the decision-making of a rent-seeking incumbent government regarding T_i, r_i and G_i in both periods, will be set out in section 3.3.[15] We also assume there to be a maximum level X_i of state tax collections – and thus also of rent diversion – that can be imposed on voters, where $T_i \in [0, X_i]$ and $X_i > T_i^L$.

We assume each political party $p_i \in \{L, C, R\}$ can win over a share of the unionised vote by investing political influence Y_{p_i} in this process. If a party is also in power, it will have less time

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[14]This is similar to Boffa et al. (2016), where an identical random process defines the amount of informed voters in the voting population, rather than the amount of voters with specific interests as is the case here.

[15]Note also that we have, in effect, set $\beta = 0$ for benevolent politicians. As discussed in Lockwood (2005), assuming that benevolent politicians are fully myopic delivers a unique and stable equilibrium in the signalling game we will set up in the following sections.

and resources at its disposal to win over votes through this channel depending on the levels of public goods G_i it provides, so that

$$Y_{p_i}(G_i) = \nu_{p_i} R_i (1 - G_i), \tag{3}$$

with R_i a concave function expressing the political effectiveness of politicians to translate excess resources and/or time into union influence, where $R_i(0) = 0$, and ν_{p_i} a party-specific scaling factor. However, the effectiveness of targeting union members using these political resources is assumed to carry a certain risk of backfiring, as it is often unclear what a specific subgroup's priorities are ex-ante. We thus assign probability $\rho(Y_{p_i})$ to win a majority share $\eta_{p_i} = \frac{1}{2} + \chi_{p_i}$ of the unionised vote $\omega_{p_i} = \omega_i \times \gamma_{p_i}$ when using political influence Y_{p_i} for targeting, with γ_{p_i} the average share of the unionised vote accessible to party p_i, so that

$$\eta_{p_i} \left[Y_{p_i} \left(G_i \right) \right] = \begin{cases} \frac{1}{2} + \chi_{p_i} & \text{with } \rho \left[Y_{p_i} \left(G_i \right) \right] \\ \frac{1}{2} - \chi_{p_i} & \text{with } 1 - \rho \left[Y_{p_i} \left(G_i \right) \right] . \end{cases} \tag{4}$$

where $0 < \chi_{p_i} \leqq \frac{1}{2}$ expresses the complexity of the targeting process (amount of factions to convince, etc.), $\rho(Y_i)$ is increasing in Y_{p_i}, and $\rho(0) = \frac{1}{2}$ with $\rho(Y_{p_i})$ increasing in Y_{p_i}, and $\rho(0) = \frac{1}{2}$. The density of different factions that can be targeted in a union meeting – denoted by $\frac{1}{2} < (1 - \chi) < 1$ – makes targeting less effective, but will also make backfiring strategies less detrimental as each strategy will apply to a smaller number of voters. The intuition here is that in the extreme case where $\chi = 0$, which we exclude in the model, parties would face an indeterminable mass of groups to convince, so that winning over the unionised vote through targeting essentially becomes a coin toss. However, as the number of factions becomes manageable, the chance $\rho(Y_i)$ that targeting is successful starts to depend positively on the political influence Y_i that can be spent on targeting strategies.[16]

Adding to the realism and applicability of the model lastly, we also apply a probabilistic framework to the decision making of the valence voters. We assume that valence voters care about a second policy dimension, orthogonal to the valence issue G_i. Following Persson and Tabellini (2002) or Boffa et al. (2016), this second issue captures any remaining preferences that voters may have regarding politicians, such as their personal likability or party ideology. These

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[16] As we illustrate in appendix, the fact that a majority of the party share of unionised voters can be won over in (4), is not a restrictive assumption, it simply makes the model more intuitive as explained above. Our findings go through as long as spending more revenue on targeting improves the probability of winning over more priority voters.

preferences can be decomposed into an aggregate shock δ_i and an idiosyncratic shock γ_i^j, which are both independent and identically across voters j. This introduction of a degree of riskiness on the government's side regarding its chances of re-election by the valence voters is necessary for the fiscal incentives to take effect in all possible scenarios. Suppose for example that a majority of the voting population can be counted in the valence voter camp, which as we will see below means the incumbent government will always be re-elected if it sets the benevolent policy. Without probabilistic voting, appealing to the unionised vote would lose all of its appeal to rent-seekers since re-election is assured.

3.2   Information and Timing

At the end of period 1, an election is held in each municipality where one group of politicians challenges the group in office. The group winning the majority of votes wins the election. Whether the incumbent politicians at the beginning of period 1, as well as the challengers, are of the good type g or the bad type b is defined by independent draws from an identical distribution. With a probability $\Pr(x_i = g) = \pi_i$, a group of politicians – incumbent or challenger – in a given municipality i will be benevolent. The ensuing game between incumbent politicians and voters is then defined as follows.

At the beginning of period 1, the type $x_i \in \{b, g\}$ of the group of incumbent politicians is drawn for each municipality i. These incumbents then observe the unit costs of public provision θ_i after which they decide on taxation T_i, rents r_i, and public goods G_i. Ahead of the elections the voters observe the amount of public goods G_i provided in their municipality, as well as the collected taxes T_i to finance public spending. The unit costs θ_i of public provision however, together with the type of both the incumbent and challenging politicians, remain unobserved. However, both the probability q_i that unit costs θ_i are high and the probability π_i that politicians are benevolent, are common knowledge, together with the probability $\rho(Y_{p_i})$ to win a majority share of a party p_i's unionised vote after exerting influence Y_{p_i}. After the elections, the elected group of politicians again sets G_i and r_i. Since there are no elections after period 2, even newly-elected challengers can be considered "lame ducks" whose actions will not be influenced by electoral pressure.

Clearly, since the actual type of politicians as well as the rents essentially remain hidden from the voter's eye, the game described above has a distinct structure of incomplete information. To figure out whether the incumbent is benevolent or not, the only option open to valence voters is to scrutinise incumbent performance during period 1, and weigh their updated beliefs about the

incumbents' type against their prior beliefs about the challengers. We elaborate on the resulting perfect Bayesian equilibria in the following section.

Notice lastly how – contrary to the career-concerns models developed by Persson and Tabellini (2002) – politicians can be good or bad in our model, and are equally competent to produce the desired amount of public goods at either unit cost $\theta_i \in \{H, L\}$. Politicians are fully aware of this competence ex-ante, in stead of ex-post as in Persson and Tabellini (2002), and are as a result able to hide their true type from the voters. In such a signalling model rent-seeking politicians thus have multiple strategies at their disposal, allowing for a broad study of the extent to which fiscal incentives alter these strategies. Lastly, the setup provides politicians with the strategic instrument crucial to the fiscal interest story: the tax rate. In most career-concerns models contrarily, public revenues are assumed fixed.

3.3   Equilibrium

We solve the game of incomplete information described above to obtain a unique Bayes-Nash equilibrium in each of the member states of the federation, by applying backward induction. We therefore start with period 2, and turn first to the interaction between state politicians and valence voters.

As there are no elections following period 2, the group of politicians in office in that period will no longer be constrained by electoral discipline. Good behaviour will never lead to re-election and future rents, which has bad politicians divert the maximum amount of rents $r_i = X_i$ in period 2. A bad incumbent government thus sets its state taxes T_i in such a way that maximum tax collections $T_i = X_i$ are diverted away from public provision, so that $G_i = 0$ as a result. Inversely, good politicians never divert rents, set $r_i = 0$ in period 2, and consequently sets T_i following (2) as explained earlier.

Since second-period strategies are the same for bad incumbents or bad challengers alike, i.e. extracting full rents, the best strategy for valence voters is to weed out as many bad politicians they can during the elections. Their sequentially rational voting rule will as a result be to re-elect the incumbent government of period 1 if they think this group is more likely to be benevolent than the challengers. In other words, if the *posterior* probability Π_i they ascribe to the incumbents being benevolent surpasses the *prior* probability π_i of the challengers, they re-elect the incumbents. The voter's posterior beliefs will thus inevitably be based on incumbent performance during period 1 only, and follow from the equilibrium strategies of first-period incumbents.

Focusing on these first-period strategies subsequently, a benevolent municipal government again simply maximises voter welfare following (2), and chooses T^{θ_i} so that public provision and total tax collections are equal to (G_i^H, T_i^H) with probability q_i, or (G_i^L, T_i^L) with probability $(1 - q_i)$, as before. Logically then, it follows that in any perfect Bayesian equilibrium voter posterior beliefs will assign probability zero to the incumbent being of the good type at any *other* information set (G_i, T_i), observed in period 1. Naturally, voter beliefs are not restricted by Bayes' rule at nodes not reached in equilibrium. Since the good type's actions are pinned down by (2), we do impose the minimal restriction on out-of-equilibrium beliefs that $\Pr(g|T_i) = 0$ if $(G_i, T_i) \neq (G_i^{\theta_i}, T_i^{\theta_i})$. At any such information set the valence voter elects the challengers, and rationally expects other valence voters to do the same.

Since voter beliefs are common knowledge, three possible strategies remain for a rent-seeking incumbent government deciding on first-period tax collection, where t_i is set so that $T_i \in (T_i^L, T_i^H, X_i)$ are the only spending levels observed with positive probability on the equilibrium path. In the latter case the bad incumbents claim the maximum rent $r_i = X_i$ as in period 2, revealing their true type b and as such 'separating' from the good politicians. In the first two cases on the other hand, incumbents undertake at least some degree of public investment to hide their true type and to signal benevolent behaviour, thus trying to mix in or 'pool' with the benevolent politicians. The reason for this masquerade is the re-election motive, in full effect when the sum total of expected rents over both periods outweighs maximum rents $r_i = X_i$ to be extracted in period 1, so that

$$r_i + \beta \sigma_i X_i > X_i, \tag{5}$$

where we have replaced rents r_i in period 2 with the maximum value of X_i as well, which is the equilibrium strategy of bad incumbent politicians in period 2 as described earlier. Now, to fully interpret expression (5), we need to formalise the probability of re-election σ_i as well as the decision on rents r_i, for which the unit costs of public provision, $\theta_i \in (L, H)$ are crucial. Suppose the bad incumbents face low unit costs L in period 1. By setting tax collections T_i so that $T_i^{\theta_i} = T_i^H$, and providing the corresponding amount of public goods G_i^H, they are able to siphon off rents to the extent of $\widehat{r}_i = (H - L)G_i^H$. Indeed, in this case $T_i^H = LG_i^H + (H - L)G_i^H = G_i^H$, which voters still accept as an information set potentially offered by a benevolent government. Inversely, when $\theta_i = H$, the latter 'pooling' strategy does not pay any rents in period 1 since $\widehat{r}_i = (H - H)G_i^H = 0$, so that the incumbent government cannot divert rents without revealing its type. In such a situation the separating strategy of extracting maximum rents X_i always dominates

the pooling strategy, as $r_i = X_i$ exceeds expected second-period rents $\beta \sigma_i X_i$ to be gained after re-election. For exactly the same reasons, valence voters always re-elect the incumbent group after observing (G_i^L, T_i^L) in period 1, so that in any equilibrium we get that

$$\Pr(g|T_i^L) = 1. \tag{6}$$

Indeed, also in this case rent-seeking incumbents would choose the separating strategy $r_i = X_i$, as it doesn't pay off to try to get re-elected, which is known to voters. Arriving at voter posterior beliefs based on the observation (G_i^H, T_i^H) subsequently, is more intricate. Sure enough, valence voters know of the risk that a group of bad politicians might pretend to be benevolent in order to improve its re-election chances, and will include this risk when updating their prior beliefs. They therefore assign probability λ_i to the pooling strategy, such that

$$\lambda_i = \Pr(T_i = T_i^H | \theta_i = L, x_i = b). \tag{7}$$

Based on all available information, and using Bayes' rule, valence voters can then infer the posterior probability that first-period tax collections T_i^H were levied by benevolent incumbent politicians as

$$\Pr(g|T_i^H) \equiv \Pi_i = \frac{\pi_i q_i}{\pi_i q_i + (1-\pi_i)(1-q_i)\lambda_i}, \tag{8}$$

which allows us to derive lemma 1 below, keeping in mind that only valence voters really care about the provision of G_i as explained above.[17]

Lemma 1. *Given the posterior voter beliefs $Pr(g|T_i^H) = \Pi_i$ defined in (8), and assuming that $q_i > \frac{1}{2}$, the valence voter will always re-elect the incumbent when observing first period public provision of G_i^H at a tax level T_i^H, as in this case we always have that $\Pi_i > \pi_i$.*

Suppose now an incumbent government of bad politicians would only have to worry about winning over valence voters. Its first-period strategies would then be straightforward at this point. If first-period unit costs θ_i are low, and given lemma 1, incumbent politicians will face a re-election probability of $\sigma_i = 1$ if they provide G_i^H at a total tax take of T_i^H. From (5), we then deduce that the pooling strategy to set $\hat{r}_i = (H - L)G_i^H$ will always be more beneficial than full

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rent extraction $r_i = X_i$ in period 1, if and only if

$$\widehat{r}_i^1 + \beta \sigma_i X_i > X_i. \tag{9}$$

If condition (9) does not hold however, or in the case that unit costs come out on the high side and $\theta_i = H$, bad incumbents will always separate and reveal their type. Their probability of re-election σ_i is reduced to zero because of this.

Moreover, and still focusing on valence voters, the latter not only base their voting decisions on incumbent performance as captured by lemma 1, but also on the ideologies or likeability of both competing groups of politicians. Specifically, a given valence voter j is defined to re-elect the incumbent group of politicians if

$$\Pi_i > \pi_i + \gamma_i^j + \delta_i, \tag{10}$$

thus expanding the previous condition $\Pi_i > \pi_i$ for valance voters to re-elect the incumbent government after observing (G_i^H, T_i^H). As in Persson and Tabellini (2002), the ideological policy dimension comes in through both terms on the right side of (10), where γ_i^j is an individual-specific parameter capturing voter j's *individual* ideological bias towards incumbents and candidates, which can take on negative as well as positive values. Voters for whom $\gamma_i^j = 0$ are ideologically neutral, whilst voters where $\gamma_i^j < 0$ are ideologically biased in favor of the incumbent government, and vice versa. We assume γ_i^j is uniformly distributed on the interval $\left[-\frac{1}{2}, \frac{1}{2}\right]$. Second, the parameter δ_i reflects the *aggregate* popularity of both political groupings across the population as a whole, which can also be positive or negative and is again uniformly distributed, but now on the interval $\left[-\frac{1}{2\xi}, \frac{1}{2\xi}\right]$.[18]

As discussed above however, and crucially, the voting population does not simply consist of valence voters. Unionised and partisan voters also influence the probability of re-election σ_i in (9) which, in turn, alters first-period incumbent strategies as well. This is where the union influence mechanism comes into play, and where outcomes become less clear-cut as a result. As expressed by (3), incumbent politicians can exert political influence Y_i by spending less time and resources on providing G_i. Since this means they will pull in a larger share of the total vote, as defined by (4), rent-seeking incumbents will now be tempted to influence their probability of re-election in two ways: by pretending to be benevolent as before, and by winning over groups of unionised voters. Since a government of bad incumbents will never set $\left(G_i^L, T_i^L\right)$, as this would violate (9), we focus

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[18]Both distributional assumptions facilitate closed form solutions. For a discussion of their generalisation, we refer to Persson and Tabellini (2002).

on the probability σ_i of re-election when the incumbent sets $\left(G_i^H, T_i^H\right)$. Building on the totality of our framework, we can then derive the overall probability of re-election σ_{p_i} in lemma 2.[19]

