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Keywords:

electoral rules; forms of government; fiscal policy; local governments

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Disentangling the Fiscal Effects of Local Constitutions

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Abstract

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JEL classification: D72; D78; H72; R50 *Keywords:* electoral rules; forms of government; fiscal policy; local governments

1. Introduction

There is a strong theoretical case, and growing empirical evidence from within-country studies, suggesting that earned, (e.g., local taxes) and unearned, (e.g., intergovernmental transfers) budget revenues differently affect public goods provision. The intuitive argument

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is that (local) taxes, in contrast to intergovernmental transfers, raise fiscal awareness and hence encourage the monitoring of local government service costs by taxpayers, resulting in more effective provision of public goods, more accountability and more appeals to antiincumbent policy actions (see, for instance, Oates, 2001; Martinez, 2014; Gadenne, 2017). Empirical evidence supporting this claim can be found, inter alia, in Borge and Rattso (2008), Paler (2013), Martinez (2014) and Gadenne (2017). In this paper we take a step back and ask what determines the size and composition of budget revenues at the local level. In other words, what affects a budgetary mix of local taxation and intergovernmental transfers. We study this question through the lens of constitutional political economy. As far as we are aware, this is the first paper which, by applying a constitutional political economy framework, simultaneously considers local taxation and intergovernmental grants.

The design of major constitutional rules, such as electoral systems and forms of government, plays a crucial role in shaping both local taxation and transfers from the central government. By applying a theoretical framework based on political economy, and taking into account the specificity of Polish municipalities (our empirical laboratory), we test the hypothesis that proportional electoral systems in combination with the direct election of mayors result in lower property tax revenue and greater revenue from intergovernmental grants. In contrast to appointed mayors, directly elected mayors can be more easily identified with the policy outcomes of the local government. Due to this "indentifiability" in the presidential systems, the executive is held more accountable for the government's policies than in parliamentary systems where the executive is fused with the legislature. What this argument implies is that under presidential systems, where "identifiability" of responsibility is high, the executive will be more responsive to voters' demands. If one assumes that voters prefer lower property tax rates, directly elected mayors are more likely to reduce local taxation than appointed mayors. While at first glance it may seem that the direct election of mayors would have the same effect under both proportional and majoritarian elections, we further argue that this effect is differential. Based on the fact that proportional elections introduce the idea of competing elites, ideologies and sectoral interests rather than geographical interests and given that in Poland the costs of entering political market under proportional representation are higher, we reason that mayors in proportional regimes will be more politicized, and arguably will more frequently be members of national political parties, rather than local electoral committees. This in turn may lead to an alignment effect between local and central governments, whereby central government facilitates the reduction of property taxes by compensating for the lost revenue with higher intergovernmental grants. In other words, under proportional regimes mayors are in a better position to cut taxes, as they can compensate for lost revenue via increased intergovernmental grants.

Beginning with the seminal work of Brennan and Buchanan (1980), followed by that of Persson and Tabellini (1999), the question of whether constitutional rules affect fiscal policies has gained considerable attention. The empirical evidence from multi-country studies on how electoral systems and forms of government shape fiscal outcomes, is, however, at best mixed. For instance, Persson and Tabellini (2004) demonstrate that forms of government impact budgetary outcomes in a substantial way. These authors found that, in contrast to parliamentarian regimes, presidential systems result in lower government spending by 6% of GDP, smaller size of the welfare state by some 2 to 3%, and marginally lower budget deficits. Likewise, Cheibub (2006) showed that the gross central government budget balance is systematically higher in presidential than in parliamentary democracies. However, when applying slightly different samples and outcome variables, Blume et al. (2009) were not able to find any robust effects of forms of government on fiscal outcomes.

One issue that makes it particularly difficult to credibly estimate the effects of constitutional rules, is that of omitted variable bias. Cross-country studies suffer from large unobserved heterogeneity in institutions, which cannot be fully identified. Additionally, since the time variation of the rules is typically very limited, researchers deal with relatively small sample sizes (although even potential panel regressions alleviate the omitted variable problem only slightly). In the current paper, we remedy the above-mentioned obstacles. We test the effect of forms of government at the local level in a single country. Thus, we deal with a large number of observations and we are able to mitigate the problem of omitted variable bias, since in a local setting a vast proportion of institutional characteristics remain constant. Moreover, we analyze a reform introduced by the central government but affecting local entities, which can therefore be considered exogenous.

Another question which remains largely unexplored in the constitutional political economy literature, is that of how the effects of constitutional rules, e.g., forms of government, depend on other constitutional features, e.g., electoral rules (Voigt, 2011). Since most theories on presidentialism and parliamentarism focus on the relationship between the executive and the legislature, the choice of the electoral system relating to the legislature seems to be an important interacting variable. In this paper we explicitly tackle the interaction effects between various constitutional features. We acknowledge that electoral systems display their effects in conjunction with other constitutional rules, notably forms of government.

In our empirical analysis, we exploit a unique quasi-experimental setting at the level of Polish municipalities. In 2002, legislators decided to introduce direct elections for municipal mayors, effectively changing the form of government in Polish municipalities from parliamentarian to presidential. Since 1998, municipal councils (local assemblies) in Poland have been elected according to different electoral systems - majoritarian or proportional - depending on a population threshold. Therefore, we are able to verify whether the introduction of a presidential system affected fiscal outcomes differently in proportional and majoritarian regimes. Similarly to Grembi et al. (2016), Asatryan et al. (2016), Asatryan et al. (2017) and Lopes da Fonseca (2017), we implement a difference-in-discontinuities design by combining the 2002 reform of direct elections for mayors with the 1998 reform which introduced discontinuous variation in electoral systems based on population size. Our results indicate that the discontinuity between municipalities with proportional and majoritarian systems can be identified only in the period after 2002, i.e., when direct elections for mayors were first implemented. Although after 2002 the increase in property tax income was greater in the municipalities with majoritarian elections, the intergovernmental grants increased more in the municipalities with proportional representation. This difference in local taxation and intergovernmental grants between municipalities with majoritarian and proportional regimes can explain the difference in vertical fiscal imbalance between municipalities applying the different electoral regimes. These results are complementary to those of Kantorowicz (2017), who found that in the period 2002-2010, several fiscal and political indicators showed a sharp discontinuity at a population threshold of 20,000 inhabitants.

In the next section we present the institutional design of Polish municipalities and a detailed description of our natural experiment. Section 3 contains a brief literature review and the hypotheses explored in this study. Section 4 describes the data set and the empirical approach. Section 5 contains a description of our results and Section 6 comprises a set of robustness tests. Section 7 concludes the paper.

