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**Working Paper**

## The Advantage of Incumbents in Coalitional Bargaining

Discussion paper, No. 137

**Provided in Cooperation with:**

Aboa Centre for Economics (ACE), Turku

*Suggested Citation:* Meriläinen, Jaakko; Tukiainen, Janne (2021) : The Advantage of Incumbents in Coalitional Bargaining, Discussion paper, No. 137, Aboa Centre for Economics (ACE), Turku

This Version is available at:

<https://hdl.handle.net/10419/233352>

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The Aboa Centre for Economics is a joint initiative of the economics departments of the University of Turku and Åbo Akademi University.



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ISSN 1796-3133

Printed in Uniprint  
Turku 2021

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January 2021

**ABSTRACT**

The composition of governing coalitions does not always reflect the relative sizes of the coalition members, but research has not been able to fully reconcile why. We propose that political parties with more (re-elected) incumbent representatives fare better in coalitional bargaining. To evaluate this argument empirically, we construct a data set of parties and governing coalitions in Finnish local governments. Using an instrumental variable strategy that hinges on within-party close elections between incumbents and non-incumbents, we find that, *ceteris paribus*, having more re-elected incumbents improves a party's coalitional bargaining outcomes. Descriptive evidence suggests that incumbent representation is particularly useful when a party is in a disadvantaged position (e.g., it is ideologically distant from other parties) and when the bargaining environment is more complex (e.g., there are more parties). Lastly, incumbent representation also matters for selection: parties that have more incumbent representatives nominate more incumbents in the municipal executive.

JEL Classification: C26, D72

Keywords: coalitional bargaining, coalitions, government formation, incumbency advantage, local government, multi-party system

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In parliamentary systems, the executive branch of government is not directly elected by the electorate. Instead, the executive is typically selected by a group of elected representatives. A democratic ideal is that the outcome of this coalitional bargaining process should reflect the will of people. In line with Gamson's prominent hypothesis (Gamson 1961), empirical studies have documented a strong association between parties' contribution to the governing coalition and the share of executive leadership positions that they get (Browne and Franklin 1973; Warwick and Druckman 2001; Mershon 2001; Bäck, Debus, and Dumont 2011; Cox et al. 2020).<sup>1</sup> Yet, there rarely is an exact one-to-one mapping from parties' electoral performance to their representation in the executive branch of government.

Formal theories of bargaining applied to political coalition formation often attribute these deviations to a *formateur advantage* (see, e.g., Baron and Ferejohn 1989): the party that gets to make the first proposition on how to allocate the governing positions gets more seats than any other party, no matter how large the other coalition partners are. Both experimental and observational studies have tested this claim but with mixed results. While Ansolabehere et al. (2005) find evidence of a formateur advantage in government formation, several other studies argue that the advantage appears to be smaller than implied by conventional bargaining models, or even non-existent (Fréchette, Kagel, and Lehrer 2003; Warwick and Druckman 2006; Laver, de Marchi, and Mutlu 2011). This leaves us with a puzzle. What then could explain imbalances in the distribution of political power?

We propose that there is an *incumbency bias* in coalitional bargaining, and parties that have more incumbent representatives fare better in the bargaining process than otherwise similar parties with less incumbents. To the best of our knowledge, this argument is novel, although incumbents are well known to enjoy various other advantages in the political arena. For instance, in many settings, they attract more campaign finance, get more media attention, and are more likely to get re-elected in future elections (Gelman and King 1990; Levitt and Wolfram 1997; Fourinaies

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<sup>1</sup>Laver (1998) notes that this empirical regularity known as Gamson's law is "[...] one of the highest nontrivial R-squared figures in political science." See also Bassi (2013) for a formalization.

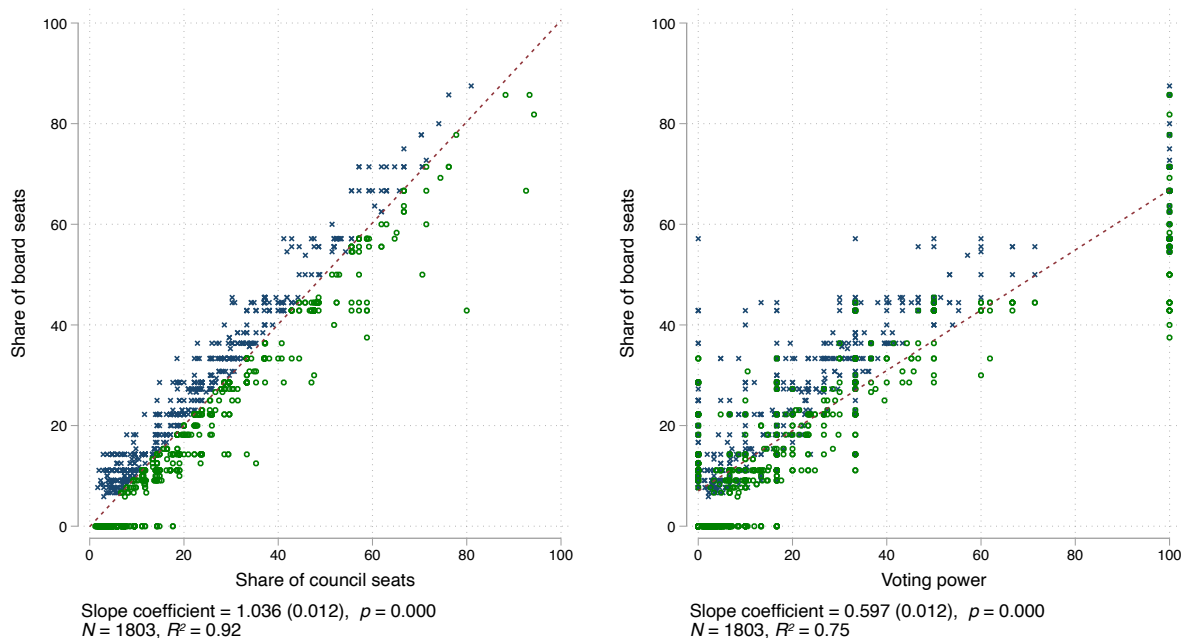
and Hall 2014).<sup>2</sup> The advantages of incumbency may extend even beyond elections. Martin and Stevenson (2010) and Glasgow, Golder, and Golder (2011) illustrate that incumbent parties have an advantage also in government formation. Instead of comparing incumbent and non-incumbent parties, we take an intra-party perspective.

To empirically test the hypothesis that differences in the extent of incumbent representation between parties shapes the distribution of political power, we construct a data set of parties and their coalitional bargaining outcomes in local governments in Finland. The institutional set-up makes them an ideal test bed that can offer more general insights on the formation of political coalitions. Just like governance in any parliamentary system, the Finnish municipal governments are composed of a legislative and an executive branch, and the latter is nominated by elected local councilors. The composition of the municipal executive board should roughly reflect the composition of the elected municipal council. Therefore, we are not studying which parties become part of the ruling coalition (the extensive margin), but rather parties' seat shares in the executive (the intensive margin). Parties have some leeway here given that the seat distribution does not need to be approved unanimously. Furthermore, there are less seats in the executive branch of the municipal government which creates disproportionality that the parties must resolve somehow. These remarks are apparent in Figure 1: there is a strong relationship between parties council seat share or voting power and the share of board seats they get, but many parties exceed or fall short of the board seat share we would expect them to obtain based on the political power that they possess.

Our data reveal that (re-elected) incumbents benefit the political parties that they represent by boosting their coalitional bargaining outcomes. For example, we find that a one standard deviation increase in the incumbent council seat share translates into a “bargaining premium” of more than half a seat more in a median-sized executive board. This premium is large enough that it can explain

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<sup>2</sup>Researchers frequently employ incumbency as a proxy of politician quality (see, e.g., Jacobson 1989; Ansolabehere, Snyder, and Stewart 2001). Prior research has also shown that electing more incumbent politicians can lead to more efficient economic policies (Freier and Thomasius 2016; Meriläinen 2020).



**Figure 1.** Parties’ political power in the municipal council and the municipal board.

*Notes:* Each cross marks a party that holds a greater share of board seats than council seats, and each circle marks a party that holds a smaller share of board seats than council seats. We measure voting power following Shapley and Shubik (1954). We also show a linear fit and report the corresponding slope coefficient alongside with its standard error clustered at the municipality level.

a considerable part of the discrepancies that we see in Figure 1. Moreover, we document indicative evidence that having more re-elected incumbents increases the probability that a party becomes the government formateur, proxied by getting to nominate the head of the local government (chairman of the municipal board). To hold all other factors fixed and to identify these effects causally, we follow Hyttinen et al. (2018a) and construct an instrumental variable that exploits *within-party* close elections between incumbents and non-incumbents. These tight electoral races stem from the (pure) open-list proportional representation system used in the Finnish local elections.

These findings speak to the prior literature on the formation of political coalitions and governments. The first fundamental question in this literature is who becomes part of the governing coalition. Laver (1998) provides a review of this literature, and some examples of empirical work include Mattila and Raunio (2004), Martin and Stevenson (2001, 2010), and Diermeier, Eraslan, and Merlo (2003). The second important topic that this research has studied is



who gets to form the government (Diermeier and Merlo 2004; Bäck and Dumont 2008; Glasgow, Golder, and Golder 2011; Fujiwara and Sanz 2019). These studies have carefully documented how diverse institutional features and party-level characteristics such as party size and ideology influence coalition membership and formateur selection. Our second contribution is to provide descriptive evidence on how the representation of incumbents interacts with such factors that shape political coalitions. We illustrate that having more re-elected incumbents may be particularly useful to political parties when they are in a disadvantaged bargaining position—ideologically distant from other parties or not the formateur party—or when the bargaining environment is more complex, i.e., when the local government is more fragmented.

We conclude our empirical investigation by asking who benefit from the improved bargaining outcome. We find that re-electing more incumbents instead of non-incumbents mainly benefits the incumbents themselves; there are no spill-overs to non-incumbents' representation in the municipal executive board, but there is no crowding out either. Using a regression discontinuity design, we provide further evidence that getting elected has a positive impact on future political nominations. These findings add new insights to the extensive literature on incumbency effects, and they are also closely related to work on seniority-based nomination norms in politics (McKelvey and Riezman 1992; Epstein et al. 1997; Cirone, Cox, and Fiva 2020).

## **Background and Theoretical Considerations**

Our empirical case study focuses on local governments in Finland. We begin by describing the institutional background in detail. We then discuss why and how we might expect incumbents to matter in coalitional bargaining in our context and more generally.

### **Municipalities in Finland**

Local governments have an important role in the Finnish system. On average, they spent more than 5,000 euros per capita per year during the period of our data (2000-2012). Overall, local public

expenditures constitute around 20% of the Finnish GDP. The majority of local expenditures is used to take care of statutory responsibilities, the most important of which are social and health care, and primary education. The municipalities are a major employer in Finland: they employ roughly one fifth of the Finnish labor force. To cover their expenditures, the municipalities are allowed to collect income and property taxes, and out-of-pocket payments from the users of municipal services. In addition, they receive a share of corporate taxes and fiscal grants from the central government.

## **Local Politics**

The municipalities are led by elected local councils in which the decisions are taken by a simple majority of the council members. The number of council seats is a step-wise function of the population, and it varies between 13 and 85. A median council has 27 seats. It can set up committees to deal with different functions such as social and health services, education or urban planning. Seats in these organs are divided proportionally between the parties following the election result, and typically every elected councilor is assigned to at least one committee. Thus, elected politicians have several channels to influence policy-making.

Municipal elections are organized every fourth year, and during the period of our investigation, a new local council started its tenure at the beginning of January. The electoral system uses proportional representation with (pure) open lists. This means that a voter has to cast her ballot for a single individual candidate and cannot directly vote for just a party.<sup>3</sup> Each party's vote count is simply the sum of personal votes over all the party's candidates. The seats in the council are allocated using the D'Hondt method. Therefore, the seat allocation between

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<sup>3</sup>Before an election and at polling stations, voters have access to a candidate list that shows different parties and lists the names of their candidates, sometimes alongside with other information such as candidates' occupations. Parties' order on the list is chosen randomly, and candidates are almost always ordered alphabetically within the party lists.

political parties depends on the vote shares of the parties and the seat allocation within the parties depends on the personal votes.<sup>4</sup>

The municipal elections held between 2000 and 2012 were dominated by three large parties from the political left, center, and right: the Social Democratic Party, the Center Party, and the National Coalition Party, respectively. Other parties that hold seats in both municipal councils and the National Parliament are the Left Alliance, Green Party, Finns Party, Swedish People's Party, and Christian Democrats. There are several smaller parties, and many municipalities have local, often independent or one-agenda political groups. However, these are rarely popular.

## **Municipal Executive Boards**

Importantly, every local council selects a municipal executive board that can be considered the government cabinet of a municipality. Municipal boards are responsible for preparing the local decision-making. The municipal executive board is headed by a chairman whose job is considered to be the most important position in local politics (Meriläinen and Tukiainen 2018). It is roughly comparable to the position of a mayor in many other political systems.

When an election is over and parties' seats in the local council are known, the parties bargain with each other on how to distribute the seats in the municipal executive board and other municipal decision-making organs.<sup>5</sup> Local councils can choose the size of the municipal board. The number of board seats varies between 6 and 17, and the median board has 9 seats. After the parties have

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<sup>4</sup>Meriläinen and Tukiainen (2018) show that the personal votes also have a role beyond determining the election result: a candidate's within-party rank matters for his or her chances of acquiring a political promotion.

<sup>5</sup>Parties typically choose a group of 1-3 politicians to spearhead the bargaining process. Many parties instruct their local branches to have politically experienced representatives involved. See, for instance, the guidelines provided by the Green Party at [https://www.vihreat.fi/files/liitto/Luottamuspaikkaneuvottelijanopas\\_2014.pdf](https://www.vihreat.fi/files/liitto/Luottamuspaikkaneuvottelijanopas_2014.pdf) (accessed September 8, 2020).

agreed on how the important positions in local governance are distributed amongst them, they have to decide whom to nominate to those positions. The rule of thumb in local governments is that representation in the executive board proportionally reflects the party composition of the local council. However, given the size difference, there cannot be an exact mapping from council to board seats.

The local council members must approve the nominations in a vote unless the council unanimously approves the proposed nominations. The council typically follows a “gentlemen’s agreement” and respects both the between-party bargaining result and the within-party choices. Sometimes an election is required, but even then, the seat distribution follows the agreement reached beforehand.<sup>6</sup>

Almost any citizen who is eligible to vote in a particular municipality is eligible to be selected to the municipal board. That is to say, board members do not have to be elected local councilors. Only civil servants who are in executive positions cannot be selected. Furthermore, municipal employees cannot constitute more than half of the board members.

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<sup>6</sup>The council elects board members either in a majority election one representative at a time, or in a vote that follows the principle of (closed-list) proportional representation. Proportional representation is used if it is requested by a sufficient number of council members. More precisely, if a council with  $N$  seats is electing  $M$  representatives for the executive board, at least  $\lceil N/(M + 1) \rceil$  must demand using proportional representation for electing the executive board. See, for instance, the guidelines provided by the Finnish Association of Local Authorities at <https://www.kuntaliitto.fi/yleiskirjeet/2012/kunnanhallituksen-lautakuntien-ja-muiden-toimielinten-valinnat> (accessed September 17, 2020). Large party dominance and abandonment of equity norms when distributing the governing positions are thus less likely to occur in our setting even if one party held more than half of the council seats.

