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Do Party Ties Increase Transfer Receipts in Cooperative Federalism? – Evidence from Germany

Abstract

Cooperative fiscal federalism needs a multi-level consent to decide on the allocation of intergovernmental transfers. We study how parliamentary representation of municipalities on the federal level influences the allocation of federal transfers to municipal governments under this type of federalism. Using a regression discontinuity design in close electoral races, we find that a directly elected member of the federal parliament, who belongs to the party that leads the federal government, induces higher infrastructure transfers from the federal government to a local jurisdiction. However, our results show that this effect only unfolds, if the parliamentarian's party is simultaneously leading the state government. Moreover, we identify party competition on the local level as motive behind the strategic use of federal funds. Thus, while supporting the swing voter hypothesis, our results suggest that federalism inherently entails restrictions for misusing intergovernmental transfers for political reasons.

JEL-Codes: H710, H720, H770, E620.

Keywords: fiscal federalism, partisan alignment, vertical transfers.

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1. Introduction

Federations can be distinguished into competitive and cooperative federal systems. Competitive federalism relies on horizontal and vertical competition of jurisdictions. In contrast to this understanding of federalism, cooperative federalism relies on shared responsibilities and multi-level consent to arrive at political decisions[1]. As a core characteristic of all federations, fiscal resources are distributed vertically among different tiers of government. Besides legally binding formula-based transfers, governments usually grant transfers that they can assign with certain degrees of discretion to the beneficiaries. The public finance literature has shown that the distribution of discretionary grants is not only driven by need-based criteria of the receiving jurisdiction. Instead, political economy arguments play a decisive role as to which municipality eventually receives transfers (Worthington and Dollery 1998; Knight 2002; Arulampalam et al. 2009; Brollo et al. 2012; Kauder et al. 2016; Maaser and Stratmann 2016).

Most of the existing studies on the politically motivated allocation of discretionary transfers in federations either look at competitive federal systems in which the granting level autonomously decides who to grant to, or they restrict their analysis to direct granting relations between the grantor government and the receiving jurisdiction. In this paper, we study as to how cooperative federalism influences the strategically motivated distribution of transfers when multiple tiers of government are involved in the granting decisions. Our analysis is based on data of budget support transfers that municipalities in the German state of North-Rhine Westphalia received from the German federal government in the period between 1992 and 2013. A core characteristic of these federal transfers is that the consent of both the federal and the state government is needed to grant funds to a specific municipality.

We use a regression discontinuity design (RDD) to estimate the causal effect on federal transfer receipts for a municipality if it is represented by a directly elected member of the federal parliament who belongs to the governing party. Within our RDD-framework, we apply subgroup analyses and use propensity score weighting to estimate separated effects if a municipality's federal representative has party ties to both the federal and the state government, or to one of the two governments only. According to our main finding, a municipality receives more fiscal transfers if it is represented by a directly elected member of the federal parliament who belongs to the party that makes up the federal government. Our estimates indicate that the average municipality in NRW with 30,000 inhabitants receives about 240,000 Euro higher

[1] While Switzerland, Canada or the U.S. are examples that largely rely on competitive federal structures, Germany, Austria or Australia are examples for states that follow a cooperative approach to federalism.

federal transfers for public investment projects over the federal election period of four years if its federal representative belongs to the governing party. However, this effect only unfolds if the party of the federal representative is simultaneously leading the federal and the state government. Our results suggest that securing local party presence is the motive behind the strategic distribution of funds. Thus, although not preventing it entirely, cooperative federalism builds roadblocks for a politically motivated misuse of public funds.

We contribute to the literature on the strategic use of discretionary transfers in federations in two regards. First, we study the partisan-driven distribution of funds under cooperative federalism when multiple levels of government are involved into granting decisions. Second, we consider the crucial role that political party structures play if the political system regarded is not only a cooperative federation but also a parliamentary democracy. The remainder of the paper is organized as follows: In Section 2, theoretical arguments and the existing empirical evidence on the effects of party ties on intergovernmental transfers are discussed. This is followed by a description of the institutional background in the German federation in Section 3. The identification strategy and the data are presented in Section 4, the results in Section 5. Conclusions are drawn in Section 6.

2. Theoretical Considerations and Previous Findings

2.1 Party Ties and Vertical Transfers

Already Weingast et al. (1981) show that politicians aim at strategically distributing transfers to increase their reelection probability. This can either be done through gaining increased public support by voters who benefit from funds that are channeled into their home region or through building and maintaining strategic alliances within the political sphere, e.g., between central and local politicians. The literature distinguishes two ways as to how politicians and political parties might be interested in manipulating the distribution of transfers strategically to increase the reelection probability of their candidates. First, Cox and McCubbins (1986) show that risk-averse politicians channel funds into those regions in which their core-supporters reside. Only for their most attached supporters, politicians know how they react to increased funds. Thus, risk-averse politicians tend to "overinvest" into their core-supporter groups "such as risk-averse investors will tend to over-invest into low-risk-securities" (p. 385). There is plenty of empirical evidence confirming the core-supporter hypothesis (Levitt and Snyder 1995, Stratmann and Wojnilower 2015, Kriner and Reeves 2015 for the US; Joanis 2011 for Canada; Dahlberg and Johansson 2002 for Sweden; Cadot et al. 2006 for France; Kauder et al. 2016 for Germany).

Second and contrary to Cox and McCubbins' (1986) core-supporter hypothesis, Dixit and Londregan (1995, 1998) argue that political parties need to maximize their vote share through investing into potential swing voters to win elections. By redistributing transfers strategically, it becomes either possible to "buy-off" unattached voters from the opposing party or to prevent own supporters from "swinging" to the opposing party in the next election. Many empirical studies confirm the swing voter hypothesis. Arulampalam et al. (2009) find that the party leading the Indian central government favored swing provinces in allocating federal grants. Similar evidence is provided by Litschig (2012) for Brazil. That the strategic distribution of public funds following the swing voter rationale is also an issue in developed economies is shown by Bracco et al. (2015), who find that governing parties in Italy distributed national grants strategically to secure their majority in municipal elections. There is also evidence for Germany (Kemmerling and Stephan 2002), France (Cadot et al. 2006), Spain (Solé-Ollé 2013) and the U.S. (Albouy 2013, Geys and Vermeir 2014) that governing parties use their financial means and distribute funds strategically to gain the support of swing voters. Brollo and Nannicini (2012) show that gaining the support of swing voters cannot only take the form of channeling additional funds towards them. Instead, strategically reducing transfers for swing voters that supported the opposing party in the last election is also an option for the governing party to compete for swing voters. The rationale behind this is to "tie the hands" of the opposing party (Brollo and Nannicini 2012). Brollo and Nannicini (2012) show that the governing party in Brazil applied such "tying-hands" policies towards municipal governments which were led by opposing parties after sharply losing mayoral elections.

2.2 Effects of Party Ties in a Parliamentary Democracy

Most of the existing evidence on the strategic use of transfers focusses on party ties between central and local governments (Sengupta 2011, Brollo and Nannicini 2012, Bracco et al. 2015, Baskaran and Hessami 2017), on alignment of parliament members with the parliamentary majority in presidential systems (Knight 2002, Albouy 2013) or on the voting support for the governing party in single municipalities (Solé-Ollé 2013). A question that has attracted minor attention so far is whether parliament members that belong to the governing party can attract more funds for their constituencies in parliamentary democracies. While in both, presidential and parliamentary systems, the support of parliament members is needed to implement policies, parties in parliamentary systems need a sufficient number of votes in parliament to form a government and to remain in government. Consequently, the governing party should have a particular interest to use its governmental means to secure and increase its number of parliament seats. One way for a political party to do this is to support its parliamentarians in securing their

reelection. Anecdotal evidence suggests that a usual strategy of parliamentarians to gain support for their reelection is to show to their voters that they are influential and successful advocates for their constituencies on the state or the federal level. This is most obviously achieved if they attract federal funds for municipalities within their constituencies. Often, these funds should then enable the realization of visible infrastructure projects (Maaser and Stratmann 2016)[2].

Given these considerations, two strategies for a governing party to support its parliamentarians in securing their seats are straightforward. First, a party that leads a parliamentary government has an incentive to use its financial means in order to support the reelection of its parliament members by channeling funds into municipalities in their constituencies. Second, members of parliament not belonging to a party in government and have a reasonable chance to get reelected are a threat to the parliamentary majority of the governing party in the next election. Thus, the governing party has an incentive to lower the reelection chances of these parliament members by reducing funds for their constituencies. These considerations lead to Hypothesis 1.

Hypothesis 1: *In a parliamentary democracy, municipalities in close-race constituencies receive more transfers if a member of parliament who represents the municipality belongs to the governing party.*

2.3 Effects of Party Ties in Cooperative Federalism

Hypothesis 1 is close to existing theory and empirical evidence on the effects of party ties on the strategic distribution of transfers. It may, however, be too simplistic under cooperative federalism[3]. In a cooperative federal system, sub-central governments are an important implementer of centrally set policies. Within this role they can, among other things, influence the local allocation of funds from the central level. Thus, the sub-central government can act as a barrier if the party which leads the central government wants to use funds strategically. This leads to Hypothesis 2.

Hypothesis 2: *Under cooperative federalism, partisan effects are weaker (stronger) if the party that leads the central government does not (does) also lead the sub-central government.*

The vertical integration of decision-making structures which characterizes cooperative federalism has two other implications for the strategic incentives of political parties. First,

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[2] Maaser and Stratmann (2016) provide examples how legislators in German state parliaments praise themselves with infrastructure funds that they attracted for municipalities in their constituencies.

[3] Bugarin and Marciniuk (2017) provide one of the few studies that considers multi-level effects in the strategic allocation of public funds. They show that Brazilian municipalities that were governed by the party of the president only received more federal transfers if the state government was led by another party than the federal government. Garofalo (2019) provides similar evidence for U.S. counties. Results may however be different if not a competitive but a cooperative federal system is regarded.

consent from both federal levels is needed to decide and to implement most policies. If a political party wants to implement large parts of its political program, it needs to control both the sub-central and the central government. In a parliamentary system, this implies that the sub-central branch of a party is also interested in winning and securing the party's seats in the federal parliament. Second, the vertical integration of politics implies a vertical integration of party structures. In their constituencies, parliament members are often not only acting as legislators who are in charge of decisions of their respective federal level. Instead, they are generalist local representatives of their party and provide technical and political support for local and municipal party branches. Thus, they play an important role in securing the statewide presence of the party. For a political party this is important, e.g., if it comes to local elections (Brollo and Nannicini 2012). Such representation concerns are of particular importance for a party if it is only represented by one elected representative in a constituency. In such cases, we expect the central and the sub-central branches of a governing party to use their financial means in order to support the incumbents from their party against the candidates of the opposition party. This leads us to Hypothesis 3.

Hypothesis 3: *In a cooperative federal system, partisan-effects are stronger if the central and sub-central government are led by the same party and this party is represented locally by only one (central or sub-central) parliament member.*

3. Institutional Background

Our empirical analysis of the strategic use of public funds under cooperative federalism is based on the German state of North-Rhine Westphalia (NRW). With a population of 17.9 million citizens North-Rhine Westphalia is the largest German state. Correspondingly, state elections in NRW are often referred to as "junior federal election". The political significance of NRW for the federal level became obvious in the year 2005 when Chancellor Gerhard Schröder called snap elections on the federal level after an electoral defeat of his party at NRW state elections and the loss of the NRW state government as political ally of his federal government[4].

3.1 Political Representation and the Voting System

Both the state and the federal level are parliamentary systems. Thus, both state and federal governments are elected by the respective parliament. The parliaments can recall the incumbent government at all points of time through electing a new government. Therefore, political parties

[4] For a discussion of the formal and informal influence of state governments on federal policy see Oeter (1998) or Bury and Feld (2020).

constantly need a sufficient number of votes, usually the absolute majority, to form and maintain a government. State and federal election periods overlap. State parliament elections are held every five years, federal elections are held every four years.

The state of NRW encompasses 396 politically independent municipalities of which 374 are embedded into counties (*kreisangehörige Gemeinden*). The 23 largest cities bear the status of a county (*kreisfreie Städte*). Each municipality is represented in the state parliament (*Landtag*) and in the federal parliament (*Bundestag*) with at least one parliament member. Parliament members are elected in separate state and federal constituencies. These constituencies encompass between 1 and 26 municipalities for federal and between 1 and 27 municipalities for state elections. The constituencies are formed to ensure a close-to-equal representation of all citizens in the parliaments. A federal constituency should encompass a population of 250.000 citizens, a state constituency should encompass 120.000 citizens. This leads to a total number of 64 constituencies for the federal parliament and 128 constituencies for the state parliament. Most constituencies differ slightly from the standard population numbers. Election laws state that these deviations should not exceed 15% of the standard population size. If the actual population figures deviate 25% from the standard numbers (20% for state constituencies), constituencies must be reshaped to restore close-to-equal representation.