2. The Institutional Background

Municipalities (Polish: gmina) are the principal units of administrative division in Poland, and constitute the lowest tier of government. There are currently 2,478 municipalities, varying in size between 1,400 and 1.7 million inhabitants. The legislative and controlling body of each gmina is the elected municipal council (*rada gminy*) or, in a town, the town council (*rada miasta*)³. Since 2002, executive power has been held by the directly

³The distinction is a matter of tradition and does not correspond to different competences.

elected mayor of a municipality. Before 2002, the mayor was elected indirectly by the council. The following subsections give a detailed description of the two institutional reforms which are the backbone of the empirical analysis in this paper, i.e., the 1998 electoral reform and the 2002 reform of the forms of government.

2.1. Municipal Councils and the 1998 Electoral Reform

Members of the council (councillors) are elected directly from the candidates representing local committees and national political parties. As of 1998, in municipalities with up to 20,000 inhabitants, the council members were elected in majoritarian (plurality) elections. In municipalities with more than 20,000 inhabitants, on the other hand, members of the council were elected by means of a proportional election.⁴ In the 2014 elections (based on the law enacted in 2011), the population threshold was removed and a winner-takes-all system was widely introduced. Hence, in this paper, we consider the time period between 1998 and 2010, during which the population threshold of 20,000 clearly delineated the division between majoritarian and proportional electoral systems. The details of the electoral systems in years 1998–2010 are summarized in Table 1.

	Majoritarian	Proportional						
Population size	$<\!20,\!000$	>=20,000						
Electoral rule	Plurality	Proportional (d'Hondt)						
District magnitude	Up to 5	5-8						
No of signatures to register a party list in a district	Min. 25	Min. 150						
No. of candidates on the list	Min. 1	Min. 5						
Confounding factors								
Council size	15	21						
Campaign spending limitation	750PLN	1000PLN						

Table 1: Intitutional details of electoral systems in the period 1998-2010

From Table 1, it is apparent that in municipalities with proportional elections the costs of entering political markets were much higher (Szczepanowska, 2010), due to a higher number of signatures required to register a party list in a district and a larger

 $^{{}^{4}}$ Before 1998 all municipalities below the threshold of 40,000 inhabitants were subject to first-past-the-post electoral systems.

number of candidates to be registered on the list. Furthermore, proportional systems usually introduce the idea of competing elites, ideologies and sectoral interests rather than geographical interests (Shugart and Carey, 1992; Gendzwill and Zoltak, 2014). All this leads us to reason that it was much more difficult for local political committees to penetrate local political markets under proportional elections and rather easy for national political parties, which are well-organized and resourceful.⁵ Kantorowicz (2017) show that there is indeed a substantial difference in the share of council members affiliated with political parties in majoritarian and proportional systems. In the following section, we show that a similar trend (higher levels of politicization in proportional systems) can also be found in the case of mayors.

There are two policies which vary at the 20,000 population threshold and can potentially confound the effect of electoral systems. These are council size and campaign spending limits. In the robustness section, we demonstrate that council size does not shape fiscal outcomes. To this end, we exploit the fact that during the years 1990-2002, the size of the council was determined by several different population thresholds.⁶ Regarding campaign expenditure limits, there is evidence that they are not strictly enforced, and thus, not binding (Szyszko, 2014). It is a well-known practice in Poland for parties to engage in so-called "pre-campaigning", in order to circumvent expenditure limits. This means that politicians start agitation before the beginning of the official campaign, i.e., when the expenses of campaigning go unreported (Szyszko, 2014). This problem has been recognized

 $^{{}^{5}}$ It is important to underline the fact that before the 1998 elections, national political parties were banned from putting candidates forward in local elections. They could merely support particular candidates or local committees (Kotarba, 2016).

⁶In the robustness section we exploit three out of nine population thresholds determining council size before 2002. It has to be noted that, the 2002 reform of the council largely simplified the rules concerning the council size. After the reform there has been only three population thresholds at which council size would change, namely 20,000, 50,000 and 100,000. The reform's primary aim was to reduce the number of council members. While before 2002 councils had 24 members in municipalities with a population size below 20,000 and 28 members in municipalities with a population above this threshold, in 2002 these numbers were reduced to 15 and 21 members for the municipalities below and above the cut-off respectively.

by the Ombudsman and the National Electoral Commission.

2.2. The Mayor and the 2002 Reform of Forms of Government

The 1990 law on self-governance stipulated that the executive power in a municipality is held by the municipal board (*zarząd gminy*), a collegial body of between four and seven members, elected by an absolute majority of council members⁷. The mayor, although a member of the board, was elected in a separate ballot. The municipal board could easily be recalled from office by the council. Initially, there were no precisely established procedures for recalling the board. This meant that dismissal of the board, and especially the mayor, could occur for any reason and at any time. A proposal for dismissing the mayor needed to be supported by the same majority required to appoint him. Over time, the procedures for recalling the board were tightened. Dismissal could occur in a situation where the mayor failed to receive a vote of confidence, or when a substantiated proposal for recalling the board (or mayor alone) was supported by a quarter of the councillors. In spite of these changes, the position of the municipal executive branch was weak, and almost entirely dependent on the council. In such circumstances, the mayor was often forced to conduct his policies so as to please council members, or even to offer them personal favors (Kowalik, 2003). Additionally, the fact that the mayor was not directly elected and was only a part of a collegial body, implied that he could hardly be held personally responsible for his decisions. All in all, a mayor in this system was not seen as representing a separate administrative body. The competence of the mayor was primarily in chairing the board, convening meetings and setting their dates. Equally important was the management of the daily affairs of the municipality (Marszał, 2006) and the drafting of laws at the demand of

⁷Board members could be elected from among councillors. This served to forge better links between the council and the executive body, and to make their relationship more workable. However, since the board largely performed a managerial role (executing laws enacted by the council), the idea was also to enable the appointment of the best possible managers from the pool of candidates outside the council (Kotarba, 2016).

the council. This very much resembled the parliamentary form of governance, as practiced at central levels of government.

As a result of the weak role of the board, the lack of accountability and frequent competence clashes between the mayor and the council, the form of government was reformed. The intention was to introduce direct elections for the mayor, who would from then on constitute a separate, legitimate, one-person executive body in the municipality. Curiously enough, the strengthening of the mayor's position was not combined with shifting competences from the council to the mayor. Apart from some minor changes, the distribution of competences between the mayor and the council remained largely the same. The council was still officially in charge of "determining the mayor's actions". The strengthening of the mayor's position was driven by the fact that he was directly and independently elected by local voters. This could be framed as a *de facto* strengthening of the mayor's position, as legally the position had not changed a great deal.

Since the mayor was directly elected, the council lost all direct means of recalling the mayor from office, and hence the mayor was not dependent on the council. Currently, only voters can recall the mayor via a popular referendum, which can be launched at the request of the council. In practice, this is a highly ineffective way of disciplining the mayor. If the proposal for recalling the mayor does not find support in the referendum, the council must be dissolved by law. Since the turnouts in local referenda are very low, the dismissal of a mayor occurs only very rarely. Thus, even though the procedure for "impeachment" is clear, it effectively only strengthens the position of the mayor. A strong public mandate combined with individual responsibility has led to an increasing role for mayors as leaders of local communities. This is evidenced by the fact that around 90% of legislative initiatives come from the mayor's office (Stępień, 2015).