## **Potential Role of Incumbents in Coalitional Bargaining**

We are interested in three questions: (i) whether incumbents matter in the formation of governing coalitions or not, (ii) how incumbent representation interacts with other party characteristics and political context that shape political coalitions, and (iii) what are the implications of incumbent representation in the local council for selection to the municipal board. We now discuss each of these issues in turn in light of previous literature to lay the groundwork for our empirical analyses.

An important class of political coalition formation theories predicts that the share of coalition portfolios that a party gets depends on the share of seats that a party contributes to the governing coalition (Gamson 1961; Morelli 1999; Bassi 2013). In our context, prevailing norms and the institutional constraints push parties toward such an outcome. If this hypothesis—commonly known as Gamson’s law—is true and the only relevant force at work, then party composition should not matter at all for parties’ bargaining outcomes. That is to say, two equally big parties are expected to get the same share of government positions even if one of them would have more incumbent politicians.

Standard bargaining theories applied in the context of politics imply the relationship between parties’ bargaining outcomes and the political power that they hold is not straightforward. The legislative bargaining model of Baron and Ferejohn (1989) and other similar models suggest that parties seek minimal winning coalitions, and there is an additional premium for the government formateur. The party that gets to make a first proposition of how to allocate the seats in the executive gets more seats than any other party, no matter how large the other coalition partners are. In such models, having more incumbent politicians could give a party a larger share of the pie by making a party more likely to become the formateur or part of the governing coalition.

Of course, parties might not be seeking merely political office but also policy (Baron 1991; Baron 1993; Bassi 2017). Policy-motivated parties could also desire to coalesce with other parties that have more experienced politicians who could be better at governing, boosting the bargaining prospects of such parties. If incumbents are better policy-makers—as suggested by Freier and

Thomasius (2016) and Meriläinen (2020)—they might also be better at advancing common goals of the coalition partners, be such goals ideological or seeking policy improvements.

Parties might even be willing to pursue coalitions with ideologically distant parties, if incumbents can serve as a substitute to ideology. This possibility is particularly relevant in our context where having ideologically distant coalition partners is more difficult to avoid, though more generally, ideologically cohesive governments are more likely to form than ideologically dispersed governments (Martin and Stevenson 2001; Warwick 1996). Another party-level factor that may interact in an important way with incumbent representation is party size and formateur status. Thinking about a Baron-Ferejohn-type bargaining framework, incumbents could be particularly beneficial for non-formateur parties if incumbents help them erode some of the formateur’s advantage. However, it is not obvious that that incumbent representation would always help political parties in such a set-up. For example, if parties are purely office-seeking and there is an exogenously determined incumbency “bonus”, the formateur may be less inclined to include a party with many incumbents to the proposed coalition, as it would be a more expensive coalition partner.<sup>7</sup>

Besides party-level characteristics, incumbent representation may interact with different institutional factors. Incumbents and their existing between-party networks could make the bargaining process in itself less costly. Importantly, experienced politicians might come in handy when the bargaining environment is more complex. For instance, coalition researchers have discussed the role of political polarization and government fragmentation as causes of bargaining delays (Martin and Vanberg 2003; Golder 2010; Blockmans et al. 2016).

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<sup>7</sup>For instance, this can happen if the probability of being recognized as the formateur is a function of party size and composition. Then, larger parties and/or parties with more incumbents that are not the formateur would have a greater continuation value (i.e., the present value of the equilibrium payoff stream) than parties with less seats and/or incumbent representatives. The formateur party would have to offer them a larger share of the pie in order to have the proposal accepted, which makes them less desirable associates.

Lastly, coalition formation could be steered by informal rules or norms (Fujiwara and Sanz 2019, Cirone, Cox, and Fiva 2020), according to which parties should prioritize incumbents, or their opinions, in the coalition formation process.<sup>8</sup> This remark is also somewhat connected with the idea of *familiarity* in government formation (Browne and Rice 1979; Franklin and Mackie 1983). If parties and their incumbent representatives care about the ability of the executive board members to work together, they might prefer pushing for the nomination of individuals whom they already know and trust. Consequently, that a party has more incumbent representatives might be particularly beneficial for the incumbents themselves.

## Data

We combine information on candidates, electoral results, and post-electoral bargaining. Summary statistics of these data are available in Appendix Table A1. Our election data cover four elections between the years 2000-2012, and they come from the Ministry of Justice. These data include information such as candidates' party affiliation, number of votes, previous political experience and election status. In total, the data cover 155,284 candidate-election year observations, out of which over 90,263 are unique individuals. We combine these information with data on chairmen and members of the municipal executive boards. These proprietary data come from the Finnish Association of Local Authorities (*Kuntaliitto*). The chairman data are available for all the above electoral terms, but we observe board members only for the 2009-2012 electoral term.

In most of our analyses, we do not use the individual-level data but instead collapse them to the party level. We focus on parties that acquire at least one seat in the municipal election and thus participate in the coalitional bargaining process. Furthermore, we rule out municipalities where

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<sup>8</sup>Related theoretical work examines the role of seniority and incumbency in legislatures (see, e.g., McKelvey and Riezman 1992; Muthoo and Shepsle 2014). Eguia and Shepsle (2015) present a legislative bargaining model where the equilibrium agenda protocol disproportionately favors more experienced legislators who get more opportunities for making policy proposals.

one party holds all seats. At most, we use 7,662 (party-electoral term) observations, although the analyses on board members only use 1,803 observations. The average party holds almost one fifth of local council seats and a roughly corresponding share of board seats. We also use the Shapley-Shubik index to capture parties' voting power (Shapley and Shubik 1954). This index measures the political power of a party as the fraction of possible votes in which the party is decisive for the outcome of the vote.<sup>9</sup> The index takes values between zero (a party cannot affect the outcome of the vote) and one (a party has an absolute majority). Our extended sample covers 1,124 municipality-election pairs. In the limited sample for which we observe the municipal board composition, our data cover 332 clusters.

## Value of Re-Elected Politicians in Coalitional Bargaining

In this section, we test the hypothesis that parties get a coalitional bargaining premium from having more incumbent politicians instead of newcomers. We show that holding all other factors fixed constant, having more representatives with recent political experience gives parties an advantage.

### Baseline Specification

Assume that we are interested in the relationship between the share of board seats that a party  $p$  in a municipality  $m$  at time  $t$  gets,  $y_{pmt}$ , and the respective seat share of incumbent politicians,  $Incumbent \%_{pmt}$ . We start by estimating the following specification using OLS:

$$y_{pmt} = \alpha + \beta Political\ power_{pmt} + \gamma Incumbent\ \%_{pmt} + \mu_{pmt}. \quad (1)$$

We want to quantify the possible bargaining premium of having more competent politicians while holding the relative strength of the party fixed. The empirical literature assessing Gamson's law typically employs party seat share as a measure of its strength (e.g., Warwick and Druckman 2001).

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<sup>9</sup>We compute the power indices using `vpower` in package in Stata (Ecker 2019).



Moreover, the Finnish norm of assigning board seats roughly proportionally to council seats makes this a relevant measure. However, Ansolabehere et al. (2005), among others, argue that voting weight is the most appealing measure of a party's bargaining potential from a theoretical point of view. Given these arguments, we use both the party seat share and the Shapley-Shubik index to gauge political power—but not simultaneously, as they are very highly correlated.<sup>10</sup>

## **Preliminary Analysis**

We start by illustrating graphically the connection between incumbent representation and parties' seat shares in the executive board in Figure 2. We plot binned averages (computed within twenty bins that have an equal number of observations) and a linear fit after controlling for parties' voting power or council seat share.

Panel A of the figure first shows a strong positive correlation between incumbent seat share and share of board seats that a party obtains. Increasing incumbent seat share by one percentage points is roughly associated with a one percentage point increase in the board seat share when we control for voting power (left-hand side graph). To better understand the magnitude of this point estimate, consider a median-sized local council with 27 councilors and a median-sized municipal board with 9 members. Then, having one more incumbent representative (instead of a non-incumbent) is roughly associated with getting 1/4 of a board seat. When we control for council seat share (right-hand side graph), the positive relationship remains, but it is more moderate: a 1% increase in

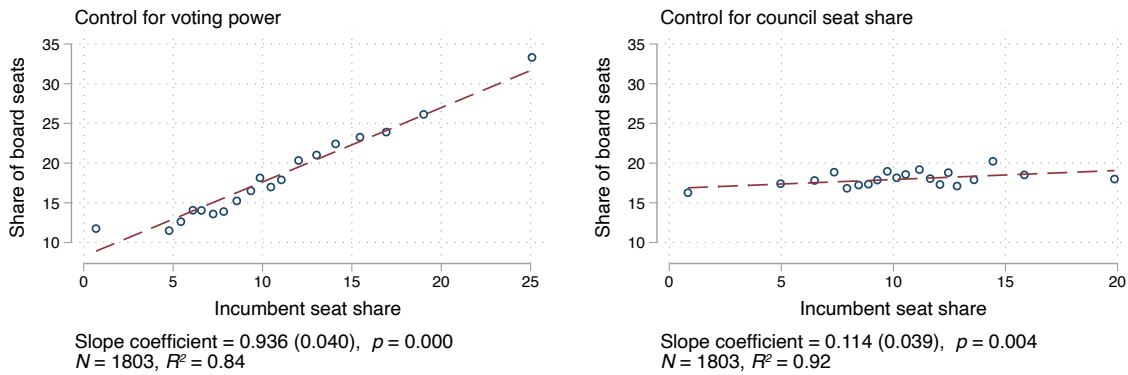
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<sup>10</sup>Note that we may similarly encounter problems with multicollinearity, because we include both party incumbent seat share and party seat share, both scaled with council size, in our regressions. This can result in inflated standard errors (Wooldridge 2001). We do not scale the number of incumbents by party size in order to avoid outliers that could arise from small parties. For example, a party that gains two seats has either 0%, 50%, 100% incumbent share. This high variance would be particularly problematic for our instrumental variable strategy that we introduce later in the paper.

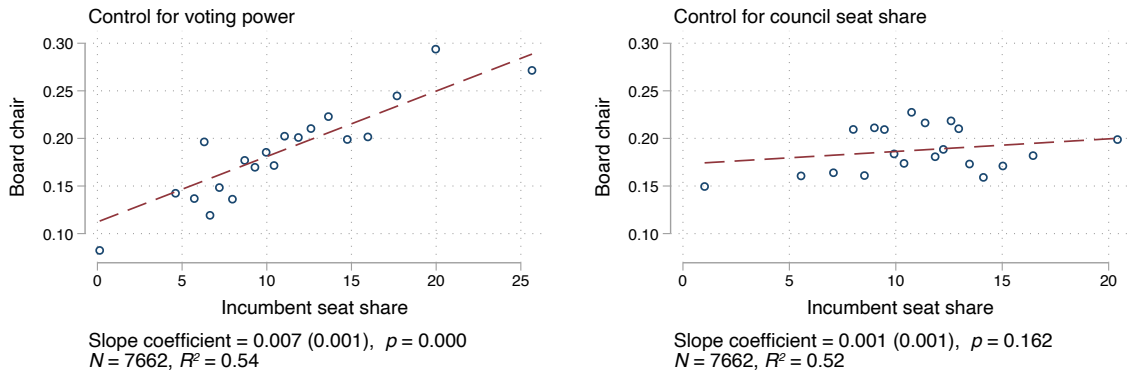
incumbent seat share is associated with a 0.11% increase in board seat share. The slope coefficients are statistically significant with  $p < 0.01$ .

Similarly, Panel B suggests a positive correlation between incumbents' representation and the probability of a party acquiring the board chairmanship—essentially, becoming the coalition formateur. The left-hand side graph suggests that 1% more incumbents is associated with a 0.7%, increase in the probability of getting to nominate the board chairperson. The regression coefficient is considerably smaller and statistically insignificant in the right-hand side graph where we net out party seat share.

Panel A: Share of board seats



Panel B: Board chair



**Figure 2.** Re-elected incumbents' seat share and coalitional bargaining outcomes.

*Notes:* The figure shows binned averages within twenty bins with an equal number of observations and a linear fit after controlling for voting power or council seat share. Standard errors clustered at the municipality level are reported in parentheses.

## Instrumental Variables Approach

We want to identify the impact of incumbents on board seat shares while holding parties' political power and all other factors fixed. The voting power index does not fully capture the fact that, in our context, the baseline seat distribution closely follows parties council seat shares. At the same time, including both party seat share and incumbent seat share in the regression is problematic as we discussed above. The estimation exercise might also yield a biased estimate of the effect of incumbents on coalitional bargaining outcomes, for instance, due to potentially unobservable party characteristics, or because incumbents may be systematically different from non-incumbents in some other traits.

To tackle these concerns, we exploit within-party close elections that involve two types of politicians to construct an instrumental variable for seat shares. These close elections stem from the open-list system used in Finland.<sup>11</sup> Our instrumental variable captures the extent to which incumbents' realized seat share exceeds or falls short of their expected seat share in close elections—but while the seat share (or voting power) of the party does not change in any direction. It is constructed in two steps.

The first step is to define candidates who are involved in close elections where the electoral outcomes can be seen as good as random. For each party list, we define a cutoff value as the average of the within-party vote shares of the last elected and the first non-elected candidate. Each candidate's distance from election is then the difference between her within-party vote share and the cutoff value. Candidates whose distance from election lies within bandwidth  $\varepsilon$  are involved

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<sup>11</sup>This approach has a flavor of a regression discontinuity design. However, instead of focusing on close races between the first non-elected and the last elected candidate only, we exploit information on a broader set of candidates who are involved in a close election. The approach that we adopt here is a slightly modified version of the identification strategy used by Hyytinen et al. (2018a) to study the effects of political representation on public policies. See also Meriläinen (2020) who uses the same approach to study how politician competence shapes policy outcomes.

in the close races. Note that closeness can be defined only for party lists that elect at least one candidate and have at least one non-elected candidate.

We use bandwidth  $\varepsilon = 0.2$  for most of the results presented in the main text, but we will explore robustness to using alternative definitions of closeness. While the choice of bandwidth is somewhat *ad hoc*, there are some practical reasons behind it. Using too wide a bandwidth would cause covariate imbalances, but there must also be enough variation to ensure that the IV approach has statistical power. In practice, the elections within the bandwidth  $\varepsilon = 0.2$  are very close. Given that  $\varepsilon$  is expressed in percentages,  $\varepsilon = 0.2$  means 2 votes out of 1,000. The elections within this bandwidth cover about 5% of all candidates running for election. Roughly half of them are either ties resolved by a lottery or cases where the vote difference between the last elected and the first non-elected candidate is merely one vote.<sup>12</sup> More than 70% of the candidates involved in these close elections are within a bandwidth of five absolute votes.

In the second step, we calculate the difference between the realized and expected outcome of the close races within each party list  $p$ . This yields a number for how many more incumbent politicians are elected, by chance, from the close races than we would expect. These close races can involve more than two candidates, of which any number can be incumbents. The expectation comes from a hyper-geometric distribution, as we can think of the situation as a simple urn problem.