The voting system is a combination of a first-past-the-post and a proportional system. Every party fields a candidate for state and federal MP in each constituency. Until 2013, at least fifty percent of the seats in each parliament were assigned to those party candidates who gained a relative majority of votes in their constituency. The remaining seats were assigned to candidates on party lists to assure that the total number of seats for each party in each parliament represented the overall (state- or federal-wide) proportional vote share of the party. Thus, there were two types of parliament members. The parliament members that were directly elected in their constituencies according to the first-past-the-post system and those that gained their seats via the party lists according to the proportional results of their party.

3.2 Directly-Elected vs. List-Elected Parliament Members

Although directly elected and list-elected members have the same rights and obligations as elected parliamentarians, there are two notable differences between them. First, Stratmann and Baur (2002) show that the reelection calculus differs between the two groups of parliament members. Directly elected members are the regional representatives of the municipalities in their constituency. This grants prestige to directly elected members as they have been personally elected by their voters, while list-elected members gained their seats via votes for

their party. Stratmann and Baur (2002) argue that for the directly elected members their constituency is crucial for being reelected while for members elected via party lists the position on the party list decides about their reelection. Therefore, it is crucial for directly elected members to serve their constituency while list-elected members rather serve their party[5].

Second, in our observation period, directly elected parliamentarians can be more important for a party to secure its parliamentary majority than list-elected parliament members. Due to the voting system that was effective until 2013 a party could gain more parliament seats by directly winning constituencies than its overall percentage share in the election would have justified.[6] In such cases, the party increased its seat numbers more than proportionally through winning constituencies directly[7]. Especially in close-race elections, these additional seats could have been decisive to attain the necessary number of seats a party needed to form a government. This was the case, e.g., in the federal election in 1994.[8] Thus, in the period observed in this paper, winning direct election races was more important for a party to gain or secure a parliamentary majority than winning parliamentary seats via the party list.

3.3 The Party Landscape

There are five major political parties in NRW and on the federal level. The two largest parties are the Social Democrats (SPD) and the Christian Democrats (CDU). The former being the major left-wing, the latter the major right-wing party. Both parties used to gain 30%-40% of votes in state and federal elections. Of the three smaller parties the Liberal Party (FDP) belongs to the right-wing camp, while the Green Party and the Socialists (PDS/Die Linke) belong to the left-wing camp. These parties usually gained between 5% and 10% of the votes. Thus, for having a parliamentary majority, coalition governments of two parties that belong to the same camp are usually necessary. Left-wing governments were led by the SPD with the Greens as coalition partner; right-wing governments were led by the CDU with the FDP as coalition partner. Notable exceptions are the years 2005-2009 and 2013-2017 in which "grand coalitions"

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5 Stratmann and Baur (2002) show that directly elected parliamentarians are members of those committees that allow them to attract funds for the municipalities they represent while parliamentarians who attained their seats via party lists are members of those committees that enable them to serve their parties ideological standpoints.

6 There are two reason for this. First, the constituencies are formed according to the number of citizens and not to the number of voters. Second, voters at the federal election (since 2010 also at the NRW state elections) have two votes which they can split. With the first vote they elect the party's candidate in their constituency. With the second vote they elect the party. The second vote determines a party's percentage share in parliament.

7 After a ruling of the German Federal Constitutional Court in 2008, these additional seats need to be outweighed through additional list-members of all other parties so that the composition of the parliament represents the exact proportional election result. The possible "extra-seat" effect through directly elected members was thus abolished. However, this procedure is only applied since 2013.

8 For a discussion see Rindsfuesser and Schaefer-Walkmann (1998).

of CDU and SPD was necessary to achieve the absolute majority of seats in the federal parliament. Election periods on the state and federal level with the respective governments are depicted in Figure 1.

All electoral races for directly elected parliament members took place between the candidates of the SPD and the CDU. In the period between 1992 and 2017 in all (federal and state) constituencies the winner and the runner-up were the candidates of these two parties. Candidates of the other parties only have a chance to enter parliaments via their party lists. Important constituencies for the SPD are municipalities with a high share of private sector workers or public servants. The CDU traditionally receives its votes from small business owners, mid-level professionals or certain types of civil servants (Baskaran and Hessami 2017). While there are constituencies that have always been won by one of the two parties, there is a sufficient number of constituencies that were contested between the two parties in all elections.

3.4 Allocation of Federal Transfers to Municipalities

In Germany's system of cooperative federalism, the state government bears the responsibility to endow its municipalities with sufficient funds to ensure that they can execute their tasks. These state funds are formula-based and distributed according to legally codified criteria. In addition, state governments autonomously provide project grants for municipal infrastructure or current expenditure projects. Besides this basic funding by the state, the federal government provides funds to support municipalities in specific fields. Most important are budget support transfers for selected municipal investment projects (*Bundesinvestitionszuweisungen*).[9] Between 1992 and 2013 the average investment grant municipalities received from the federal level was 1.20 Euro per capita and year in real terms (see Table 1) corresponding to 4.80 Euro per capita per election period. The federal government grants transfers for specific spending projects only such that most municipalities do not receive federal investment transfers each year. Therefore these transfers only account for less than one percent of the individual annual budgets of all municipalities, on average. However, for 23 percent of all municipalities, these transfers made up more than 5 and up to 11 percent of their budget in at least one year during

[9] In addition to these federal investment funds, there are federal funds that target current expenditures. However, those are quantitatively of minor importance (see Table 1). Following Maaser and Stratmann (2016), we obtain information on transfers from accounting statistics of local finances (*Statistik über Jahresrechnungsergebnisse der Kommunalfinanzen*). The dataset contains six categories of transfers to municipalities and allows to disentangle transfers that origin from the federal and the state level. We use the categories of investment transfers (*Investitionszuweisungen*) and transfers for current expenditures (*Zuweisungen für laufende Zwecke*) as dependent variables. The remaining four categories comprise formula-based grants which are assigned non-discretionarily to municipalities.

the period between 1992 and 2013. Thus, while municipalities cannot count on receiving such transfers, their budgetary effects are significant if a municipality gets granted (see Figure 2).

The distribution of federal transfers to municipalities is based on criteria that are codified by the federal government. Fulfilling these criteria is a necessary but not a sufficient condition to receive federal grants, as there usually are more applications by municipalities than funds available. While the federal government provides the funds, the German constitution prevents it from granting municipalities directly in most policy areas. Instead, the state level acts as intermediary between the federal government and the municipalities. Given this constitutional setup, there are two procedures how federal grants are allocated to individual municipalities. First, the federal government provides funds within a purely federal program. In this case, municipalities have to apply directly at the federal ministry that is in charge of the program. The federal ministry in charge then decides whether a municipality receives a grant. The second and prevalent procedure how federal funds are allocated to individual municipalities are joint programs of the federal and the state governments. In this case, municipalities have to apply at the state level to receive federal grants and the state ministry in charge decides whether a municipality will receive a federal grant. What matters for our analysis is that in both scenarios, the respective other government can thwart or even veto the granting decisions. Thus, the consent of both the federal and the state government is needed to allocate a federal grant to a municipality. Given these procedures, members of the federal parliament can use their party ties and follow two strategies to exert influence on both granting procedures. First, they can lobby for approval of a grant application from a municipality in their constituencies at the federal ministry in charge of the grant. Second, they can recommend grant applications from municipalities in their constituency to their party colleagues at the state level[10].

4. Identification Strategy

Transfer receipts and election results can both be influenced by confounding socio-economic characteristics of a municipality. Thus, estimating the causal effect of parliament members' party ties on transfer receipts of their constituencies raises endogeneity issues. Prior studies that estimated partisan effects on the distribution of funds used a standard OLS framework and tried to cope with endogeneity by controlling for factors that might simultaneously influence transfer

[10] Anecdotal evidence shows that federal representatives actively use both possibilities to attract funds to municipalities in their constituencies. To give two examples for Federal MPs that claim credit for federal funds from joint programs: SPD MP Mahmut Özdemir released a press statement after his hometown was accepted for a new transfer project stating "*I successfully espoused myself in Berlin that Duisburg gets the acceptance for this project*". CDU MP Hans-Jürgen Thiel released a press statement, being quoted with "*I support every application for funds, in the course of the urban construction program or other programs*".

receipts and election results.[11] However, relying on a "selection of observables" approach suffers from omitting possible unobservable factors (Brollo and Nannicini 2012). To tackle the issue of omitted unobserved variables, several authors[12] use fixed-effects models to control for time-invariant unobservables. While this improves inference compared to the "selection of observables" analyses, this approach still ignores the possibility of time-varying unobservables and thus a possible source of endogeneity (Brollo and Nannicini 2012).

To establish exogeneity of our results, we follow Lee (2008) and Lee and Lemieux (2010) and use a regression-discontinuity design (RDD) to estimate the causal effect on the transfer receipts of a municipality if it is represented by a directly elected member of the federal parliament who has party ties to the state or federal government[13]. We focus on the effect of directly elected parliamentarians and use the vote margin between the candidate of the governing party and the candidate of the opposition as running variable. We focus on directly elected parliament members as they depend on place-based support of voters in their constituency to get reelected. Moreover, between 1992 and 2013 directly elected parliamentarians were decisive for possible over-proportional parliament seats that could have decided whether the incumbent party remained in government at the next election. Thus, gaining the support of voters within their constituencies was crucial for both directly elected parliamentarians and for their parties.

The RDD framework establishes exogeneity of being represented by a directly elected federal parliament member who belongs to the governing party for three reasons. First, Lee (2008) and Lee and Lemieux (2010) show that the probabilities for a candidate to win or to lose an election are identical as long as the election race is sufficiently close. Thus, our estimates only rely on election races in which the result is that close that it can be considered random. In this case, our estimations correspond to a natural experiment. Second, winning the race for direct election depends on the result in the entire constituency and not in a single municipality only. Hence, it is hard for voters within an individual municipality to strategically influence whether they will be represented by a parliamentarian from a specific party. Third, it is decided ex post whether the party to which a municipality's directly elected parliamentarian belongs will eventually lead the government. Whether the party of the directly elected parliamentarian forms the government depends on its state-wide or federal-wide election result. This result cannot be influenced by voters in a single municipality in a strategic way. For these reasons, we are confident that being

[11] See, e.g., Grossman (1994), Levitt and Snyder (1995) or Worthington and Dollery (1998).

[12] See, e.g., Maaser and Stratmann (2016), Solé-Ollé and Sorribas-Navarro (2008), Arulampalam et al. (2009), Veiga and Pinho (2007) or Carozzi and Repetto (2016).

[13] RDD is used to estimate the causal effect of partisan alignment in several studies as, e.g., Albouy (2013), Baskaran and Hessami (2017), Brollo and Nannicini (2012) or Bracco et al. (2015).

represented by a parliamentarian who belongs to the governing party is exogenous for an individual municipality as long as (and only if) the election result is sufficiently close.

A possible threat to this identification is that candidates can run for direct election in a constituency and simultaneously be part of the party list. If candidates lose the race for direct election but enter parliament via the party list it is likely that they try to win the direct race in the next election and also try to service the constituency in which they plan to run at the next election. This may especially be the case if the race for direct election was close. Thus, list-elected parliamentarians might also use their party ties to lobby for funds for the municipalities in which they want to gain votes at the next election. Existing evidence supports this concern. Maaser and Stratmann (2016) show that a constituency receives more state funds if it is represented by a higher number of state parliamentarians that entered the state parliament via their party lists. To account for the effects of being represented by more parliamentarians than the directly elected parliament member only, we need to consider the number of candidates that took part in each constituency's direct election race and entered the federal parliament via their party lists. In addition, we need to consider the party ties of list-elected parliamentarians to the state and federal government in our estimations, thus holding the number of list-elected parliamentarians with and without party ties to the federal and state government constant for all municipalities. We thus estimate the exogenous ceteris paribus effect of being represented by a directly elected member of the federal parliament who belongs to the governing party.