All in all, the mayor enjoys the position of an executive which is similar to the position of an executive under the presidential form of government. Firstly, the executive is directly elected for a fixed time period and secondly, the executive is neither appointed nor dismissable via a parliamentary vote (Sartori, 1997). In the context of Poland, some refer to this system as "local presidentialism" (Kociubinski, 2015).

According to the law, only parties and committees which are registered in the majority of electoral districts can register a candidate for mayor. Since, ceteris paribus, in the proportional systems there are more national parties registered than in the majoritarian systems, this also means that in proportional systems there will be more mayoral candidates registered as candidates of political parties and, hence, mayors affiliated with national parties. As Figure 1 demonstrates, the likelihood that a particular mayor will represent a national political party is much higher above the population threshold of 20,000 than below it. There is of course some logic behind this pattern. The fact that mayors in proportional systems are more politicized is relevant for intergovernmental fiscal policies.

Figure 1: Share of partisan mayors



2.3. Fiscal Competences of the Municipalities

Municipalities in Poland dispose of revenues from five major sources: subsidies from the central government (Polish: *subwencja ogolna*), targeted intergovernmental grants (Polish: *dotacje celowe*), shares of personal and corporate income taxes, local taxation, and revenue stemming from the management of municipal property. Municipalities' degrees of freedom

in raising income differ among these diverse categories of financing. In the first two categories, municipalities have virtually no financial independence. It is, however, crucial to make a distinction between subsidies and targeted intergovernmental grants. While the former are purely formula-based transfers, grants are mostly discretionary and are politicized. In 2014, 58% of all transfers from the central government level took the form of subsidies, and the remaining 42% were discretionary grants. Overall, intergovernmental transfers (subsidies and grants together) constituted on average 57% of municipalities' revenues in 2014, with maximum values reaching almost 90% in some cases.

Interestingly, according to local finance law, a portion of the personal and corporate income taxes received by the municipalities is classified as "own income"⁸ as the municipalities are eligible to receive a certain fraction of these taxes levied in their territories. Thus, the municipalities can indirectly influence the revenue from these taxes by attracting working people and businesses to register within their boundaries or by stimulating local labor markets. The income from the management of municipal properties and local taxation both fall into the same category of own income as shares of PIT and CIT income. This is because in the Polish context, own income is defined as income generated by the tax base located in a given municipality. This means that own income is the total income net of intergovernmental transfers, (i.e., subsidies and grants) and borrowings.

The most important local tax is a property tax. Income from this tax generates nearly 30% of all own income. Crucially, municipalities have the freedom to determine the rate of property tax (residential and business buildings and land) up to a ceiling determined by the Ministry of Finance. They can likewise apply preferential rates and exempt certain taxpayers from paying this tax.

In recent years, most evidently since 2008, it has been clearly observed that the share of

⁸Similarly to the case of the German fiscal equalization system, this classification might be misleading.

own income (excluding income from PIT and CIT) within total municipal income in Poland is steadily decreasing, while the share of targeted intergovernmental grants is gradually increasing (Bober et al., 2013). This trend is negatively assessed by most researchers in the field of local public finance. Targeted grants make local governments dependent on central government and disincentivize local politicians to stimulate local tax bases. Furthermore, grants come with strings attached so that municipalities do not have complete freedom in deciding how the money will be spent. A decreasing share of own income is associated with decreasing economic autonomy for municipalities, implying that the role of local government is changing. Instead of focusing on stimulating local tax bases, local governments are being transformed into a collective of people lobbying for external (central government) support for the municipality (Heller et al., 2013). Under these circumstances, local prosperity increasingly depends on outside factors, putting into question the current concept of the self-governance of local communities.

3. Consitutional Rules and Fiscal Outcomes

Majoritarian systems are more conducive to individual accountability of policy-makers than proportional regimes as voters choose a particular candidate rather than a party list. Higher accountability, as theory goes, gives more incentives to policy-makers to preserve personal reputation by responding to voters' preferences (Carey and Shugart, 1995). On the contrary, in the PR system the candidates need to primarily respond to party leaders, although less so in the open-ballot PR where personal reputation matters a great deal as well. Given that in the majoritarian systems incumbents are somewhat more accountable to the voters, one should observe lower taxes levied on the local population in the majoritarian systems, assuming that voters at large dislike high taxes (Peltzman, 1992).

One has to note, however, that willingness to decrease local taxes may be conditional on the availability of other financial resources, compensating forgone tax income. In the local context such compensation consists of intergovernmental grants. Since proportional systems enable national political parties to penetrate local political markets to a greater extent than majoritarian elections, councillors elected via proportional elections should be more effective in lobbying for higher intergovernmental grants. Due to a possible alignment effect, national political parties might provide patronage to their counterparts operating at the local level through, for instance, increased intergovernmental transfers (Bracco et al., 2015). This leads us to the first hypothesis, which can be stated as follows:

Hypothesis 1. Municipalities with majoritarian (proportional) elections have a higher (lower) income from property taxes and a lower (higher) inflow of intergovernmental grants than municipalities with proportional (majoritarian) elections.

A system in which the executive and the legislature are independent from one another (separation of powers) may lead to conflicts and deadlocks in cases of divided government, negatively influencing the stability of the political system. Cheibub (2006) shows, however, that a government's numerical composition (coalition or single-party) and its legislative strength (minority or majority) have no impact on fiscal outcomes (specifically budget balances), whether the system is presidential or parliamentary. He showed instead that the form of government may be important with respect to fiscal outcomes for reasons that are unrelated to the way the executive-legislature relationship is structured under each type of democratic system.

According to Cheibub (2006), what matters is the type of system itself and the way it structures the relationship between the voters and the government. Presidential institutions generate incentives for governments to be responsive to voters. Directly elected presidents can be easily identified with the policy outcomes (performance) of the government in a way that heads of government in parliamentary regimes are not. Due to this high degree of "identifiability" in presidential systems, the executive is held more accountable for the government's policies than in parliamentary system where the executive is fused with the legislature (Shugart and Carey, 1992). This reasoning is similar to the "clarity of responsibility" argument. Voters can punish the government when institutions are structured in such a way that voters are able to clearly assign responsibility for government policies. In summary, this argument implies that under a presidential system where "identifiability" of responsibility is high, the executive will be more responsive to the voters' demands. This is in line with the common perception in Poland, where at the local level the mayors take responsibility for major decisions, even though the council ultimately approves local legislation and hence, acts as a rubber stamp for policies proposed by mayors.