Formally, the instrumental variable is then defined by equation

$$T_{mt} = \frac{100}{S_{mt}} \left( \sum_{N_{pmt}} C_{ipmt} E_{ipmt} D_{ipm} - \frac{\sum_{N_{pmt}} C_{ipmt} D_{ipm}}{\sum_{N_{pmt}} C_{ipmt}} \sum_{N_{pmt}} C_{ipmt} E_{ipmt} \right), \quad (2)$$

where  $C_{ipmt}$ ,  $E_{ipmt}$  and  $D_{ipm}$  are dummies for a politician  $i$  (from party  $p$  in municipality  $m$  at time  $t$ ) being close, getting elected, and being incumbent, respectively.  $N_{pmt}$  is the set of candidates. The first term within the parentheses is the number of incumbent candidates elected in close elections, while the second term is the expected number of such candidates. Finally, we re-scale

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<sup>12</sup>See Hyytinen et al. (2018b) for more details on the lottery procedure.

the expression by council size  $S_{mt}$  and multiply it by 100 in order to express the instrument in terms of seat share.<sup>13</sup>

Figure 3 graphically illustrates the first stage of our IV analyses as well as the identifying variation. The graph shows scatter plots of incumbent seat share and the instrumental variable for it as well as linear fits using two samples: the limited sample for which we observe the board seat shares, and the full sample for which we also observe the board chairmanship. There is a strong connection between the instrument and incumbent seat share. In the limited sample, incumbent seat share increases by 1.82 percentage points ( $p < 0.001$ ). In the full sample, the first-stage coefficient is around 1.89 ( $p < 0.001$ ). The scatter plots suggest that the actual seats typically deviate from the expected seats by one or less in those parties that have close elections, although there are some parties that have more extreme deviations.<sup>14</sup>

While incumbents may be different from non-incumbents also in other characteristics than just their past political experience, the variation that our instrument captures is plausibly random. We demonstrate this in Appendix Tables B2 and B3, where we show that parties with a positive and a negative instrument value are similar to each other not only in size but also in composition. We conjecture that close elections will credibly allow us to identify the causal effect of incumbent representation on parties' bargaining outcomes. The possible effects quantified using the IV approach arise from incumbency in itself rather than (on average) higher competence of incumbents, for instance.

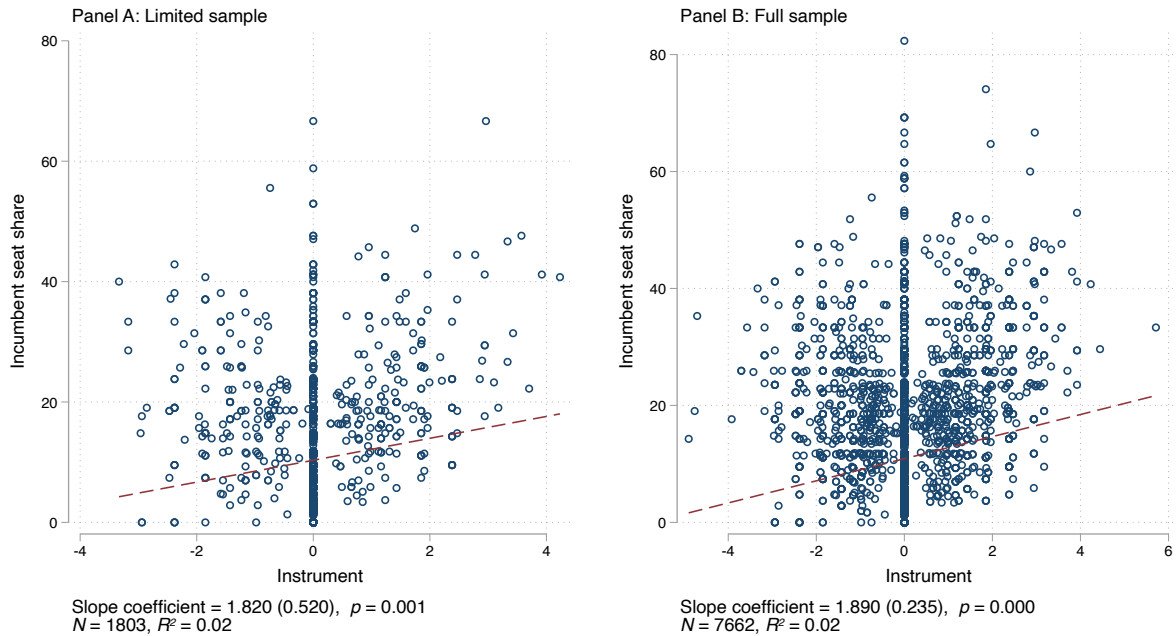
In sum, our method produces an instrumental variable that is ideal in many ways. It is as-good-as random; the exclusion restriction holds; it is monotonic in the sense that an increase in the instrument deterministically increases the value of the endogenous variable (i.e., incumbent

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<sup>13</sup>We demonstrate the construction of the instrumental variable with a hypothetical example in Appendix B.

<sup>14</sup>Close elections happen within all parties, but they are more common in large parties; the Social Democratic Party, the Center Party, and the National Coalition Party. Appendix Figures B1 and B2 graphically illustrate the identifying variation by political party.

seat share); it has a strong first stage; and all units are compliers, since getting elected in a close election also simply means getting elected.



**Figure 3.** A graphical illustration of the first stage.

*Notes:* Figure shows a scatter plot of incumbent seat share and the instrumental variable, and a linear fit in the limited sample (Panel A) and the full sample (Panel B). Standard errors clustered at the municipality level are reported in parentheses.

## Regression Results

We then run our analyses using the instrumental variable discussed above. We do not control for voting power or party seat share in the main analysis, as it is not needed for identification. These measures balance by construct due to the within-party, as-good-as-random research design. Figure 4 presents estimation results from a 2SLS IV specification and the reduced form of IV. To ease the comparison with our preliminary analyses, we also reproduce the OLS estimates.

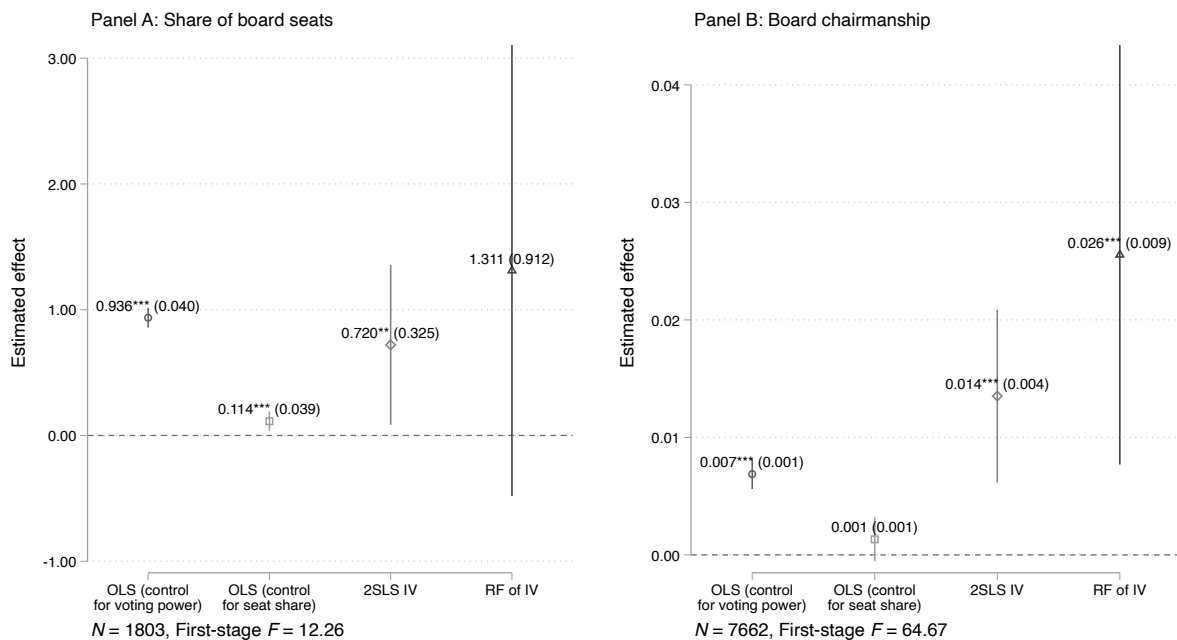
Let us first consider the results in Panel A of the figure. The 2SLS IV estimate is 0.72 ( $p < 0.05$ ). The reduced form of IV estimate is around 1.31 but not statistically significant at any conventional level. To put these effects on the scale, consider again a median-sized local council

with 27 seats. In such a council, one politician has a seat share of around 3.7%. Electing one more incumbent instead of a non-incumbent thus gives a party 2.7 – 4.8% larger board seat share, holding all else equal. A one standard deviation shift in the incumbent seat share ( $\sigma = 10.20$ ) is associated with a 7.3 – 13.4% increase in the share of board seats that a party obtains. Given that the median board has nine seats, the effect magnitude is meaningful. Panel B examines the role of re-elected incumbents in becoming the formateur (and succeeding in the job). The 2SLS IV and the reduced form of IV estimates are larger than the OLS estimates. They suggest that increasing incumbents' seat share by one percentage points leads to a 1.4 – 2.6 percentage points higher probability of getting to nominate the board chairperson. However, note that the confidence intervals are also rather wide.

Several robustness checks are available in Appendix C. We illustrate that the results we have presented thus far are robust to controlling different measures of voting power (Appendix Tables C1 and C3). However, we do not find a statistically significant impact of incumbent representation if we augment our regression with seat share control (Appendix Table C2), which naturally stems from the fact that netting out party seat shares leaves us with considerably less variation. We further document that our conclusions remain unchanged after controlling for municipality and year fixed effects (Appendix Table C4), using alternative definitions of electoral closeness (Appendix Figure C1), or leaving out parties that do not have any close elections (Appendix Table C5). To provide further evidence supporting the validity of our IV approach, we also conduct a placebo threshold analysis in Appendix Figure B3.

## **When Do Incumbents Matter?**

We have now established that parties that have more re-elected incumbents do better in the coalitional bargaining following the election. This section analyzes how incumbent representation may interact with other party characteristics and institutional factors that play an important role in coalitional bargaining. Our focus is on descriptive analysis, as we do not have enough statistical



**Figure 4.** Effect of incumbent representation on coalitional bargaining outcomes.

*Notes:* The figure shows point estimates and their 95% confidence intervals constructed using standard errors clustered at the municipality level. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

power to estimate the interaction terms using our IV approach. Auxiliary robustness checks showing that the results are robust to alternative measurement of political power as well as inclusion of additional covariates are available in Appendix C.

## Incumbent Representation and Party-Level Characteristics

We begin by studying the interaction between incumbent seat share and ideological difference from other parties, and party size. Column (1) of Table 1 first presents regression results from an OLS specification that introduces ideological distance and its interaction with incumbent seat share in the regression. For each of party  $p$  in municipality  $m$  at time  $t$ , we define ideological distance as the



deviation between their policy position ( $x_{pmt}$ ) and the seat share weighted average policy position of the local council ( $\hat{x}_{mt}$ ), or more formally,  $|x_{pmt} - \hat{x}_{mt}|$ .<sup>15</sup>

In line with earlier work (e.g., Warwick 1996; Mattila and Raunio 2004), being ideologically distant from potential coalition partners mars the coalition prospects of a party. If a party is not ideologically different at all from the council average, then one percentage point increase in incumbent representation is associated with a 0.8 percentage points higher board seat share. A one standard deviation shift in ideological distance ( $\sigma = 0.41$ ) is associated with a one percentage point change in board seat share. However, having more incumbents can attenuate this negative association. The regression coefficient for the interaction term *Ideological distance*  $\times$  *Incumbent seat share* is positive, around 0.29, and statistically significant, implying that representation of high-quality politicians can act as a substitute for ideology. Column (4) shows a similar relationship for acquiring board chairmanship. The signs of the point estimates are as expected and rhyme with those that we reported in column (1). Ideologically remote parties are less likely to get to nominate the board chairperson, but having more incumbents helps.

The increased probability of becoming the formateur may explain part of the premium from having more re-elected incumbents on the party list. On the other hand, having more experienced politicians may help other parties erode the formateur's advantage. We examine this in column (2) of Table 1. To avoid potential post-treatment bias, we proxy coalition formateurship by an indicator for being the largest party instead of using board chairmanship.<sup>16</sup> Namely, getting to

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<sup>15</sup>We use candidate-level survey data on economic policy preferences of candidates running in the 2008 election to construct a of party ideology. These data come from a so-called voting aid application provided by the Finnish public broadcasting company *YLE*. The survey contains a number of questions related to the local public sector that we compress into a single measure of party ideology using a principal component analysis. For further information, see Appendix A.

<sup>16</sup>This is a reasonable assumption in light of our data. Almost in 80% of the cases, the party holding the board chair position is the largest party represented in the local council.

nominate the board chairman can in addition be influenced by the voting power and the amount of incumbent representatives that a party has.

Again, we see a positive correlation between a party's voting power and the share of board seats. Furthermore, the formateur enjoys a substantial advantage. The formateur has almost 17% more board seats than other parties, even after holding voting power fixed. However, the formateur benefits from re-elected incumbents less than other parties.<sup>17</sup> The interaction term *Incumbent seat share*  $\times$  *Largest party* comes with a negative and statistically significant regression coefficient.

A simple legislative bargaining model with office-seeking parties would also suggest that if a party is not the coalition formateur, then having too many incumbents or too much voting power is hurtful. We consider this possibility in column (3) where we complement our regression with quadratic polynomials of voting power and incumbent seat share as well as their interactions with an indicator for being the formateur (again proxied with a dummy for being the largest party). The regression results echo those that we report in column (3), but they do not reveal any strong evidence of convexities. Thus, it appears that parties always benefit from having more incumbent politicians, on average.

## **Complexity of the Bargaining Environment**

We then explore how the role of incumbent representation may depend on the local political context. Our focus is on the complexity of the bargaining environment which we measure by concentration of political power, number of political parties, and ideological dispersion. Table 2 presents regression results from an OLS regression in which we interact incumbent seat share

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<sup>17</sup>The finding that the formateur party obtains a larger share of the executive seats corroborates the findings of Ansolabehere et al. (2005), even if many earlier studies have found no support for the idea. In fact, this lack of systematic evidence led Laver, de Marchi, and Mutlu (2011) to label the idea of a formateur advantage in coalition formation as a “theoretical and empirical impasse”.

**Table 1.** Incumbent representation and party-level characteristics.

	Share of board seats			Board chair
	(1)	(2)	(3)	(4)
Voting power	0.299*** (0.018)	0.289*** (0.017)	0.195*** (0.053)	0.008*** (0.000)
Incumbent seat share	0.796*** (0.057)	1.110*** (0.036)	1.230*** (0.095)	0.004*** (0.001)
Ideological distance	-2.537*** (0.477)			-0.057*** (0.006)
Incumbent seat share $\times$ Ideological distance	0.288*** (0.063)			0.006*** (0.001)
Largest party		17.445*** (1.176)	18.846*** (3.305)	
Incumbent seat share $\times$ Largest party		-0.744*** (0.055)	-1.175*** (0.182)	
Voting power <sup>2</sup>			0.002 (0.002)	
Incumbent seat share <sup>2</sup>			-0.005 (0.005)	
Voting power $\times$ Largest party			0.185 (0.146)	
Voting power <sup>2</sup> $\times$ Largest party			-0.003 (0.002)	
Incumbent seat share <sup>2</sup> $\times$ Largest party			0.009 (0.006)	
Constant	4.223*** (0.365)	1.536*** (0.225)	1.564*** (0.283)	-0.019*** (0.005)
<i>N</i>	1799	1803	1803	7427
<i>R</i> <sup>2</sup>	0.85	0.87	0.87	0.54

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

with each of these factors in turn. The first three columns of the table study the relationship with the share of board seats.