4.1 Econometric Framework

We implement a sharp parametric RDD as our baseline specification to estimate the average effect of being represented by a directly elected parliament member who belongs to the governing party on municipal transfer receipts. We estimate the following equation

$$Federal\ Transfers_{i,t} = \beta_1 D_{i,l,t} + f(VM_{j,t}) + D_{i,l,t} * f(VM_{j,t}) + X_{i,t} + \tau + \varepsilon_{i,t} \quad (1)$$

where $Federal\ Transfers_{i,t}$ are deflated budget support transfers from the federal level to municipality *i* in per-capita terms at time *t*. As most municipalities did not receive federal transfers every year, we use the average transfers a municipality received per year between each state and federal election as dependent variable. We use average transfers per year instead of aggregating transfers over the election periods because the length of election periods differs between state and federal elections. The variable $D_{i,l,t}$ is a dummy variable that has the value of one if the directly elected parliament member who represents municipality *i* belongs to the governing party in legislative term *l* and zero otherwise. The function $f(VM_{j,t})$ is a polynomial

of the running variable $VM_{j,t}$ which is the vote margin of the governing party's candidate in constituency *j* that comprises a varying number of municipalities.

We use a parametric RDD that involves covariates for the following reason. Identification in a non-parametric RDD without covariates would only hold if there were no structural differences between the units around the cut-off that could influence the dependent variable (Calonico et al. 2019, Frölich and Huber 2019). If such differences cannot be ruled out, it becomes necessary to include covariates into the RD estimation and to control for structural differences between treated and non-treated units to restore identification. Thus, it becomes necessary to estimate a parametric instead of a non-parametric RDD. Including covariates and estimating a parametric RDD then corresponds to pre-intervention controls in randomized experiments (Calonico et al. 2019). In our case, municipalities within the bandwidth around the cut-off that enters the RD estimation are likely to differ from each other. Therefore, we follow Calonico et al. (2019) and include the vector of covariates $X_{i,t}$ that comprises a set of time-variant factors. With this procedure, we ensure that we estimate the randomized ceteris paribus effect for a municipality of being represented by a directly elected parliament member of the governing party.

Our most important covariate is the number of aligned and un-aligned parliamentarians that attained their seats via their party list and can be assigned to a constituency. Therefore, we include the number of list-elected parliamentarians with and without party ties to the federal and the state government as our major covariate. In addition, we include the vote share of the governing party's candidate in municipality *i*. Controlling for the vote share on the municipal level is important for two reasons. First, parliament members may try to use federal funds to buy off individual municipalities based on their vote result. Second, in close electoral races it may be possible that the vote result of an individual municipality tips the result on the constituency level. To still assure the exogeneity of being represented by a legislator of the governing party, it is thus necessary to hold election results on the municipal level constant. As third political variable, we include the seniority of the directly elected parliament member. Long-serving representatives are more experienced and may have better networks to lobby for funds. Thus, holding the seniority of federal legislators constant is important to isolate the effects of party ties at the cutoff. Besides these political variables, we include structural characteristics of each municipality that could influence transfer receipts. To control for the financial capacity of a municipality, we include the relative per-capita tax revenues of municipality *i* compared to all other municipalities of the same status. Controlling for the fiscal capacity of a municipality is important as federal transfers are conceived as budget support transfers. Thus, the municipality has to provide co-funding for the projects the transfers are

meant for. To consider the fiscal need of a municipality, we include information on the demographic and spatial environment of each municipality. To control for demographics, we include the shares of the population below the age of 20 and above the age of 65. To control for the spatial structure of a municipality, we include the resident density, measured as population per square kilometer. We include election period fixed effects τ to make sure that our results are not driven by exceptional events in one or more election periods.

4.2 Data

Our dataset covers financial and structural information as well as the election results for the state and federal elections for all 396 municipalities in the state of NRW in the period between 1992 and 2013. Data on federal transfers and other monetary variables comes from the municipal accounts statistics of the Statistical Office of the State of NRW. As there was a change in the municipal accounting standards in NRW in the year 2006, we adjusted the post-2006 data to the pre-2006 standards in accordance with the State Statistical Office. Election results for each municipality are also provided by the State Statistical Office and aggregated to the level of state and federal constituencies. The 26 largest cities of NRW comprise more than one state or federal constituency. Thus, it is not possible to assign individual parliament members to these municipalities, as the financial accounts only allow us to distinguish transfer receipts for individual municipalities but not for several constituencies within a municipality. Therefore, we consider 370 of the 396 municipalities in our analysis.

Individual information on all federal and state parliament members in NRW since 1993 are hand-collected. We used the official handbooks of the state and the federal parliament for all election periods since 1990 to gather individual information on every parliament member in both parliaments. Directly elected members were assigned to individual municipalities according to the constituency in which they were elected. For list-elected parliament members, we gathered information whether they have been candidates in a direct election race at the previous election and assigned them to the constituency in which they stood for election. List-elected members who were not running in a race for direct election were also assigned to constituencies based on their hometown.

There have been six federal and five state elections in our sample period. As we focus on federal transfers and use the race for the directly elected seat of each constituency as natural experiment, we need to exclude the periods between 2005 and 2009 and the period after 2013. In these years, a grand coalition was needed to form the federal government. Thus, both the winner and the runner-up belonged to the governing parties on the federal level. Therefore, we

observe variation that stems from four federal and five state elections. Given these nine elections and 370 municipalities, our sample yields a total of 3,330 observations.

4.3 Testing Assumptions

For the RDD to be internally valid, we need to rule out that a municipality or a candidate can influence whether the candidate of the party which is expected to win the state or federal election slightly wins the race for the directly elected seat in that constituency. Otherwise, the assumption of Lee (2008) and Lee and Lemieux (2010), that the probabilities of winning and losing a close race for direct election must be identical, would be invalidated and exogeneity of being represented by a legislator of the governing party would not be given. Three concerns could invalidate our identification strategy via such a manipulation of the sorting of candidates around the cut-off. First, Caughey and Sekhon (2011) show that close elections are sometimes prone to be manipulated by strong candidates. Second, it is possible that parties use their governmental means to change the boundaries of individual constituencies in such a way that their candidates scarcely win the race for direct election ("gerrymandering"). Third, in razor-close races voters in individual municipalities could be pivotal for the election result on the constituency level and could use this power strategically.

To check whether these concerns invalidate the exogeneity of being represented by a parliamentarian who belongs to the governing party, we run two empirical tests proposed by Jacob and Zhu (2012). First, we check whether our non-outcome variables show a discontinuity at the cut-off of scarcely winning a directly elected race or whether there are differences in the means of our non-outcome variables across representatives from governing and opposition parties. If one or more of the variables that either describe political or structural characteristics of the candidate or the municipality showed a discontinuity at the cut-off after we control for potential covariates, this would indicate that the election outcome on the constituency level is determined by systematic advantages of single municipalities or of candidates instead of idiosyncratic factors.[14] Test results are reported in Table 2. None of the non-outcomes shows a statistically significant discontinuity at the cut-off. We also find no significant differences in the means of the structural and political variables between municipalities with and without parliamentarians that have party ties to one or both governments.

While this provides first evidence that there is no possibility to manipulate the sorting around the cut-off due to structural factors, the issue of potential gerrymandering remains. To rule out that gerrymandering invalidates our results, we run McCrary (2008) tests to check whether there

[14] For a formal description of this argument see Barrera-Rodriguez (2019).

is a significant difference in the log-density of the distribution of observations around the cut-off (see Figure 3). If the test indicated that there is a significant jump in the distribution at the cut-off, this would imply that manipulation of close election results is highly likely[15]. However, with a test statistic of 0.013 and a p-value of 0.11 the McCrary test indicates no evidence for statistically significant differences in the distribution around the cut-off of slightly winning or losing the race for direct election. Thus, we find no evidence in favor of a manipulation of close races for direct election, which means that the conditions of Lee (2008) and Lee and Lemieux (2010) hold.

5. Results

5.1 Graphical Analyses

We start the empirical analysis with a graphical representation of the discontinuity in federal transfer receipts at the cut-off if a parliamentarian of the governing party sharply wins the race for direct election (Figure 4). Panel A of Figure 4a shows the discontinuity in federal investment transfer receipts at the cut-off point of being represented by a federal parliament member who belongs to the party that controls either the state or federal government. Having a federal parliament member with party ties to the federal or to the state government is associated with a jump in investment transfer receipts from the federal level. Panel B of Figure 4a shows the same graphical representation for federal transfers that target current expenditure projects. Here, no clear effect shows up. Beside the graphs shown in Figure 4a, we ran RDD graphs for polynomials up to order four that draw the same picture (see Figure 4b).

5.2 General Effects of Parliamentary Representation

Panel A of Table 3 displays the regression results for federal investment transfers. All specifications include a vector of covariates described above and use heteroscedasticity robust standard errors that are clustered on the municipal level. Columns 1-4 show the average treatment effect on federal transfer receipts if a municipality is represented by a directly elected member of the federal parliament who belongs to the party that leads the federal government. Columns 5-8 show the effect of having a directly elected federal parliament member who belongs to the party that controls the state government. We estimate all specifications with linear and quadratic polynomials and use different bandwidths to avoid spurious results.

[15] Looking at the histogram of the distribution of observations over the vote margin raises concerns with regard to possible manipulation. While there are many observations around the cut-off and many observations in the range of clear-cut election results, there is a drop in observations between the two.

Being represented by a member of the federal parliament who belongs to the party that controls the federal government shows a positive but statistically insignificant effect on federal investment transfer receipts. We find different results for party ties to the state government[16]. According to our estimates, a municipality that was represented by a federal parliament member with party ties to the state government received about 2 Euro higher investment transfers per capita from the federal level compared to a municipality of which the directly elected representative in the federal parliament belongs to the state opposition party. This leads to

Result 1: *A municipality that is represented by a federal parliament member who belongs to the party that leads the state government receives more federal funds for investment projects compared to a municipality that is represented by a federal parliamentarian who has no party ties to the state government.*

For the average municipality in NRW with 30.000 inhabitants and over the state election period of five years, the effect of a federal representative with party ties to the state government amounts to 300.000 Euro higher federal investment transfers for a municipality if its directly elected federal parliament member belongs to the party that leads the state government, compared to a municipality of which the federal representative has no party ties towards the state government. The results are robust to different bandwidths and polynomials. Moreover, we used different types of the kernel function. In all specifications alignment with the federal government shows a positive, but statistically insignificant effect while the positive and significant effect of party ties towards the state government holds. Panel B of Table 3 shows the results with federal transfers for current expenditures as dependent variable. Different to our results for investment transfers, we find no effects of party ties of the municipality's representative on transfer receipts from the federal level for this type of transfers.

5.3 Multi-Level vs. One-Level Alignment

What drives our baseline result that party ties to the state government seem to be more important for attracting transfers than those to the federal government? Due to the cooperative structure of German federalism it is possible that these results simply reflect that simultaneous party ties to *both* the state and the federal government are the decisive factor to attract funds via partisan policies. To estimate the effect of multi-level against single-level party ties, we conduct a subgroup-analysis. Carril et al. (2018) and Geradino et al. (2017) show that in an RDD-setting with interaction terms the two groups observed can differ systematically in their structural characteristics. However, if the group of municipalities that are represented by parliamentarians

[16] Note that the standard errors are similar to those for alignment with the federal government.

with party ties to both governments was structurally different from the group of municipalities with representatives whose party only controls one governmental level, we would likely get biased estimates that are driven by structural differences instead of party ties. Panel A of Table 4 shows that the two groups of municipalities are indeed structurally different from each other with an F-statistic of 28.99. We therefore use the setting of Carril et al. (2018) and Geradino et al. (2017) and balance both groups with propensity-score weighting. More precisely, Carrill et al. (2018) propose to weight the observations in each subgroup based on the inverse probability of each municipality to belong to that subgroup according to our set of structural control variables. Results in Panel A of Table 4 show that, after we apply this weighting procedure, no significant differences in the structural characteristics of the two groups remain.

Subgroup estimates are reported in Panel A of Table 5. We only find a transfer increasing effect for a municipality if its federal parliament member has party ties to both, the state and the federal government. Instead, we find no transfer increasing effect if a municipality's representative is aligned with one of the two governments only. This leads to

Result 2: *A municipality only receives increased funds due to party ties of its representative in the federal parliament if the party of the representative is simultaneously leading the state government and the federal government.*

The effect size is slightly higher but comparable to the one we found in our baseline estimate. The difference between the two groups is significant if we use a linear polynomial. Thus, our estimates provide evidence that confirms Hypothesis 1 and goes beyond Hypothesis 2. Not only indicating *stronger* effects, our results indicate that there is *only* a transfer increasing effect of being represented by federal parliament members who belong to the governing party if their party simultaneously controls both the state and the federal government.