Furthermore, a directly elected executive has a municipality-wide constituency (the entire municipality as an electoral district). That provides incentives to consider the needs of the entire municipality, instead of only particular districts (Hallerberg and Marier, 2004). Given that for the local population it may be attractive to bear a lower local tax burden, the implementation of the direct election of mayors may lead to lower property taxes. It may be further argued, however, that without sufficient property tax income, the mayor is not able to realize important investment projects which may be crucial for enhancing the economic growth of the municipality in general. Hence, it may be the case that presidential systems will result in lower property tax income only if the lost income can be compensated for by an increase in external income. As shown in the institutional design section, mayors elected in larger municipalities (above the 20,000 threshold) may be more effective in lobbying for intergovernmental grants, as it is more likely that they represent national political parties present at the central level.

Based on the fact that directly elected mayors are more easily identified with local policies than mayors under the parliamentary form of government, and that they have a municipality-wide constituency (councillors are never elected from municipality-wide districts⁹), they should therefore be more responsive to broad preferences, such as reducing the local tax burden. As mayors under proportional systems are arguably in a better position to compensate for lost property tax income with intergovernmental grants, they should be more responsive to pressure to reduce the local tax burden. This leads us to the following testable hypothesis:

Hypothesis 2. The implementation of a presidential system exacerbates the differences in property tax income (higher in majoritarian systems) and intergovernmental grants (higher in proportional systems) between majoritarian and proportional systems.

In terms of empirical analysis, we expect that the 2002 reform, which introduced the direct election of mayors, will result in a greater discontinuity in property tax income and intergovernmental grants at the 20,000 population threshold (threshold delineating majoritarian and proportional elections established in 1998). In consequence, we also expect that the difference in vertical fiscal imbalance (VFI) at the 20,000 cut-off will be higher after the 2002 reform. The empirical design employed in this paper allows for comparison of the discontinuity in fiscal outcomes at the 20,000 threshold before the reform (Hypothesis 1), with the discontinuity in fiscal outcomes after the reform (Hypothesis 2), and hence it is a difference-in-discontinuities design.

4. Data and Empirical Approach

Our sample contains 32,217 observations on Polish municipalities between 1998 and 2010. In 2002, 2,129 of the municipalities were inhabited by fewer than 20,000 persons, and therefore majoritarian voting was implemented in these municipalities. In 336 municipalities, the proportional voting rule was in place¹⁰. The exact distribution of municipalities

 $^{^9\}mathrm{Even}$ under proportional systems the largest permitted district encompasses roughly one third of the municipality

¹⁰In other years, the numbers might be slightly different, as some municipalities' changing populations may cause them to cross the threshold. In year 2002, one municipality crossed the threshold from majori-

around the threshold is presented in Figure 2. Data were collected from several sources. Demographic and fiscal variables were obtained from the Local Data Bank of the Central Statistical Office of Poland. Electoral data were collected from the official electoral records of the Polish National Election Commission (PKW). Since elections take place in autumn, it is likely that any fiscal effects would be observed only after one year, i.e., our variables relating to the direct election of the mayor and the effects of population thresholds both lead by one year, and hence, the effects of direct election of mayors can be observed only in 2003. Definitions of the variables are presented in Table 2. Descriptive statistics relating to the variables are presented in Table 3.

Table 2: Definitions of the variables

Population in units of 1,000	Population expressed in units of 1,000 normalized so that 20,000=0 (PKW)
Majoritarian Election	Equals 1 if normalized population < 0 (PKW)
Direct Mayor	Equals 1 in years 2003 to 2010 (PKW)
VFI	1 - the ratio of own income to overall income i.e. transfer dependency (GUS)
Grants	Real (Inflation $1996 = 100$) grants per capita (logarithm) (GUS)
Property taxes	Real (Inflation $1996 = 100$) income from property taxation per capita (loga-
	rithm) (GUS)

Table 3: Descriptive statistics: municipalities between 18,000 and 22,000 inhabitants

Variable	Mean	SD	Ν	Min	Max
Direct election=0					
VFI	.593	.135	527	.231	.944
(log) property tax p.c.	4.87	.628	574	1.95	6.56
(log) grants p.c.	5.58	.214	535	4.94	6.26
Direct election=1					
VFI	.522	.137	1120	.17	.862
(log) property tax p.c.	5.74	.525	1126	4.05	7.45
(log) grants p.c.	5.81	.285	1126	5.04	6.83
Total					
VFI	.545	.14	1647	.17	.944
(log) property tax p.c.	5.45	.696	1700	1.95	7.45
(log) grants p.c.	5.74	.287	1661	4.94	6.83

Since the assignment of electoral rules is a function of population with a clear cut-off point at the level of 20,000 inhabitants, a standard way to explore this quasi-experimental

tarian to proportional; in 2006, five municipalities crossed from proportional to majoritarian. We address these changes in the robustness section.



Figure 2: Number of municipalities by population classes

setup is by using a regression-discontinuity (RD) design. Since we wish to analyze how the reform of 2002 could potentially differently affect the municipalities below and above the population threshold, a natural method is to exploit the difference-in-discontinuities design, as proposed by, e.g., Grembi et al. (2016). This can be implemented with local linear regression (LLR), nonparametric kernel estimation or a polynomial approach (see Imbens and Lemieux, 2008; Lee and Lemieux, 2010; Calonico et al., 2014, for further details). The basic LLR model is restricted to observations around the population cut-off $p_{it} \in [p_c - h, p_c + h]$, where p_c is the cut-off value, and takes the form

$$y_{it} = \alpha_0 + \alpha_1 \times p_{it} + M_i \times (\gamma_0 + \gamma_1 \times p_{it}) + D_i [\delta_0 + \delta_1 \times p_{it} + M_i (\underbrace{\beta_0}_{\text{Diff-in-Disc estimator}} + \beta_1 \times p_{it})] + \varepsilon_{it}.$$
(1)

where M_i is a dummy variable for municipalities with majoritarian elections, D_i is the treatment variable - dummy for periods from 2003 onwards, and β_0 is the difference-indiscontinuities estimator. The term y_{it} denotes the outcome variables, e.g., property tax

Number of municipalities by classes of 500 in year 2010; in red municipalities between 18,000 and 22,000, which roughtly corresponds to the CCT bandwidths.

income per capita (real values), intergovernmental grants per capita (real values) and VFI. Standard errors are clustered at the municipality level. The choice of main bandwidth follows the procedure described by Calonico et al. (2014), but different bandwidths are tested for sensitivity. This basic specification can be further augmented by additional covariates that explain the outcome variables, provided these are continuous at the cutoff population size - a common practice in applied RD studies. However, a recent study by Calonico et al. (2016) suggests that adding additional covariates does not resolve the issue of identification (if the continuity assumption fails), and does not affect the point estimates but only slightly adds to the efficiency of estimations. On the other hand, including interaction terms of other covariates with the treatment variable leaves the RD estimator inconsistent - which in practical terms means that if additional covariates are a channel of transmission through which the treatment works, one risks inconsistencies (see Calonico et al., 2016). Given little gain and a potentially high risk, we abstain from using covariates, and include only time and province fixed effects.