Column (1) suggests that the benefits of having more re-elected incumbents representing a party diminish as political power becomes more concentrated and bargaining for the board seats ought to

be more simple. We capture concentration of political power with a simple Herfindahl-Hirschman index of party seat shares, formally defined as the sum of squared seat shares. The interaction effect is also statistically significant with  $p < 0.01$ . At the same time, parties tend to get a larger share of board seats, on average. This goes hand-in-hand with the estimation results that we report in column (2): we see that the regression coefficient for the interaction between incumbent seat share and the number of parties (a larger number of parties implying a more complicated bargaining situation) is positive, while the number of parties represented in the local council is negatively associated with board seat shares.

However, polarization in the local government and its interaction with incumbent seat share does not seem to matter in any meaningful way (column 3). We define polarization of the local council as the sum of seat share weighted deviations between each party's ideology and the seat share weighted average of policy position:  $\sum_{pmt} s_{pmt} |x_{pmt} - \hat{x}_{mt}|$ .

The next three columns focus on board chairmanship as the dependent variable, revealing a very similar pattern. The more concentrated the seat share distribution is, the lesser role re-elected incumbents play. On the contrary, increasing the number of parties is associated with the incumbent seat share mattering more for acquiring the board chairmanship. But as before, incumbent representation does not interact with political polarization.

## **Implications for Selection**

So far our analysis has concerned the effect of having more elected incumbent politicians on parties' bargaining outcomes. In this section, we conclude our empirical exploration by studying the effect of incumbents on representation by politician types as well as the effect of incumbency on future political promotions.

**Table 2.** Incumbent representation and complexity of the bargaining environment.

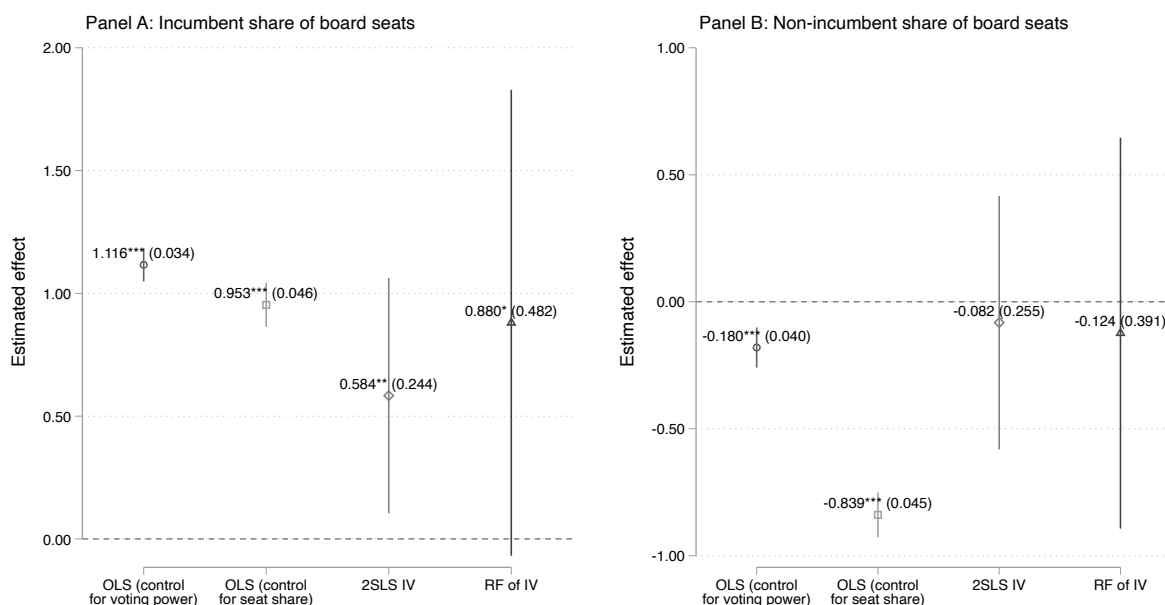
	Share of board seats			Board chair		
	(1)	(2)	(3)	(4)	(5)	(6)
Voting power	0.294*** (0.018)	0.292*** (0.017)	0.282*** (0.017)	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)
Incumbent seat share	1.120*** (0.070)	0.574*** (0.101)	0.960*** (0.046)	0.010*** (0.002)	-0.001 (0.002)	0.007*** (0.001)
Seat share concentration	13.408*** (2.139)			0.047 (0.033)		
Incumbent seat share $\times$ Seat share concentration	-0.590*** (0.203)			-0.008** (0.004)		
Number of parties		-1.340*** (0.146)			-0.007*** (0.003)	
Incumbent seat share $\times$ Number of parties		0.061*** (0.015)			0.002*** (0.000)	
Polarization			-0.036 (0.225)			0.003 (0.004)
Incumbent seat share $\times$ Polarization			-0.022 (0.023)			0.000 (0.000)
Constant	-1.137* (0.677)	11.096*** (0.955)	3.112*** (0.341)	-0.068*** (0.013)	-0.010 (0.014)	-0.048*** (0.005)
$N$	1803	1803	1803	7662	7662	7662
$R^2$	0.85	0.85	0.84	0.55	0.55	0.54

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

## Who Gets Selected in the Municipal Board?

We now estimate the same models as before but decompose the dependent variable in two parts: incumbents' and non-incumbents' share of board seats. We plot the estimation results from four different specifications in Figure 5. Panel A shows that electing more incumbents instead of non-incumbents in the local council leads to more incumbents getting seats in the municipal board. The OLS result suggests that increasing incumbents' seat share by one percentage points is associated with an increase of around one percentage points in the share of board seats that a party obtains, no matter whether we control for voting power or party seat share. The 2SLS IV and reduced form of IV estimates suggest a slightly more moderate effect, around 0.58 and 0.88, respectively. Panel B reveals that there is no spill-over effect to non-incumbents. We also do not find any evidence of a crowding out effect, although the OLS estimate suggests a negative correlation between incumbent

representation in the municipal council and non-incumbent representation in the municipal board. Robustness checks are available in Appendix C.



$N = 1803$ , First-stage  $F = 29.11$

**Figure 5.** The effect of incumbents on board composition.

*Notes:* The figure shows point estimates and their 95% confidence intervals constructed using standard errors clustered at the municipality level. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

## Incumbency and Board Membership

To reconcile the fact that incumbent representation mainly benefits incumbents themselves in coalitional bargaining, we finish our analysis by studying the effect of incumbency on future political nominations. Our data reveal a strong correlation between incumbency and future board nominations. Individuals who get elected at time  $t$  are around 15% more likely to get selected to municipal boards than those who do not get elected in the bargaining process that follows elections at  $t + 1$ . Incumbents are also 3% more likely to become board chairmen. Whether these correlations are about an incumbency advantage or something else is unclear. A standard concern in the literature on incumbency effects is that a simple comparison of non-incumbents and

incumbents would be confounded by other factors. For instance, individuals elected with large margins are potentially more capable than those individuals who were far from getting elected.

To solve this problem, we exploit the same within-party close elections as before but now focusing on individual politicians (Hyytinen et al. 2018b). We estimate the following regression discontinuity design (RDD) specification non-parametrically to quantify the causal effect of incumbency on future political promotion:

$$y_{im,t+1} = \pi + \rho \text{Elected}_{imt} + f(\text{Election margin}_{imt}) + v_{imt}. \quad (3)$$

Here *Elected* is an indicator variable for the election status of a politician *i* running in municipality *m* at election *t*.  $y_{im,t+1}$  indicates getting a board seat in bargaining process that follows after elections held at  $t + 1$ . That is, we are interested in the incumbency effect rather than the direct effect of getting elected.  $f(\text{Election margin})$  is a low-order polynomial estimated separately on each side of the cutoff, and  $v$  is the error term.

We start with a conventional local linear approach with MSE-optimal bandwidth. This approach is MSE-optimal for point estimation but invalid for inference (Cattaneo, Idrobo, and Titiunik 2020). Following Calonico, Cattaneo, and Titiunik (2014), we thus complement the analysis with a robust bias-corrected approach which is valid for inference. This specification fits a second-order polynomial within the MSE-optimal bandwidth for the local linear polynomial, as recommended by Calonico, Cattaneo, and Farrell (2020). Robust inference is achieved by incorporating the contribution of the bias-correction step to the variability of the bias-corrected point estimator. All our RDD estimations use a triangular kernel.

Three remarks regarding the sample that we use in the subsequent analyses are in order. First, our estimations are unconditional on rerunning. This is reasonable also given the institutional setting: municipal board members do not need to be elected politicians, even though they often are. Second, we omit politicians from parties that had all their candidates elected or non-elected. It is not possible to define the running variable for such party lists. Third, we leave out candidates

who were involved in ties for the last seat. For all such candidates, the running variable takes the value zero resulting in a mass point, and they are randomly assigned in treatment and control groups violating the sharp RDD assumption.

We illustrate the regression results graphically in Figure 6. The graphs plot local linear and quadratic polynomial fits within the MSE-optimal bandwidth for the local linear specification. We also show binned averages. Panel A first shows that there is an upward jump at the threshold: getting elected at time  $t$  gives a politician roughly a 2 – 3% advantage in getting promoted to the municipal executive board after election  $t + 1$ . There is no visible jump in Panel B where we look at the propensity of becoming a board chair.

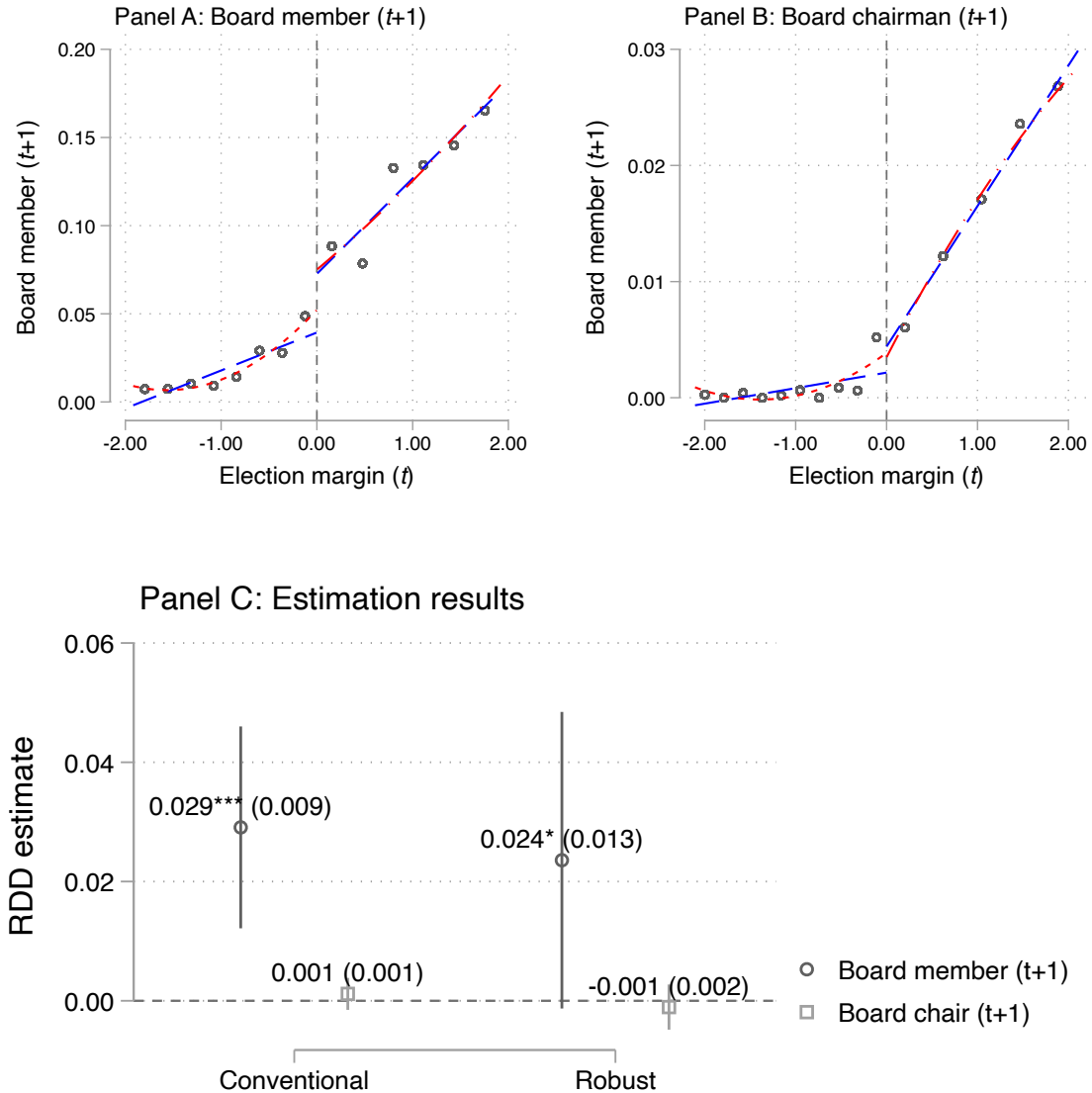
More detailed estimation results can be found in Panel C of Figure 6. There is a small, statistically significant incumbency effect on future nomination to the municipal board (results shown in dark gray color) but no effect on acquiring the board chairmanship (results shown in light gray color). The conventional RDD estimate suggests a 2.9% increase in the probability of getting selected to the municipal board ( $p < 0.01$ ), while the robust RDD estimate is 2.4% ( $p < 0.10$ ). The finding that there is a positive and significant incumbency effect on board nomination is interesting in the sense that Hyytinen et al. (2018b) find no evidence of a personal incumbency advantage what comes to re-election. We estimate a precise zero effect on the probability of getting promoted to the board chairmanship.

We assess the robustness and validity of the RDD results in Appendix D.<sup>18</sup> As we show in Appendix Figure D1, the effect magnitude is very robust to alternative bandwidths. Appendix Figure D2 shows that the covariate smoothness assumption is satisfied. We also document that the empirical design passes a placebo threshold test (Appendix Figure D3). Lastly, McCrary (2008) test shown in Appendix Figure D4 suggests that there is no precise manipulation of the running variable at the cutoff.

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<sup>18</sup>Generally speaking, close elections have been shown provide a credible source of causal identification both in our context and many others (Eggers et al. 2015; Hyytinen et al. 2018b; De Magalhães et al. 2020).





**Figure 6.** Incumbency and future board membership.

*Notes:* Panels A and B of the figure show RDD plots with local linear and quadratic polynomials and averages calculated within bins that have an equal number of observations following Calonico, Cattaneo, and Titiunik (2015). We restrict the data within the MSE-optimal bandwidth for the local linear specification. Panel C reports conventional and robust RDD estimates obtained using a local linear specification within the MSE-optimal bandwidth. We use a triangular kernel. Standard errors clustered at the municipality level are reported in parentheses. We also show 95% confidence intervals constructed using the same standard errors. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

## Concluding Remarks

How do parties form governing coalitions? It is well established that parties' government portfolio shares strongly correlate with the share of seats they contribute to the governing coalition—a regularity commonly known as Gamson's law—but empirical research thus far has not been able to decipher the distribution of residual political power that is not predicted by parties' seat shares. In this paper, we propose that what kind of representatives parties have may matter for their coalitional bargaining outcomes. We use data from local governments in Finland to empirically illustrate that differences in incumbent representation between parties offer a plausible explanation to why some parties do not get as many seats in the municipal board as their representation in the municipal council would imply.