5.4 Securing vs. Increasing Local Party Presence

Our results show that the support of the state branch of a party is needed if federal parliamentarians want to attract more funds for the municipalities they represent. But why should the state branch of a party be interested in supporting a federal parliament member? Two strategies are conceivable. If the aim of the state-party branch is to secure the party's local presence, we should find transfer increasing effects of a federal parliamentarian who belongs to the governing party if the parliamentarian who represents the municipality in the state parliament belongs to a different party. However, it could also be the case that the party's state branch wants to increase its local presence and targets those municipalities that are represented by a tied federal and a tied state parliament member. In this case, we should also find a transfer

increasing effect of having a federal parliament member from the governing party if the state parliament member who represents the municipality also belongs to the governing party. While securing local party presence would support the swing-voter hypothesis, increasing it would provide evidence in favor of the core-supporter theory.

To test the two hypotheses against each other, we again use subgroup analysis as proposed by Carril et al. (2018) and Geradino et al. (2017). We now separate municipalities into the group of those of which the directly elected parliament members in the federal and in the state parliament belong to the same party and those municipalities of which they belong to different parties. Panel B of Table 4 indicates that we again need to apply propensity-score weighting of the two groups to assure that our results are not driven by underlying structural dynamics of the municipalities in the respective groups.

Results of the subgroup analysis are reported in Panel B of Table 5. Our results provide no evidence that it has any effect on receiving federal transfers if a municipality's directly elected representative in the state and federal parliament belong to the same party. In contrast, we find a positive and significant effect on federal investment transfer receipts if a municipality's directly elected member of the federal parliament belongs to the party that controls the federal or the state government while the municipality's directly elected member of the state parliament belongs to another party. This leads to

Result 3: *A municipality only receives increased federal investment transfers due to party ties of its representative in the federal parliament if its state parliament member belongs to another party than its federal parliament member.*

With an estimated effect size between 3.40 and 5.50 Euro per capita and year the estimated effect on transfers is higher than in the baseline scenario or when the state and the federal government are aligned. Thus, our empirical results support our Hypothesis 3, stating that parties react to local party competition and invest in swing voters to secure their local presence.

5.5 Multi-Level Alignment or Swing Voter Effects – What Prevails?

To test whether multi-level alignment and local party competition are *simultaneously* necessary conditions to receive increased federal funds, or whether one of the two factors prevails, we combine multi-level party ties and local party competition in our subgroup analysis. Results are reported in Table 6. First, we restrict our sample to those observations where the party of a municipality's member of the federal parliament controls both governments (Panel A). Within this group of observations, transfer increasing effects of a directly elected federal parliamentarian only unfold if the municipality's directly elected state parliamentarian belongs

to another party than the federal representative. Second, we restrict our sample to those observations where the directly elected member of the federal and the state parliament belong to different parties (Panel B). Within this subsample, we only find a transfer increasing effect for a municipality if the party of its representative in the federal parliament is leading both the federal and the state government. The estimated average effect on transfers is higher than in the specifications before and lies between 4.20 Euro and 5.50 Euro per capita and year. The results of Table 6 lead to Result 4.

Result 4: *Only if the federal representative of a municipality has party ties to both the federal and the state government AND if the state representative of that municipality belongs to another party than the federal representative, a municipality receives increased federal funds due to partisan effects.*

This empirical result provides evidence that, under cooperative federalism, it is a necessary condition for a political party to control both the federal and the state government if it wants to use federal funds for strategic reasons. At the same time and in line with the swing voter hypothesis, our result suggests that a party only uses funds strategically if there is party competition on the local level. Thus, while we can identify party ties to both governments as institutional precondition to use federal funds strategically, we can identify securing a party's local presence as the political motive behind the strategic use of federal funds.

Restricting our sample into two subsamples carries the downside of losing variation. To incorporate the variation from the whole sample into our estimation, we estimate the effects of each possible combination of multi-level party ties and alignment between the two directly elected representatives of a municipality against all other observations. Results for each of these combinations are reported in Table 7. We *only* find a positive and significant effect on transfer receipts of a municipality against all other municipalities if its federal parliament member has party ties to both governments while the state parliamentarian of that municipality belongs to a different party (Panel D). For all other combinations, we find no or even negative effects on transfer receipts from the federal level, compared to the aggregate of all other municipalities (Panels A, B and C). This result confirms our finding that not one of the two factors of alignment prevails. Instead, party ties to both governments and local party competition are simultaneously necessary conditions for a partisan driven distribution of transfers.

5.6 "Tying Hands" or "Securing" Hypothesis

Our results confirm that only if a party has control over the federal and the state government it *can* use federal funds strategically, while it only *makes use* of this possibility if there is party

competition on the local level. But which strategy is used by a governing party to support its parliamentarians? Brollo and Nannicini (2012) propose two strategies as to how transfers can be used strategically. First, the party leading the federal and the state government could "tie the hands" of parliament members from other parties through channeling less funds into their constituencies. Second, the incumbent party could try to "secure" the constituencies of their own parliament members for the next election through channeling additional funds into the municipalities within their constituencies. Our RDD estimations do not allow to distinguish whether the estimated effect on transfers comes from increased funds towards municipalities that are represented by a tied federal parliament member ("secure" hypothesis) or from reduced funds to municipalities in constituencies where the governing party slightly lost the last election ("tying-hands" hypothesis). To shed light on the question which of the two strategies prevails, we follow Brollo and Nannicini (2012) and use a graphical analysis. Considering our previous findings, we first restrict the sample to those observations where the federal parliament member belongs to the party that leads the federal and the state government. In a second step we restrict the sample to those observations where the federal parliament member belongs to the party that leads both incumbent governments and the state parliament member of the municipality belongs to the party in opposition on both levels. Figure 5 displays the respective graphs with different bin-selection procedures and polynomials. In all specifications it is apparent that municipalities received *increased* funds after the constituency in which a municipality is located was closely won by a federal parliament member who belongs to the incumbent party on the state and federal level. This leads to Result 5.

Result 5: *Incumbent governments try to "secure" contested constituencies through channeling increased transfers into municipalities in these constituencies.*

5.7 Political Budget Cycles

If effects are driven by reelection concerns of parties and individual parliament members, public choice theory suggests that political budget cycles should be at work (e.g., Foremny et al. 2018). Thus, governing parties should channel more funds into contested constituencies in the years prior to elections to gain voter support for their parliamentarians. We divide our dependent variable into per capita transfers which a municipality received in the year prior to a federal or state election and those in the remaining years to check whether our results are driven by increased transfers prior to federal or state elections. Results are reported in Table 8. While the transfer increasing effect of party ties to the state government remains for the years prior to a state or federal election, we find no robust evidence for the remaining years. With an effect size

of 2.70 Euro per capita and year the size of the average treatment is higher than in our baseline estimation if we consider only pre-election years. These results support our theoretical reasoning that reelection concerns matter.

5.8 Transfer Purposes

If members of the federal parliament use party ties to attract funds with the aim to increase their reelection chances, these funds should be used for visible projects within their constituency. Therefore, we disentangle federal investment transfers according to their purpose. We re-estimate the steps above for the disentangled federal investment transfers. Results are reported in Table 9. The estimation of the disentangled transfers shows that our estimates are driven by federal grants that were used for municipal infrastructure and traffic projects. All effects found above for the aggregate of federal investment transfers show up for federal transfers with this purpose. On the contrary, we find no partisan effects for any other spending category. This finding is in line with our expectation and supports the anecdotal evidence of Maaser and Stratmann (2016) that parliament members use visible projects to show to their voters that they are engaged and successful advocates for their constituencies on the federal level.

5.9 Robustness

To assure the robustness of our results, we conduct a series of additional econometric tests. First, we check for the generalizability of our RDD results. RDD estimations rely on local effects around the cut-off. In our setting this is a priori not a problem, as our theoretical reasoning is based on the swing-voter theory and we are thus focusing on the outcome of close elections. For the generalizability of our results it is important that close-run constituencies do not differ structurally in various respects from constituencies with clear-cut election results. Thus, we have a look at the distribution of municipalities with different characteristics around the cut-off. Histograms are depicted in Figure 6. We divide the municipalities in our sample into above and below average groups of our core structural covariates. In all subgroups, a population around the cut-off exists. Thus, we are confident that our results apply for close-run elections in our sample generally and not only to a specific group of municipalities depending on specific characteristics.

Second, to further assess the generalizability of our results, we check whether the local RDD results hold in a globalized econometric setting. Therefore, we run two-way fixed-effects regressions and assign dummy variables reflecting the different treatment combinations in order to check whether we also find the local effects of our RDD strategy in a non-local econometric setting. Again, we use standard errors robust to heteroskedasticity and clustered on the level of

individual municipalities. Moreover, we include the same vector of covariates as in the RDD setting. Note that estimating a two-way FE model implies that we only rely on the within variation of our panel structure and might therefore underestimate the true average treatment effects of being represented by a directly elected member of the federal parliament with party ties towards the federal and state government. Results are reported in Table 10. We find a positive and significant effect on federal transfer receipts if a municipality is represented by a federal parliament member who belongs to the governing party only if that party controls the state and the federal government (columns 1 and 3). Moreover, the effect of having a directly elected federal parliament member who belongs to the governing party is only statistically significant if the municipality's member of the state parliament belongs to the (federal) opposition. The effect sizes are smaller but comparable to those in the RDD setting. Thus, our local RDD results can be confirmed in a globalized econometric setting.

Third, to assure that our results are not random, we run placebo tests for different vote margins between -10% and +10% of the actual vote margin (see Table 11). The placebo estimates confirm the internal validity of our RDD approach. We find no systematically or random positive and significant RDD estimate that would put our assignment of treatment into question. Note that we do find a positive and significant effect at the fictive cut-off of +0.2%. This is however not a threat to identification, as increasing transfer receipts above but sufficiently close to the cut-off are in line with the swing-voter hypothesis.

Fourth, we follow Jacob and Zhu (2012) and restrict the sample at the two ends of the distribution to check whether our results are driven by the tails of the distribution of vote margins across municipalities. We drop those observations with vote margins greater than +/– 30%, and greater +/– 25%. Our results still hold and indicate a positive effect on municipal transfer receipts if the municipality is represented by a directly elected federal parliament member who belongs to the party in government. The results even hold if we drop all observations with vote margins +/– 5%. Therefore, our results do not seem to be driven by specific characteristics of the overall distribution of the vote margin[17].

Fifth, we drop all observations after the year 2005 from our estimation. The reason for this is that municipal accounting standards have been changed from the year 2006 onwards. Although we adjusted the post-2005 data in accordance with the State Statistical Office to the pre-2006 categories, we still make sure that our results are not driven by data issues stemming from the

[17] Detailed estimation results for steps four to seven of the robustness analysis are available upon request.

change in the accounting standards. However, our results fully hold for the pre-2006 period and are thus not driven by any change in accounting standards.

Sixth, we exclude the first federal and state election from our sample. The reason for this is that our transfer data ranges from 1992 to 2006 and from 2009 to 2017. The election periods for the first election observed lasted however from 1990 to 1994 for the federal parliament and from 1990 to 1995 for the state parliament. Although using average transfers per year *observed* for each municipality as dependent variable, we want to assure that considering incomplete election periods in our sample does not affect our results. However, this manipulation does also not alter the effects found.

Seventh, we include the vote share of the incumbent parliament member in each municipality as a covariate instead of including the vote share of the governing party. Moreover, we include the relative deviation of the incumbent parliament member's vote share in an individual municipality to their vote share in the constituency to check for possible personal career concerns of federal representatives. Our results appear to be robust to these manipulations, too.

6. Conclusion

Cooperative federalism needs multi-level consent to make political decisions that affect more than one layer of government. In this paper, we asked whether pork-barrel politics are influenced by such multi-level decision-making in a parliamentary system. We argued that directly elected federal parliament members who belong to the governing party are important for their party for two reasons. First, their reelection is important for the party to remain in government and implement their policy. Second, they act as local representatives of their party in their constituency. Through the latter channel, a federal parliament member can also be an important ally for the party's state branch. Thus, on both the federal and the state government level it can be beneficial for a party to use its financial means and strategically allocate grants with the aim to secure the reelection of a federal parliament member. We applied a regression discontinuity design to causally estimate whether municipalities in the German federal state of North-Rhine Westphalia received more federal infrastructure transfers if they are represented by a member of the federal parliament who belongs to the governing party.

The empirical results presented in the previous section essentially confirm the hypotheses derived from theoretical considerations. However, we found some peculiarities that can be traced back to cooperative instead of competitive federal structures. Our first hypothesis, stating that municipalities in close-run constituencies receive more federal funds if their representative on the federal level belongs to the governing party, can only be confirmed if the state and the

federal government are led by the same party. At the same time, only in the case of party competition between a municipality's directly elected member of the federal parliament with the directly elected member of the state parliament, partisan effects can be found. Thus, we find evidence in favor of our second and third hypotheses. However, other than stated in the hypothesis, we do not find weaker or stronger effects in the case of multi-level ties and local party competition. Instead, we only find *any* effect on federal transfers if both multi-level party ties and local party competition are present simultaneously.