Alternatively, one can apply polynomial smoothing at both sides of the cut-off before and after the reform and compare the size of the discontinuity at the cut-off value, as well as using cubic spline regression to allow for a more flexible relationship between the outcome variable and the population (see, Grembi et al., 2016, for more details).

For the RD design, some assumptions must be met in order to identify the local treatment effect. Firstly, the treatment assignment must be a monotonic deterministic function of the assignment variable. This holds true in our study, as exogenously determined electoral law fully determines the assignment to treatment.

Secondly, identification is possible only if municipalities are not able to manipulate the assignment variable. We need to establish whether manipulation of the running variable is not an issue in our study. The density of the assignment variable for the whole period is presented in Figure A.9 in the Appendix. The confidence intervals are evaluated using McCrary (2008) standard errors. Visual inspection of Figure A.9 and evaluation of the test statistic suggest that manipulation of the forcing variable is not a problem in our design. The estimated log-difference (θ) in the height of the probability distribution is -0.04 and the p-value of the test is 0.957, therefore we do not reject the null hypothesis that the variable is not sorted. Moreover, for the difference-in-discontinuities design, we need to ensure that the densities are constant over time, or in other words, test for sorting before and the reform, as well as for sorting *differences* in the densities. The p-values of the test for the years 1998, 2010 and the difference, are equal to 0.444, 0.217, and 0.732 respectively.

Regarding standard assumptions of any difference-in-differences model, we need to test the parallel trends assumption, that is, whether the variables of interest have evolved parallely in the two groups of municipalities before the reform of 2002. One can visually inspect the trends in the dependent variables in Figure A.10 in the Appendix.

Finally, in the absence of treatment, the outcome variable must evolve continuously with the assignment variable in the neighborhood of the threshold. In other words, confounded treatment should be excluded. If other factors create discontinuities in this relationship, a clear identification of the local treatment effect is not possible. One potential distortion in our setup could arise from the discontinuity in the council size at some population thresholds. We address this issue in the robustness section.

5. Results

5.1. Property Tax Income and Intergovernmental Grants

We begin describing the results by visually illustrating the discontinuity in property tax income per capita and intergovernmental grants per capita before and after the 2002 reform. As can clearly be seen in Figure 3, for both fiscal outcomes a small discontinuity at the 20,000 population threshold can be identified before the 2002 reform. In the municipalities with majoritarian elections, the property tax income per capita was larger and grants per capita were smaller than in the municipalities with proportional electoral regimes. For both fiscal outcomes the discontinuity appears to be larger in the period after the 2002 reform introducing direct election of mayors. This could be considered a prima facie confirmation of both the hypotheses derived in Section 3. However, in the following discussion we present the formal results from the difference-in-discontinuities regressions.

Figure 3: Discontinuities in property taxes (left panel) and intergovernmental grants (right panel) before (blue) and after (red) the reform



An overview of the results regarding the existence of discontinuities before 2002 and the differences in the discontinuities can be found in Table 4. The full results of the estimations are presented in Tables A.8, A.9 and A.10 in the Appendix. These include coefficients of all variables and the sensitivity of the results to the choice of bandwidth.

The results in columns (1) and (2) of Table 4 (and Table A.8 in the Appendix), despite having visual appeal, do not confirm the existence of any systematic differences in property tax income per capita at the 20,000 threshold before the 2002 reform, as the coefficient of "Majoritarian Election=1" is not statistically significantly different from zero. Nevertheless, one should note that the estimate of the difference-in-discontinuities coefficient is statistically significant and positive. The difference in property tax income per capita at the 20,000 population threshold increased over time by approximately 20-40%. This is an effect of the electoral systems, which are contingent on the type or forms of government.

	Proper	ty tax	Grants			VFI
	(1)	(2)	(3)	(4)	(5)	(6)
Majoritarian	-0.06	-0.04	-0.08	0.03	0.02	-0.02
	(-0.47)	(-0.35)	(-1.44)	(0.68)	(0.76)	(-0.59)
Diff-in-disc	0.43^{***}	0.26^{**}	-0.15^{*}	-0.14**	-0.15^{***}	-0.06*
	(2.95)	(2.10)	(-1.71)	(-2.20)	(-4.02)	(-1.72)
Observations	1102	1102	1003	1003	1154	1154
Time & fixed effects	NO	YES	NO	YES	NO	YES

Table 4: Overview of the main results, bandwidth=CCT

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 * Full results for Columns (1) and (2) in Table A.8, for Columns (3) and (4) in Table A.9 and for Columns (5) and (6) in Table A.10.

Thus, after 2002 in municipalities with majoritarian elections, the property tax income per capita increased much more than in the municipalities with proportional elections.

Opposite results are found in columns (3) and (4) of Table 4 (and Table A.9 in the Appendix). It was found that intergovernmental grants increased in municipalities with majoritarian elections after the 2002 reform, but not as much as in the municipalities with proportional regimes. The size of the effect in this case is about 15 percent. This is there-fore further confirmation of Hypothesis 2. Proportional elections, by creating favorable conditions for national political parties to enter local markets, lead to an increased inflow of intergovernmental grants.

5.2. Vertical Fiscal Imbalance

As illustrated in Figure 4, a clear difference-in-discontinuities effect can also be observed for vertical fiscal imbalance. Under the presidential system (after the 2002 reform) the discontinuity in vertical fiscal imbalance at the 20,000 population threshold is much more pronounced than under the parliamentary form of government (before the 2002 reform).

This visual inspection of differences in various discontinuities is further substantiated by the evidence provided in Table A.10. It is clear that the discontinuity in the vertical fiscal imbalance at the 20,000 population threshold could not be observed before the reform of the governance system. Neither is the direct election of mayors responsible for changes in the fiscal imbalances. The interaction between the two effects is, however, highly significant across all specifications. Smaller communes with majoritarian elections and directly elected mayors have lower fiscal imbalances than those with the proportional electoral system. The size of the effect is about six percentage points, and is independent of the bandwidth for the specifications including fixed and time effects. Given that the average vertical fiscal imbalance is around 57%, an average reduction of six percentage points equals to a change of about 10% and, thus, constitutes a highly significant economic effect.





5.3. Channels of transmission

Our hypothesized channel of transmission is the ability of mayors to succesfully lobby for higher grants with the upper level governments. As we have initially shown, above the threshold of 20,000, the share of partisan mayors increases. Moreover, we can show that the political alignment of the mayors also sharply increases at the analyzed threshold. We define as alignment if the mayor is a member of any of the coalitional partners at the central level; this definition takes into account the fact, that junior partner of many coalitional governments, the Polish People's Party (agrarian Christian-democracts) is traditionally well represented at the local level. Discontinuity in alignment for the years 2002 until 2010 is presented in Table 5.