Our findings also bear methodological implications. Formal models of legislative bargaining applied in the political arena typically attribute the final result of bargaining to parties' seat shares or their voting power, although some models also investigate the role of party ideology. We illustrate that parties' bargaining power and bargaining outcomes do not only depend on such attributes, but also on the characteristics of their representatives. Furthermore, our example shows that these factors may interact with each other. In our view, it would be important to reconcile these phenomena with a comprehensive, micro-founded model.

While we focus on a specific context, our findings are likely to have much broader relevance. For instance, local governments are key players in political systems across Europe (Stoker 1991). In many countries, they have institutional arrangements similar to those in Finland, with an elected local council that then selects an executive. Indeed, inspired by our analysis, Fiva, Izzo, and Tukiainen (2020) document a similar incumbency advantage in coalitional bargaining in Norway. We welcome further comparative research from different types of contexts to elaborate when and why incumbents play an important role in political coalition formation.

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# **The Advantage of Incumbents in Coalitional Bargaining**

## **Online Appendix**

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January 1, 2021

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## A Data

This Appendix provides additional information on our data.

### A.1 Summary Statistics and Data Sources

We combine information on candidates, electoral results, and post-electoral bargaining. Our election data cover four elections between the years 2000-2012, and they come from the Ministry of Justice. These data include information such as candidates' party affiliation, number of votes, previous political experience and election status. In total, the data cover 155,284 candidate-election year observations, out of which over 90,263 are unique individuals. We combine these information with data on chairmen and members of the municipal executive boards. These proprietary data come from the Finnish Association of Local Authorities (*Kuntaliitto*). The chairman data are available for all the above electoral terms, but the board members are observed only for the 2009-2012 electoral term. Lastly, we use candidate-level survey data on economic policy preferences of candidates running in the 2008 election to construct different metrics of party ideology. Further details on these data can be found below. Panel A of Table A1 reports descriptive statistics on the candidate-level data that are relevant for our subsequent empirical investigation.

In most of our analyses, we do not use the individual-level data but instead collapse them to the party level. Summary statistics on the party-level data can be found in Panel B of Table A1. We focus on parties that acquire at least one seat in the municipal election and thus participate in the coalitional bargaining process. Furthermore, we rule out municipalities where one party holds all seats. At most, we use 7,662 (party-electoral term) observations, although the analyses on board members only use 1,803 observations.

The average party holds almost one fifth of the local council seats and a roughly corresponding share of the board seats. We also use the Shapley-Shubik index to capture parties' voting power (Shapley and Shubik 1954). This index measures the political power of a party as

the fraction of possible votes in which the party is decisive for the outcome of the vote. The index takes values between zero (a party cannot affect the outcome of the vote) and one (a party has an absolute majority). Besides political power, ideology may fundamentally influence coalition formation. The survey data allow us to capture how different each party is from the other parties in the local council. Large deviations from the average policy position of the local council could be an indication of a party being in a tougher position to bargain for the board seats. For each of party  $p$  in municipality  $m$  at time  $t$ , we define ideological distance as the deviation between their policy position ( $x_{pmt}$ ) and the seat share weighted average policy position of the local council ( $\hat{x}_{mt}$ ), or more formally,  $|x_{pmt} - \hat{x}_{mt}|$ .

At most, we exploit data from 1,124 municipality-election pairs. In the limited sample for which we observe the municipal board composition, our data cover 332 clusters. Some of our analyses make use of municipality-level variables to capture the complexity of the bargaining environment. Panel C of Table A1 provides descriptive statistics on these as well as some other municipality-level characteristics. Importantly, we capture local council fragmentation with a Herfindahl-Hirschman index of party seat shares, formally defined as the sum of squared seat shares. The index takes values between 0 and 1, higher values reflecting a more concentrated seat distribution and a less complex bargaining environment. We also measure polarization (or ideological dispersion) at the local level based on our survey data on candidates' policy positions. We define polarization of the local council as the sum of seat share weighted deviations between each party's ideology and the seat share weighted average of policy position:

$$\sum_{pmt} s_{pmt} |x_{pmt} - \hat{x}_{mt}|.$$

**Table A1.** Summary statistics.

	<i>N</i>	Mean	Std. dev.
<b>Panel A: Individual-level variables</b>			
Board member	38567	0.08	0.27
Board chair	155284	0.01	0.10
Elected	155284	0.29	0.45
Incumbent	155284	0.21	0.41
Election margin	150763	-1.51	6.72
<b>Panel B: Party-level variables</b>			
Board seat share	1803	17.98	17.77
Board chairmanship	7662	0.19	0.39
Voting power	7662	19.28	27.36
Council seat share	7662	19.28	17.20
Incumbent seat share	7662	10.96	10.71
Ideological distance	7427	0.62	0.41
<b>Panel C: Municipality-level variables</b>			
Seat share concentration	1124	0.35	0.14
Number of parties	1124	5.15	1.45
Polarization	1124	0.86	0.74
Council size	1124	28.86	10.78
Board size	1124	7.57	3.61

## A.2 Measuring Ideology

Some of our analyses make use of party ideology that we measure using so-called voting aid application data from the Finnish public broadcasting company *Yle*. Voting aid applications are interactive questionnaires, the purpose of which is to assist voters in finding a candidate with similar policy preferences to theirs. Candidates fill out the survey before elections, after which voters can take the same survey to find a suitable candidate. The voting aid applications include a number of claims mostly related to the size of the public sector and redistribution, such as: “It is too easy to obtain welfare benefits nowadays” and “User fees of municipal services should be more progressive”. A stronger agreement with the first claim is associated with a more right-leaning ideology, whereas the stronger agreement with the latter two claims is related to a more liberal ideology. Overall, the data contain seven claims. The candidates would give their answers on a 1-4 scale (from “completely disagree” to “completely agree”).

We employ a principal component analysis to compress the survey responses into a single measure of economic policy preferences. This is a commonly used approach to extract a one-dimensional measure of ideology from survey data (Heckman and Snyder 1997; Ansolabehere, Snyder, and Stewart 2001). The first principal component captures the left-right dimension of economic ideology and explains about 28% of the variation in the data. Table A2 reports results of the principal component analysis alongside with the questions included in our data. Claims where a stronger agreement implies more right-wing attitudes get larger positive values, whereas the opposite is true for claims where a stronger agreement is in line with more left-wing preferences.

**Table A2.** PCA results.

	Loading	Mean	Standard deviation
Q1. If necessary, it is better to increase the municipal income tax than cut local public services.	-0.38	1.89	0.79
Q2. It is too easy to obtain welfare benefits nowadays.	0.51	2.92	0.79
Q3. We should compromise on environmental protection if it can improve employment or citizens' welfare.	0.33	3.07	0.81
Q4. Our municipality should fire some of the employees, as there are too many of them.	0.45	3.18	0.79
Q5. User fees of municipal services should be more progressive.	-0.15	2.62	0.91
Q6. If one of the parents is at home, the children should not be eligible for public day care.	0.41	2.80	0.91
Q7. If necessary, it is better to cut funding from public health care than schools, since there is no private schooling available.	0.30	2.71	0.89
Eigenvalue	1.96		
Proportion	0.28		

## B Instrumental Variables Approach

In this Appendix, we provide additional information on the instrumental variables approach that we use in some of our analyses.

### B.1 Illustrative Example

To illustrate how the instrumental variable for incumbents' seat share is constructed, consider the hypothetical example in Table B1. Suppose there is a party list with ten candidates, labeled with letters from  $A$  to  $J$ . The vote shares of the candidates are as indicated in the table. We first identify the last elected and the first non-elected candidate. These are  $E$  and  $F$ , respectively. We then fix the threshold for getting elected at  $(7.03 + 7.03)/2 = 7.03$ . The closeness measure for each candidate is the difference between this threshold and their vote share. For instance, for candidate  $D$  the closeness measure would get the value  $7.59 - 7.03 = 0.56$ .

For the sake of an example, let us say that the closeness measure that we have chosen is  $\varepsilon = 1$ . All candidates for whom the absolute distance from the threshold for getting elected is  $\varepsilon$  or less would be considered close. In this case, the close candidates would be  $C$ ,  $D$ ,  $E$ ,  $F$ , and  $G$ . Let us further assume that candidates  $E$ ,  $F$ , and  $G$  are incumbents. We can now calculate how many incumbents we would have expect to elect in close elections. If getting elected is essentially a random draw for the candidates involved in close elections, we obtain this expected number using a hyper-geometric distribution. The expected number of incumbents elected in close elections would be  $(3/5) \times 3 = 1.8$ . However, only one incumbent was elected. By chance, less incumbents got elected than we would have expected in the close elections. The difference between the actual and expected number of elected incumbents is  $1 - 1.8 = -0.8$ . Last, we multiply this by  $100/S_{mt}$  (where  $S_{mt}$  is the council size in a municipality  $m$  at time  $t$ ) to obtain the instrument for incumbents' seat share.



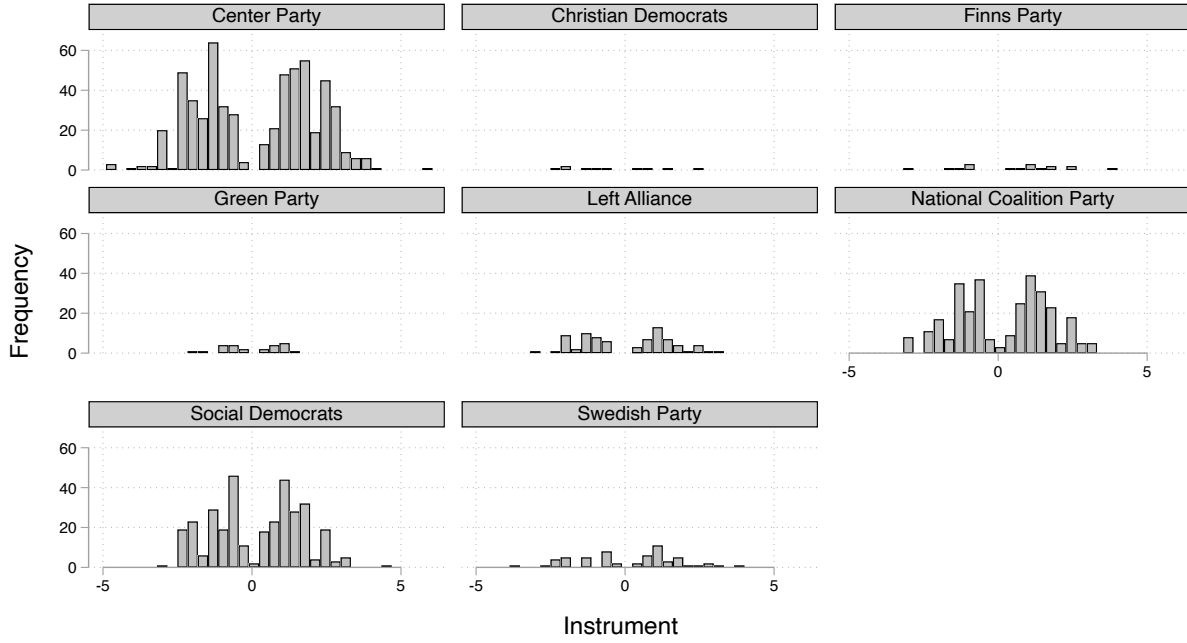
**Table B1.** Illustrative example.

Candidate	Vote share	Closeness	Elected	Incumbent	Close
A	32.35	25.32	1	0	0
B	25.60	18.57	1	1	0
C	8.02	0.98	<b>1</b>	0	<b>1</b>
D	7.59	0.56	<b>1</b>	0	<b>1</b>
E	7.03	0.00	<b>1</b>	<b>1</b>	<b>1</b>
F	7.03	0.00	0	<b>1</b>	<b>1</b>
G	6.89	-0.14	0	<b>1</b>	<b>1</b>
H	3.09	-3.94	0	0	0
I	2.25	-4.78	0	1	0
J	0.14	-6.89	0	1	0

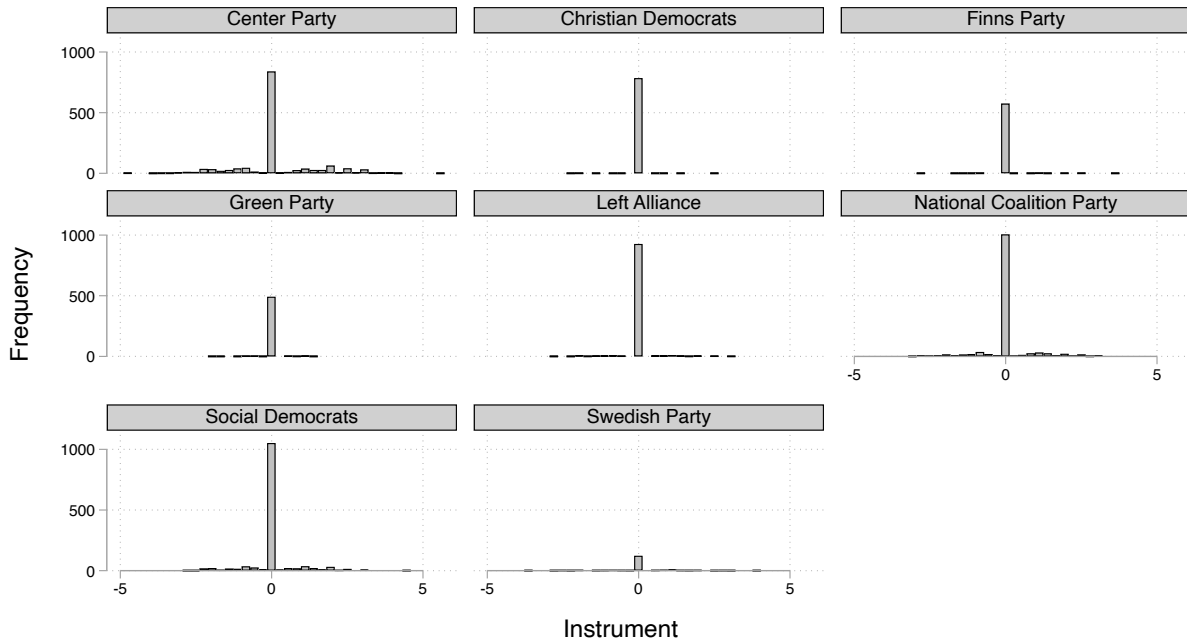
Actual number of (re-)elected incumbents = 1  
Expected number of (re-)elected incumbents =  $(3/5) \times 3 = 1.8$   
 $T_p = 1 - 1.8 = -0.8$

## **B.2 Identifying Variation**

Figures B1 and B2 show the distribution of the instrumental variable (excluding and including zeros). We plot the distributions by party (for eight largest parties). We see that most of the identifying variation comes from the three largest parties: the Center Party, the National Coalition Party, and the Social Democratic Party. However, there is also some variation within the smaller party lists.