We derive two implications from these empirical findings. First, we find evidence for a strategic use of funds only if a political party is simultaneously leading the federal and the state government. The reason for this is the institutional setting in the cooperative federal structure. This structure prohibits the federal government from granting municipalities directly, without the consent of the state level. Thus, even if the governing party on the federal government aims at using federal funds strategically, such a strategic use of funds is only possible if the federal and the state government have identical strategic interests in whom to support. Our empirical results indicate that in cooperative federalism, the state government effectively acts as a roadblock for a federal government that wants to use federal funds for reasons of party politics. Hence, cooperative federalism can act as a mechanism to prevent politically intended misuse of federal funds as long as the state level acts as an intermediary between its municipalities and the federal level and as long as its consent is needed to decide on the allocation of grants.

Second, our empirical results indicate that the political motive that induces the strategic use of funds is to secure the local presence of a party. As discussed above, being represented locally by a federal or a state parliament member is an important factor for a political party. In line with our theoretical reasoning parties in government support their parliamentarians in those municipalities where they are only represented by a member of the federal parliament and not by a member of the state parliament. In line with the existing literature on the swing voter hypothesis, we argue that the intention behind this is to secure the reelection of the federal parliament member in that constituency. What remains unclear in our study is whether the strategic use of federal funds eventually turns out to be a successful strategy from the perspective of governing parties. The fact that there have been multiple changes of federal and state governments during our observed period creates doubts as to the political success of such pork-barrel policies. However, the question whether the strategic use of federal funds increases the reelection chances of directly elected parliamentarians remains and provides space for future research.

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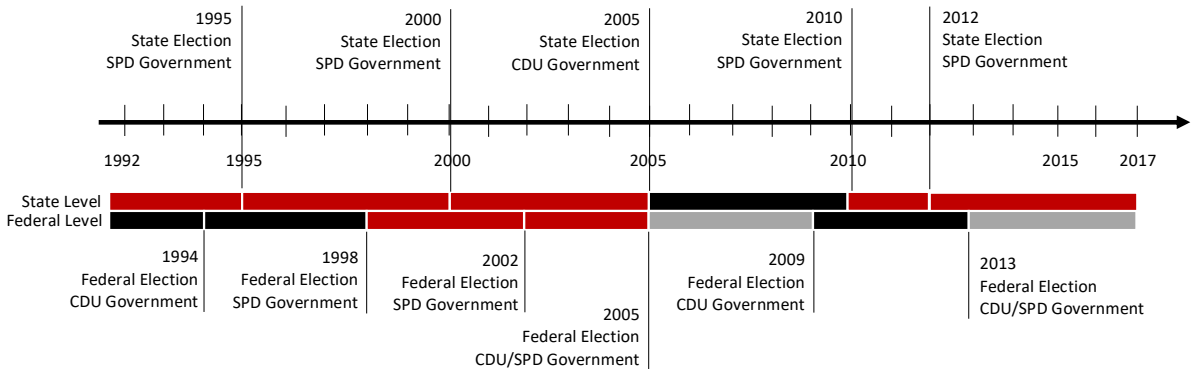
Figures and Tables

Figure 1: State and Federal Election Periods and Government Leadership



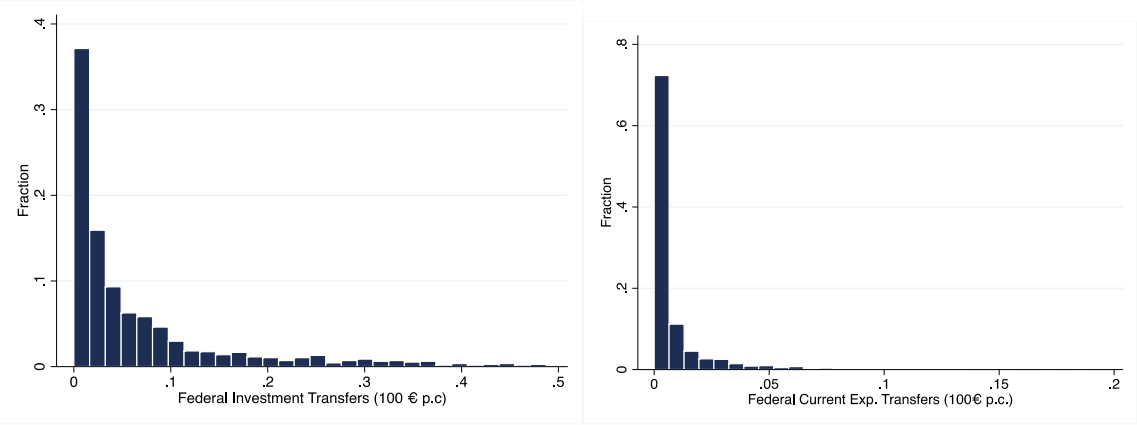
Source: Own depiction based on election results.

Table 1: Descriptive Statistics of Average Annual Per Capita Transfer Receipts

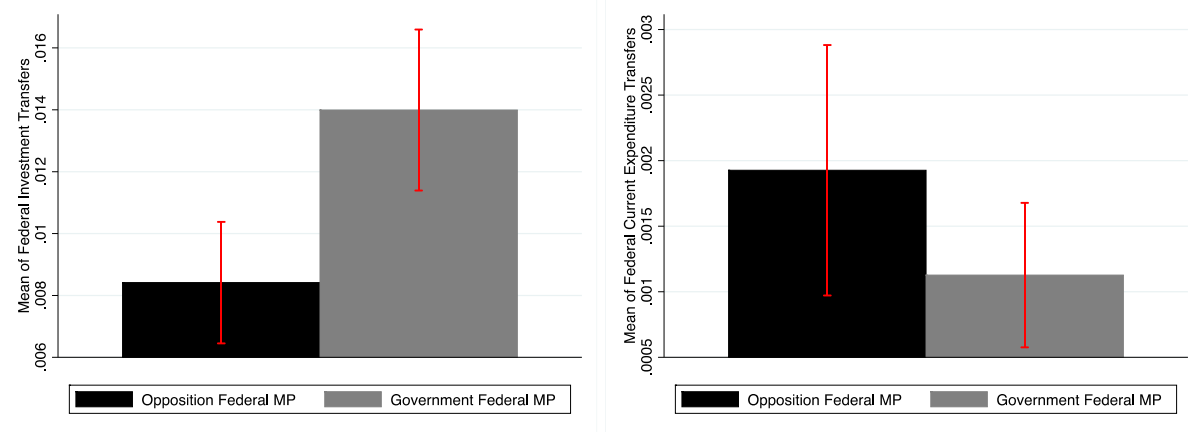
Variable	Mean	Min	Max	Standard Dev.
Federal Investment Transfers	0.012	0.000	2.789	0.070
Federal Transfers for Current Exp.	0.002	0.000	1.337	0.023
Fed. Investment Transfers as Fraction of all municipal Budgets (annually)	0.001	0.000	0.115	0.003
Fed. Transfers for Current Exp. as Fraction of all mun. Budgets (annually)	0.001	0.000	0.051	0.001

Source: Own calculations based on date from the State Statistical Office.

Figure 2: Variation in Municipal Transfer Receipts



Histograms show the distribution of federal budget support transfers for investment and current expenditures to municipalities in North-Rhine Westphalia over the period from 1992 to 2013. Distribution is depicted as fraction of all municipalities in all years. Data was provided by the State Statistical Office.



Graphs show the average annual federal budget support transfers for investment and current expenditurtes to municipalities in North-Rhine Westphalia in each year between 1992 and 2013 that were represented either by a federal parliament member who belonged to the party that led the federal government or to a federal parliament member who belonged to the party in opposition on the federal level. Confidence bars indicate 90% confidence intervals.

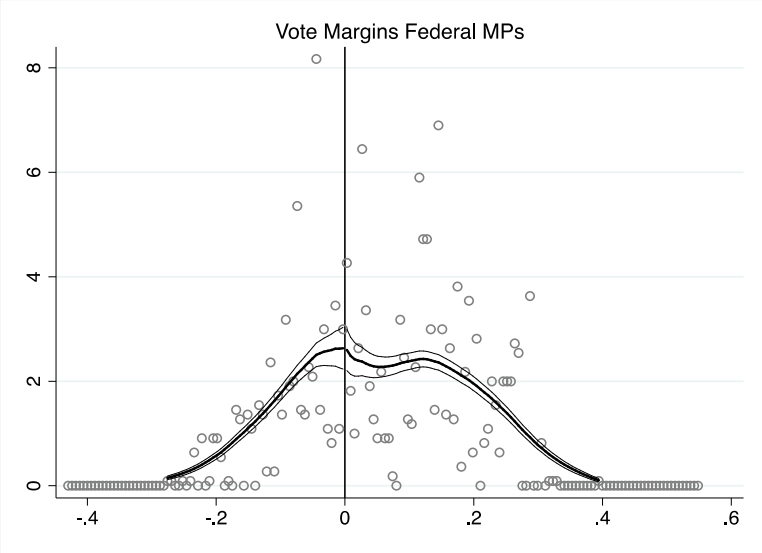
Table 2: RDD Assumptions Placebo Estimates

	RDD estimate	p-value RDD
Resident Density	-0.136	0.868
Tax Strength	62.416	0.218
Share of pop. Under 20	-0.002	0.668
Share of pop. Over 65	0.013*	0.065
Number of List MPs	-0.211	0.260
Seniority	-0.871	0.575
Share Leftwing	-0.005	0.720

Table shows the RD estimation coefficients and corresponding p-values for non-outcome variables at the cut-off of a vote margin between the candidate of the party that formed the government and the candidate of the party that ended in opposition of 0.00. ***, **, * depict statistical significance at the 1%, 5% and 10% significance level based on heteroskedasticity robust standard errors that are clustered on the municipal level.

Figure 3: Manipulation Tests

McCrary Plot

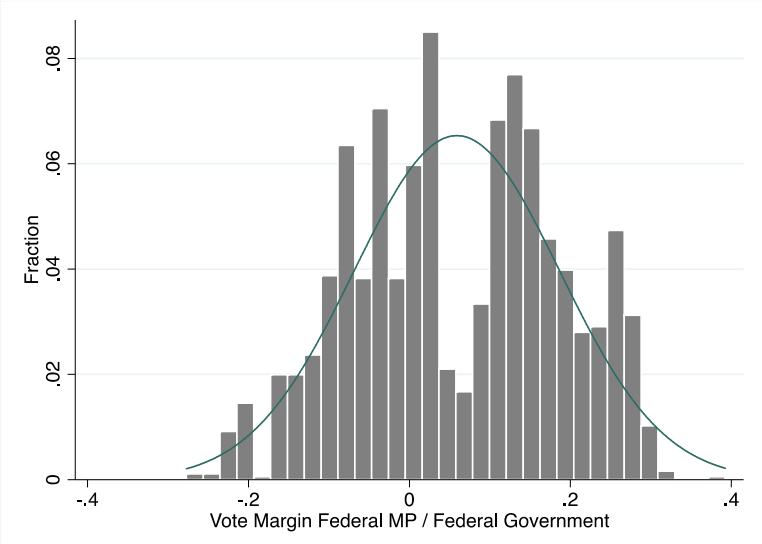


Vote Margin of being represented by a federal parliament member of the governing party

Disc. Estimate (log difference in height)	0.0126
p-value	0.114

The McCrary graph shows the log density of observations around the cut-off of a vote margin between the candidate of the party that formed the federal government and the candidate of the party that ended in opposition of 0.00. Manipulation around the cut-off can be ruled out if there is no statistically significant difference in the density of observations at the cut-off (McCrary 2008). Test statistics show the difference estimate and corresponding p-value.