Lemma 2. *When the incumbent group of politicians provides a level of public goods G_i^H at a tax level T_i^H, and with $\alpha_{p_i} \geqq 0$, its re-election probability σ_i of winning a majority share κ_{p_i} of both priority as well as valence voters, is given by*

$$\Pr\left[\kappa_{p_i} \geqq \frac{1}{2}\right] = \sigma_{p_i}\left(\alpha_{p_i} + (\Pi_i - \pi_i)\right) = \begin{cases} 1 & \text{if } \alpha_{p_i} + (\Pi_i - \pi_i) > \frac{1}{2\xi} \\ \frac{1}{2} + \xi\left[\alpha_{p_i}(Y_i, \chi_{p_i}, \omega_i) + (\Pi_i - \pi_i)\right] & \text{Otherwise} \\ 0 & \text{if } \alpha_{p_i} + (\Pi_i - \pi_i) < -\frac{1}{2\xi}. \end{cases}$$
(11)

Now, it is precisely through $\alpha_{p_i}(Y_i(G_i, \nu_{p_i}), \omega_i, \chi_{p_i})$ in (11) that the union influence mechanism affects the likelihood of re-election σ_{p_i}, a process where the exerted political influence Y_{p_i} and the unionised vote share ω_i and the targeting effectiveness of part p ν_{p_i} all have their effect. This process plays out alongside the reputational effect on re-election probability, captured by $(\Pi_i - \pi_i)$ in (11), which is due to the Bayesian updating process discussed at length above.[20] For a good understanding, suppose now the probability of re-election expressed by (11) lies between zero and one. Before discussing the channels operating through α_{p_i} in proposition 1 below, and plugging (11) into (9), we first derive the necessary condition for a bad incumbent to set $\left(G_i^H, T_i^H\right)$ – in other words, opt for the pooling strategy – which is

$$\widehat{r}_i^1 + \beta\sigma_{p_i}\left(\alpha_{p_i}(Y_i, \chi, \omega_i) + (\Pi_i - \pi_i)\right)X_i > X_i,$$
(12)

and where, using (7) and (8), Π_i is defined in the latter expression by setting $\lambda_i = 1$ since voters know a rent-seeking incumbent will opt precisely for the pooling strategy if (12) holds. In other words, if the sum total of expected rents characterised by the left hand side of (12) – to be extracted after re-election – exceeds the rents on the right hand side – to be captured in period 1 after choosing the separating strategy of $r_i = X_i$ – the incumbents will always mimic the benevolent politicians in the hope of being re-elected, and thus choose the pooling strategy. In any other case they separate, and are voted out. We summarise in lemma 3.

Lemma 3. *As long as $\widehat{r}_i^1 + \beta\sigma_{p_i}\left(\alpha_{p_i} + (\Pi_i - \pi_i)\right)X_i > X_i$, a rent-seeking incumbent government*

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[19]See appendix B for the derivations.

[20]See Besley (2007) for an overview of agency models using this kind of Bayesian updating, and the reputation effects on which they rely.

will always choose the pooling strategy, i.e. set $\left(G_i^H, T_i^H\right)$ when $\theta_i = L$. They separate otherwise, and extract the full rent $r_i = X_i$.

What we learn from lemma 3 and proposition 1, is that the mere presence of unionised voters provides bad incumbents with a second channel to gain votes, orthogonal to pure reputation building. Indeed, without unionised voters (11) would increase to the usual trade-off between reputational gains $(\Pi_i - \pi_i)$ – achieved by the incumbents after setting (G_i^H, T_i^H) – and popularity shocks δ_i. Having the option of influencing unionised voters on the other hand, results in less politicians choosing for the pooling strategy rather than simply separating, as their re-election probability receives a boost because of the targeting channel captured by (4).

This equilibrium clearly hinges on condition (12), and the probability of re-election σ_{p_i} which, compared to a setting without priority voters, in turn depends on α_{p_i} as defined by lemma 2 and touched upon above. We investigate in proposition 1.

Proposition 1. *Rent-seeking incumbents can improve their chances of re-election σ_{p_i} by spending political resources to influence union meetings, instead of providing public goods. The extent to which they will do so, depends on*

1. *The degree of targeting effectiveness ν_{p_i}: the more efficient parties are at converting time and resources into political influence, the more unionised votes can be won over;*

2. *The share of unionised voters ω_i: as the share of unionised voters grows, targeting proves a more reliable buffer against popularity shocks;*

3. *The degree of democratisation, i.e. the share ψ_{p_i} of the partisan vote incumbents can count on. The more this share is split evenly across parties, the higher the degree of democratisation, and the more resources will be invested in influencing the unions, ceteris paribus.*

In proposition 1 we disentangle the channels operating through $\alpha_{p_i}(Y_i(G_i, \nu_{p_i}), \omega_i, \chi_{p_i})$, as such laying bare the union influence mechanism behind the separating strategy of not setting (G_i^H, T_i^H), and the targeting this allows for. First, a higher degree of effectiveness ν_{p_i} logically boosts the impact of targeting efforts as can be seen in (4). Secondly, if the electorate consists of proportionally more unionised voters, rent-seeking incumbents will be quicker to use targeting as a safety net against risky popularity shocks δ_i. As the sheer mass of unionised voters rises, the more targeting will pay off in terms of re-election. Third, when electoral institutions become more democratic, and political parties can count to a lesser extent on a guaranteed support base,

the importance of relying in the unions to win elections will increase. Lastly, and importantly, proposition 1 can be generalised to include all political parties, not only the incumbent parties. It thus serves as a lower bound, as the reputational channel working through $\Pi_i - \pi_i$ in eq. (11) would be shut down for challengers, hence strengthening the comparative statics derived in proposition 1.

4 Data description

As outlined earlier a key research question entails investigating the relationship between the electoral cycle and strike threats. The attribute of Mexican labour law which we exploit relates to the requirement for all strike threats to be lodged at an Arbitration and Conciliation Commission. We utilise the disaggregated administrative records of strike petitions lodged with the 32 Local Arbitration and Conciliation Boards,[21] thus excluding the public sector, and those firms in industries which fall under federal jurisdiction. The data have a temporal coverage from 1991–2012, and are collected on a monthly basis. The records contain information both on the number of petitions per industry and the official causes of the petition. We aggregate these to the relevant following 12–24, 25–36 months after an election and convert these to rates per 10,000 of the population received by the board.

Table 1 presents the summary of electoral outcomes and strike petitions when aggregated around electoral years. The table reports the outcomes across all elections, and the three subsamples of narrow elections, where the margin of victory/loss lies in the ±10 percentage point window. As asserted before, it is clear that PRI are the most electorally successful party, as they won 64.0% of all municipal elections across the time-span 1991–2012. With PAN winning 21.7% and PRD 14.2%. These do not sum to 100%, as there is some overlap due to coalitions. We should note that this paper is not the first to focus on local level elections in Mexico, Dell (2015) compares across narrowly contested municipalities in the context of drug-war related violence. However, the key issue with this approach is that it ignores the primary electoral innovation in local elections in Mexico: the coalition. Coalitions represent one of the electoral strategies most aggressively pursued by parties in the post 2000 period—these often span ideological divides—to deny the opposition the likelihood of victory. In our analysis we consider all such wins to be equally attributable to all coalition partners. Indeed, coalitions have been a key innovation that has led to the dramatic narrowing of electoral victories seen in the earlier figures. The time-varying covariates do appear

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[21]Despite having 31 states, there is also another Commission which oversees Mexico City. It should be noted that whilst the arbitration boards are state-level institutions, the disaggregated data are defined at municipal level.

Table 1: Summary of Elections and Petitions

|	All Elections	Narrow PAN	Narrow PRD	Narrow PRI
Electoral Outcomes by party (%)				
PAN wins	21.734	47.656	27.104	18.260
Margin of Victory / Loss PAN	-26.384	-0.920	-14.835	-23.831
PRD wins	14.204	13.276	19.303	46.077
Margin of Victory / Loss PRD	-35.207	-29.488	-22.189	-1.231
PRI wins	64.041	44.622	51.643	44.365
Margin of Victory / Loss PRI	10.300	-2.048	0.331	-2.177
Other Electoral outcomes (%)				
PAN incumbency	14.691	19.507	14.753	8.951
PRD incumbency	8.183	5.391	8.776	13.766
PRI incumbency	44.824	45.543	44.258	43.188
PAN coalition	12.459	23.273	14.897	25.178
PRD coalition	21.755	33.135	24.612	32.168
PRI coalition	24.390	35.925	28.711	30.635
PAN governor	14.246	22.866	16.558	9.023
PRD governor	10.060	10.864	12.712	24.501
PRI governor	74.894	65.348	69.718	63.873
Electoral turnout	60.774	62.554	62.261	61.485
Other time-varying covariates				
Workplace death rate$_{t+1}$ (Per 10,000)	15.461	8.993	8.806	5.860
Workplace death rate$_{t+2}$ (Per 10,000)	38.265	18.362	19.088	11.251
Unemployment rate$_{t+1}$ (%)	3.564	3.774	3.587	3.557
Unemployment rate$_{t+1}$ (%)	3.468	3.601	3.426	3.427
Average Petitions				
One year after election	8.625	12.102	8.238	4.513
Two years after election	27.907	44.876	29.976	15.513
Independent Union$_{t+1}$	1.147	1.493	1.050	0.553
Independent Union$_{t+2}$	3.693	4.856	3.376	1.995
Officialist Union$_{t+1}$	7.477	10.609	7.188	3.960
Officialist Union$_{t+2}$	24.214	40.020	26.600	13.518
Average Petition Rate per 10,000				
One year after election	0.531	0.643	0.514	0.402
Two years after election	1.757	2.299	1.755	1.540
Independent Union$_{t+1}$	0.084	0.094	0.079	0.065
Independent Union$_{t+2}$	0.289	0.367	0.290	0.191
Officialist Union$_{t+1}$	0.447	0.549	0.435	0.336
Officialist Union$_{t+2}$	1.469	1.933	1.465	1.348

The electoral data were collected from each of the 31 state electoral bodies, with supplementary data obtained from IFE.

Workplace death rate comes from vital statistics published by INEGI. The data are derived from administrative records for those unexplained deaths that occurred in a manufacturing or construction site, and are defined per 10,000 of the municipal population.

The unemployment level data is determined at state level and is derived from the *Encuesta Nacional de Empleo Urbano* (ENEU) and *Encuesta Nacional de Ocupación y Empleo* (ENOE) surveys run by *Instituto Nacional de Estadística, Geografía e Informática* (INEGI) for the appropriate time periods.

to differ across the three sub-samples of narrow electoral contests. And finally, it is worth noting that, on average, there seem to be more strike threats two years after an election. The fewest number of strikes are associated with PRI narrow victory municipalities, whereas municipalities narrowly won by PAN are most likely to be associated with more strikes. Equally, it can be noted that the large 'officialist' unions represent the predominant source of strike threats. This may be some evidence for the Burton (1984) view, suggesting that larger unions may suffer from the 'paradox of participation'. As membership size increases, workers are less likely to participate in union decision-making processes, and as such we may see more union leadership discretion. This may lead to an increased number of strike threats during key political periods, such as the lead-up to elections.

Figure 1: Margin of victory in Municipal Elections
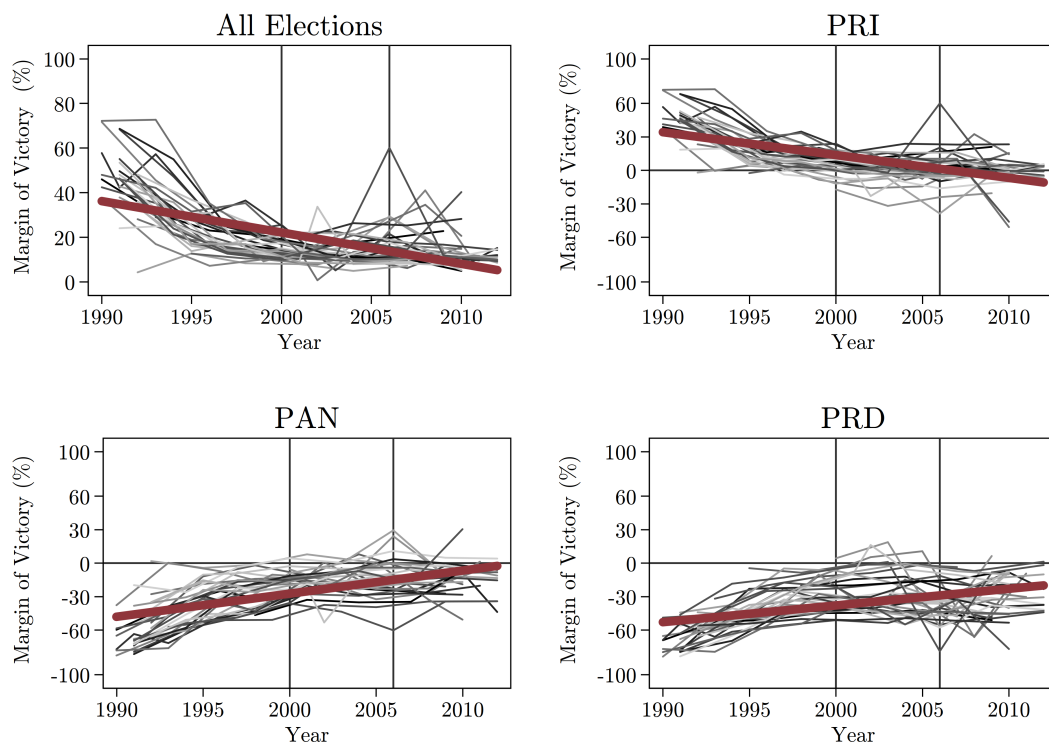
Note: Author's own calculations from electoral data. Each vertical line represents a Presidential Election.

The analysis focuses on the electoral outcomes for municipal presidencies. We obtained these from each of the 31 independent electoral authorities in Mexico, and some of the gaps were completed by IFE. These data represent electoral data covering the same period as the strikes data. Figure 1 provides some visual stylized facts about Mexican municipal elections. For each pane in the figure each of the monochrome lines represent the mean margin of victory at a state

level, and the red line is the national trend obtained from a simple linear regression. The following electoral stylized facts can be observed. First, the electoral reforms of the 1990s were successful, as they created competitive elections at municipal level. At the beginning of the period the state mean margin of victory was approximately 54%, whereas the mean margin of victory between winners and losers in 2012 was about 12%. This narrowing of electoral victories shows an increased belief in the democratic process, and the increasing importance of Municipal Presidents as political actors. The second pane shows that whilst the PRI are the most electorally successful party in Mexico, their electoral successes have diminished over time. In fact, by the 2000 election more than half of Mexican municipalities had been ruled by another party (Seele, 2012), showing that increasing municipal democracy was an influential factor in demonstrating that credible institutional changes had occurred. The third and fourth panes show that as the PRI electoral wins diminished, PAN and to a lesser extent the PRD's electoral successes have increased.

5   Close elections lead to more strike threats

In order to explore if there is a causal relationship between between strike threats and the electoral cycle, we will employ a sharp RD design (see Thistlethwaite and Campbell, 1960; Imbens and Lemieux, 2008; van der Klaauw, 2008; Lee and Lemieux, 2010) using information on close municipal elections. The RD approach used here as applied to elections is due to Lee (2008). Given the count nature of the petitions data, these are transformed into the rate of petitions per 10,000 of the population. We employ a parametric estimator to obtain the RD estimates, which assumes the following functional form:

$$\text{Petition Rate}_{mst} = \alpha_m + \rho_t + \beta \text{PartyWin}_{mt} + f(\text{MoVParty}_{mst}) + Z_{mst}\prime\theta + \eta_{mst} \qquad (13)$$

The causal identification here is achieved by employing a parametric estimator within a RD design. The causal variable of interest in equation (13) is given by the treatment parameter β from the parametric regression, which is a binary indicator variable that takes the value of 1 where one of the three political parties won the municipal presidency (either alone or in a coalition) and zero otherwise. So, for example, in municipality m in state s in time t, if there is a significant effect of the estimated β parameter, assuming that there is a discontinuity whose variation is appropriately captured by the functional form, then the β parameter is interpretable as a causal effect from elections to petitions.