**Figure B1.** Identifying variation (zeros excluded).



**Figure B2.** Identifying variation (zeros included).

### B.3 Validity Checks

In general, the seat share of re-elected incumbents strongly correlates with various party characteristics. We find that this is not the case when we limit our attention to the close elections. To demonstrate this, we report balance tests for different party characteristics using the same definition of electoral closeness as we use in our main analyses ( $\epsilon = 0.2$ ). We divide the data into two groups based on the seat share exceeding or falling short of its expected value in close elections, and then test for differences in means using a  $t$ -test adjusted for clustering at the municipality level. Tables B2 and B3 report the results from these analyses in the limited and the full sample, respectively. We do not find that parties that elect (by chance) more incumbents than expected would be different from those parties that elect less incumbents than expected. This is good news for the validity of our IV approach.

We also conduct a placebo threshold analysis. This test is analogous to the fake threshold test typically conducted in regression discontinuity design settings to show that there is a discontinuity only at the true cutoff. The results from this analysis can be found in Figure B3. For the first-stage placebo test (Panel A), we move the within-party threshold of getting elected by steps of 0.05 when constructing the instrument. We regress the actual seat share of incumbent politicians on the placebo instruments. As expected, the placebo results fluctuate around zero. Moreover, they are not systematically statistically significant. For the IV results (Panels B and C), the first stage has to be re-estimated. When the thresholds for getting elected are artificially changed, the council size and composition also change. Therefore, at each of the artificial thresholds, we compute the respective placebo council sizes, the seat shares of re-elected incumbents, and the instrument. We use the artificial seat share of incumbent politicians as the endogenous variable of interest instead of the real share, and instrument it with the placebo instrument. Using the placebo seat share ensures that the first stage of the placebo IV works as it should. This is because there is an approximate one-to-one relationship between the placebo seat share and the placebo instrument even at the fake thresholds. Again, we do not find any systematic effects at the fake thresholds.

**Table B2.** Balance test (limited sample).

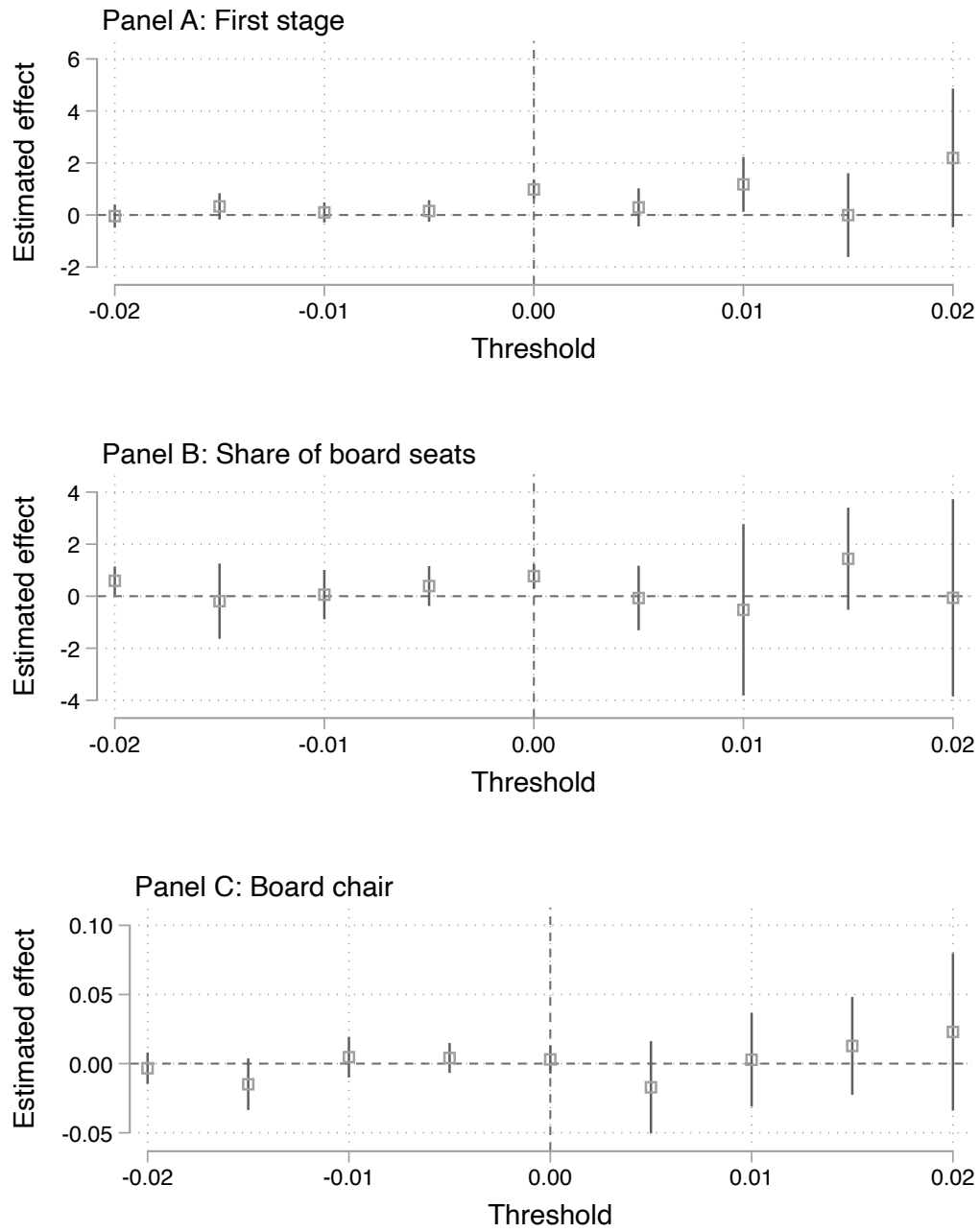
	Negative instrument	Positive instrument	Difference	<i>p</i> -value
Seat share	35.00	35.28	0.28	0.87
Voting power	42.64	43.17	0.53	0.86
Women %	37.12	35.70	-1.41	0.15
Unemployed %	2.05	2.34	0.29	0.40
Public employees %	22.92	23.08	0.16	0.88
Entrepreneurs %	21.91	21.84	-0.07	0.97
High professionals %	27.24	26.59	-0.65	0.69

*Notes:* The table reports averages for municipalities with a negative or a positive instrument value. We also test for differences in means using a *t*-test adjusted for clustering at the municipality level.

**Table B3.** Balance test (full sample).

	Negative instrument	Positive instrument	Difference	<i>p</i> -value
Seat share	35.00	35.28	0.28	0.87
Voting power	42.64	43.17	0.53	0.86
Women %	37.12	35.70	-1.41	0.15
Unemployed %	2.05	2.34	0.29	0.40
Public employees %	22.92	23.08	0.16	0.88
Entrepreneurs %	21.91	21.84	-0.07	0.97
High professionals %	27.24	26.59	-0.65	0.69

*Notes:* The table reports averages for municipalities with a negative or a positive instrument value. We also test for differences in means using a *t*-test adjusted for clustering at the municipality level.



**Figure B3.** Placebo threshold test.

*Notes:* The figure shows point estimates and their 95% confidence intervals (constructed based on standard errors that are clustered at the municipality level).

## C Robustness Checks

This appendix presents a number of robustness checks for the party-level analyses.

### C.1 Robustness of the Main Results

We start by assessing the robustness of our main results. First, we experiment with alternative controls for political power. The IV analyses that we present in the main text do not include any additional covariates as such are not needed for identification. If we control for the Shapley and Shubik (1954) index of voting power, our point estimates remain unchanged but we gain more statistical power (Table C1). Unfortunately, the same is not true if we control for the party council seat share (Table C2). The point estimates remain positive but are considerably smaller. We suspect that this finding may reflect the fact that once we net out party seat shares, we are left with considerably less variation that we can exploit. As a third measure of political power, we employ the Banzhaf power index (Penrose 1946). We find that both the OLS and IV results are robust to using this voting power metric (Table C3).

Second, we augment our estimations with municipality fixed effects (columns 1-4) or municipality-year fixed effects (columns 5-8) in Table C4. Recall that we only observe the board seat shares (the dependent variable in columns 1-4) for one electoral term, so we cannot include municipality-year fixed effects in the respective estimations, while we have data on board chairmen for multiple terms. Our qualitative conclusions remain unchanged after adding these controls.

Fourth, we evaluate the robustness of the IV and RF results for alternative definitions of electoral closeness in Figure C1. Consider first Panel A where we look at the share of board seats, and note that in order to keep the figure legible, we omit some of the very smallest bandwidths to avoid having extremely wide confidence intervals. We see that the magnitude of the estimates slowly gets smaller as we make the bandwidth more narrow. However, the confidence intervals also widen considerably, and the instrument loses its strength as we make the bandwidth more

narrow. The point estimates are more stable in Panel B where we also have a larger number of observations available. While the regression coefficients are not statistically significant at any conventional levels, their magnitude remains unchanged throughout different definitions of closeness.

Finally, as we explain in the main text, close elections do not occur within all parties. For these observations, we have no meaningful variation in the instrumental variable. Dropping out such observations results in largely similar conclusions (see Table C5). Due to smaller sample sizes, however, the point estimates come with larger standard errors.



**Table C1.** Political power, incumbents, and coalitional bargaining outcomes (controlling for Shapley-Shubik index).

	Share of board seats		Board chair	
	(1)	(2)	(3)	(4)
Voting power	0.429*** (0.075)	0.597*** (0.012)	0.009*** (0.001)	0.010*** (0.000)
Incumbent seat share	0.502** (0.217)		0.003 (0.005)	
Instrument		0.756* (0.400)		0.004 (0.006)
Constant	4.904*** (0.914)	7.002*** (0.268)	-0.028 (0.022)	-0.013*** (0.003)
Specification	IV	RF	IV	RF
<i>N</i>	1803	1803	7662	7662
<i>R</i> <sup>2</sup>	0.82	0.75	0.54	0.53
First stage <i>F</i>	29.11		125.41	
Outcome mean	17.98	17.98	0.19	0.19

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.

**Table C2.** Political power, incumbents, and coalitional bargaining outcomes (controlling for party seat share).

	Share of board seats		Board chair	
	(1)	(2)	(3)	(4)
Seat share	1.003*** (0.129)	1.036*** (0.012)	0.015*** (0.003)	0.016*** (0.000)
Incumbent seat share	0.057 (0.215)		0.003 (0.005)	
Instrument		0.064 (0.244)		0.003 (0.006)
Constant	-1.023*** (0.205)	-1.038*** (0.178)	-0.127*** (0.004)	-0.127*** (0.004)
Specification	IV	RF	IV	RF
<i>N</i>	1803	1803	7662	7662
<i>R</i> <sup>2</sup>	0.92	0.92	0.52	0.52
First stage <i>F</i>	31.29		147.09	
Outcome mean	17.98	17.98	0.19	0.19

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.

**Table C3.** Political power, incumbents, and coalitional bargaining outcomes (controlling for Banzhaf index).

	Share of board seats			Board chair		
	(1)	(2)	(3)	(4)	(5)	(6)
Voting power	0.252*** (0.013)	0.392*** (0.069)	0.521*** (0.008)	0.007*** (0.000)	0.008*** (0.001)	0.009*** (0.000)
Incumbent seat share	0.917*** (0.039)	0.441* (0.231)		0.006*** (0.001)	0.003 (0.005)	
Instrument			0.624 (0.393)			0.004 (0.005)
Constant	2.091*** (0.231)	3.514*** (0.701)	4.820*** (0.313)	-0.074*** (0.003)	-0.064*** (0.017)	-0.053*** (0.004)
Specification	OLS	IV	RF	OLS	IV	RF
<i>N</i>	1804	1804	1804	7673	7673	7673
<i>R</i> <sup>2</sup>	0.85	0.82	0.76	0.55	0.55	0.54
First stage <i>F</i>		25.40			96.91	
Outcome mean	18.02	18.02	18.02	0.19	0.19	0.19

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.

**Table C4.** Voting power, incumbents, and coalitional bargaining outcomes (fixed effects included).

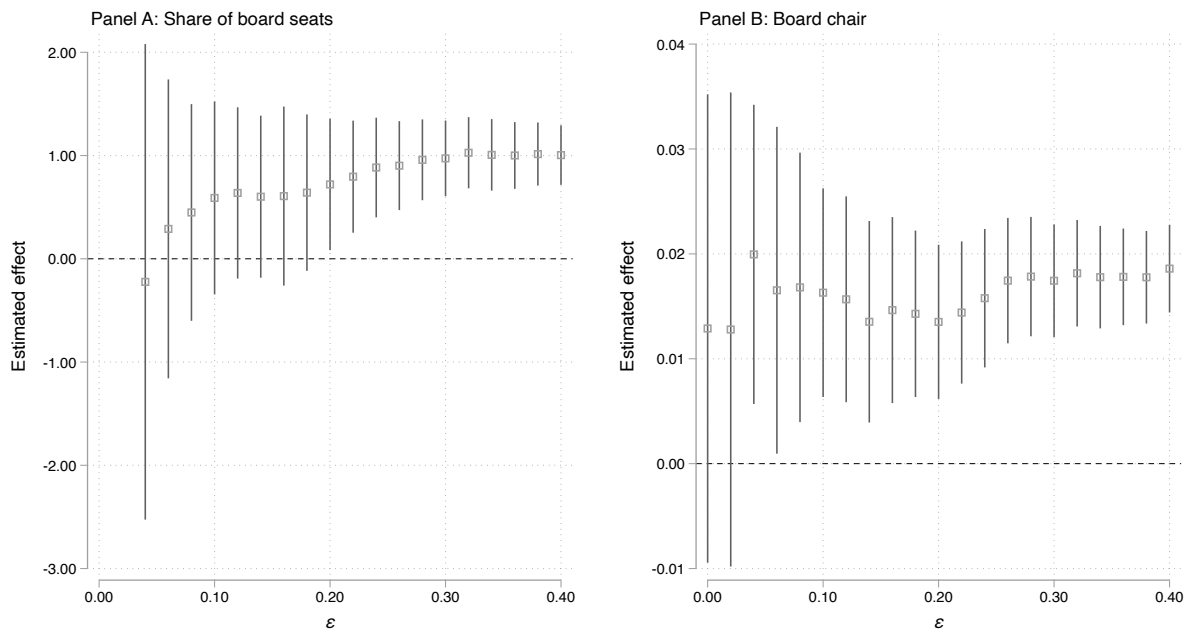
	Share of board seats				Board chair			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voting power	0.246*** (0.016)				0.008*** (0.000)			
Seat share		0.988*** (0.030)				0.017*** (0.001)		
Incumbent seat share	1.020*** (0.038)	0.111*** (0.043)	0.661* (0.365)		0.009*** (0.001)	0.001 (0.001)	0.016*** (0.004)	
Instrument				1.241 (1.033)				0.031*** (0.011)
Constant	2.870*** (0.235)	-1.313*** (0.209)		17.942*** (0.032)	-0.056*** (0.004)	-0.147*** (0.005)		0.186*** (0.000)
Specification	OLS	OLS	IV	RF	OLS	OLS	IV	RF
<i>N</i>	1803	1803	1803	1803	7662	7662	7662	7662
<i>R</i> <sup>2</sup>	0.86	0.93	0.54	0.09	0.56	0.54	0.39	0.03
First stage <i>F</i>			10.07				54.59	
Outcome mean	17.98	17.98	17.98	17.98	0.19	0.19	0.19	0.19

*Notes:* Columns (1)-(4) use data from the 2009-2012 council term and control for municipality fixed effects. Columns (5)-(8) use data from the 2001-2016 council terms and control for municipality-year fixed effects. Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.