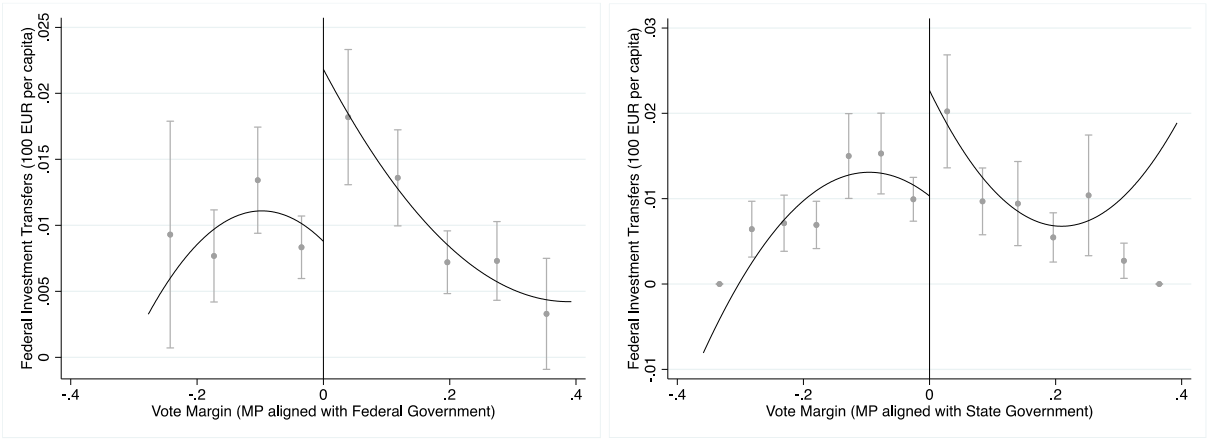
Histogram of Vote Margin



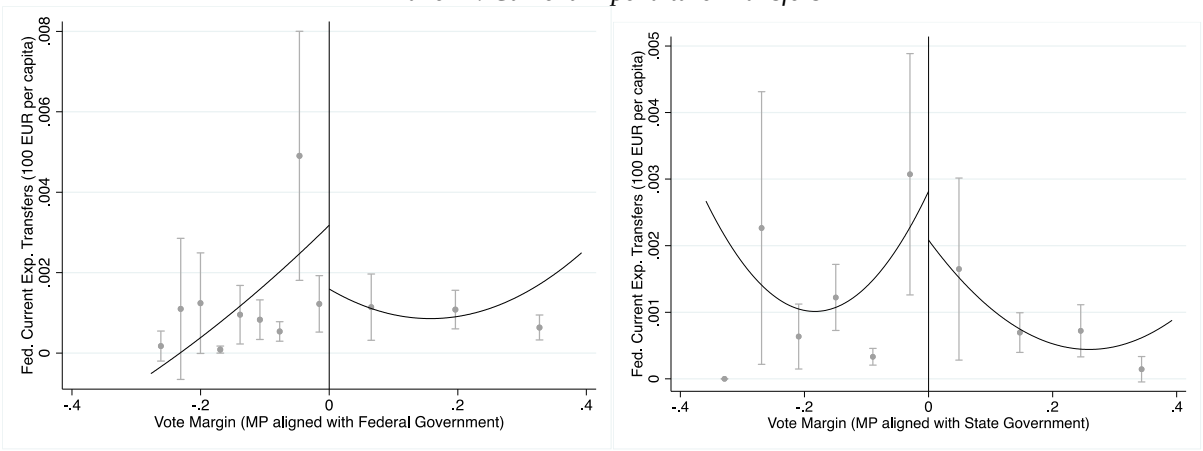
Histogram depicts the distribution of vote margins between the candidate of the party that formed the government and the candidate of the party that ended in opposition as fractions of all municipalities in North-Rhine Westphalia between 1992 and 2013.

Figure 4a: RDD Plots Federal Transfers (polynomial order = 2)

Panel A: Investment Transfers



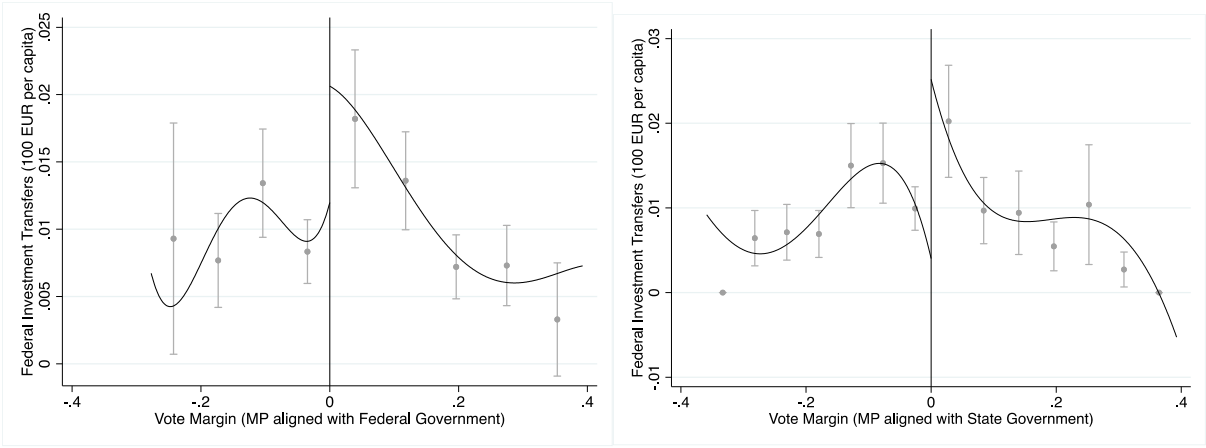
Panel B: Current Expenditure Transfers



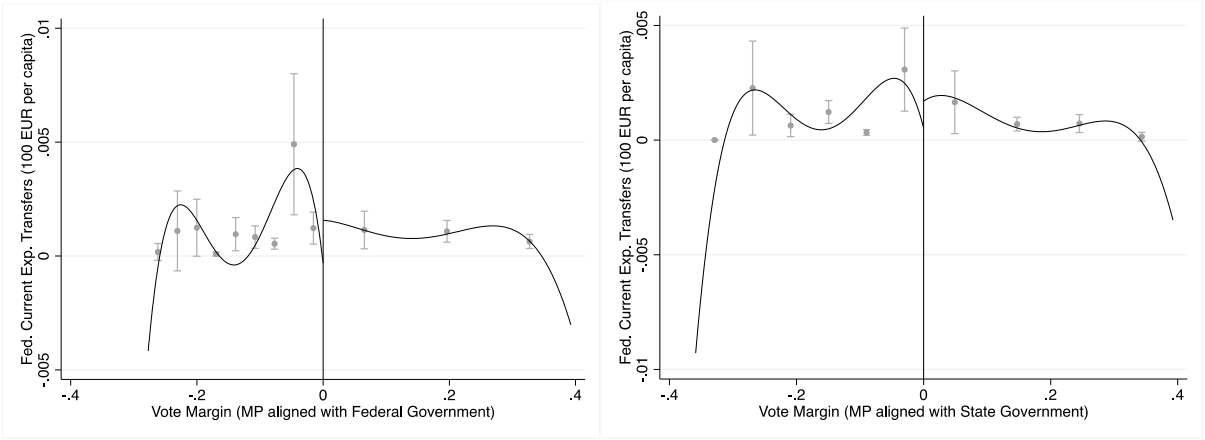
The left-hand graph in Panel A shows the discontinuity of a municipality's federal investment transfer receipts at the cut-off of a vote margin of 0.00 between the candidate of the party that formed the *federal* government and the candidate of the party that ended in *federal* opposition. The right-hand graph shows the discontinuity of a municipality's federal investment transfers receipts at the cut-off of a vote margin of 0.00 between the candidate of the party that formed the *state* government and the candidate of the party that ended in *state* opposition. Panel B shows the same for federal transfers that target current expenditures. Transfers in 100 Euro per capita and constant prices. We use a quadratic regression function. Confidence bars indicate 90% confidence intervals. Bins are selected using the IMSE-optimal evenly spaced method based on polynomial regression. We used the Stata routine rdplot.

Figure 4b: RDD Plots Federal Transfers (polynomial order = 4)

Panel A: Investment Transfers



Panel B: Current Expenditure Transfers



The left-hand graph in Panel A shows the discontinuity of a municipality's federal investment transfer receipts at the cut-off of a vote margin of 0.00 between the candidate of the party that formed the *federal* government and the candidate of the party that ended in *federal* opposition. The right-hand graph shows the discontinuity of a municipality's federal investment transfers receipts at the cut-off of a vote margin of 0.00 between the candidate of the party that formed the *state* government and the candidate of the party that ended in *state* opposition. Panel B shows the same for federal transfers that target current expenditures. Transfers in 100 Euro per capita and constant prices. We use a regression function with a polynomial order of four. Confidence bars indicate 90% confidence intervals. Bins are selected using the IMSE-optimal evenly spaced method based on polynomial regression. We used the Stata routine rdplot.

Table 3: RDD Estimates of MPs Influence on Transfer Receipts

	Alignment with Federal Government				Alignment with State Government			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				Panel A: Investment Transfers				
RD Estimate	**0.014**	**0.013**	**0.012**	**0.011**	**0.019****	**0.020****	**0.020****	**0.019****
	(0.009)	**(0.009)**	**(0.011)**	**(0.011)**	**(0.008)**	**(0.009)**	**(0.009)**	**(0.010)**
Observations	3330	3330	3330	3330	3330	3330	3330	3330
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B Type	MSE	CET	MSE	CET	MSE	CET	MSE	CET
Kernel Type	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Oder loc. Poly	linear	linear	Quadratic	Quadratic	linear	linear	Quadratic	Quadratic
Standard Error	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered
				Panel B: Current Expenditure Transfers				
RD Estimate	**0.000**	**0.000**	**0.001**	**-0.003****	**0.003***	**0.000**	**0.003**	**0.000**
	(0.001)	**(0.001)**	**(0.001)**	**(0.002)**	**(0.002)**	**(0.001)**	**(0.002)**	**(0.002)**
Observations	3330	3330	3330	3330	3330	3330	3330	3330
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B Type	MSE	CET	MSE	CET	MSE	CET	MSE	CET
Kernel Type	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Oder loc. Poly	linear	linear	Quadratic	Quadratic	linear	linear	Quadratic	Quadratic
Standard Error	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered

[1] RDD estimation coefficients with heteroskedasticity-robust standard errors that are clustered on the municipal level and displayed in parentheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level.

[2] Columns 1 to 4 indicate the effect of being represented by a federal parliament member from the party that leads the federal government. Columns 5 to 8 indicate the effect of being represented by a federal parliament member from the party that leads the state government.

[3] Columns 1/2 and 5/6 show linear regression functions. Columns 3/4 and 7/8 show quadratic regression functions. For each specification, we use mean squared error optimal bandwidth (MSE) selectors as well as common coverage error-rate optimal (CET) bandwidth selectors.

[4] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

[5] We use the Stata routine rdrobust.

Table 4: Balance Improvement for RDD Subgroup Estimation

	Original Balance				**Balance after propensity-score-weighting**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: State and Federal Government aligned							
	Govs. Aligned (n=435)	Govs. Unaligned (n= 648)	St. mean diff	p-value	Govs. Aligned (n=405)	Govs. Unaligned (n=459)	St. mean diff	p-value
Tax Strength	717	774	0.16	0.011	745	740	-0.230	0.742
Share young	.0229	.0224	-0.214	0.000	0.225	0.225	-0.022	0.764
Share old	.0173	0.168	-0.188	0.003	0.172	0.175	0.090	0.228
Density	4.59	3.88	-0.186	0.003	4.25	4.33	0.020	0.770
Seniority	7.72	7.1	-0.099	0.138	7.55	7.62	0.011	0.880
Share Leftwing	40.7	39.8	-0.13	0.038	40.6	40.5	-0.011	0.869
Number List MP	0.524	0.501	-0.031	0.621	0.631	0.634	0.004	0.954
F-statistic				**28.99**				**0.58**
p-value				**0.000**				**0.774**
	Panel B: State and Federal MP aligned							
	MPs. Aligned (n=697)	MPs. Unaligned (n=662)	St. mean diff	p-value	MPs. Aligned (n=620)	MPs. Unaligned (n=516)	St. mean diff	p-value
Tax Strength	772	410	-0.092	0.099	760	753	-0.025	0.685
Share young	0.220	0.229	0.407	0.000	0.223	0.224	0.017	0.776
Share old	0.177	0.164	-0.438	0.000	0.173	0.172	-0.010	0.866
Density	4.62	4.17	-0.112	0.046	4.36	4.31	-0.014	0.818
Seniority	8.22	6.76	-0.232	0.000	7.46	7.24	-0.035	0.548
Share Leftwing	39.5	40.6	0.177	0.001	40.4	40.4	-0.003	0.961
Number List MP	0.569	0.447	-0.166	0.003	0.573	0.565	-0.010	0.860
F-statistic				**10.58**				**0.080**
p-value				**0.000**				**0.999**

Columns 1 and 2 of Panel A show the average values of control variables for the groups of municipalities that are represented by federal parliament members with party ties to only one or to both governments. Columns 3 shows the mean difference between the two groups for each variable. Columns 4 shows the p-value of the F-test on statistical mean differences between the two groups before propensity score weighting. Columns 5 to 8 show the same statistics for the two groups after propensity score weighting. Panel B shows the same statistics for the two groups of municipalities of which the federal and state representative belong to the same/ to competing parties. We use the Stata routine rddsga.