	(1) Aligned	(2) Aligned	(3) Aligned	(4) Aligned
RD Estimate	0.197*** [0.038]	0.234*** [0.037]	0.204*** [0.050]	0.209*** [0.054]
Robust 95% CI	[.122 , .294]	[.168 , .328]	[.095 , .312]	[.094 , .324]
Kernel Type	Triangular	Triangular	Triangular	Triangular
BW Type	CCT	CCT	CCT	CCT
Eff. Observations L	344	891	815	1107
Eff. Observations R	304	664	624	752
Conventional p-value	0.000	0.000	0.000	0.000
Robust p-value	0.000	0.000	0.000	0.000
Order Loc. Poly. (p)	1	2	3	4
Order Bias (q)	2	3	4	5
BW Loc. Poly. (h)	1.755	3.752	3.534	4.423
BW Bias (b)	2.858	5.448	4.146	5.127

Table 5: Political alignment of the mayor and the central government (linear probability model)

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in brackets.

At the threshold, the probability of a mayor belonging to the party, which is a coalition partner at the central level increases by about 20 percentage points. It seems, as hypothesized, that political alignment between the local executive and the central government is a main driver of the observed regularities.

Another possibility is that it is the competence or ability of the mayor, which affects their succes in applying for grants. Whereas we cannot measure competence directly, we have information about education of the mayors. As visualized in Table 6 for year 2006 (for which data is available), there are no differences in the fraction of mayors with higher education above and below the population thresholds. It seems that education of the mayor is not related to the change in the electoral system.

Other potential channels of transmission can be excluded. One possibility is that municipalities below the threshold have different economic characteristics, in particular, are "poorer", and the central government sees the necessity to provide them with additional funding. This can be easily checked as economic development can be measured by income from personal and corporate income taxation. If we observe no discontinuity in these variables, we can safely assume that the municipalities have similar characteristics. Table A.17 in the Appendix shows the difference in discontinuities in the income from personal and

	(1)	(2)	(3)	(4)
	Education	Education	Education	Education
RD Estimate	0.004	0.019	0.049	0.067
	[0.104]	[0.148]	[0.192]	[0.234]
Robust 95% CI Kernel Type BW Type Eff. Observations L Eff. Observations R	[256 , .253] Triangular CCT 134 89 0.067	[312 , .376] Triangular CCT 174 103 0 200	[363 , .501] Triangular CCT 197 112 0.707	[462 , .588] Triangular CCT 225 118 0.775
Conventional p-value Robust p-value Order Loc. Poly. (p) Order Bias (q) BW Loc. Poly. (h) BW Bias (b)	$ \begin{array}{c} 0.967\\ 0.988\\ 1\\ 2\\ 4.184\\ 6.215 \end{array} $	$ \begin{array}{c} 0.899\\ 0.854\\ 2\\ 3\\ 5.057\\ 6.421 \end{array} $	$ \begin{array}{c} 0.797 \\ 0.754 \\ 3 \\ 4 \\ 5.835 \\ 6.822 \end{array} $	$ \begin{array}{r} 0.775\\ 0.814\\ 4\\ 5\\ 6.332\\ 6.816\\ \end{array} $

Table 6: Higher education of the mayor (linear probability model)

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in brackets.

corporate taxation. It shows, that the results are not driven by the differences in these incomes.

Finally, one could imagine that extensive migration from Poland after joining the European Union in 2004 (in particular to the United Kingdom) might have affected economic development of municipalities. Whereas, we do not see an obvious reason why migration would differentially affect municipalities above the below the threshold, we can check this directly. Table A.18 in the Appendix shows regressions with yearly net migration (expressed as $\Delta pop/pop_{t-1}$). It additionally allows us to exclude the possibility, that the changes in property taxation were happening at the extensive margin, i.e. through an increase/decrease of tax base via migratory movements. According to Table A.18 in the Appendix, this is not the case.

6. Robustness Checks

It could be a matter of concern that in the case of a long time period, the regression analysis picks up a larger number of confounding factors, leading to biased results (omitted variable bias problem). Although we control for time effects in our main regression, we wish to ensure that unobservable time-dependent factors do not drive the results. For

	Proper	ty tax	Gra	ants		VFI
	(1)	(2)	(3)	(4)	(5)	(6)
Majoritarian	-0.06	-0.04	-0.08**	0.01	0.03	-0.03
	(-0.76)	(-0.48)	(-2.07)	(0.22)	(1.19)	(-1.57)
Diff-in-disc	0.39***	0.21^{**}	-0.15***	-0.14***	-0.13***	-0.04
	(3.28)	(2.10)	(-2.68)	(-2.99)	(-4.53)	(-1.56)
Observations	891	891	968	968	1092	1092
Time & fixed effects	NO	YES	NO	YES	NO	YES

Table 7: Robustness with regard to time span, bandwidth=CCT

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 * Full results for columns (1) and (2) in Table A.11, for columns (3) and (4) in Table A.12 and for columns (5) and (6) in Table A.13.

instance, starting in 2008, an economic crisis hit Europe and might have caused changes in the revenues from taxation. Although Poland had not experienced a recession, we need to make sure that this one-of-a-kind economic shock did not have differential effect on the analyzed municipalities.

As a first robustness check, we therefore demonstrate that our results are stable if we consider a different (narrower) time span. Since we have access to data for only one electoral term before the 2002 reform, for balance, we also consider only one electoral term after the reform. Thus, we run a similar difference-in-discontinuities model to that in the main specification, but only for the time period 1998-2006. Table 7 and Table A.11 (for property tax income), Table A.12 (for intergovernmental grants) and Table A.13 (for vertical fiscal imblance) in the Appendix present the results. As can be seen, all results appear to be largely confirmed. We still observe a significant joint effect of the majoritarian system combined with direct election of the mayor on the incomes from property taxes, grants and the vertical fiscal imbalance, except for the specification in column (6), for which the coefficient is no longer significant.

Another robustness check includes excluding municipalities, which have crossed the threshold in the analyzed period: it involves a total of six changes, and thus 97 observations. Results are presented in Tables A.14, A.15 and A.16 in the Appendix, and remain in line with the main specifications.

The falsification tests presented in Figures 5, 7 and 6 show that no discontinuity and no difference-in-discontinuity is observed for the variables of interest at the counterfactual threshols of between 18,000 and 22,000, further confirming that the results are credible.

Figure 5: Sensitivity around the cut-off: property taxes

(a) Discontinuity

(b) Difference in discontinuities



Vertical axis: Coefficients; Horizontal axis: Placebo cut-offs between -2 (18,000 inhabitants) and 2 (22,000 inhabitants). Estimates from the fixed and year effect regressions with CCT bandwidths. Dashed lines correspond to the 95% confidence intervals of the estimates.

Figure 6: Sensitivity around the cut-off: grants



Vertical axis: Coefficients; Horizontal axis: Placebo cut-offs between -2 (18,000 inhabitants) and 2 (22,000 inhabitants). Estimates from the fixed and year effect regressions with CCT bandwidths. Dashed lines correspond to the 95% confidence intervals of the estimates.