**Table C5.** Voting power, incumbents, and coalitional bargaining outcomes (parties with no close elections excluded).

	Share of board seats		Board chair	
	(1)	(2)	(3)	(4)
Incumbent seat share	0.383 (0.371)		0.008 (0.005)	
Instrument		0.535 (0.636)		0.011 (0.008)
Constant	24.987*** (6.678)	31.825*** (0.755)	0.277*** (0.096)	0.419*** (0.010)
Specification		IV	RF	IV
<i>N</i>		605	605	2513
<i>R</i> <sup>2</sup>		0.35	0.00	0.17
First stage <i>F</i>		13.25		60.26
Outcome mean		31.87	31.87	0.42

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.



**Figure C1.** Robustness of the main IV results to alternative definitions of closeness.

*Notes:* The figure shows point estimates and their 95% confidence intervals that are obtained using alternative definitions of closeness. The confidence intervals are constructed using standard errors clustered at the municipality level.

## **C.2 Robustness of the Heterogeneity Analyses**

We then present robustness checks for the descriptive analyses that investigate how the role of incumbents may depend on different party characteristics and the local political context. Tables C6, C7, C9, and C10 show that the findings are robust to controlling for party seat share or Banzhaf index of voting power instead of the Shapley-Shubik index. The results are also robust to controlling for municipality (or municipality-year) fixed effects, as we demonstrate in Tables C8 and C11.

**Table C6.** Interaction between incumbent representation and party-level characteristics (control for party seat share).

	Share of board seats			Board chair
	(1)	(2)	(3)	(4)
Seat share	0.992*** (0.028)	0.931*** (0.029)	1.262*** (0.079)	0.015*** (0.001)
Incumbent seat share	0.007 (0.049)	0.243*** (0.042)	0.029 (0.107)	0.002 (0.001)
Ideological distance	-1.129*** (0.357)			-0.018** (0.007)
Incumbent seat share × Ideological distance	0.223*** (0.046)			-0.001 (0.001)
Largest party		6.479*** (1.229)	5.848 (4.127)	
Incumbent seat share × Largest party		-0.279*** (0.049)	0.023 (0.231)	
Seat share <sup>2</sup>			-0.006*** (0.002)	
Incumbent seat share <sup>2</sup>			0.003 (0.005)	
Seat share × Largest party			-0.253 (0.205)	
Seat share <sup>2</sup> × Largest party			0.005 (0.003)	
Incumbent seat share <sup>2</sup> × Largest party			-0.003 (0.007)	
Constant	-0.817*** (0.276)	-1.468*** (0.181)	-2.837*** (0.304)	-0.112*** (0.006)
<i>N</i>	1799	1803	1803	7427
<i>R</i> <sup>2</sup>	0.92	0.92	0.92	0.52

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

**Table C7.** Interaction between incumbent representation and party-level characteristics (control for alternative measure of voting power).

	Share of board seats			Board chair
	(1)	(2)	(3)	(4)
Voting power	0.249*** (0.014)	0.213*** (0.013)	0.086** (0.035)	0.007*** (0.000)
Incumbent seat share	0.900*** (0.052)	1.071*** (0.040)	1.257*** (0.092)	0.007*** (0.001)
Ideological distance	-1.272*** (0.476)			-0.017*** (0.006)
Incumbent seat share × Ideological distance	0.040 (0.060)			-0.000 (0.001)
Largest party		11.648*** (1.353)	48.077*** (11.454)	
Incumbent seat share × Largest party		-0.426*** (0.059)	-1.202*** (0.186)	
Voting power <sup>2</sup>			0.001* (0.001)	
Incumbent seat share <sup>2</sup>			-0.005 (0.005)	
Voting power × Largest party			-0.821** (0.322)	
Voting power <sup>2</sup> × Largest party			0.006*** (0.002)	
Incumbent seat share <sup>2</sup> × Largest party			0.010* (0.006)	
Constant	2.905*** (0.363)	1.387*** (0.233)	1.659*** (0.288)	-0.060*** (0.005)
<i>N</i>	1799	1803	1803	7427
<i>R</i> <sup>2</sup>	0.85	0.85	0.86	0.55

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.



**Table C8.** Interaction between incumbent representation and party-level characteristics (fixed effects included).

	Share of board seats			Board chair
	(1)	(2)	(3)	(4)
Voting power	0.270*** (0.018)	0.268*** (0.017)	0.711*** (0.095)	0.008*** (0.000)
Incumbent seat share	0.829*** (0.056)	1.176*** (0.037)	1.010*** (0.116)	0.005*** (0.001)
Ideological distance	-3.023*** (0.497)			-0.058*** (0.007)
Incumbent seat share × Ideological distance	0.371*** (0.065)			0.007*** (0.002)
Largest party		19.963*** (1.241)	22.251*** (3.276)	
Incumbent seat share × Largest party		-0.861*** (0.059)	-1.030*** (0.193)	
Voting power <sup>2</sup>			-0.012*** (0.003)	
Incumbent seat share <sup>2</sup>			0.004 (0.006)	
Voting power × Largest party			-0.296** (0.144)	
Voting power <sup>2</sup> × Largest party			0.011*** (0.003)	
Incumbent seat share <sup>2</sup> × Largest party			0.002 (0.007)	
Constant	4.257*** (0.357)	1.337*** (0.227)	0.460 (0.282)	-0.028*** (0.006)
<i>N</i>	1799	1803	1803	7423
<i>R</i> <sup>2</sup>	0.87	0.89	0.89	0.56

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. Columns (1)-(3) control for municipality fixed effects, and column (4) controls for municipality-year fixed effects. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

**Table C9.** Interaction between incumbent representation and municipality-level characteristics (controlling for party seat share).

	Share of board seats			Board chair		
	(1)	(2)	(3)	(4)	(5)	(6)
Seat share	1.012*** (0.027)	1.005*** (0.028)	0.969*** (0.027)	0.016*** (0.001)	0.017*** (0.001)	0.016*** (0.001)
Incumbent seat share	0.307*** (0.053)	-0.207** (0.081)	0.128*** (0.046)	0.004*** (0.001)	-0.007*** (0.002)	0.001 (0.001)
Seat share concentration	0.338 (1.226)			-0.130*** (0.021)		
Incumbent seat share $\times$ Seat share concentration	-0.638*** (0.125)			-0.007* (0.004)		
Number of parties		-0.155 (0.103)			0.015*** (0.003)	
Incumbent seat share $\times$ Number of parties		0.055*** (0.011)			0.001*** (0.000)	
Polarization			0.126 (0.143)			0.005 (0.005)
Incumbent seat share $\times$ Polarization			-0.012 (0.018)			0.000 (0.001)
Constant	-1.717*** (0.402)	-0.539 (0.685)	-1.146*** (0.211)	-0.099*** (0.006)	-0.233*** (0.015)	-0.133*** (0.006)
<i>N</i>	1803	1803	1803	7662	7662	7662
<i>R</i> <sup>2</sup>	0.92	0.92	0.92	0.53	0.53	0.52

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

**Table C10.** Interaction between incumbent representation and municipality-level characteristics (controlling for alternative measure of voting power).

	Share of board seats			Board chair		
	(1)	(2)	(3)	(4)	(5)	(6)
Voting power	0.281*** (0.014)	0.268*** (0.013)	0.252*** (0.013)	0.008*** (0.000)	0.007*** (0.000)	0.007*** (0.000)
Incumbent seat share	0.815*** (0.083)	0.795*** (0.095)	0.942*** (0.044)	0.007*** (0.001)	0.005*** (0.001)	0.006*** (0.001)
Seat share concentration	18.065*** (2.377)			0.211*** (0.053)		
Incumbent seat share × Seat share concentration	-0.018 (0.222)			-0.004*** (0.001)		
Number of parties		-1.231*** (0.151)			-0.006*** (0.002)	
Incumbent seat share × Number of parties		0.008 (0.015)			0.000* (0.000)	
Polarization			-0.028 (0.224)			0.003 (0.004)
Incumbent seat share × Polarization			-0.025 (0.021)			-0.000 (0.000)
Constant	-3.050*** (0.743)	9.775*** (0.978)	2.133*** (0.330)	-0.141*** (0.017)	-0.039*** (0.013)	-0.078*** (0.005)
<i>N</i>	1803	1803	1803	7662	7662	7662
<i>R</i> <sup>2</sup>	0.86	0.86	0.85	0.55	0.55	0.55

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

**Table C11.** Interaction between incumbent representation and municipality-level characteristics (fixed effects included).

	Share of board seats			Board chair		
	(1)	(2)	(3)	(4)	(5)	(6)
Voting power	0.257*** (0.017)	0.259*** (0.017)	0.246*** (0.016)	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)
Incumbent seat share	1.175*** (0.069)	0.679*** (0.098)	1.053*** (0.045)	0.012*** (0.002)	-0.000 (0.002)	0.009*** (0.001)
Incumbent seat share × Seat share concentration	-0.477** (0.198)			-0.010** (0.005)		
Incumbent seat share × Number of parties		0.059*** (0.014)			0.002*** (0.000)	
Incumbent seat share × Polarization			-0.029 (0.024)			-0.000 (0.000)
Constant	2.692*** (0.217)	2.788*** (0.217)	2.859*** (0.233)	-0.062*** (0.004)	-0.057*** (0.004)	-0.056*** (0.004)
<i>N</i>	1803	1803	1803	7662	7662	7662
<i>R</i> <sup>2</sup>	0.86	0.87	0.86	0.56	0.56	0.56

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. Columns (1)-(3) control for municipality fixed effects, and columns (4)-(6) control for municipality-year fixed effects. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1% levels, respectively.

### **C.3 Robustness of the Selection Results**

Last, we present robustness analyses for the selection results. Our results do not change much if we control for voting power measured by the Shapley-Shubik index (Table C12). But as before, if we control for party seat share, our point estimates lose statistical significance and also become smaller (Table C13). We have also tried controlling for the Banzhaf index of voting power instead of the Shapley-Shubik index (Table C14). The choice of voting power index does not seem to make a big difference. Similarly, the findings are robust to controlling for municipality fixed effects (Table C15), using alternative definitions of electoral closeness (Figure C2), or restricting the sample to include only parties that have close elections (Table C16).

**Table C12.** Effect of incumbent representation in the local council on incumbent and nonincumbent representation in the municipal board (controlling for Shapley-Shubik index).

	Incumbent share of board seats		Non-incumbent share of board seats	
	(1)	(2)	(3)	(4)
Voting power	0.193** (0.085)	0.389*** (0.014)	0.240*** (0.089)	0.210*** (0.011)
Incumbent seat share	0.581** (0.250)		-0.090 (0.260)	
Instrument		0.855* (0.482)		-0.133 (0.390)
Constant	2.492** (1.060)	4.914*** (0.238)	2.451** (1.102)	2.075*** (0.204)
Specification	IV	RF	IV	RF
<i>N</i>	1804	1804	1804	1804
<i>R</i> <sup>2</sup>	0.71	0.55	0.36	0.35
First stage <i>F</i>	27.20		27.20	
Outcome mean	12.09	12.09	5.93	5.93

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.

**Table C13.** Effect of incumbent representation in the local council on incumbent and nonincumbent representation in the municipal board (controlling for party seat share).

	Incumbent share of board seats		Non-incumbent share of board seats	
	(1)	(2)	(3)	(4)
Seat share	0.456** (0.191)	0.681*** (0.017)	0.528*** (0.182)	0.352*** (0.016)
Incumbent seat share	0.389 (0.326)		-0.305 (0.314)	
Instrument		0.436 (0.416)		-0.342 (0.387)
Constant	-0.358 (0.238)	-0.460* (0.238)	-0.616*** (0.230)	-0.536** (0.233)
Specification	IV	RF	IV	RF
<i>N</i>	1804	1804	1804	1804
<i>R</i> <sup>2</sup>	0.74	0.68	0.49	0.40
First stage <i>F</i>	31.28		31.28	
Outcome mean	12.09	12.09	5.93	5.93

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.

**Table C14.** Effect of incumbent representation in the local council on incumbent and nonincumbent representation in the municipal board (controlling for Banzhaf index).

	Incumbent share of board seats			Non-incumbent share of board seats		
	(1)	(2)	(3)	(4)	(5)	(6)
Voting power	0.043*** (0.013)	0.186** (0.076)	0.347*** (0.010)	0.209*** (0.015)	0.206** (0.081)	0.174*** (0.009)
Incumbent seat share	1.037*** (0.035)	0.552** (0.259)		-0.120*** (0.039)	-0.111 (0.274)	
Instrument			0.782* (0.473)			-0.158 (0.396)
Constant	0.201 (0.177)	1.650** (0.791)	3.286*** (0.261)	1.890*** (0.233)	1.864** (0.835)	1.534*** (0.209)
Specification	OLS	IV	RF	OLS	IV	RF
<i>N</i>	1804	1804	1804	1804	1804	1804
<i>R</i> <sup>2</sup>	0.77	0.72	0.58	0.33	0.33	0.32
First stage <i>F</i>		25.40			25.40	
Outcome mean	12.09	12.09	12.09	5.93	5.93	5.93

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.



**Table C15.** Effect of incumbent representation in the local council on incumbent and nonincumbent representation in the municipal board (fixed effects included).

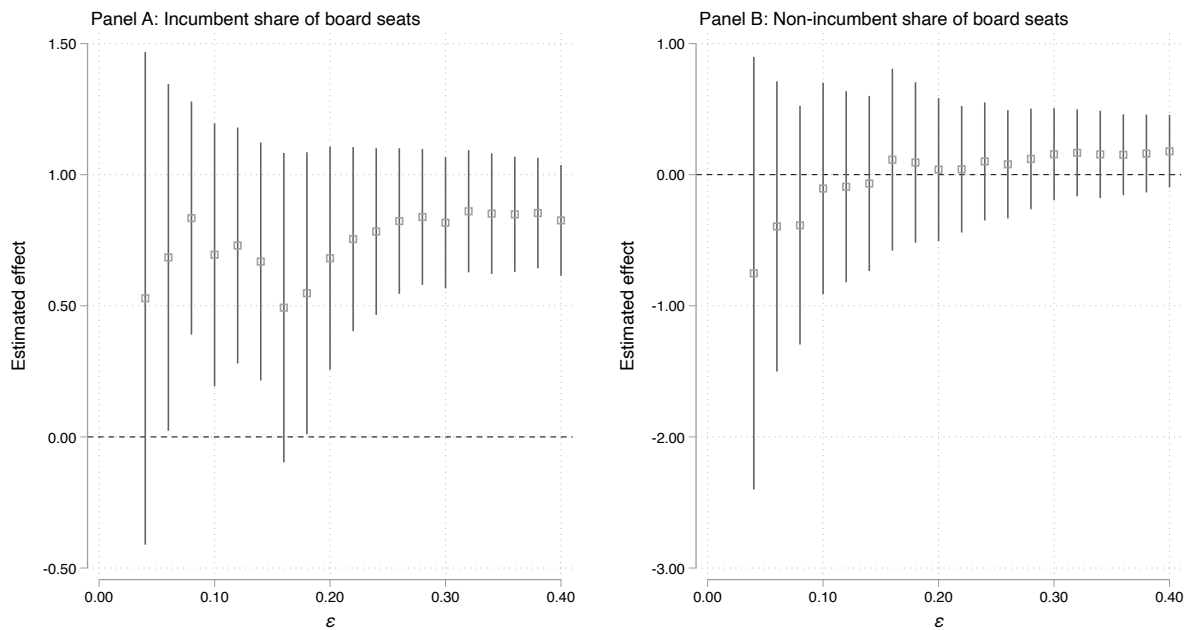
	Incumbent share of board seats				Non-incumbent share of board seats			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voting power	0.004 (0.015)				0.242*** (0.018)			
Seat share		0.173*** (0.035)				0.815*** (0.033)		
Incumbent seat share	1.162*** (0.034)	0.919*** (0.048)	0.666*** (0.228)		-0.142*** (0.039)	-0.808*** (0.046)	-0.005 (0.278)	
Instrument				1.250* (0.755)				-0.009 (0.521)
Constant	-0.074 (0.204)	-0.649** (0.268)		12.026*** (0.023)	2.944*** (0.226)	-0.664*** (0.254)		5.916*** (0.016)
Specification	OLS	OLS	IV	RF	OLS	OLS	IV	RF
<i>N</i>	1803	1803	1803	1803	1803	1803	1803	1803
<i>R</i> <sup>2</sup>	0.81	0.81	0.64	0.10	0.51	0.63	-0.01	0.21
First stage <i>F</i>			10.07				10.07	
Outcome mean	12.06	12.06	12.06	12.06	5.92	5.92	5.92	5.92

*Notes:* Columns (1)-(4) use data from the 2009-2012 council term and control for municipality fixed effects. Columns (5)-(8) use data from the 2001-2016 council terms and control for municipality and year fixed effects. Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.