The regression outlined in equation (13) is also augmented with additional covariates, which are outlined in table 1. These covariates include state-level unemployment rates, municipal year specific effects, and some such as workplace accident related deaths, controls that capture the political party of the governor of each municipality, incumbency dummies, and coalition dummies.[22] The electoral calendar in Mexico operates such that even though there may be municipal elections in a given year across multiple states, there is no guarantee that these will occur on the same day. Thus, in the final specification electoral cycle fixed effects are introduced and are defined to be the year in which there was at least one election (regardless of month).

Although the data utilised in this section are similar to those used in the previous section, these data differ in one key respect. Previously these had been disaggregated at a monthly level. However, due to the nature of electoral contests the most appropriate level for analysis is annual. The data are therefore aggregated as the sum total strike threats in the immediate 12 months after an election, as well as the total petition rate per 10,000 of population in the 12–24 month interval after an election.

The panel nature of the data, and the twenty year time span that this covers, suggest that there are likely important unobserved effects that are occurring at the municipal level. In order to net these out we employ municipal specific fixed effects. Due to the count nature of the petitions data, it would be inappropriate to estimate their relationship by OLS. The estimates presented in tables 5, 6 and 7 are obtained through a fixed effects estimator on the rate of petitions, which neatly sidesteps the count nature of petitions.[23] This allows the estimates to represent the true causal effect in the relationship of interest.

McCrary (2008) raises a concern for RD designs relating to the validity of the estimates being contingent on the inability of the running variable to be manipulated by agents. In the context of electoral results, manipulation can manifest in the form of electoral irregularities, this may be a concern in particular for marginal elections. Given that the identification strategy relies strongly on these results, falling foul of this assumption would invalidate the RD approach. We employed the test suggested by McCrary, which estimates a finely binned histogram of the forcing variable, and then used a Local Linear Regression (LLR) to estimate whether there is a discontinuity at the victory threshold. The use of LLR raises the issue of optimal bandwidth selection for this test. McCrary uses the Imbens and Kalyanaraman (2012) algorithm for selecting the appropriate

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[22]Some of these were excluded from the earlier analysis, as they are not available in as high a frequency as required. The aggregation to years allow these to come into play.

[23]Nevertheless, these tables have also been estimated using petitions data as a count with a Negative Binomial fixed effects estimator. These findings are consistent to what is presented here.

Figure 2: Continuity along forcing variable
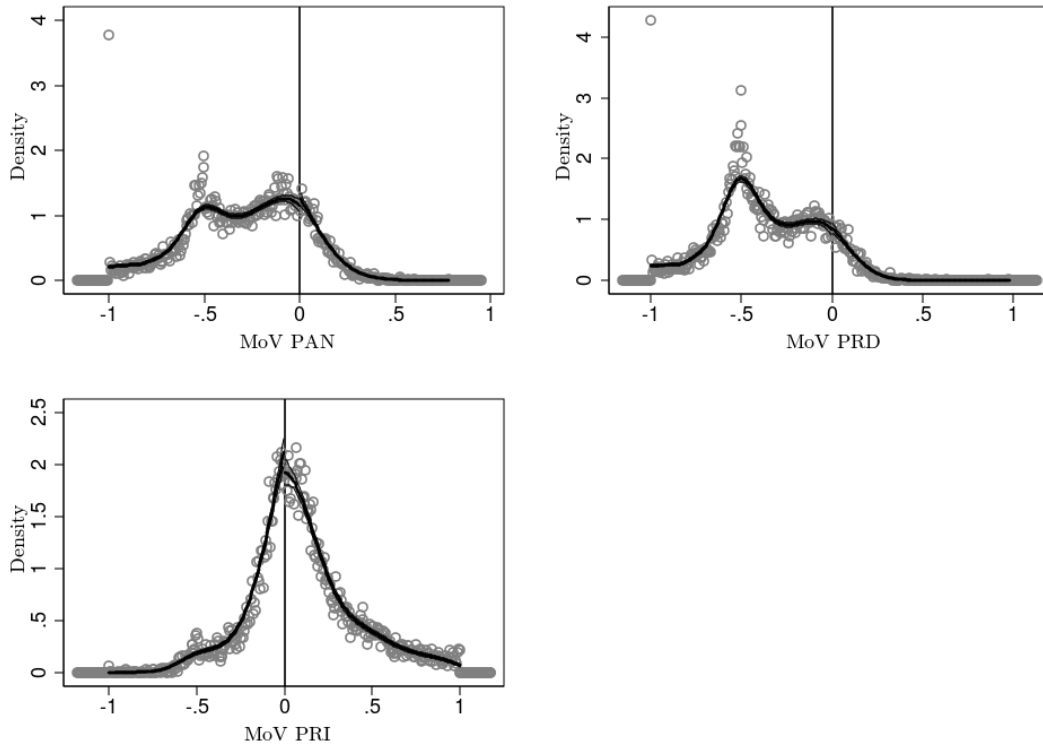
bandwidth. The test is then effectively the log difference in height between the point estimate from the LLR using a bandwidth of the nearest n-points on both the left and the right of the discontinuity.[24] The results from this test can be seen in figure 2, which suggest that there is no discontinuity along the forcing variable. One thing that must be noted for the PRD and PAN diagrams is the bimodality of the forcing variable along the 50% mark as well as those elections where there is a narrow election with a margin of victory near the zero boundary. This mass of density along the 50% mark reflects the changing nature of Mexican politics. Prior to the 2000 election the PRD and PAN would not have been seen as credible contenders for municipalities, and this is representative of the PRI hegemony across all levels of government. If those elections prior to 2000 are excluded the second peak of density along those large losses disappears. Nevertheless, this may give rise to concerns that this may have some effect on the estimates obtained from the global parametric RD approach. In order to mitigate this, this paper estimates equation (13) for thise elections whose margin of victory is in the range [-.1,.1] and includes a number of robustness checks across a variety of narrower electoral margins. These estimates should demonstrate that

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[24]In practice to employ this test we used McCrary's Stata module `-DCdensity-`.

the effects derive from narrow elections and are unrelated the large losses experienced prior to 2000.

As an additional robustness check on the continuity of the forcing variable we employ the test proposed by Cattaneo et al. (2016). This approach has the added benefit that it does not rely on the pre-binning of data into a histogram, and provides a test value that follows the robust-bias correction proposed in Calonico et al. (2014c). The test statistics for each of the PAN, PRD and PRI are as follows .718 (.473), -1.192 (.233) and -2.22 (.026), where the respective p-values are reported in parentheses. These test statistics suggest that there is no manipulation of the running variable for the PAN and PRD. In contrast to the McCrary test, the null of no discontinuity along the forcing variable cannot be rejected for the PRI party. This suggests that at the electoral margin, there may be manipulation of PRI results. This is consistent with the long established history of PRI electoral manipulation, which is well documented (Gillingham, 2012; Eisenstadt and Yelle, 2012; Lujambio, 2001). However, performing the test again on the post-2000 election sample, yield a test statistic of -1.628 (.1034) suggesting that the watershed elections of that year, where the PRI lost the presidency also witnessed the end of such electoral manipulation. Indeed, if one considers that narrow electoral margins are a new phenomenon in Mexican politics, with margins significantly narrowing since 2000, and the test is performed for the PRI only for the sub-sample of 10% closest elections, the finding is once again reversed with the test statistic of -0.712 (0.476), again validating our approach of focusing only on narrow elections.

Figures 3, 4 and 5 allow visual inspection of the discontinuity and the petitions data. The plots were generated using the methods developed by Calonico et al. (2014c). These methods are robust methods that select the optimal bin size either side of the discontinuity. Each figure is comprised of four sub-figures, each of these plot the petition rate per 10,000 of population over the rating variable. The first and third panes plot the whole span of the rating variable [-1,1] representing losing and winning by 100 percent of the vote for the total petition rate per 10,000 of the population in a municipality one and two years after the election, respectively. For ease of viewing panes 2 and 4 of each figure plot the data, using the Calonico et al. (2014a) methods, over the window [-.1,.1] over elections where 10% or less of the vote decided the outcome. The lines for all of the plots are the result of a local polynomial smoothed at either side of the discontinuity using the optimum bandwidth as determined by the Calonico et al. (2014c) algorithm.

It is noteworthy that all of the plots show a clear discontinuity on the petitions data across the margin of victory for all three parties. The plots suggest that locations that had a right-wing

**Figure 3:** Impact of PAN win on Strike Petitions rate
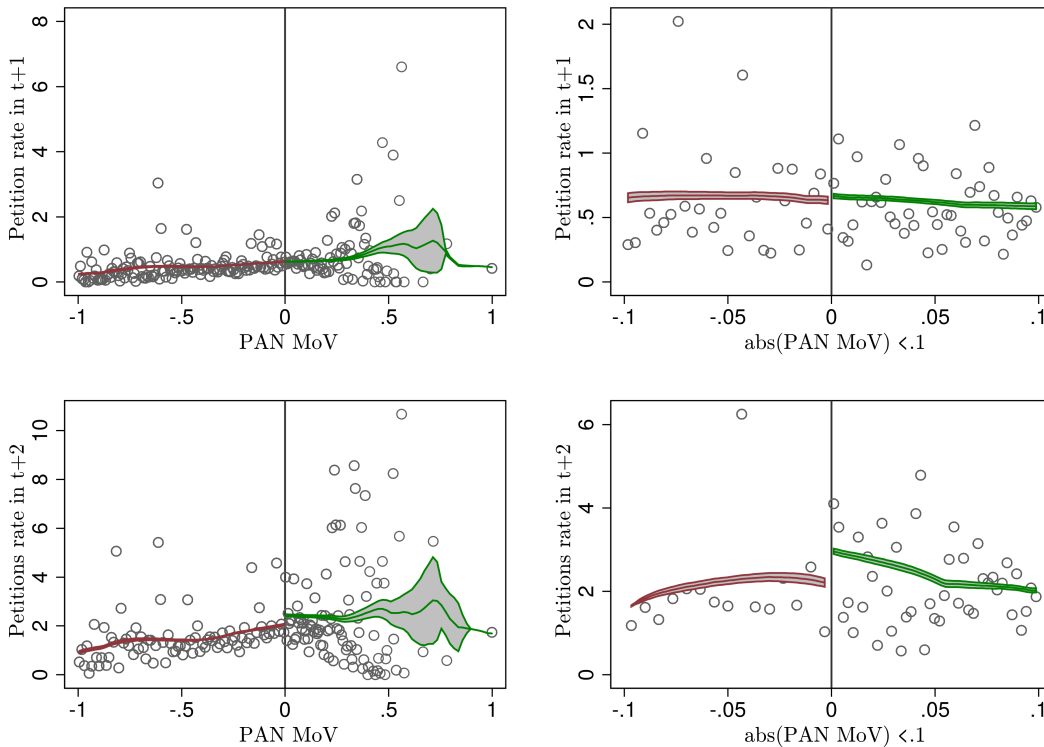
PAN mayoral victory perceive a higher petition rate per 10,000 of population both one year and two years following the election. The findings are similar, if less marked for the left-wing PRD party. The findings for the PRI party suggest that around the discontinuity a PRI election leads to fewer petitions.

The results from the local linear parametric RD exercise are reported in Table 2 which give the $\widehat{\beta}$ causal parameter for each political party as per (13).[25] In each instance the functional form employed uses a quadratic polynomial spline around the discontinuity. This functional form was preferred due to the Gelman and Imbens (2014) suggestion to avoid high-order polynomials, as these cannot be satisfactorily chosen and the confidence intervals in these should be treated with care. Nevertheless, the optimal functional form of the RD is the subject of robustness checks in Section 5.1.

Pane (a) in Table 2 suggests that the rate of strike threats is unaffected by one year after a right-wing narrow PAN election. This is found to be the case regardless of the specification. However, the estimates in columns 4–6, suggest that two years after the mayoral elections for the right-wing

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[25]Tables 5, 6 and 7 in Appendix B report the full regression results for the PAN, PRD and PRI parties, respectively.

Figure 4: Impact of PRD win on Strike Petitions rate
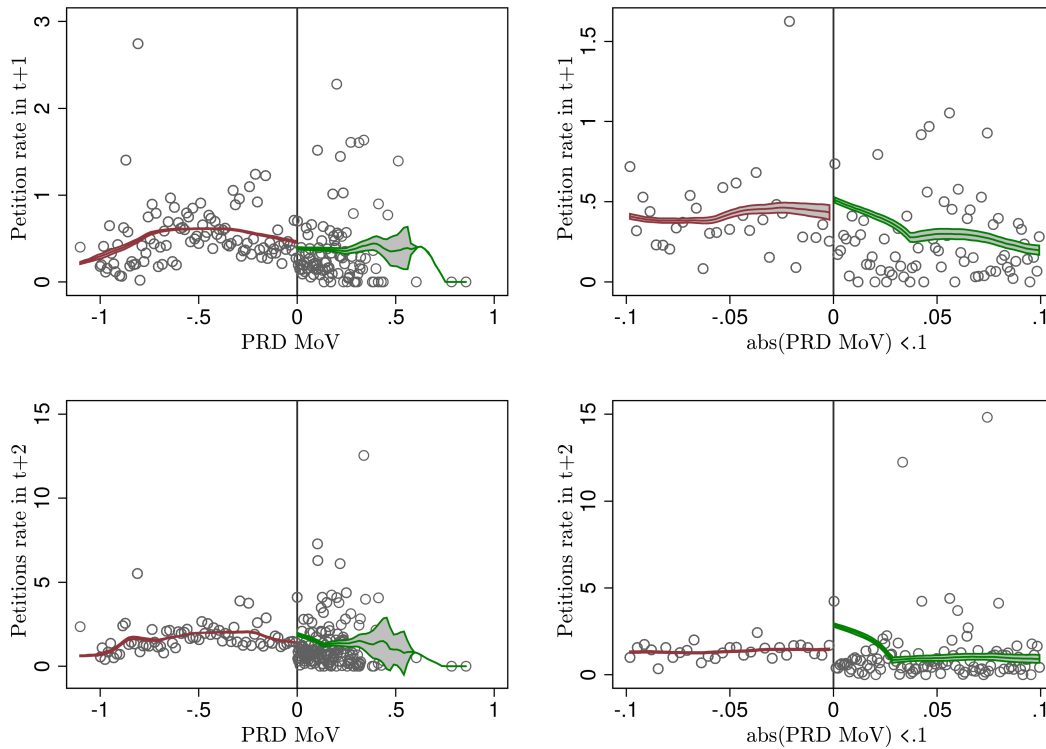
PAN party, there is an increase of approximately 1.74 petitions per 10,000 of the population. The mean population for a municipality where the PAN won is 128,838.[26] The estimates suggest that a right-wing electoral victory in the average sized municipality leads to an additional 22.2 strike threats, relative to those municipalities where any other party won.[27] When other covariates are introduced the coefficient reduces in size and there is a predicted increase of approximately 13.53 strike threats relative to those who voted other parties into power.[28]

Looking at the results for the left-wing PRD party it becomes clear that increases in the rate of strike threats are due to elections but perhaps unrelated to political ideology. The estimates in pane (b) table 2 imply that those municipalities that elect a left-wing PRD mayor exhibit systematically higher rates of petitions both one year and two years after a PRD victory. Columns 3 and 6–our preferred specifications– suggest that the rate of strike threats *increase* both one and two years

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[26]A similar sized town that elected a PAN mayor would be the municipality of San Pedro Cholula in the state of Puebla in 2012. The population in 2012 was 124,937 and it is an area with some manufacturing, and industry. They elected a PAN mayor in 2010.