Table 5: RDD Subgroup Estimates

	Aligned with State Government	Aligned with State Government	Aligned with Federal Government	Aligned with Federal Government
	(1)	(2)	(3)	(4)
		Panel A: State and Federal Governments aligned		
RD Estimate Govs. Aligned	**0.025**** **(0.018)**	**0.021**** **(0.010)**	**0.026**** **(0.012)**	**0.015*** **(0.010)**
RD Estimate Govs. Unaligned	**-0.005** **(0.008)**	**-0.005** **(0.016)**	**0.007** **(0.010)**	**-0.002** **(0.021)**
Difference Estimate	**0.029*** **(0.018)**	**0.026** **(0.021)**	**0.019**** **(0.008)**	**0.018** **(0.022)**
Observations	3330	3330	3330	3330
Bandwidth	MSE	MSE	MSE	MSE
Spline	linear	quadratic	linear	quadratic
Controls	yes	yes	yes	yes
Standard Error	Clustered	Clustered	Clustered	Clustered
		Panel B: State and Federal MP aligned		
RD Estimate MPs. Aligned	**0.002** **(0.006)**	**0.001** **(0.010)**	**0.004** **(0.008)**	**-0.004** **(0.013)**
RD Estimate MPs. Unaligned	**0.046**** **(0.010)**	**0.055***** **(0.021)**	**0.040**** **(0.018)**	**0.034**** **(0.018)**
Difference Estimate	**-0.044*** **(0.023)**	**-0.054**** **(0.027)**	**-0.036**** **(0.018)**	**-0.038*** **(0.023)**
Observations	3330	3330	3330	3330
Bandwidth	MSE	MSE	MSE	MSE
Spline	linear	quadratic	linear	quadratic
Controls	yes	yes	yes	yes
Standard Error	Clustered	Clustered	Clustered	Clustered

[1] RDD estimation coefficients with heteroskedasticity-robust standard errors that are clustered on the municipal level and displayed in parentheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. We use linear (columns 1 and 3) and quadratic (columns 2 and 4) regression functions and apply mean squared error optimal bandwidth (MSE) selectors.

[2] Panel A shows difference estimates between municipalities that are represented by a federal parliament member with party ties to the federal and state government (Govs. Aligned) and municipalities of which the federal representative has ties to the state government (columns 1 and 2) or the federal government (columns 3 and 4) only (Govs. Unaligned).

[3] Panel B shows difference estimates between municipalities of which the federal and the state parliament member belong to the same party (MPs Aligned) and municipalities of which only the federal representative (MPs Unaligned) belongs to the party that leads the state government (columns 1 and 2) or the federal government (columns 3 and 4).

[4] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

[5] We use the Stata routine rddsga.

Table 6: RDD Subgroup Estimates

	aligned with State Gov.		aligned with Federal Gov.	
	(1)	(2)	(3)	(4)
	Panel A: Governments aligned			
RD Estimate MPs aligned	-0.001	-0.002	0.003	-0.005
	(0.006)	(0.009)	(0.008)	(0.010)
RD Estimate MPs unaligned	0.055*	0.042*	0.055*	0.044*
	(0.028)	(0.024)	(0.031)	(0.027)
Difference Estimate	-0.056*	-0.044*	-0.052*	-0.048*
	(0.032)	(0.027)	(0.033)	(0.030)
Observations	1449	1449	1449	1449
	Panel B: MPs unaligned			
RD Estimate Govs aligned	0.051*	0.010	0.043*	0.016
	(0.028)	(0.021)	(0.026)	(0.021)
RD Estimate Govs unaligned	-0.010	0.004	0.010	-0.006
	(0.012)	(0.011)	(0.010)	(0.010)
Difference Estimate	0.061**	0.004	0.033	0.022
	(0.031)	(0.022)	(0.027)	(0.024)
Observations	804	804	804	804
Bandwidth	MSE	MSE	MSE	MSE
Spline	linear	quadratic	linear	quadratic
Controls	Yes	Yes	Yes	Yes
Standard Error	Clustered	Clustered	Clustered	Clustered

[1] RDD estimation coefficients with heteroskedasticity-robust standard errors that are clustered at the municipal level and displayed in parentheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. We use linear (columns 1 and 3) and quadratic (columns 2 and 4) regression functions and apply mean squared error optimal bandwidth (MSE) selectors.

[2] Panel A restricts the sample to those observations, where the state and federal government are led by the same party. Panel B restricts the sample to those observations where the state and federal MP of a municipality belong to different parties.

[3] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

[4] We use the Stata routine rddsga.

Table 7: RDD Subgroup Estimates

	aligned with State Gov.		aligned with Federal Gov.	
	(1)	(2)	(3)	(4)
	Panel A: MPs aligned and governments aligned			
RD Estimate both aligned	0.002	-0.001	0.004	-0.003
	(0.011)	(0.010)	(0.007)	(0.011)
RD Estimate none or only MP/Gov aligned	0.026**	0.031**	0.032**	0.042**
	(0.011)	(0.016)	(0.015)	(0.021)
Difference Estimate	-0.025*	-0.032*	-0.028	-0.045*
	(0.014)	(0.019)	(0.018)	(0.026)
	Panel B: MPs aligned and governments unaligned			
RD Estimate Only MPs aligned	0.004	-0.051	0.007	0.030
	(0.014)	(0.046)	(0.014)	(0.049)
RD Estimate both or only Gov aligned	0.019**	0.025**	0.017**	0.011
	(0.010)	(0.010)	(0.008)	(0.008)
Difference Estimate	-0.015	-0.075	-0.010	0.019
	(0.021)	(0.049)	(0.017)	(0.049)
	Panel C: MPs unaligned and governments unaligned			
RD Estimate MPs and Govs. not aligned	-0.008	0.007	0.011	-0.014
	(0.008)	(0.012)	(0.011)	(0.014)
RD Estimate both or only MP/Gov aligned	0.019***	0.019***	0.018*	0.003
	(0.006)	(0.007)	(0.010)	(0.014)
Difference Estimate	-0.027***	-0.012	-0.007	-0.016
	(0.008)	(0.013)	(0.014)	(0.020)
	Panel D: MPs unaligned and governments aligned			
RD Estimate Only Govs. Aligned	0.056**	0.028	0.056**	0.035
	(0.029)	(0.022)	(0.034)	(0.025)
RD Estimate both or only MP aligned	0.003	-0.001	0.003	0.000
	(0.004)	(0.007)	(0.006)	(0.008)
Difference Estimate	0.053*	0.029	0.053**	0.035
	(0.028)	(0.024)	(0.032)	(0.027)
Observations	3330	3330	3330	3330
Bandwidth	MSE	MSE	MSE	MSE
Spline	linear	Quadratic	linear	Quadratic
Controls	Yes	Yes	Yes	Yes
Standard Error	Clustered	Clustered	Clustered	Clustered

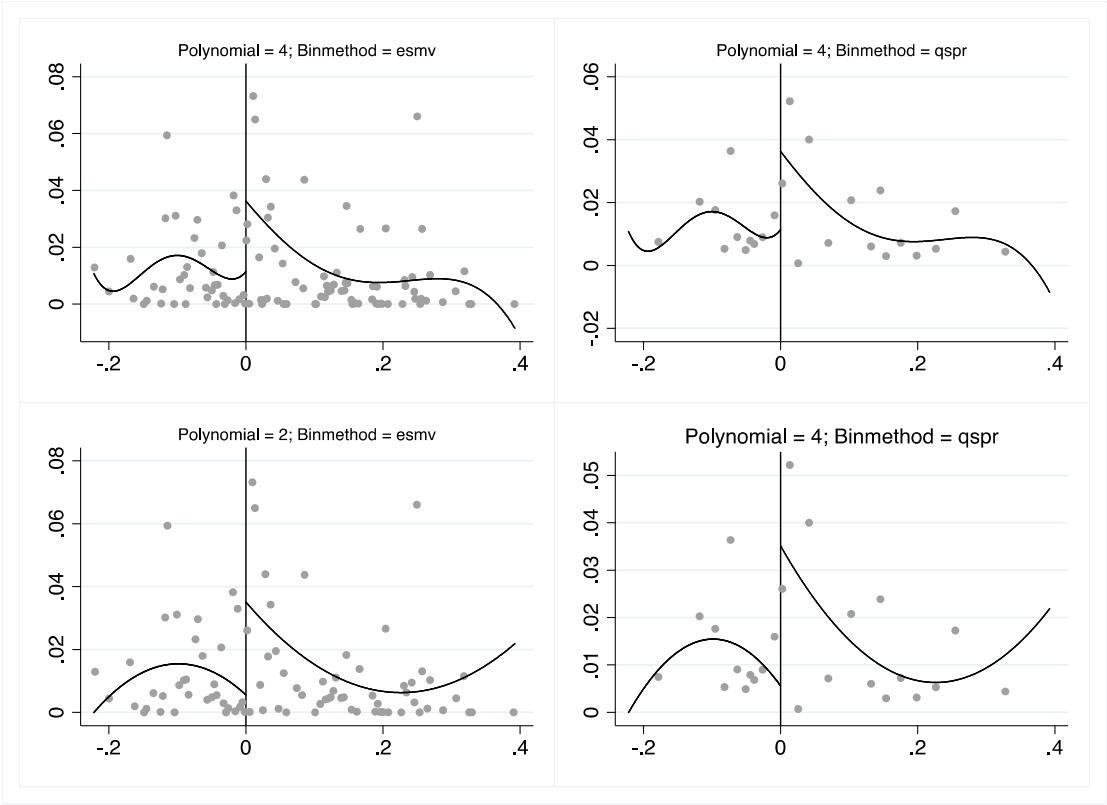
[1] RDD estimation coefficients with heteroskedasticity-robust standard errors that are clustered at the municipal level and displayed in parentheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. We use linear (columns 1 and 3) and quadratic (columns 2 and 4) regression functions and apply mean squared error optimal bandwidth (MSE) selectors.

[2] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

[3] We use the Stata routine rddsga.

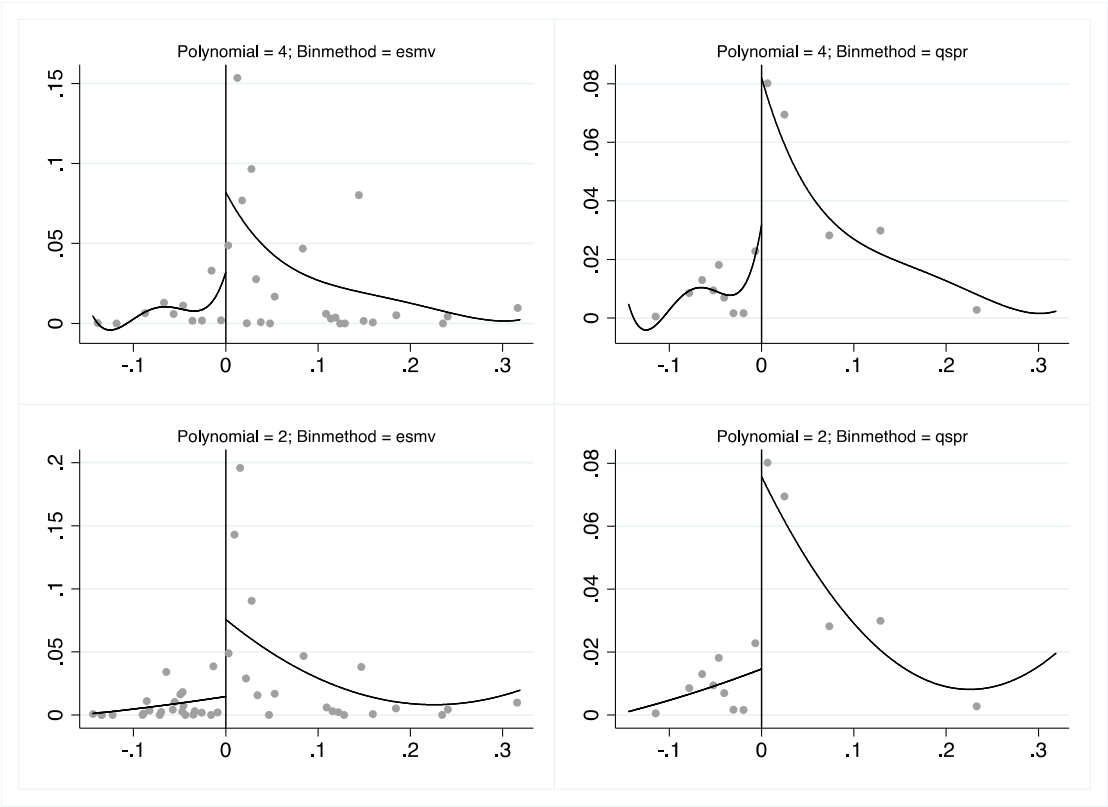
Figure 5: Graphical Analysis of the Incumbent Governments' Strategy

Panel A: Federal- and State Government aligned



The graph shows the discontinuity of a municipality's federal investment transfer receipts at the cut-off of a vote margin of 0.00 between the candidate of the party that formed the government and the candidate of the party that ended in opposition for the case that the state and the federal government are led by the same party. The top row shows a regression fit with a polynomial order of four. The bottom row shows a regression fit with a polynomial order of two. The left-hand side graphs depict bin selection using the mimicking-variance evenly spaced method, the right-hand side graphs depict bin selection using the IMSE-optimal evenly spaced method based on polynomial regression. We used the Stata routine rdplot.