**Table C16.** Effect of incumbent representation in the local council on incumbent and nonincumbent representation in the municipal board (parties with no close elections excluded).

	Incumbent share of board seats		Non-incumbent share of board seats	
	(1)	(2)	(3)	(4)
Incumbent seat share	0.497* (0.285)		-0.114 (0.335)	
Instrument		0.695 (0.540)		-0.159 (0.459)
Constant	12.920** (5.111)	21.792*** (0.584)	12.067** (6.048)	10.033*** (0.500)
Specification	IV	RF	IV	RF
<i>N</i>	605	605	605	605
<i>R</i> <sup>2</sup>	0.47	0.00	-0.07	0.00
First stage <i>F</i>	13.25		13.25	
Outcome mean	21.86	21.86	10.02	10.02

*Notes:* Standard errors clustered at the municipality level are reported in parentheses. \*, \*\* and \*\*\* denote statistical significance at 10%, 5% and 1%, respectively.



**Figure C2.** Effect of incumbent representation in the local council on incumbent and nonincumbent representation in the municipal board: robustness to alternative definitions of closeness.

*Notes:* The figure shows point estimates and their 95% confidence intervals that are obtained using alternative definitions of closeness. The confidence intervals are constructed using standard errors clustered at the municipality level.

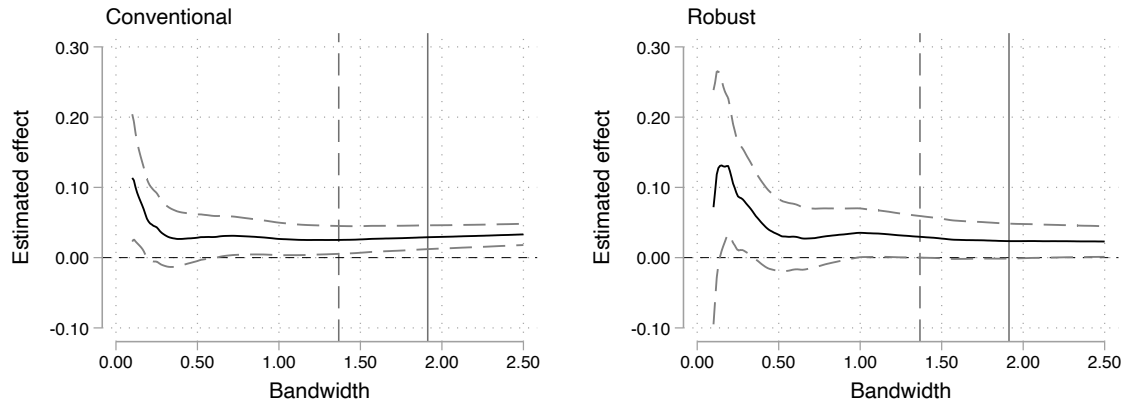
## D Robustness and Validity Checks for RDD

This appendix presents robustness and validity checks for the RDD analyses on incumbency effects. We first show in Figure D1 that our results are robust to alternative choices of bandwidth. When we make the bandwidth smaller, the confidence intervals become wider but our qualitative conclusions remain unchanged.

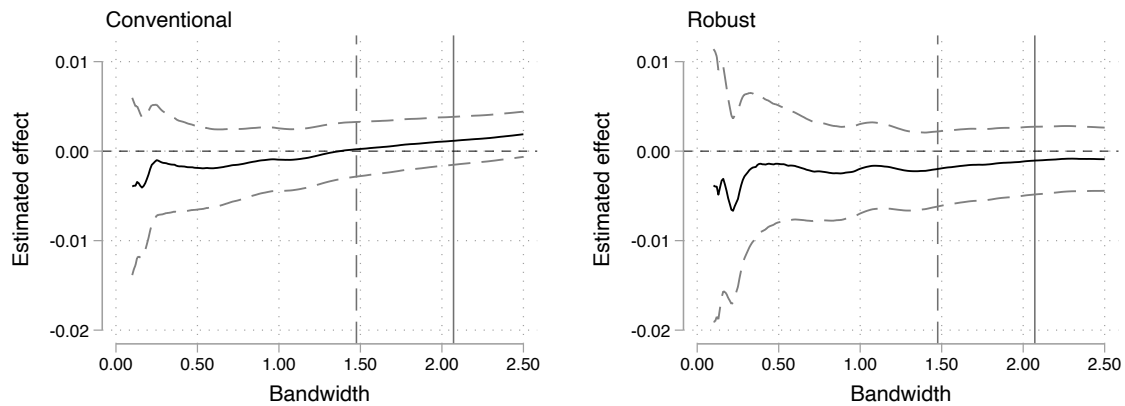
A number of additional analyses support the validity of our RDD results. Figure D3 plots regression discontinuity estimates and their 95% confidence intervals that are obtained using placebo cutoffs. We see that in Panel A, where we look at the actual (marked with vertical lines) and placebo effects on board membership, we mainly detect statistically significant effects around the true cutoff. The point estimates fluctuate around zero for the artificial thresholds. Hyytinen et al. (2018) and De Magalhães et al. (2020) argue that this is a good indication of the suitability of the specification that we use.

We also do not find any evidence of sorting at the threshold. Figure D2 examines covariate smoothness. We focus on incumbency at time  $t$  and show regression results from the conventional and robust RDD specifications. We report results using the (full) 2000-2012 sample. The covariate smoothness test raises no concerns. Last, the McCrary (2008) density discontinuity test in Figure D4 suggests that there is no precise manipulation of the running variable at the cutoff.

Panel A: Board member

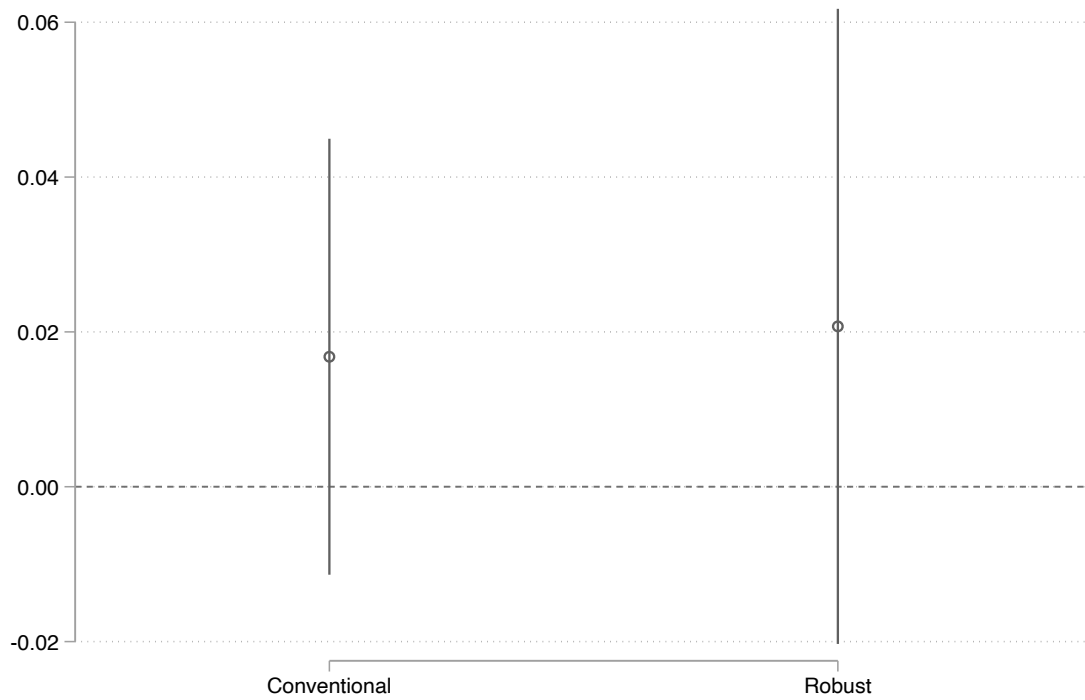


Panel B: Board chair



**Figure D1.** Robustness to alternative bandwidths.

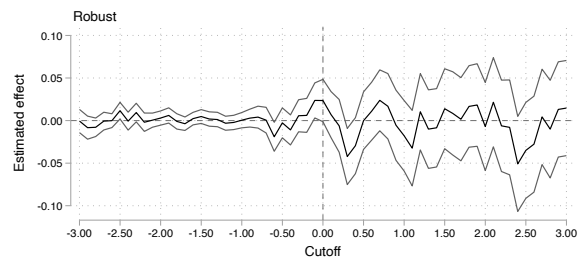
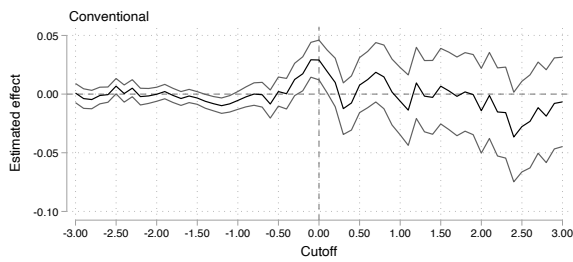
*Notes:* The figure shows point estimates and their 95% confidence intervals (constructed based on standard errors that are clustered at the municipality level) that are obtained using alternative bandwidths. The solid vertical line marks the MSE-optimal bandwidth, and the dashed vertical line is the CER-optimal bandwidth (see Calonico, Cattaneo, and Farrell 2020). All estimations use a triangular kernel, and the robust estimation fixes the main and bias bandwidths to be the same. The confidence intervals are constructed using standard errors clustered at the municipality level.



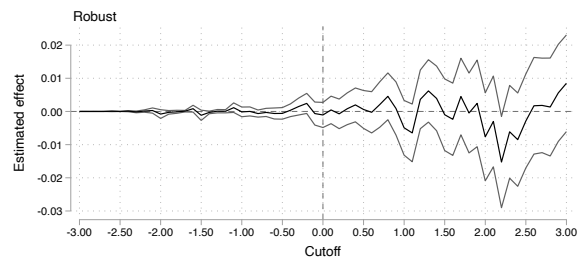
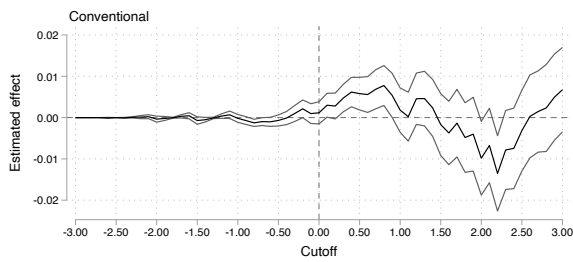
**Figure D2.** Covariate smoothness test.

*Notes:* The dependent variable is incumbency after election  $t - 1$ . The figure shows regression discontinuity estimates and their 95% confidence intervals constructed using standard errors clustered at the municipality level. Both estimations use a triangular kernel and MSE-optimal bandwidths.

Panel A: Board member

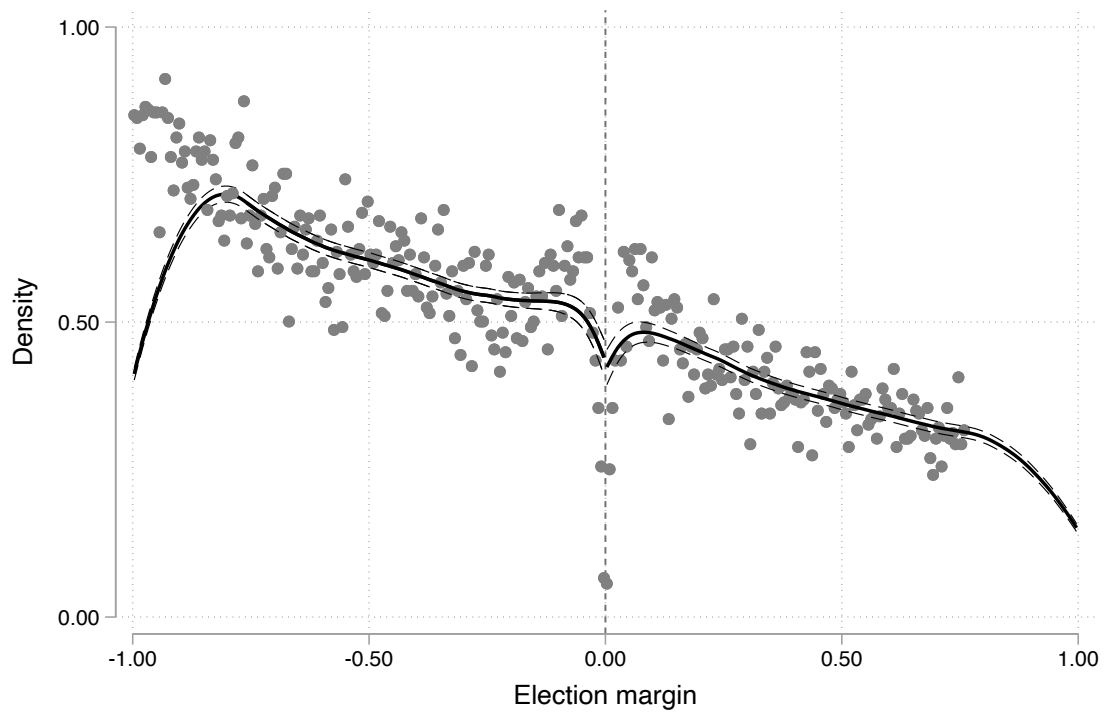


Panel B: Board chair



**Figure D3.** Regression discontinuity estimates obtained using placebo thresholds.

*Notes:* The figure shows point estimates and their 95% confidence intervals that are obtained using placebo thresholds. The confidence intervals are constructed using standard errors clustered at the municipality level.



**Figure D4.** McCrary test.

*Notes:* The figure shows estimated density, its 95% confidence interval, and binned averages. There is no jump at the threshold.

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ISSN 1796-3133