[27]This can be obtained by taking the coefficient in column 4 of pane (a) of Table 2 and multiplying it by the population of Cholula in tens of thousands (12.4947).

[28]Note, that it should be clear that this effect scales with the size of the municipality and thus the magnitude of the effect will vary between [0.07,194.46] extra petitions. Where the smallest municipality that elected a right-wing mayor had a population of 633 in 2012 and the largest, Iztapalapa borough in Mexico city with a population of 1,839,700 in 2006.

Figure 5: Impact of PRI win on Strike Petitions rate
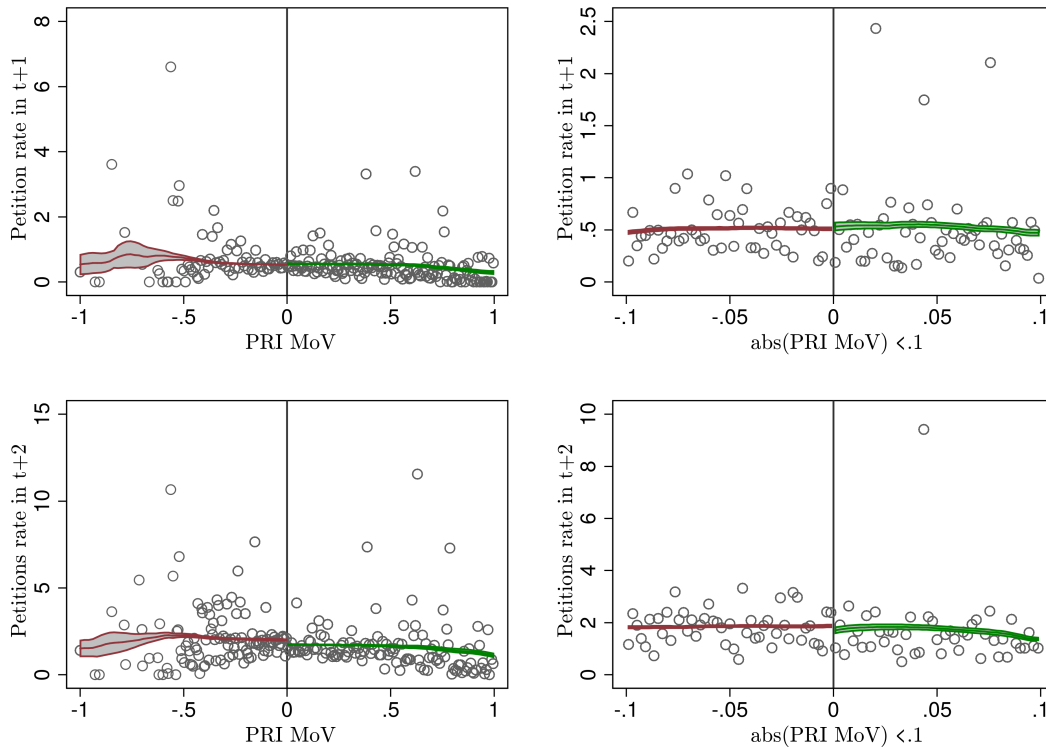
after a left-wing win by the PRD party. The rate increases by 0.264 and 1.456 petitions per 10,000 of the municipal population one and two years after the election. To put this into context, the average size for a municipality won by the PRD is of 78,638.[29] For the average municipality won by the PRD, the effects implicit in column 3 suggest that one year after an election there will be approximately 2 more strike petitions, relative to non-PRD Municipalities. Whilst, in the lead-up to the following election, the model predicts an additional 11.4 petitions.[30] As with the previous findings the magnitude of the effect is diminished by the introduction of other controls, with the smallest effect associated with introducing electoral cycle fixed effects.

The results from pane (c) of Table 2 for the PRI party are in stark contrast to the PAN and PRD parties. We find that as expected from Figure 5, there is no effect from PRI municipal wins on the number of strike threats after a narrowly contested PRI election. This lack of finding for PRI must contend with the following:

(i) PRI are the most electorally successful party in Mexican politics, both legitimately, and

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[29]This is roughly equivalent to the population of the municipality of Salina Cruz (pop. 77,825) in the state of Oaxaca, which elected a left-wing mayor in 1998.

[30]Note that the population of municipalities won by PRD range from 633 to 1,830,000, so the effect range will lie somewhere in the range of [0.017,48.312] on year after the election and [0.092,266.448] two years after an election.

Table 2: Impact of narrow Municipal President elections on strike petition rate, by political party

	Petition Rate +1 (1)	Petition Rate +1 (2)	Petition Rate +1 (3)	Petition Rate +2 (4)	Petition Rate +2 (5)	Petition Rate +2 (6)
(a) Right-wing PAN win						
PAN win	0.221	0.035	0.056	1.740***	0.978*	1.057*
	(0.186)	(0.191)	(0.194)	(0.605)	(0.587)	(0.589)
N	2,025	2,025	2,025	2,025	2,025	2,025
(b) Left-wing PRD win						
PRD win	0.278*	0.251*	0.264*	1.532**	1.263**	1.456**
	(0.142)	(0.141)	(0.146)	(0.677)	(0.624)	(0.668)
N	1,465	1,465	1,465	1,465	1,465	1,465
(c) Centrist PRI win						
PRI win	-0.076	-0.063	-0.069	-0.779	-0.709	-0.737
	(0.141)	(0.139)	(0.141)	(0.731)	(0.716)	(0.712)
N	2,984	2,984	2,984	2,984	2,984	2,984
Covariates	No	Yes	Yes	No	Yes	Yes
Electoral Cycle FE	No	No	Yes	No	No	Yes
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes

NOTES: Regressions all follow general specification outlined in (13). Each cell reports the estimate for the causal β parameter. The standard errors are clustered at municipal level and are reported in parentheses. Full results are available in Appendix B.
Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t, that is 12–24 months or 25–36 months after an election for the relevant political party as indicated in each pane. The covariates included replicate the specifications previously shown previously. These include: unemployment rate, unexplained workplace deaths, coalition dummies, incumbency dummies, governorship dummies, a quadratic polynomial spline around the discontinuity.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

indeed through well known incidents of fraud (Camp, 2003). Thus, for most municipalities, PRI represent the *status quo*, thus it is unlikely that strike threats would act as a signal in those municipalities to engage in the electoral process.

(ii) As outlined in Section 2, PRI are the party which has the closest historical links with 'officialist' unions (Bensusán and Middlebrook, 2012b). Union leaders of those unions which had formal membership within PRI have been postulated as candidates for senators and congressmen (Middlebrook, 1995), and were complicit in maintaining this party in power during their 71 year rule of the country (Lastra Lastra, 2002a). Thus, the behaviour perceived suggests that there may be a certain clientelist relationship between 'officialist' unions and PRI. Potentially exchanging political uncertainty for electoral gains.

(ii) However, the identification of these effects could be compromised by instances of electoral fraud, although this is mitigated by the focus of this paper on narrow electoral contests, as seen

by the results of the Cattaneo et al. (2016) manipulation test, and by the institutional changes outlined in Section 2.2.

The findings presented in this section demonstrate that there are important effects on strike threats originating from certain electoral results. These effects are found to span political ideology, affecting municipalities where both right-wing and left-wing mayors were elected. The identification of these effects has thus far relied on a local linear parametric regression strategy, exploiting the variation of those elections that we termed as narrow. Where, we term narrow elections those whose margin of victory lies within the window [-.1,.1], that is where 10% or less of the vote settled the outcome. However, the choice of bandwidth, or estimation window may account for the results. The RD approach, is contingent on the assumption that it is those observations that are close to the discontinuity that are as good as random. As such, it could be argued that the magnitude of the effects presented thus could be identified with excess variation which should not be taken into account. We formally test alternative estimation windows in Section 5.1.

The explanation we have offered with regards to why the PRI party are unaffected relies on the historic association between the PRI and the 'officialist' unions. However, in order to formally test this hypothesis we would need to disentangle the RD effects estimated by a union submitting the petition to strike. Given the administrative nature of the data, we have access to such information. The RD parameter of interest β is given in table 3 for all three political parties. We define 'officialist' unions to be those large trade unions congresses which have dominated Mexican unionisation.[31] The findings from this exercise strengthens our argument. It can be seen that for the PAN and PRD that the increase in petitions associated with the election of a Municipal President solely comes from the 'officialist' unions. As asserted earlier one way to understand these results is to appreciate that 'officialist' unions are members of large confederations, where the 'paradox of participation' is in full force (see Burton, 1984; Downs, 1957). Given their large membership, we may expect that union engagement is low. Furthermore, given the large national membership of these unions, there is likely to be union leadership discretion between union actions and the preferences of the union members. We interpret these findings in this instance to imply that the leadership of these large unions are perhaps more interested in furthering their national goals, as opposed to the demands of their rank-and-file. One may also situate this finding in the model sketched out by Rosa (1984) where the union may derive political rents through acting as

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[31]These are: *Confederación de Trabajadores de México* (CTM); *Confederación Regional Obrera Mexicana* (CROM); *Conferación Obrera Regional* (COR); *Congreso General de Trabajadores* (CGT); and *Conferación Revolucionaria de Trabajadores* (CRT). All of these trade unions congresses belong to the PRI aligned *Congreso del Trabajo* (CT).

a campaigning tool for the PRI party.

Table 3: Impact of narrow Municipal President elections on strike petition rate, by petitioner type

	Petition Rate +1 (1)	Petition Rate +1 (2)	Petition Rate +1 (3)	Petition Rate +2 (4)	Petition Rate +2 (5)	Petition Rate +2 (6)
(a) PAN win						
Officialist Union	0.107	-0.057	-0.047	1.612***	0.854	0.943*
	(0.165)	(0.174)	(0.176)	(0.580)	(0.563)	(0.562)
N	2,025	2,025	2,025	2,025	2,025	2,025
Independent Union	0.114	0.092	0.104	0.128	0.124	0.113
	(0.077)	(0.064)	(0.073)	(0.091)	(0.098)	(0.104)
N	2,025	2,025	2,025	2,025	2,025	2,025
(b) PRD win						
Officialist Union	0.291**	0.255**	0.268**	1.546**	1.321**	1.504**
	(0.127)	(0.126)	(0.131)	(0.637)	(0.582)	(0.636)
N	1,465	1,465	1,465	1,465	1,465	1,465
Independent Union	-0.013	-0.004	-0.005	-0.014	-0.058	-0.048
	(0.053)	(0.053)	(0.051)	(0.155)	(0.149)	(0.143)
N	1,465	1,465	1,465	1,465	1,465	1,465
(c) PRI win						
Officialist Union	-0.044	-0.033	-0.038	-0.494	-0.437	-0.468
	(0.128)	(0.126)	(0.129)	(0.438)	(0.433)	(0.432)
N	2,984	2,984	2,984	2,984	2,984	2,984
Independent Union	-0.032	-0.031	-0.031	-0.285	-0.271	-0.268
	(0.042)	(0.040)	(0.040)	(0.389)	(0.380)	(0.377)
N	2,984	2,984	2,984	2,984	2,984	2,984
Covariates	No	Yes	Yes	No	Yes	Yes
Electoral Cycle FE	No	No	Yes	No	No	Yes
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes

NOTES: Regressions all follow general specification outlined in (13). The standard errors are clustered at municipal level and are reported in parentheses.

Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t, that is 12–24 months or 25–36 months after an election. The covariates included replicate the specifications previously shown previously. These include: unemployment rate, unexplained workplace deaths, coalition dummies, incumbency dummies, governorship dummies, a quadratic polynomial spline around the discontinuity.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

5.1 Robustness Checks

In this subsection we report a number of robustness checks for the main findings of this paper. These checks attenuate some of the concerns of the identification strategy employed. The main concern considered by this section is that the causal parameter (β) from (13) may be sensitive to changes in the estimation window or the functional form of the local linear regression. We report tables 8, 9, 10 and 11 in Appendix C as evidence to the contrary. These tables provide narrower bandwidths for each of the three main political parties, where each cell reports the crucial $\hat{\beta}$ parameter. This is estimated and reported for both petitions in $t+1$ and $t+2$. It is clear that the results are robust to either the inclusion or exclusion of covariates, and in general the results are not dependent on the length of the estimation window. Indeed the narrowing of the bandwidth shows that the effects for these extremely narrow windows are larger than those reported by 10 percentage point window. With regards to the functional form of the RD local linear regression, Tables 10 and 11 suggest that when interpreting the optimal polynomial, the results of the main text remain unaltered. There is a causal effect from narrow elections on Strike threat rates in municipalities where PAN and PRD won by a margin of 10 percentage points or less. If anything, interpreting the optimal polynomial estimates as determined by the Akaike Information Criterion (AIC)[32] suggest larger estimates than those reported in the main body of the text.

A further concern of RD estimation relates to spurious results. One could imagine that the results that we am reporting are purely statistical artefacts, and when the procedure is replicated with unrelated variables one would still find significant effects. This would challenge the causal narrative we establish in this paper. To mitigate this concern, we have run a series of spuriousness falsification regressions. The results of these are reported in Appendix D, the findings suggest that the reported RD results are not spurious, as the covariates are continuous across the discontinuity. As another falsification test, asserting the temporal ordering of the causal effect, (13) was replicated with the strike threat rates from 12–24 months and 25–36 months *prior* to the narrow election. No results were found, thus asserting that the causal effect only exists in those municipalities that had a narrow election, but the effect only travels in one causal direction.[33]

A final robustness check to the RD estimates is the estimation of non-parametric estimates of the regression discontinuity. These were estimated using both the plug-in bandwidth estimator suggested by Imbens and Kalyanaraman (2012), and the standard errors reported reflect the

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[32]Lee and Lemieux (2010) suggest using Akaike's cross-validation criterion, however, this is shown by Stone (1977) to be asymptotically minimised by minimising the AIC.

[33]These results are available upon request from me.

robust-bias correction suggested by Calonico et al. (2014c). We also employed the optimal bandwidth estimator suggested by Calonico et al. (2014c), and in practice all of these were estimated using the Calonico et al. (2014b) Stata module. The results from this exercise are reported in Appendix E. The results remain invariant to this approach. In summary, the findings suggest that there is a strongly robust causal effect from narrow right- and left-wing victories to 'officialist' strike threats two years after a narrow election.

6 Strike threats stimulate electoral turnout

So far we have shown that strike threats are not only associated with elections, but the election of certain political parties directly increases the petition rate in the lead-up to the following election. At the end of the previous section, we hypothesized that the reason there is an increased number of strike petitions is that they are being misused as an electoral campaigning tool. This proposed mechanism relies on the institutional set-up of unions in Mexico. Section 2 outlined a key feature of Mexican labour legislation, in the FLL there is no formal requirement for unions to hold secret ballots, or be internally democratic. Thus, the decision to issue a strike threat is likely to go to a public vote as determined by a show of hands. We hypothesise that this meeting will become politicised by the union leaders to achieve their national aims, and thus in this meetings leaders will seek to modify their members' political preferences, either through campaigning, or through intimidation.[34] The historical context suggests that this campaigning is directed favourably towards PRI, and thus we would expect for this channel to be employed in those municipalities in which the electoral outcome was close enough to be in contest for the following election.

In order to test this hypothesis we collected data from all of the state electoral institutes on electoral turnout at municipal level. This is distinct from the electoral district, as there is no direct one-to-one mapping between the two geographies. We argue that electoral turnout is stimulated by strike threats over and above the amount that would be affected by the mere existence of narrow elections in those municipalities which were 'treated' by having narrow elections.