Panel B: Federal- and State Government aligned and State MP in Opposition



The graph shows the discontinuity of a municipality's federal investment transfer receipts at the cut-off of a vote margin of 0.00 between the candidate of the party that formed the government and the candidate of the party that ended in opposition for the case that the state and the federal government are led by the same party AND the municipality's state parliament member belongs to the opposing party. The top row shows a regression fit with a polynomial order of four. The bottom row shows a regression fit with a polynomial order of two. The left-hand side graphs depict bin selection using the mimicking-variance evenly spaced method, the right-hand side graphs depict bin selection using the IMSE-optimal evenly spaced method based on polynomial regression. We used the Stata routine rdplot.

Table 8: Political Budget Cycles

	Year prior to State or Federal Election		Other Years	
	(1)	(2)	(3)	(4)
RD Estimate MP aligned with State Government	0.027***	0.030***	0.017*	0.017
	(0.011)	(0.012)	(0.009)	(0.012)
RD Estimate MP aligned with Federal Government	0.014	0.012	0.014	0.016
	(0.013)	(0.012)	(0.011)	(0.013)
Observations	3330	3330	3330	3330
Controls	Yes	Yes	Yes	Yes
B Type	MSE	MSE	MSE	MSE
Kernel Type	Triangular	Triangular	Triangular	Triangular
Oder loc. Poly	Linear	quadratic	Linear	quadratic
Standard Error	Clustered	Clustered	Clustered	Clustered

[1] RDD estimation coefficients with heteroskedasticity-robust standard errors that are clustered on the municipal level and displayed in parentheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level.

[2] Columns 1 and 2 restrict transfer receipts to the year prior to a state or federal election. Columns 3 and 4 restrict transfer receipts to other years.

3 We use linear (columns 1 and 3) and quadratic (columns 2 and 4) regression functions and mean squared error optimal bandwidth (MSE) selectors.

[4] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, the shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

[5] We use the Stata routine rdrobust.

Table 9: RDD Estimates of Purpose of Federal Investment Transfers

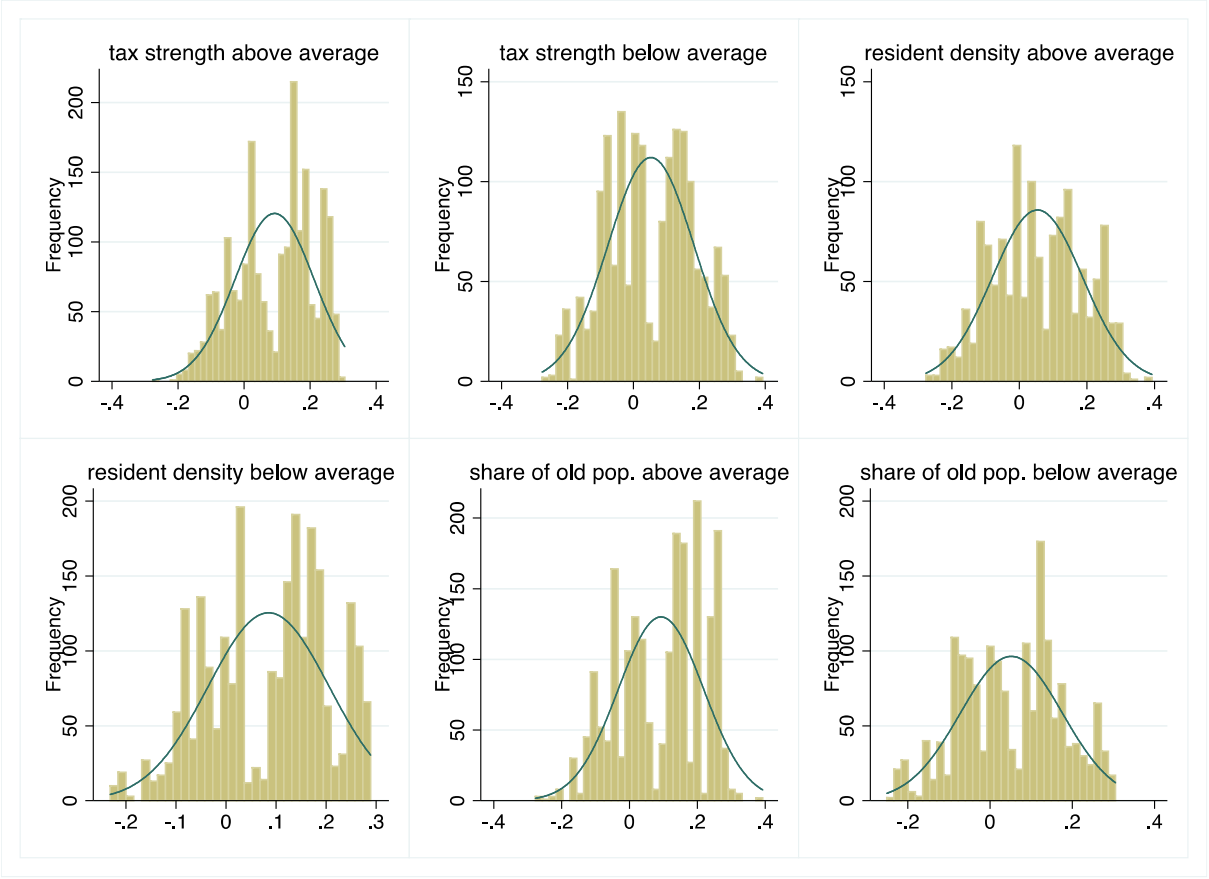
	Schools and Education	Traffic and Infrastructure	Social Security	Health and Recreation	Science and Culture	Economic Promotion	Security and Admin
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Federal MP aligned with Federal Government			
RD Estimate	0.002	0.009	0.000	0.000	-0.001	0.000	0.000
General Effect	(0.001)	(0.008)	(0.000)	(0.000)	(0.000)	(0.004)	(0.002)
Observations	3330	3330	3330	3330	3330	3330	3330
				Federal MP aligned with State Government			
RD Estimate	0.001	0.013**	0.000	0.000	-0.001	0.004	0.000
General Effect	(0.001)	(0.007)	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)
Observations	3330	3330	3330	3330	3330	3330	3330
				Federal MP aligned with Federal Government			
RD Estimate Govs	0.002	0.021*	0.000	0.000	0.000	0.002	0.000
Aligned	(0.002)	(0.011)	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)
RD Estimate Govs	0.000	0.007	0.000	0.000	0.000	-0.003	0.000
Non-Aligned	(0.000)	(0.008)	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)
Difference Estimate	0.002	0.014	0.000	0.000	0.000	0.004	0.000
	(0.002)	(0.009)	(0.000)	(0.000)	(0.000)	(0.004)	(0.000)
Observations	3330	3330	3330	3330	3330	3330	3330
				Federal MP aligned with State Government			
RD Estimate MPs	0.002	0.024**	0.000	0.000	0.000	0.004	0.000
Aligned	(0.001)	(0.011)	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)
RD Estimate MPs	0.000	-0.004	0.000	0.000	0.000	0.002	0.000
Non-Aligned	(0.000)	(0.008)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
Difference Estimate	0.002	0.027*	0.000	0.000	0.000	0.002	0.000
	(0.001)	(0.017)	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)
Observations	3330	3330	3330	3330	3330	3330	3330
				Federal MP aligned with Federal Government			
RD Estimate Govs	0.001	0.021*	0.000	0.000	0.000	-0.004	0.000
Aligned	(0.001)	(0.014)	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)
RD Estimate Govs	0.001	-0.005	0.000	0.000	0.000	0.010	0.000
Non-Aligned	(0.002)	(0.008)	(0.000)	(0.000)	(0.000)	(0.006)	(0.000)
Difference Estimate	0.000	-0.015	0.000	0.000	0.000	-0.013*	0.000
	(0.000	(0.016)	(0.000)	(0.000)	(0.000)	(0.007)	(0.000)
Observations	3330	3330	3330	3330	3330	3330	3330
				Federal MP aligned with State Government			
RD Estimate MPs	0.001	0.003	0.000	0.000	0.000	0.001	0.000
Aligned	(0.001)	(0.005)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
RD Estimate MPs	0.001	0.031**	0.000	0.000	0.000	0.011	0.000
Non-Aligned	(0.001)	(0.016)	(0.000)	(0.000)	(0.000)	(0.007)	(0.000)
Difference Estimate	0.000	-0.028	0.000	0.000	0.000	-0.010	0.000
	(0.002)	(0.019)	(0.000)	(0.000)	(0.000)	(0.007)	(0.000)
Observations	3330	3330	3330	3330	3330	3330	3330
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B Type	MSE	MSE	MSE	MSE	MSE	MSE	MSE
Kernel Type	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Oder loc. Poly	linear	linear	linear	linear	linear	linear	linear
Standard Error	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered

[1] RDD estimation coefficients with heteroskedasticity-robust standard errors that are clustered at the municipal level and displayed in parentheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. We use linear (columns 1 and 3) and quadratic (columns 2 and 4) regression functions and apply mean squared error optimal bandwidth (MSE) selectors.

[2] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

[3] We use the Stata routine rddsga.

Figure 6: Distribution of Observations around the cutoff



Histograms show the distribution of municipalities with different structural characteristics around the cut-off of a vote margin of being represented by a federal parliament member who belongs to the governing party on the federal level of 0.00.

Table 10: Marginal Effects of RDD Estimates for Multi-Level Alignment

	aligned with state gov.	aligned with state gov.	aligned with federal gov.	aligned with federal gov.
	(1)	(2)	(3)	(4)
Federal MP aligned	0.003	0.023**	-0.002	0.012**
	(0.004)	(0.010)	(0.004)	(0.005)
Federal MP aligned*Govs aligned	0.010*		0.010*	
	(0.005)		(0.005)	
Federal MP aligned*MPs aligned		0.004		-0.001
		(0.003)		(0.004)
Controls	Yes	Yes	Yes	Yes
Twoway-FE	Yes	Yes	Yes	Yes
Standard Errors	Clustered	Clustered	Clustered	Clustered
Observations	3330	3330	3330	3330

[1] OLS estimation with two-way fixed effects in a globalized setting. Heteroskedasticity-robust standard errors are clustered on the municipal level and displayed in parantheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level.

[2] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

Table 11: Placebo estimates for different cutoffs

vote margin	- 10%	- 5 %	- 2.5%	-0.2%	0.2%	2.5%	5%	10%
RD-Estimate	-0.054***	-0.014	-0.004	0.014	0.019**	0.010	-0.004	-0.019*
	(0.020)	(0.016)	(0.010)	(0.010)	(0.010)	(0.022)	(0.009)	(0.011)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B Type	MSE	MSE	MSE	MSE	MSE	MSE	MSE	MSE
Kernel Type	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Polyn.	quadratic	quadratic	quadratic	quadratic	quadratic	quadratic	quadratic	quadratic
SE	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered

[1] Table 11 depicts RD-estimates at placebo vote margins of +-10%. RDD estimation coefficients with heteroskedasticity-robust standard errors that are clustered at the municipal level and displayed in parentheses. *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. We use quadratic regression functions and apply mean squared error optimal bandwidth (MSE) selectors.

[2] Control variables included are the number of list-elected parliamentarians that belong to the governing and to the opposition party that can be assigned to municipality i, the vote share of the governing party's candidate in municipality i, seniority of the directly elected parliament member, shares of the population below the age of 20 and above the age of 65, resident density and election period fixed effects.

[3] We use the Stata routine rdrobust.