Therefore, the most appropriate model to test our hypothesis is a triple differences-in-differences model on the change in electoral turnout between elections of the following form:

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[34]It is worthwhile to remember that exclusion clauses were in effect in Mexico until 2001, where the loss of one's union membership would imply the loss of one's job.

$$\Delta \text{Turnout}_{mst} = \alpha_m + \rho_t + \psi_{st} + \delta \text{NarrowOutcome}_{mst-3} + \phi \text{Petition Rate}_{mst-1}$$

$$+ \gamma \left(\text{NarrowOutcome}_{mst-3} \times \text{Petition Rate}_{mst-1} \right) + \text{X}_{mst}\prime\theta + \epsilon_{ms} \qquad (14)$$

where α is the fixed effect for the mth municipality, ρ is the fixed effect for the tth year, ψ is the specific time trend for the sth state. Δ is the first difference operator, where $\Delta \text{Turnout}_{mst} = \text{Turnout}_{mst} - \text{Turnout}_{mst-3}$ is the change in electoral turnout between the last election and the following one, recalling that municipal elections occur in a triennial basis. Time has been re-indexed to the next election, so the previous narrow election is now $t - 3$ and the causal effect in the previous section is pertained to $t - 1$. δ is the standard differences-in-differences estimate of the impact of having a narrow election in the mth municipality in the previous election on the following election. The variable NarrowOutcome is defined as follows: it takes the value of 1 for those municipalities that in the previous mayoral elections had a margin victory of 10 percentage or less, and where a given party has won, and zero otherwise. Two NarrowOutcome variables will be used in this analysis: Narrow PAN and Narrow PRD, these will measure whether previous electoral results yield some influence in the following election turnout. ϕ is the effect of the Petition rate on turnout. X is a matrix of controls, that are both varying at municipality and state level. These include municipal population, Presidential fixed effects, an indicator if a given state s is concurrently running gubernatorial elections or presidential elections, and the rate of unemployment at state level. ϵ is the municipal error term. Finally, γ is the parameter of interest, as it disentangles the change in turnout variation due to strike threats in the period prior to electoral year t.

The interpretation that can be given to the γ parameter is the variation due to the increased intensity in the state of industrial relations, as measured by strike threats for those municipalities that experienced a narrow electoral contest. We estimate the model separately for those municipalities that experienced a narrow right-wing or left-wing wins, and a final set of model estimates that include both differences-in-differences estimates in a single model.

Table 4 reports the results for this exercise. The estimates suggest there is no direct effect of party political incumbency on electoral turnout at subsequent elections. Strike threats are found to have a direct effect upon electoral turnout but once state time trends are introduced this effect disappears as in columns 3, 6, 9. However, the estimates in these columns suggest that that there

are substantial negative effects on turnout channelled only in those locations where there was a narrow electoral outcome for PAN or PRD. The γ coefficient suggests that for those municipalities who in the previous election had a right-wing mayor, exhibit a decline of electoral turnout of 0.499 of a percentage point per each additional strike threat per 10,000 of the municipal population. For those municipalities that where the left were won, strike threats decrease electoral turnout between election by 1.423 percentage points per additional strike threat.

Table 4: Triple Difference-in-Differences estimates of changes in Electoral Turnout (%)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Narrow PAN	-0.726	-1.523	-0.734				-0.691	-1.484	-0.721
	(1.076)	(0.940)	(0.805)				(1.081)	(0.946)	(0.811)
Narrow PAN×Petition Rate$_{t-1}$	-1.213***	-0.773**	-0.499*				-1.250***	-0.814***	-0.541*
	(0.422)	(0.308)	(0.308)				(0.408)	(0.297)	(0.298)
Narrow PRD				0.630	0.600	0.256	0.580	0.480	0.193
				(1.113)	(0.928)	(0.881)	(1.118)	(0.940)	(0.889)
Narrow PRD×Petition Rate$_{t-1}$				-1.872*	-1.770***	-1.423***	-1.961*	-1.823***	-1.479***
				(1.013)	(0.537)	(0.459)	(1.086)	(0.595)	(0.480)
Petition Rate$_{t-1}$	0.957***	0.427*	0.229	0.944***	0.462*	0.263	1.086***	0.549**	0.333
	(0.326)	(0.250)	(0.249)	(0.325)	(0.255)	(0.247)	(0.331)	(0.254)	(0.257)
Unemployment Rate$_{t-1}$		-0.510	-1.622**		-0.477	-1.634**		-0.523	-1.577**
		(0.426)	(0.686)		(0.427)	(0.681)		(0.425)	(0.680)
State Time trends	No	No	Yes	No	No	Yes	No	No	Yes
Presidency FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Year FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electoral Cycle FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.23	0.38	0.56	0.22	0.38	0.56	0.23	0.38	0.56
N	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,894
AIC	12718.23	12312.93	11753.36	12729.81	12323.12	11753.58	12714.11	12308.19	11751.18

NOTES: Regressions all follow general specification outlined in (14). The standard errors are reported in parentheses and are clustered at state level.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

I will interpret the model in column 9, as this accounts for important temporal variation, as well as disentangling the effects of the narrow electoral victories and petitions. The model itself also minimises the AIC, thus suggesting that this model has the best fit amongst those presented. Each marginal petition decreases electoral turnout in those municipalities where the PRD (PAN) won by 1.479 (0.541) percentage points per additional petition per 10,000 of the population. In order to get perspective on what these estimates imply we will now provide an illustration of the implied effect for municipalities where both PAN and PRD won narrow electoral victories.

Earlier in this paper the causal effect of narrow PRD and PAN victories was derived from (13) by the estimates of the β parameter. The estimand for γ is valid for all municipalities where a narrow electoral contest took place, however, the β estimate is only causal where the named parties (*viz.* PAN, PRD) won. Thus, a back-of-the-envelope calculation may be made evaluating the implied causal effect on the turnout of the following election by multiplying it by the γ estimate from equation (14).[35] Thus, we know that municipalities where a PAN mayor was elected by a narrow margin of ± 10 percentage points perceived a causal increase of 1.057 petitions per 10,000 of the population as suggested in column 6 of pane (a) of table 2. If we multiply both of these estimates this suggests that there is an decline of 0.547 percentage points in electoral turnout per 10,000 of the municipal population as a result of the increased number of petitions. The estimated standard error associated with this point estimate is 0.378. This suggests that the estimate is statistically significant at a 10% level. These estimates suggest that overall electoral turnout is negatively stimulated by additional strike threats.

Now, to derive the effect of a narrow left-wing victory. The coefficient in column 9 of table 4 suggests in municipalities that where PRD narrowly won perceive a decline in electoral turnout between elections for each additional petition per 10,000 of the population of 1.48 percentage points. From column 6 of table 6 we know that narrow PRD victories at the 10 percentage point margin increase the petition rate by 1.456 per 10,000 of the municipal population. Thus, if we take the product of both of these estimates which suggests that each additional petition *decreases* turnout by 2.15 percentage points. The standard error for this point estimate is 1.060, which suggests this finding is significant at 5%. The magnitude of this effect dominates that of a 1 percentage point increase in the state-level rate of unemployment.

This section had the explicit goal of demonstrating that the increases in the petition rate

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[35]To test the significance of this prediction the analytical variance can be derived using the delta method, this is found to be:
$$\text{V}(\hat{\beta} \cdot \hat{\gamma}) = \text{V}(\hat{\beta}) \cdot \text{V}(\hat{\gamma}) + \text{V}(\hat{\beta}) \cdot \hat{\gamma}^2 + \text{V}(\hat{\gamma}) \cdot \hat{\beta}^2$$

following narrow right- and left-wing victories matter. We have shown that whilst numerically these effects may appear small when these are evaluated at the average causal increases suggested in Section 5, these effects are non-trivial relative to other electoral year effects. Implicit in the calculations performed in this section, is the following causal chain: An narrow-win of PRD (PAN) election happens in time t, in time $t+2$ there are 1.456 (1.057) more strike threats in those contested municipalities; the additional strike threats stimulate decreases in electoral turnout for the election in $t+3$ by -2.15 (0.54) percentage points. Whilst in of themselves these magnitudes are not sufficient to swing the margin of the following election,, these findings suggest that unions via strike threats, may play an role in mobilising the electorate. If one considers that electoral advertising is strongly regulated by IFE, then this could potentially constitute illegal electoral campaigning.

7 Summary and Discussion

This paper set out to answer the following questions: Do Union strike threats follow the business cycle? Do Union strike threat follow political cycle? we addressed this question by exploiting the administrative records of the local jurisdiction Arbitration and Conciliation commissions that govern union activity in Mexico. Utilising this extensive database, we look at strike threats in the private sector, during a period of increased democratisation and political institution improvement. our findings are four-fold:

First, we provided a political economy model of union influence. This presents a game of incomplete information between the electorate and politicians. We innovated by allowing the electorate to be split along three dimensions: valence voters, partisan voters and union members. We found that rent-seeking incumbents can improve their chances of re-election by spending political resources to influence union meetings, instead of providing public goods. The extent to which they will do so, depends on the degree of democratisation and electoral competition. The greater these are the more likely politicians will seek to invest in influencing unions.

Second, given those findings we focus the relationship between politics on union activity. We find whether there are direct causal effects from close municipal elections to strike threats. We exploit the quasi-random nature of close municipal elections to conduct a RD exercise. This yields the finding that when the right or left- win this leads to an increase of 0.796 (1.218) petitions per 10,000 of the municipal population. If these are evaluated at the mean municipal populations where the right- and left-wing win then these effects suggest an increase of 10.2 (9.6) more petitions

than all other Municipalities. We find no change to strike threat behaviour for the centrist PRI party. This finding is found to be robust to the inclusion of state level controls, and alternate bandwidth specifications. This finding is particularly troublesome since a mayor has no control over any regulation regarding unions. Unions themselves should have no preferences, nor misuse petitions against Municipal Presidents.

The lack of a significant finding for the PRI party, suggests that there may be a direct partisan motive by unions and of executive discretion in the union leadership. We posit that contrary to the analysis of Bensusán and Middlebrook (2012a), 'officialist' unions continued their partisan support for the PRI. Whilst this did not necessarily translate into increased numbers of strikes, the evidence we provide suggests that the rate of strike threats increased. We argue that these strike petitions—a tool for bargaining—are misused for electoral purposes by the union leadership. In the final part of the analysis we demonstrate that the increased rate of threats two years after an election has an effect upon electoral turnout in the key municipalities where the PRI has a chance to recapture power. We employ a differences-in-differences approach. We compare those municipalities that had a close election, relative to those that did not. When this is interacted with petitions, we find that one extra marginal petition per 10,000 of the municipal population increases turnout in municipalities where there was a narrow win for the right (left) by 0.295 (-0.807) of a percentage point. This is an important finding, when a back-of-the-envelope calculation is performed for the average municipality where the right- (left-)wing win, it implies an increase (decrease) in electoral turnout of 0.540 (-2.15), which is sizeable when compared to the decline turnout due to having a 1 percentage point decline in the state-level of unemployment, where on average this decreases turnout by 1.58%.

Finally, we answer the question: Are trade unions a fast- or a slow-changing institution? The findings presented in this paper suggest that over the time period under investigation– when strong independent political institutions were being built—unions reflected the slow-changing nature of societal norms. They did not change their behaviour in the face of a changing political landscape. This is to some extent consistent with the findings in the literature that suboptimal institutions persist an the slow changing nature of cultural norms (see Nunn, 2009; Dell, 2010; Guiso et al., 2013; Alesina and Giuliano, 2015). However, unlike culture, unions can be reformed, just as with the institutional improvement surrounding the electoral authorities. In particular rules surrounding internal union democracy may be an area where legislative changes may reduce the agency problem which leads to a divergence between union leadership aims and the wishes of the rank-and-file.

A Proofs

Proof of lemma 1. The valence voter will always re-elect the incumbent after observing first period public provision of G_i^H when his posterior beliefs Π_i outweigh his prior beliefs π_i:

$$\Pr(g|T_i^H) = \Pi_i = \frac{\pi_i q_i}{\pi_i q_i + (1 - \pi_i)(1 - q_i)\lambda_i} > \pi_i. \tag{15}$$

Solving (15) for λ_i we get that

$$\Pi_i > \pi_i \Leftrightarrow \frac{q_i}{(1 - q_i)} > \lambda_i, \tag{16}$$

which, since $\lambda_i \in [0, 1]$, will always be the case as long as $q_i > \frac{1}{2}$. $\qquad \square$

Proof of lemma 2. Let us first look at a 'swing' valence voter s whose ideological bias makes him indifferent between the two parties so that, after observing (G_i^H, T_i^H) in period 1 and using (10), we know that for this voter

$$\gamma_i^s = \Pi_i - \pi_i - \delta_i. \tag{17}$$

All valence voters j with $\gamma_i^j \leqq \gamma_i^s$ thus prefer the incumbent grouping of politicians, since in this case it is always true that $\Pi_i > \pi_i + \delta_i + \gamma_i^s$. Consequently, given our distributional assumptions on γ_i, and using (4), the incumbent group of party p_i can expect to win an *overall* vote share κ_{p_i} after setting (G_i^H, T_i^H) in period 1 of

$$\kappa_{p_i} = \mathbb{E} \left(\Omega_i^1 \eta_{p_i} [Y_{p_i}(G_i)] + \Psi_i^1 \kappa_{p_i} + (1 - \Omega_i^1 - \Psi_)^1) \left(\gamma_i^s + \frac{1}{2} \right) \right), \tag{18}$$

keeping in mind that Ω_i^1 and Ψ_i^1 denotes the share of unionised and partisan voters in the total voting population, and that as a result, $(1 - \Omega_i^1 - \Psi_i^1)$ captures the valence voters' share. Plugging (18) into (17), and solving, we then obtain

$$\kappa_{p_i} = \omega_i \mathbb{E} (\eta_{p_i} [Y_{p_i}(G_i)]) + \psi_{p_i} + (1 - \omega_i - \psi_i) \left(\Pi_i - \pi_i - \delta_i + \frac{1}{2} \right), \tag{19}$$

so that we can also write out the probability of winning a majority of the overall vote share as

$$\Pr \left[\kappa_{p_i} \geqq \frac{1}{2} \right] = \Pr \left[\omega_i \mathbb{E} (\eta_{p_i} [Y_{p_i}(G_i)]) + \psi_{p_i} + (1 - \omega_i - \psi_i) \left(\Pi_i - \pi_i - \delta_i + \frac{1}{2} \right) \geqq \frac{1}{2} \right]. \tag{20}$$

Using (4), we can further derive the expected share that can be won of the priority vote by providing G_i^H, which gives us

$$\mathbb{E}\left(\eta_{p_i}\left[Y_{p_i}\left(G_i\right)\right]\right) = \rho\left[Y_{p_i}\left(G_i\right)\right]\left(\frac{1}{2}+\chi\right) + \left(1 - \rho\left[Y_{p_i}\left(G_i\right)\right]\right)\left(\frac{1}{2}-\chi\right) = \left(2\rho\left[Y_{p_i}\left(G_i\right)\right]-1\right)\chi + \frac{1}{2} > 0, \quad (21)$$

which, plugged into (20) yields

$$\text{Prob}\left[\kappa_{p_i} \geqq \frac{1}{2}\right] = \text{Prob}_{\delta_i}\left[\left(\frac{\omega_i\left(2\rho\left[Y_{p_i}\left(G_i\right)\right]-1\right)\chi}{\left(1-\omega_i-\psi_i\right)} - \frac{1}{2}\left(\frac{1-\omega_i-2\psi_{p_i}}{1-\omega_i-\psi_i}\right) + \frac{1}{2}\right) + \left(\Pi_i - \pi_i\right) \geqq \delta_i\right],$$
$$(22)$$

so that, setting $\left(\frac{\omega_i\left(2\rho\left[Y_{p_i}\left(G_i\right)\right]-1\right)\chi}{\left(1-\omega_i-\psi_i\right)} - \frac{1}{2}\left(\frac{1-\omega_i-2\psi_{p_i}}{1-\omega_i-\psi_i}\right) + \frac{1}{2}\right) = \alpha_{p_i}$, we get

$$\Pr\left[\kappa_{p_i} \geqq \frac{1}{2}\right] = \text{Prob}_{\delta_i}\left[\alpha_{p_i} + \left(\Pi_i - \pi_i\right) \geqq \delta_i\right]. \quad (23)$$

Using (23), and given our distributional assumptions on δ_i, the probability for the group of incumbents of winning the elections then becomes

$$\Pr\left[\kappa_{p_i} \geqq \frac{1}{2}\right] = \sigma_i\left(\alpha_{p_i} + \left(\Pi_i - \pi_i\right)\right) = \begin{cases} 1 & \text{if } \alpha_{p_i} + \left(\Pi_i - \pi_i\right) > \frac{1}{2\xi} \\ \frac{1}{2} + \xi\left(\alpha_i + \left(\Pi_i - \pi_i\right)\right) & \text{Otherwise} \\ 0 & \text{if } \alpha_{p_i} + \left(\Pi_i - \pi_i\right) < -\frac{1}{2\xi}. \end{cases} \quad (24)$$

$\square$

Proof of proposition 1. From section II we know that $Y_i = \nu_i R_i(G_i)$, where $R_i(0) = 0$. Since $\rho(Y_i = 0) = \frac{1}{2}$, and focusing on the expression for α_i given in lemma 2

$$\alpha_{p_i} = \left(\frac{\omega_i\left(2\rho\left[Y_{p_i}\left(G_i\right)\right]-1\right)\chi}{\left(1-\omega_i-\psi_i\right)} - \frac{1}{2}\left(\frac{1-\omega_i-2\psi_{p_i}}{1-\omega_i-\psi_i}\right) + \frac{1}{2}\right), \quad (25)$$

we know from (25) that $\alpha_{p_i} = 0$ when $G_i = 0$. Moreover, because $\frac{dY_i(G_i,\nu_i)}{dG_i} > 0$ and $\rho(Y_i)$ is increasing in Y_i, we have that $\frac{d\alpha_{p_i}(G_i,\nu_i,\omega_i,\chi)}{dG_i} > 0$ and $\alpha_{p_i}(G_i,\nu_i,\omega_i,\chi) > 0$ for all other possible values of G_i,ν_i,ω_i,χ, given that $\nu_i \in\,]0,1]$. From (25) we also learn that $\frac{d\alpha_{p_i}(G_i,\nu_i,\omega_i,\chi)}{d\nu_i} > 0$ and $\frac{d\alpha_{p_i}(G_i,\nu_i,\omega_i,\chi)}{d\omega_i} > 0$, which, together with the fact that $\alpha_i(G_i,\nu_i,\omega_i,\chi) > 0$ when $G_i = G_i^H$ as shown above, proves points 1) and 2) of proposition 1 as higher values of α_i increase the probability that condition (12) holds, which can be seen in (11) or lemma 2. Likewise, since lower marginal costs of public funds μ_i translate into higher public provision G_i^H following (1), and $\hat{r}_i = (H - L)G_i^H$, we know that $\frac{d\alpha_i(G_i,\nu_i,\omega_i,\chi)}{d\mu_i} > 0$ and $\frac{d\hat{r}_i(G_i)}{d\mu_i} > 0$, which proves point 3) of proposition 1 since both a higher r_i and α_i increase the probability that condition (12) holds. $\square$

B Full Local Linear Regression Results

This appendix reports the full results of the local linear parametric regressions reported in the main body of the text.

Table 5: Impact of narrow PAN election on strike petition rate

	Petition Rate +1 (1)	Petition Rate +1 (2)	Petition Rate +1 (3)	Petition Rate +2 (4)	Petition Rate +2 (5)	Petition Rate +2 (6)
PAN win	0.221	0.035	0.056	1.740***	0.978*	1.057*
	(0.186)	(0.191)	(0.194)	(0.605)	(0.587)	(0.589)
MoV	4.557	5.573	5.317	-10.105	-7.751	-9.409
	(5.964)	(5.963)	(6.065)	(18.059)	(17.953)	(17.718)
PAN win $\times$ MoV	-26.016***	-21.540**	-20.654**	-48.386*	-15.990	-11.795
	(9.141)	(9.346)	(8.906)	(27.135)	(26.425)	(25.836)
MoV^2	41.890	52.704	52.881	-171.177	-139.344	-150.217
	(57.179)	(56.954)	(57.286)	(151.756)	(149.029)	(147.589)
PAN win $\times$ MoV^2	138.802	86.860	78.826	623.043**	280.055	258.175
	(104.520)	(111.234)	(107.070)	(264.250)	(261.517)	(261.080)
PRD governor		0.333	0.325		-0.635	-0.695
		(0.219)	(0.218)		(0.491)	(0.505)
PRI governor		0.412*	0.402*		-0.452	-0.470
		(0.218)	(0.213)		(0.501)	(0.499)
Incumbent		-0.171	-0.239		-0.009	-0.184
		(0.134)	(0.178)		(0.241)	(0.259)
Workplace death rate		0.265*	0.269*		0.044	0.015
(per 10,000)		(0.142)	(0.145)		(0.120)	(0.119)
Unemployment rate (%)		0.042	0.043		0.302***	0.305***
		(0.045)	(0.044)		(0.088)	(0.088)
In coalition		0.287***	0.315***		1.148***	1.217***
		(0.111)	(0.110)		(0.255)	(0.260)
Constant	0.767***	0.314	0.053	2.055***	1.071	0.433
	(0.138)	(0.255)	(0.265)	(0.468)	(0.707)	(0.632)
R^2	0.01	0.02	0.03	0.03	0.06	0.07
N	2,025	2,025	2,025	2,025	2,025	2,025
Electoral Cycle FE	No	No	Yes	No	No	Yes
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes

NOTES: Regressions all follow general specification outlined in (13). The standard errors are clustered at municipal level and are reported in parentheses.

Narrow wins are defined as those where the margin of victory is within the window [-.1,.1], for alternate specifications which vary this assumption please see table 8.

Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t, that is 12–24 months or 25–36 months after an election. The unemployment level data is determined at state level and is derived from the ENEU and ENOE for the appropriate time periods. The work place deaths data are derived from administrative records for those unexplained deaths that occurred in a manufacturing or construction site, and are defined per 10,000 of the municipal population.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

Table 6: Impact of narrow PRD election on strike petition rate

	Petition Rate +1 (1)	Petition Rate +1 (2)	Petition Rate +1 (3)	Petition Rate +2 (4)	Petition Rate +2 (5)	Petition Rate +2 (6)
PRD win	0.278*	0.251*	0.264*	1.532**	1.263**	1.456**
	(0.142)	(0.141)	(0.146)	(0.677)	(0.624)	(0.668)
MoV	1.890	2.542	2.388	11.556	13.681	9.727
	(4.517)	(4.662)	(4.698)	(14.230)	(14.225)	(13.756)
PRD win $\times$ MoV	-12.210*	-11.702*	-12.179*	-110.489***	-100.845***	-100.894***
	(6.816)	(6.963)	(7.262)	(38.680)	(37.046)	(37.318)
MoV^2	22.464	27.762	25.834	93.096	112.898	78.118
	(41.110)	(42.388)	(42.645)	(126.905)	(127.687)	(123.935)
PRD win $\times$ MoV^2	54.993	41.667	48.054	828.693**	706.591**	765.870**
	(61.572)	(61.443)	(64.487)	(354.702)	(329.549)	(338.706)
PRI governor		0.079	0.068		0.316	0.354*
		(0.049)	(0.049)		(0.200)	(0.195)
PAN governor		-0.053	-0.073		-0.347	-0.280
		(0.089)	(0.095)		(0.299)	(0.310)
Incumbent		0.089	0.086		-0.089	-0.256
		(0.079)	(0.086)		(0.166)	(0.180)
Workplace death rate (per 10,000)		0.012	0.003		0.013	0.004
		(0.061)	(0.059)		(0.122)	(0.120)
Unemployment rate (%)		0.008	0.009		0.132**	0.110*
		(0.033)	(0.033)		(0.057)	(0.059)
In coalition		0.112	0.125*		0.718**	0.726**
		(0.074)	(0.073)		(0.309)	(0.323)
Constant	0.369***	0.251	0.240	1.613***	0.801*	0.044
	(0.106)	(0.181)	(0.187)	(0.327)	(0.413)	(0.617)
R^2	0.02	0.03	0.04	0.07	0.08	0.10
N	1,465	1,465	1,465	1,465	1,465	1,465
Electoral Cycle FE	No	No	Yes	No	No	Yes
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes

NOTES: Regressions all follow general specification outlined in (13). The standard errors are clustered at municipal level and are reported in parentheses.

Narrow wins are defined as those where the margin of victory is within the window [-.1,.1], for alternate specifications which vary this assumption please see table 8.

Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t, that is 12–24 months or 25–36 months after an election. The unemployment level data is determined at state level and is derived from the ENEU and ENOE for the appropriate time periods. The work place deaths data are derived from administrative records for those unexplained deaths that occurred in a manufacturing or construction site, and are defined per 10,000 of the municipal population.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

Table 7: Impact of narrow PRI election on strike petition rate

	Petition Rate +1 (1)	Petition Rate +1 (2)	Petition Rate +1 (3)	Petition Rate +2 (4)	Petition Rate +2 (5)	Petition Rate +2 (6)
PRI win	-0.076	-0.063	-0.069	-0.779	-0.709	-0.737
	(0.141)	(0.139)	(0.141)	(0.731)	(0.716)	(0.712)
MoV	2.551	2.989	2.960	6.592	4.450	3.519
	(5.184)	(5.219)	(5.162)	(14.230)	(14.007)	(14.087)
PRI win $\times$ MoV	-2.174	-2.834	-2.767	19.759	21.318	20.746
	(6.545)	(6.693)	(6.544)	(34.787)	(35.052)	(34.040)
MoV^2	8.931	11.522	11.123	66.616	42.329	27.494
	(53.064)	(52.918)	(51.870)	(137.834)	(136.387)	(136.937)
PRI win $\times$ MoV^2	-4.437	-5.521	-5.912	-294.975	-252.481	-221.794
	(69.530)	(69.102)	(70.484)	(304.077)	(283.626)	(264.974)
PRD governor		-0.044	-0.043		-0.508*	-0.538*
		(0.054)	(0.054)		(0.287)	(0.291)
PAN governor		-0.114	-0.110		0.105	0.143
		(0.138)	(0.138)		(0.281)	(0.290)
Incumbent		0.173*	0.138		0.677*	0.414
		(0.095)	(0.096)		(0.390)	(0.273)
Workplace death rate		0.125	0.140		-0.054	-0.038
(per 10,000)		(0.102)	(0.103)		(0.105)	(0.087)
Unemployment rate (%)		0.077**	0.078**		0.036	0.022
		(0.038)	(0.038)		(0.273)	(0.282)
In coalition		-0.168	-0.163		0.594	0.592
		(0.110)	(0.107)		(0.687)	(0.658)
Constant	0.582***	0.266*	0.179	1.924***	1.218*	0.683*
	(0.093)	(0.136)	(0.140)	(0.270)	(0.661)	(0.401)
R^2	0.00	0.01	0.01	0.00	0.01	0.01
N	2,984	2,984	2,984	2,984	2,984	2,984
Electoral Cycle FE	No	No	Yes	No	No	Yes
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes

NOTES: Regressions all follow general specification outlined in (13). The standard errors are clustered at municipal level and are reported in parentheses.

Narrow wins are defined as those where the margin of victory is within the window [-.1,.1], for alternate specifications which vary this assumption please see table 8.

Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t, that is 12–24 months or 25–36 months after an election. The unemployment level data is determined at state level and is derived from the ENEU and ENOE for the appropriate time periods. The work place deaths data are derived from administrative records for those unexplained deaths that occurred in a manufacturing or construction site, and are defined per 10,000 of the municipal population.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

C   Alternative Bandwidths and Functional Forms of RDD

This appendix reports the results of a series of robustness checks which vary the functional form of the RD design. Tables 8 and 9 provide narrower bandwidths for each of the three main political parties, where each cell reports the crucial $\hat{\beta}$ parameter. This is estimated and reported for both petitions in $t+1$ and $t+2$. It is clear that the results are robust to either the inclusion or exclusion of covariates, and in general the results are not dependent on the length of the estimation window. Indeed the narrowing of the bandwidth shows that the effects for these extremely narrow windows are larger than those reported by 10 percentage point window. With regards to the functional form of the RD local linear regression, Tables 10 and 11 suggest that when interpreting the optimal polynomial, the results of the main text remain unaltered. There is a causal effect from narrow elections on Strike threat rates in municipalities where PAN and PRD won by a margin of 10 percentage points or less. If anything, interpreting the optimal polynomial estimates as determined by the AIC[36] suggest larger estimates than those reported in the main body of the text.

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[36]Lee and Lemieux (2010) suggest using Akaike's cross-validation criterion, however, this is shown by Stone (1977) to be asymptotically minimised by minimising the AIC.

Table 8: Impact of alternate bandwidths in local linear regression on narrow election results with no controls

MoV	PAN		PRD		PRI	
	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2
	(1)	(2)	(3)	(4)	(5)	(6)
2%	0.656	5.368***	1.347***	0.727	-0.008	-0.034
	(0.419)	(1.740)	(0.382)	(1.265)	(0.454)	(1.039)
N	562	562	432	432	650	650
3%	0.666**	4.558***	1.029***	1.511	-0.779*	-1.990*
	(0.334)	(1.239)	(0.327)	(1.037)	(0.459)	(1.096)
N	747	747	560	560	959	959
4%	0.586**	3.962***	0.506	0.531	-0.473	-1.302
	(0.293)	(1.069)	(0.335)	(0.940)	(0.326)	(0.825)
N	894	894	669	669	1,225	1,225
5%	0.356	3.336***	0.603**	1.513	-0.227	0.330
	(0.267)	(0.901)	(0.245)	(0.938)	(0.260)	(0.961)
N	1,079	1,079	809	809	1,538	1,538
6%	0.255	2.657***	0.443**	2.002**	-0.127	-0.918
	(0.219)	(0.744)	(0.204)	(0.951)	(0.200)	(0.625)
N	1,254	1,254	933	933	1,814	1,814
7%	0.301	1.885***	0.364*	1.909**	-0.094	-0.866
	(0.194)	(0.727)	(0.190)	(0.882)	(0.179)	(0.905)
N	1,471	1,471	1,075	1,075	2,150	2,150
8%	0.212	2.032***	0.295*	1.866**	-0.085	-0.982
	(0.195)	(0.685)	(0.172)	(0.826)	(0.169)	(0.879)
N	1,667	1,667	1,193	1,193	2,425	2,425
9%	0.225	1.939***	0.281*	1.767**	-0.048	-0.862
	(0.189)	(0.635)	(0.156)	(0.748)	(0.152)	(0.804)
N	1,850	1,850	1,329	1,329	2,719	2,719
10%	0.221	1.740***	0.278*	1.532**	-0.076	-0.779
	(0.186)	(0.605)	(0.142)	(0.677)	(0.141)	(0.731)
N	2,025	2,025	1,465	1,465	2,984	2,984

NOTES: Regressions all follow general specification outlined in (13), with no covariates and replicate the functional form of columns 1 and 4 of tables 5,6 and 7. The standard errors reported in parentheses are clustered at the municipal level.
 Each column reports the estimate obtained for the parameter β in (13) for the appropriate time periods as given in the column heading.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

Table 9: Impact of alternate bandwidths in local linear regression on narrow election results with controls

MoV	PAN		PRD		PRI	
	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2
	(1)	(2)	(3)	(4)	(5)	(6)
2%	0.886	4.603**	1.589***	1.465	-0.134	0.930
	(0.574)	(2.027)	(0.406)	(0.936)	(0.446)	(1.193)
N	562	562	432	432	650	650
3%	0.950*	4.030***	1.028***	1.667**	-0.798*	-1.495
	(0.540)	(1.387)	(0.327)	(0.812)	(0.450)	(1.041)
N	747	747	560	560	959	959
4%	0.747*	3.304***	0.409	0.610	-0.489	-1.007
	(0.419)	(1.143)	(0.355)	(0.801)	(0.317)	(0.781)
N	894	894	669	669	1,225	1,225
5%	0.162	2.552***	0.581**	1.239*	-0.225	-0.120
	(0.349)	(0.928)	(0.255)	(0.723)	(0.260)	(0.772)
N	1,079	1,079	809	809	1,538	1,538
6%	-0.072	1.529*	0.456**	1.838**	-0.053	-0.979
	(0.286)	(0.844)	(0.212)	(0.777)	(0.204)	(0.836)
N	1,254	1,254	933	933	1,814	1,814
7%	0.050	0.967	0.372*	1.908**	-0.051	-0.881
	(0.231)	(0.764)	(0.204)	(0.812)	(0.176)	(0.995)
N	1,471	1,471	1,075	1,075	2,150	2,150
8%	-0.012	1.190*	0.288	1.782**	-0.059	-0.941
	(0.214)	(0.691)	(0.183)	(0.772)	(0.166)	(0.907)
N	1,667	1,667	1,193	1,193	2,425	2,425
9%	0.057	1.178*	0.267*	1.640**	-0.030	-0.798
	(0.200)	(0.617)	(0.162)	(0.713)	(0.150)	(0.755)
N	1,850	1,850	1,329	1,329	2,719	2,719
10%	0.056	1.057*	0.264*	1.456**	-0.069	-0.737
	(0.194)	(0.589)	(0.146)	(0.668)	(0.141)	(0.712)
N	2,025	2,025	1,465	1,465	2,984	2,984

NOTES: Regressions all follow general specification outlined in (13), with covariates and replicate the functional form of columns 3 and 6 of tables 5,6 and 7. The standard errors reported in parentheses are clustered at the municipal level.
Each column reports the estimate obtained for the parameter β in (13) for the appropriate time periods as given in the column heading.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

Table 10: Impact of alternate polynomial functional forms on narrow election results with no controls

	PAN		PRD		PRI	
	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2
	(1)	(2)	(3)	(4)	(5)	(6)
Polynomial spline of order:						
Zero	-0.081	0.618***	0.086*	0.207	0.050	-0.121
	(0.107)	(0.200)	(0.049)	(0.128)	(0.066)	(0.121)
N	2,025	2,025	1,465	1,465	2,984	2,984
AIC	6,749.470	9,489.294	1,828.861	5,658.524	9,266.278	17,471.887
One	0.111	1.037**	0.242**	0.800**	-0.069	-0.330
	(0.142)	(0.449)	(0.097)	(0.358)	(0.098)	(0.350)
AIC	6,745.210	9,465.081	1,815.892	5,631.381	9,268.344	17,475.278
Two	0.221	1.740***	0.278*	1.532**	-0.076	-0.779
	(0.186)	(0.605)	(0.142)	(0.677)	(0.141)	(0.731)
AIC	6,742.272	9,456.979	1,813.233	5,568.928	9,272.309	17,477.915
Three	0.259	2.627***	0.383**	1.878**	-0.133	-0.602
	(0.198)	(0.760)	(0.179)	(0.820)	(0.188)	(0.597)
AIC	6,741.506	9,441.413	1,793.293	5,541.002	9,274.155	17,480.774
Four	0.510**	3.374***	0.379*	1.675*	-0.421*	0.135
	(0.239)	(0.858)	(0.207)	(0.877)	(0.251)	(0.872)
AIC	6,740.669	9,425.681	1,776.923	5,538.304	9,273.513	17,481.532
Five	0.480**	3.219***	0.370*	1.684**	-0.391	0.037
	(0.233)	(0.848)	(0.202)	(0.858)	(0.239)	(0.744)
AIC	6,740.618	9,428.848	1,778.385	5,539.287	9,273.062	17,481.675
Optimal order of the polynomial	5	4	4	1	0	0
N	2,025	2,025	1,465	1,465	2,984	2,984

NOTES: Regressions all follow general specification outlined in (13), with no covariates and replicate the functional form of columns 1 and 4 of tables 5,6 and 7. The bandwidth for the local linear regression lies within the window [-.1,.1]. The standard errors reported in parentheses are clustered at the municipal level. Optimal polynomial is that which minimises the AIC.
Each column reports the estimate obtained for the parameter β in (13) for the appropriate time periods as given in the column heading.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

Table 11: Impact of alternate polynomial functional forms on narrow election results with controls

	PAN		PRD		PRI	
	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2	Petitions Rate +1	Petitions Rate +2
	(1)	(2)	(3)	(4)	(5)	(6)
Polynomial spline of order:						
Zero	-0.140	0.464***	0.090	0.149	0.062	-0.097
	(0.113)	(0.178)	(0.056)	(0.130)	(0.069)	(0.119)
N	2,025	2,025	1,465	1,465	2,984	2,984
AIC	6,728.720	9,398.945	1,826.981	5,607.759	9,255.009	17,468.119
One	-0.011	0.701*	0.227**	0.685**	-0.061	-0.398
	(0.147)	(0.421)	(0.099)	(0.341)	(0.098)	(0.389)
AIC	6,730.084	9,391.739	1,818.676	5,590.100	9,256.787	17,471.064
Two	0.056	1.057*	0.264*	1.456**	-0.069	-0.737
	(0.194)	(0.589)	(0.146)	(0.668)	(0.141)	(0.712)
AIC	6,730.487	9,394.067	1,816.772	5,540.195	9,260.733	17,474.126
Three	0.077	1.753**	0.382**	1.812**	-0.096	-0.593
	(0.214)	(0.756)	(0.189)	(0.808)	(0.187)	(0.637)
AIC	6,731.975	9,389.644	1,799.602	5,519.977	9,262.945	17,476.715
Four	0.329	2.440***	0.395*	1.639*	-0.392	0.041
	(0.274)	(0.851)	(0.218)	(0.858)	(0.248)	(0.739)
AIC	6,735.508	9,384.596	1,780.858	5,520.891	9,261.950	17,477.941
Five	0.298	2.273***	0.382*	1.651**	-0.362	-0.045
	(0.267)	(0.844)	(0.212)	(0.839)	(0.237)	(0.651)
AIC	6,733.441	9,386.974	1,782.399	5,519.698	9,261.500	17,480.107
Optimal order of the polynomial	0	4	4	5	0	0
N	2,025	2,025	1,465	1,465	2,984	2,984

NOTES: Regressions all follow general specification outlined in (13), with covariates and replicate the functional form of columns 3 and 6 of tables 5,6 and 7. The bandwidth for the local linear regression lies within the window [-.1,.1]. The standard errors reported in parentheses are clustered at the municipal level. Optimal polynomial is that which minimises the AIC.
 Each column reports the estimate obtained for the parameter β in (13) for the appropriate time periods as given in the column heading.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

D   Continuity of Covariates

This appendix reports the results of a series of robustness tests for spuriousness in the RD design. A concern may be that the effect observed is spuriously discontinuous. It has been suggested in the RDD literature that one may visually inspect the balance of the covariates across the discontinuity (Lee and Lemieux, 2010). If one finds that there is no discontinuous effect on the covariatese, then, the RD design is valid and the covariates may be included in the local linear regressions. Below we reproduce such diagrams for each political party (*viz.* PAN, PRD, PRI). In all three cases, there is no visible discontinuity in the covariates along the forcing variable. This suggests that the RD findings reported in the text are not spurious, and the rate of unexplained workplace deaths at municipal levels, and the state level unemployment rates are valid covariates.
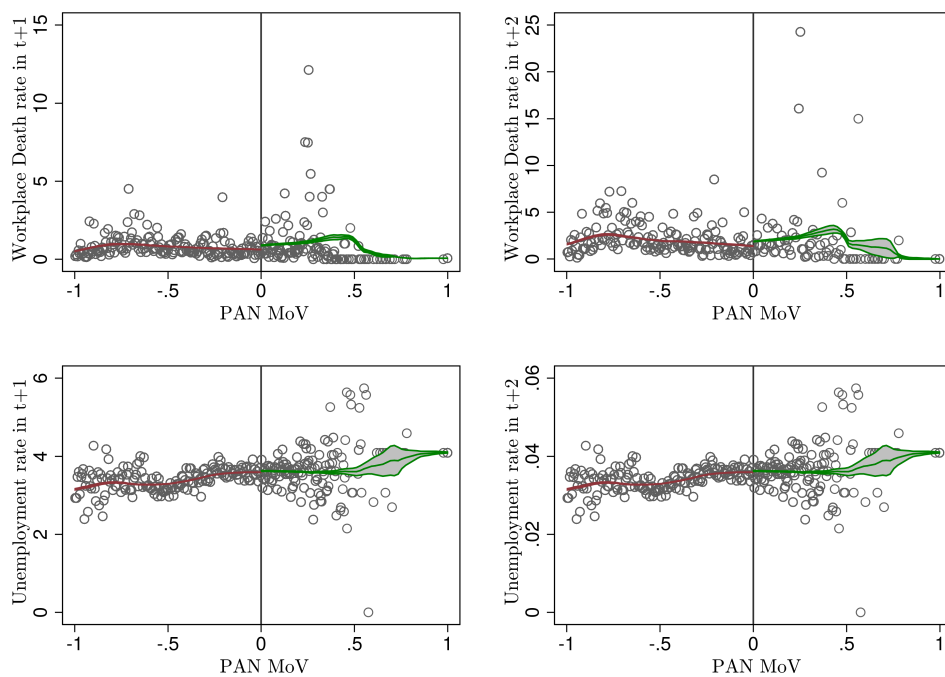
Figure 6: Continuity PAN Covariates
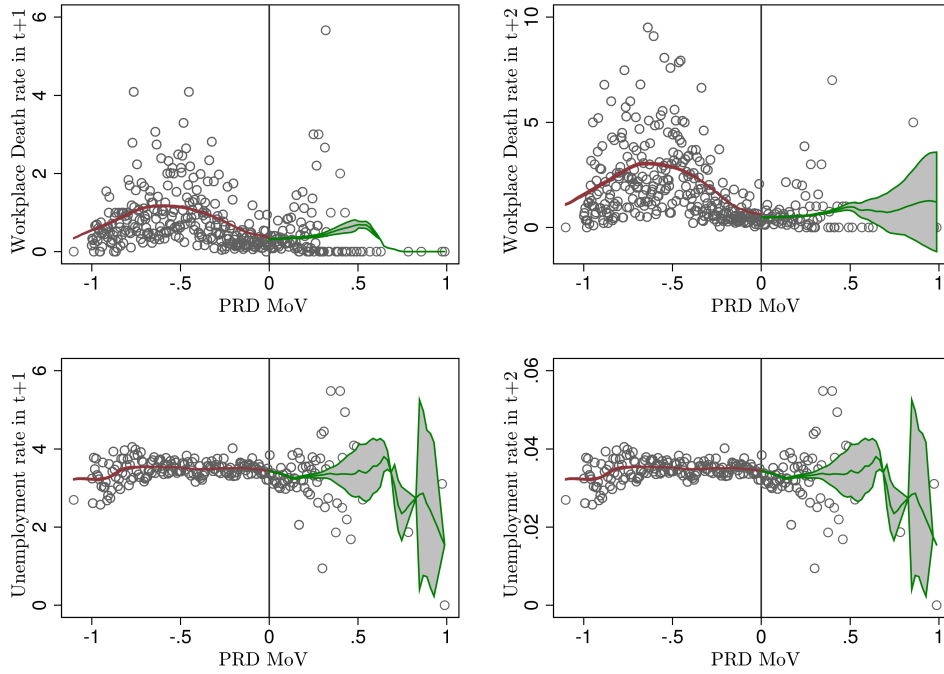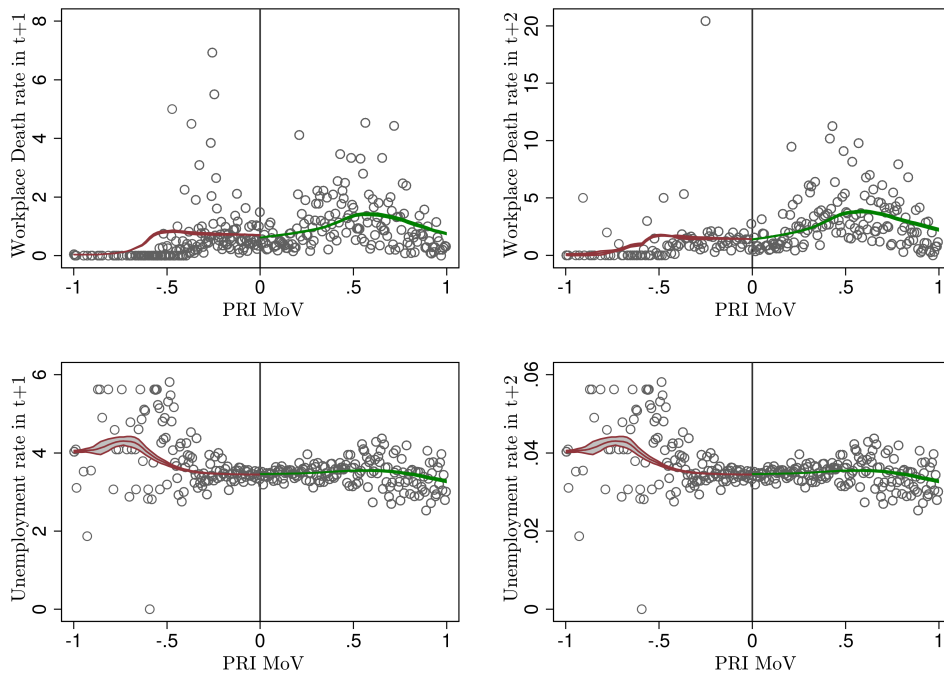
Figure 7: Continuity PRD Covariates

Figure 8: Continuity PRI Covariates

E   Non-parametric regression discontinuity

The tables in this appendix report the results of non-parametric estimation of the sharp RDD for each political party using both the Imbens and Kalyanaraman (2012) and Calonico et al. (2014c) optimal bandwidth estimators. These were implemented using `-rdrobust-` as outlined in outlined in Calonico et al. (2014b).

Table 12: Impact of narrow PAN elections on strike petition rate, non parametric estimates

	Petition Rate +1		Petition Rate +2	
	IK BW	CCT BW	IK BW	CCT BW
All Union	0.156	0.143	1.192**	1.250**
	(0.151)	(0.146)	(0.535)	(0.496)
h	0.197	0.124	0.157	0.122
N	3,414	2,427	2,895	2,392
Independent Union	0.039	0.047	-0.168	-0.185
	(0.047)	(0.047)	(0.263)	(0.255)
h	0.226	0.129	0.292	0.305
N	3,759	2,496	4,397	4,526
Officialist Union	0.099	0.105	1.312***	1.421***
	(0.128)	(0.129)	(0.421)	(0.434)
h	0.189	0.133	0.129	0.104
N	3,300	2,558	2,491	2,095

NOTES: Regressions are all estimated using non-parametric methods outlined in Calonico et al. (2014b).

Narrow wins here are optimally computed using the Imbens and Kalyanaraman (2012) and Calonico et al. (2014c) bandwidth estimators, these are columns IK and CCT, respectively where the reported parameter h is the bandwidth utilised.

Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t. The standard errors reported below in parentheses are the result of the Calonico et al. (2014c) robust-bias corrected procedure.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

Table 13: Impact of narrow PRD elections on strike petition rate, non parametric estimates

	Petition Rate +1		Petition Rate +2	
	IK BW	CCT BW	IK BW	CCT BW
All Union	0.143	0.117	1.445***	1.966***
	(0.148)	(0.182)	(0.391)	(0.476)
h	0.270	0.107	0.143	0.059
N	3,063	1,541	1,913	920
Independent Union	-0.023	-0.037	-0.093	-0.095
	(0.071)	(0.080)	(0.110)	(0.100)
h	0.226	0.163	0.113	0.125
N	2,717	2,126	1,603	1,720
Officialist Union	0.140	0.204*	1.683***	2.076***
	(0.111)	(0.114)	(0.376)	(0.435)
h	0.199	0.084	0.146	0.054
N	2,462	1,238	1,956	873

NOTES: Regressions are all estimated using non-parametric methods outlined in Calonico et al. (2014b).
Narrow wins here are optimally computed using the Imbens and Kalyanaraman (2012) and Calonico et al. (2014c) bandwidth estimators, these are columns IK and CCT, respectively where the reported parameter h is the bandwidth utilised.
Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t. The standard errors reported below in parentheses are the result of the Calonico et al. (2014c) robust-bias corrected procedure.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

Table 14: Impact of narrow PRI elections on strike petition rate, non parametric estimates

	Petition Rate +1		Petition Rate +2	
	IK BW	CCT BW	IK BW	CCT BW
All Union	-0.029	-0.061	-0.390	-0.153
	(0.170)	(0.129)	(0.435)	(0.411)
h	0.161	0.145	0.212	0.173
N	4,359	4,018	5,158	4,554
Independent Union	0.020	0.018	-0.075	0.131
	(0.043)	(0.047)	(0.106)	(0.178)
h	0.151	0.193	0.224	0.161
N	4,159	4,886	5,311	4,354
Officialist Union	-0.033	-0.049	-0.319	-0.291
	(0.309)	(0.104)	(0.484)	(0.298)
h	0.298	0.149	0.198	0.160
N	6,048	4,113	4,962	4,332

NOTES: Regressions are all estimated using non-parametric methods outlined in Calonico et al. (2014b).
Narrow wins here are optimally computed using the Imbens and Kalyanaraman (2012) and Calonico et al. (2014c) bandwidth estimators, these are columns IK and CCT, respectively where the reported parameter h is the bandwidth utilised.
Each column reports the estimate obtained for the Petition rate per 10,000 of population in $t+1$ and $t+2$ in a given municipality that had an election in t. The standard errors reported below in parentheses are the result of the Calonico et al. (2014c) robust-bias corrected procedure.

***, **, * denote statistical significance at the 1%, 5% and 10%, respectively.

References

Acemoglu, D., D. Cantoni, S. Johnson, and J. A. Robinson (2011, December). The Consequences of Radical Reform: The French Revolution. *American Economic Review 101*(7), 3286–3307.

Acemoglu, D., S. Johnson, and J. A. Robinson (2001, December). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review 91*(5), 1369–1401.

Acemoglu, D., S. Johnson, and J. A. Robinson (2006). Institutions as the Fundamental Cause of Long-Run Growth. In P. Aghion and S. A. Durlauf (Eds.), *Handbook of Economic Growth*, Volume 1A, pp. 385–472. North Holland: Elsevier.

Acemoglu, D., S. Johnson, J. A. Robinson, and Y. Thaicharoen (2003). *Journal of Monetary Economics 50*(1), 49–123.

Acemoglu, D. and J. Robinson (2010). The Role of Institutions in Growth and Development. *Review of Economics and Institutions 1*(2).

Acemoglu, D. and J. A. Robinson (2008, March). Persistence of Power, Elites, and Institutions. *American Economic Review 98*(1), 267–293.

Acemoglu, D. and J. A. Robinson (2012). *Why Nations Fail: The Origins of Power, Prosperity and Poverty.* London: Profile Books.

Acemoglu, D., D. Ticchi, and A. Vindigni (2010, January). A Theory of Military Dictatorships. *American Economic Journal: Macroeconomics 2*(1), 1–42.

Aghion, P., Y. Algan, and P. Cahuc (2011, 02). Civil Society And The State: The Interplay Between Cooperation And Minimum Wage Regulation. *Journal of the European Economic Association 9*(1), 3–42.

Ahmad, E. (2006). *Handbook of fiscal federalism.* Edward Elgar Publishing.

Alesina, A. and P. Giuliano (2015, December). Culture and Institutions. *Journal of Economic Literature 53*(4), 898–944.

Alesina, A. and G. Tabellini (2008). Bureaucrats or politicians? part ii: Multiple policy tasks. *Journal of Public Economics 92*(3), 426–447.

Bandiera, O. and G. Levy (2011). Diversity and the power of the elites in democratic societies: Evidence from Indonesia. *Journal of Public Economics 95*(11), 1322–1330.

Barba García, H. (2004). La contratación colectiva en México. In J. A. Bouzas Ortiz (Ed.), *La reforma laboral que necesitamos*, Chapter 6, pp. 123–183. Mexico City: Universidad Nacional Autónoma de México.

Batu, M. (2017, September). Poverty and the Colonial Origins of Elite Capture: Evidence from Philippine Provinces. Working Papers 1708, University of Windsor, Department of Economics.

Bensusán, G. and K. J. Middlebrook (2012a). El Sindicalismo y la democratización en México. *Foro Internacional 52*(4), 796–835.

Bensusán, G. and K. J. Middlebrook (2012b). Organized Labour and Politics in Mexico. In R. A. Camp (Ed.), *Oxford Handbook of Mexican Politics*, pp. 335–364. Oxford: Oxford University Press.

Bensusán, G. and K. J. Middlebrook (2012c). *Organized Labour and Politics in Mexico: Changes, Continuities and Contradictions*. London: Institute for the study of the Americas.

Besley, T. (2007). *Principled agents?: The political economy of good government*. Oxford University Press.

Besley, T. and R. Burgess (2001). Political agency, government responsiveness and the role of the media. *European Economic Review 45*(4), 629–640.

Besley, T., T. Persson, and D. M. Sturm (2010). Political competition, policy and growth: theory and evidence from the us. *The Review of Economic Studies 77*(4), 1329–1352.

Boffa, F., A. Piolatto, and G. A. Ponzetto (2016). Political centralization and government accountability. *The Quarterly Journal of Economics 131*(1), 381–422.

Botero, J. C., S. Djankov, R. L. Porta, F. L. de Silanes, and A. Shleifer (2004). The Regulation of Labor. *The Quarterly Journal of Economics 119*(4), 1339–1382.

Burton, J. (1984). The Economic Analysis of the Trade Union as a Political Institution. In J.-J. Rosa (Ed.), *The Economics of Trade Unions: New Directions*, Chapter Chapter 6. New York: Kluwer Nijhoff.

Calonico, S., M. D. Cattaneo, and R. Titiunik (2014a, December). Optimal Data-Driven Regression Discontinuity Plots. *Journal of the American Statistical Association 110*(512), 1753–1769.

Calonico, S., M. D. Cattaneo, and R. Titiunik (2014b, December). Robust data-driven inference in the regression-discontinuity design. *Stata Journal 14*(4), 909–946.

Calonico, S., M. D. Cattaneo, and R. Titiunik (2014c, November). Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs. *Econometrica 82*, 2295–2326.

Camp, R. A. (2003). *Politics in Mexico: The Democratic Transformation* (Fourth ed.). Oxford: Oxford University Press.

Camp, R. A. (2012). The Democratic Transformation of Mexican Politics. In R. A. Camp (Ed.), *Oxford Handbook of Mexican Politics*, pp. 3–27. Oxford: Oxford University Press.

Cattaneo, M. D., M. Jansson, and X. Ma (2016, January). Simple Local Regression Distribution Estimators with an Application to Manipulation Testing. Working paper, University of Michigan.

Chattharakul, A. (2010). Thai electoral campaigning: Vote-canvassing networks and hybrid voting. *Journal of Current Southeast Asian Affairs 29*(4), 67–95.

Dell, M. (2010, November). The Persistent Effects of Peru's Mining Mita. *Econometrica 78*(6), 1863–1903.

Dell, M. (2015). Trafficking networks and the mexican drug war. *American Economic Review 105*(6), 1738–1779.

Djankov, S., R. L. Porta, F. L. de Silanes, and A. Shleifer (2002). The Regulation of Entry. *The Quarterly Journal of Economics 117*(1), 1–37.

Downey, M. (2017, 06). Losers Go to Jail: Congressional Elections and Union Officer Prosecutions . Job Market Paper MIT.

Downs, A. (1957). *An Economic Theory of Democracy*. New York: Harper and Row.

Eisenstadt, T. A. and J. Yelle (2012). Ulysses, the Sirens and Mexico's Judiciary: Increasing Precommitments to Strengthen the Rule of Law. In R. A. Camp (Ed.), *Oxford Handbook of Mexican Politics*, pp. 210–233. Oxford: Oxford University Press.

Fairris, D. (2006). Union Voice Effects in Mexico. *British Journal of Industrial Relations 44*(4), 781–800.

Fairris, D. (2007). ¿Que hacen los sindicatos en México? *Estudios Económicos 22*(2), 185–240.

Feigenbaum, J., A. Hertel-Fernandez, and V. Williamson (2018, January). From the bargaining table to the ballot box: Political effects of right to work laws. Working Paper 24259, National Bureau of Economic Research.

Finkel, J. (2005). Judicial reform as insurance policy: Mexico in the 1990s. *Latin American Politics and Society 47*(1), 87–113.

Freeman, R. B. (2010). Labor Regulations, Unions, and Social Protection in Developing Countries: Market Distortions or Efficient Institutions? In D. Rodrik and M. Resenzweig (Eds.), *Handbook of Development Economics*, Volume V, Chapter 70, pp. 4657–4702. North Holland: Elsevier.

Freeman, R. B. and J. L. Medoff (1984). *What Do Unions Do?* New York: Basic Books.

Gelman, A. and G. Imbens (2014, August). Why high-order polynomials should not be used in regression discontinuity designs. Working Paper 20405, National Bureau of Economic Research.

Gillingham, P. (2012). Mexican Elections, 1910–1994: Voters, Violence and Veto Power. In R. A. Camp (Ed.), *Oxford Handbook of Mexican Politics*, pp. 53–76. Oxford: Oxford University Press.

Guiso, L., P. Sapienza, and L. Zingales (2013). Long-term Persistence. Technical report.

Hindriks, J. and B. Lockwood (2009). Decentralization and electoral accountability: incentives, separation and voter welfare. *European Journal of Political Economy 25*(3), 385–397.

Hirsch, B. T. and J. T. Addison (1986). *The Economic Analysis of Unions: New Approaches and Evidence.* Winchester, MA: Allen & Unwin.

Imbens, G. and K. Kalyanaraman (2012). Optimal bandwidth choice for the regression discontinuity estimator. *The Review of Economic Studies 79*(3), 933–959.

Imbens, G. W. and T. Lemieux (2008, February). Regression discontinuity designs: A guide to practice. *Journal of Econometrics 142*(2), 615–635.

La Porta, R., F. Lopez-de Silanes, A. Shleifer, and R. W. Vishny (1998, December). Law and Finance. *Journal of Political Economy 106*(6), 1113–1155.

Larreguy, H., C. E. Montiel Olea, and P. Querubin (2017). Political brokers: Partisans or agents? evidence from the mexican teachers' union. *American Journal of Political Science 61*(4), 877–891.

Lastra Lastra, J. M. (2002a). El sindicalismo en méxico. In J. L. Soberanes Fernández (Ed.), *Annuario Mexicano de Historia del Derecho* (1st ed.), Volume XIV, Chapter 2. Mexico City: Universidad Autonoma de México.

Lastra Lastra, J. M. (2002b). Inconstitucionalidad de la cláusula de exclusión. In P. Kurczyn and M. C. Mácias Vázquez (Eds.), *Libertad Sindical: Cláusula de Exclusión*, Chapter 4, pp. 39–59. Mexico City: UNAM Centro de Investigaciones Jurídicas.

Lee, D. S. (2008). Randomized experiments from non-random selection in U.S. House elections. *Journal of Econometrics 142*(2), 675–697.

Lee, D. S. and T. Lemieux (2010, June). Regression Discontinuity Designs in Economics. *Journal of Economic Literature 48*(2), 281–355.

Linz, J. J. and A. Stepan (1996). *Problems of Democratic Transition and Consolidation: Southern Europe, South America, and Post-Communist Europe.* Johns Hopkins University Press.

Lockwood, B. (2005). A note on the hybrid equilibrium in the besley-smart model.

Lujambio, A. (2001). Democratization through Federalism? The National Action Party Strategy 1939–2000. In K. J. Middlebrook (Ed.), *Party Politics and the Struggle for Democracy in Mexico*, Chapter 2, pp. 47–94. San Diego: Center for US–Mexican Studies. University of California.

Martinez-Bravo, M., P. Mukherjee, and A. Stegmann (2017, November). The Non-Democratic Roots of Elite Capture: Evidence From Soeharto Mayors in Indonesia. *Econometrica 85*(6), 1991–2010.

McCrary, J. (2008, February). Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of Econometrics 142*(2), 698–714.

Middlebrook, K. J. (1995). *The Paradox of Revolution: Labor, the State, and Authoritarianism in Mexico.* Baltimore: Johns Hopkins Press.

North, D. (1990). *Institions, Institutional Change and Economic Perfomance.* Cambridge: Cambridge University Press.

Nunn, N. (2009, 05). The Importance of History for Economic Development. *Annual Review of Economics 1*(1), 65–92.

Persson, T. and G. E. Tabellini (2002). *Political economics: explaining economic policy.* MIT press.

Pierskalla, J. H. and A. Sacks (2019). Personnel politics: Elections, clientelistic competition and teacher hiring in indonesia. *British Journal of Political Science First View*, 1–23.

Roland, G. (2004). Understanding institutional change: Fast-moving and slow-moving institutions. *Studies in Comparative International Development 38*(4), 109–131.

Rosa, J.-J. (1984). Toward a theory of the union firm. In J.-J. Rosa (Ed.), *The Economics of Trade Unions: New Directions*, Chapter Chapter 7. New York: Kluwer Nijhoff.

Seabright, P. (1996). Accountability and decentralisation in government: An incomplete contracts model. *European Economic Review 40*(1), 61–89.

Seele, A. (2012). Municipalities and Policymaking. In R. A. Camp (Ed.), *Oxford Handbook of Mexican Politics*, pp. 101–118. Oxford: Oxford University Press.

Sokoloff, K. L. and S. L. Engerman (2000, Summer). Institutions, Factor Endowments, and Paths of Development in the New World. *Journal of Economic Perspectives 14*(3), 217–232.

Stone, M. (1977). An asymptotic equivalence of choice of model by cross-validation and akaike's criterion. *Journal of the Royal Statistical Society. Series B (Methodological) 39*(1), 44–47.

Thistlethwaite, D. L. and D. T. Campbell (1960). Regression-discontinuity analysis: An alternative to the ex post facto experiment. *Journal of Educational Psychology 51*(6), 309–317.

Treisman, D. (2017, October). Democracy by mistake. NBER Working Papers 23944, National Bureau of Economic Research, Inc.

van der Klaauw, W. (2008, 06). Regression-Discontinuity Analysis: A Survey of Recent Developments in Economics. *LABOUR 22*(2), 219–245.