Furthermore, to exclude the possibility that differences in property tax income, intergovernmental grants and vertical fiscal imbalance are driven by the council size, we report



Figure 7: Sensitivity around the cut-off: VFI

Vertical axis: Coefficients; Horizontal axis: Placebo cut-offs between -2 (18,000 inhabitants) and 2 (22,000 inhabitants). Estimates from the fixed and year effect regressions with CCT bandwidths. Dashed lines correspond to the 95% confidence intervals of the estimates.

the effect for population thresholds of 4,000 (demarcating council sizes of 15 and 18 members), 7,000 (demarcating council sizes of 18 and 20 members), 10,000 (demarcating council sizes of 20 and 22 members) and 15,000 (demarcating council sizes of 22 and 24 members) in Tables A.19, A.20 and A.21 respectively, in the Appendix.

A further robustness check involves estimating the effects of the reforms using a polynomial spline approximation. In Table A.22 in the Appendix, we report the estimates using a third-order polynomial. The results remain confirmed.

Lastly, Figure 8 shows the sensitivities of the estimated difference-in-discontinuities coefficients to the choice of bandwidth, and further confirms stability of the results. Above a bandwidth of 1,000 inhabitants, i.e., where a reasonably large sample of observations is available, all coefficients stabilize at the levels reported in the main specifications.

7. Conclusions

In this paper, we apply the difference-in-discontinuities design to verify how constitutional rules, namely electoral systems and forms of government, shape earned (taxes) and unearned (transfers) budget revenues at the subnational government level. We take advantage of a natural experiment, which involves two institutional reforms implemented in Polish municipalities. The first reform introduced two electoral rules in 1998, which changed according to an exogenous population threshold: smaller municipalities used majoritarian elections and larger municipalities used proportional elections. The second reform changed the governance system in Polish municipalities from "parliamentary" to "presidential", i.e., an indirectly appointed executive was replaced by a directly elected mayor. Our results indicate that a change from the parliamentary to the presidential form of government led to higher property tax income, predominantly in the jurisdictions with majoritarian elections but also to a lesser extent in municipalities governed by proportional elections. While intergovernmental grants also increased in both small and large municipalities, the increase was less marked in municipalities with majoritarian elections compared to jurisdictions with proportional representation. This differential reaction of electoral systems to the direct election of mayors has further implications for vertical fiscal imbalance. The presidential form of government tends to exacerbate the difference in vertical fiscal imbalance between majoritarian and proportional systems. This confirms the existence of an interaction effect between forms of government and electoral rules at the local level in Poland.

Regarding policy implications, our results suggest that the budgetary self-reliance of local governments under the direct election of mayors is best achieved with majoritarian electoral systems for local legislative bodies. Majoritarian elections present a barrier to the penetration of local political markets by national parties, preventing political alignment between local and central governments. Political alignment is crucial inasmuch as it causes greater transfers from central to local governments, increasing the transfer dependency of



Figure 8: Sensitivity of the choice of bandwidth: difference-in-discontinuity

Vertical axis: Diff-in-disc coefficients; Horizontal axis: Bandwidth (in units of 1,000 inhabitants). Estimates from the fixed and year effect regressions. Dashed lines correspond to the 95% confidence intervals of the estimates.

municipalities. High reliance on transfers has, in turn, negative implications for, inter alia, public goods provision (Oates, 2001) and general governmental budget balance (Eyraud and Lusinyan, 2013).

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Appendix A.



Figure A.9: Continuity of the assignment variable



Figure A.10: Trends in the dependent variables

(c) Vertical fiscal imbalance

Table A.8: Real own income from property tax per capita (logarithm): local linear regression, band-width=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	h=2000	h=2000	h=2118	h=2118	h = 5000	$h{=}5000$
Population in 1,000s	0.07	0.00	0.03	-0.01	0.06^{***}	0.00
	(0.87)	(0.03)	(0.32)	(-0.16)	(3.26)	(0.20)
Majoritarian Election=1	-0.01	-0.01	-0.06	-0.04	0.03	0.02
	(-0.08)	(-0.11)	(-0.47)	(-0.35)	(0.41)	(0.41)
Majoritarian Election= $1 \times$ Population in 1,000s	-0.21**	-0.05	-0.18*	-0.05	-0.06***	0.03
	(-2.16)	(-0.62)	(-1.85)	(-0.67)	(-2.76)	(1.37)
Direct Mayor=1	0.44^{***}	0.24^{***}	0.39***	0.21^{**}	0.47^{***}	0.29^{***}
	(4.49)	(2.83)	(3.88)	(2.24)	(7.42)	(4.71)
Direct Mayor= $1 \times$ Population in 1,000s	0.04	0.12	0.14	0.18**	-0.02	0.01
	(0.42)	(1.38)	(1.27)	(2.01)	(-0.65)	(0.47)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	0.37^{***}	0.22^{*}	0.43^{***}	0.26**	0.17^{**}	0.05
	(2.74)	(1.86)	(2.95)	(2.10)	(2.18)	(0.78)
Majoritarian Election= $1 \times \text{Direct Mayor}=1 \times \text{Population in 1,000s}$	0.24^{*}	-0.00	0.12	-0.07	0.05^{*}	-0.01
	(1.76)	(-0.02)	(0.93)	(-0.65)	(1.80)	(-0.44)
Constant	4.97^{***}	5.45^{***}	5.00^{***}	5.43^{***}	4.99^{***}	5.56^{***}
	(45.64)	(40.64)	(44.02)	(37.81)	(95.99)	(99.52)
Observations	1033	1033	1102	1102	2980	2980
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *

Table A.9: Grants from the central government per capita (logarithm): local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	$h{=}2000$	$h{=}2000$	h = 1964	h = 1964	$h{=}5000$	$h{=}5000$
Population in 1,000s	-0.03	0.03	-0.02	0.02	-0.04***	-0.01
	(-0.76)	(1.24)	(-0.48)	(0.71)	(-3.74)	(-1.34)
Majoritarian Election=1	-0.09*	0.03	-0.08	0.03	-0.12***	-0.01
	(-1.69)	(0.80)	(-1.44)	(0.68)	(-3.85)	(-0.24)
Majoritarian Election= $1 \times Population in 1,000s$	0.01	-0.04	0.01	-0.02	0.01	-0.01
	(0.36)	(-1.14)	(0.32)	(-0.65)	(0.60)	(-0.75)
Direct Mayor=1	0.18^{***}	0.27^{***}	0.18^{***}	0.26^{***}	0.14^{***}	0.20***
	(3.65)	(6.41)	(3.53)	(6.10)	(4.26)	(6.25)
Direct Mayor= $1 \times$ Population in 1,000s	-0.03	-0.09**	-0.02	-0.07	0.01	-0.01
	(-0.57)	(-2.11)	(-0.41)	(-1.54)	(0.49)	(-1.18)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	-0.15^{*}	-0.17***	-0.15^{*}	-0.14**	-0.01	-0.07*
	(-1.83)	(-2.67)	(-1.71)	(-2.20)	(-0.22)	(-1.90)
Majoritarian Election= $1 \times \text{Direct Mayor} = 1 \times \text{Population in 1,000s}$	-0.08	0.03	-0.09	0.03	-0.01	0.00
	(-1.19)	(0.46)	(-1.15)	(0.48)	(-1.01)	(0.02)
Constant	5.68^{***}	5.58^{***}	5.67^{***}	5.59***	5.69^{***}	5.59^{***}
	(114.13)	(117.00)	(111.32)	(110.08)	(208.06)	(190.90)
Observations	1033	1033	1003	1003	2980	2980
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Table A.10: Main results, vertical fiscal imbalance: local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	h=2000	h=2000	h=2217	h=2217	h = 5000	h = 5000
Population in 1,000s	-0.02	-0.00	-0.02	-0.01	-0.01***	-0.00
	(-1.13)	(-0.28)	(-0.84)	(-0.65)	(-2.66)	(-0.36)
Majoritarian Election=1	0.02	-0.02	0.02	-0.02	0.03^{*}	0.01
	(0.52)	(-0.65)	(0.76)	(-0.59)	(1.82)	(0.61)
Majoritarian Election= $1 \times$ Population in 1,000s	0.06^{**}	-0.00	0.05^{**}	0.02	0.02^{***}	-0.00
	(2.48)	(-0.06)	(2.34)	(0.69)	(3.16)	(-0.71)
Direct Mayor=1	0.02	0.02	0.03	0.02	-0.00	-0.01
	(0.82)	(0.78)	(1.12)	(1.01)	(-0.25)	(-0.47)
Direct Mayor= $1 \times$ Population in 1,000s	-0.03	-0.04^{*}	-0.04**	-0.05**	0.00	-0.00
	(-1.20)	(-1.92)	(-2.01)	(-2.49)	(0.22)	(-0.82)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	-0.16^{***}	-0.06*	-0.15^{***}	-0.06*	-0.10^{***}	-0.04**
	(-4.03)	(-1.85)	(-4.02)	(-1.72)	(-4.82)	(-2.08)
Majoritarian Election= $1 \times \text{Direct Mayor}=1 \times \text{Population in 1,000s}$	-0.06	0.02	-0.03	0.04	-0.02^{***}	-0.00
	(-1.58)	(0.69)	(-0.81)	(1.43)	(-3.34)	(-0.37)
Constant	0.57^{***}	0.54^{***}	0.57^{***}	0.54^{***}	0.56^{***}	0.50^{***}
	(22.49)	(15.99)	(21.89)	(15.55)	(41.24)	(34.43)
Observations	1023	1023	1154	1154	2958	2958
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *

Table A.11: Property tax up to 2006: local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	h=2000	h = 2000	h=2069	h = 2069	h = 5000	h = 5000
Population in 1,000s	0.07	0.01	0.03	-0.01	0.06***	0.00
	(1.23)	(0.15)	(0.53)	(-0.16)	(3.28)	(0.27)
Majoritarian Election=1	-0.01	-0.00	-0.06	-0.04	0.03	0.02
	(-0.12)	(-0.06)	(-0.76)	(-0.48)	(0.41)	(0.46)
Majoritarian Election= $1 \times$ Population in 1,000s	-0.21^{***}	-0.06	-0.18^{***}	-0.06	-0.06***	0.02
	(-2.99)	(-0.92)	(-2.69)	(-0.93)	(-2.78)	(1.34)
Direct Mayor=1	0.42^{***}	0.15^{*}	0.36^{***}	0.12	0.42^{***}	0.18^{***}
	(4.81)	(1.67)	(4.02)	(1.29)	(6.37)	(2.82)
Direct Mayor= $1 \times$ Population in 1,000s	0.01	0.09	0.12	0.16^{***}	-0.02	0.01
	(0.15)	(1.41)	(1.57)	(2.59)	(-0.66)	(0.53)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	0.31^{***}	0.17^{*}	0.39^{***}	0.21^{**}	0.15^{*}	0.05
	(2.67)	(1.67)	(3.28)	(2.10)	(1.77)	(0.66)
Majoritarian Election=1 × Direct Mayor=1 × Population in 1,000s	0.24^{**}	-0.00	0.14	-0.07	0.04	-0.02
	(2.40)	(-0.05)	(1.41)	(-0.85)	(1.52)	(-0.63)
Constant	4.97^{***}	5.42^{***}	5.00^{***}	5.40^{***}	4.99^{***}	5.55^{***}
	(72.18)	(62.04)	(70.83)	(62.56)	(96.59)	(97.44)
Observations	848	848	891	891	2433	2433
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Table A.12: Grants up to 2006: local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	h=2000	h = 2000	h=2234	h = 2234	$h{=}5000$	$h{=}5000$
Population in 1,000s	-0.03	0.03	-0.01	0.01	-0.04***	-0.01*
	(-0.98)	(1.22)	(-0.58)	(0.34)	(-3.98)	(-1.76)
Majoritarian Election=1	-0.09**	0.03	-0.08**	0.01	-0.12***	-0.02
	(-2.27)	(0.75)	(-2.07)	(0.22)	(-4.10)	(-0.62)
Majoritarian Election= $1 \times$ Population in 1,000s	0.01	-0.04	-0.00	-0.02	0.01	-0.01
	(0.42)	(-1.20)	(-0.11)	(-0.78)	(0.64)	(-0.59)
Direct Mayor=1	0.14^{***}	0.13***	0.16^{***}	0.13***	0.12^{***}	0.09***
	(3.21)	(3.06)	(3.76)	(3.09)	(3.59)	(2.81)
Direct Mayor= $1 \times$ Population in 1,000s	-0.01	-0.06*	-0.04	-0.07**	0.00	-0.01
	(-0.23)	(-1.91)	(-1.30)	(-2.57)	(0.23)	(-1.09)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	-0.14**	-0.15***	-0.15***	-0.14***	-0.02	-0.06*
	(-2.50)	(-3.14)	(-2.68)	(-2.99)	(-0.45)	(-1.83)
Majoritarian Election= $1 \times \text{Direct Mayor} = 1 \times \text{Population in 1,000s}$	-0.10**	-0.00	-0.04	0.03	-0.01	-0.00
	(-2.09)	(-0.10)	(-1.03)	(0.75)	(-0.83)	(-0.11)
Constant	5.68***	5.59***	5.67^{***}	5.62^{***}	5.69***	5.61***
	(164.90)	(135.94)	(170.83)	(143.74)	(221.59)	(197.46)
Observations	848	848	968	968	2433	2433
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *

Table A.13: Vertical fiscal imbalance up to 2006: local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	h = 2000	$h{=}2000$	h=2518	$h{=}2518$	$h{=}5000$	h=5000
Population in 1,000s	-0.02	-0.01	-0.01	-0.01	-0.01***	-0.00
	(-1.33)	(-0.42)	(-0.63)	(-0.95)	(-2.71)	(-0.53)
Majoritarian Election=1	0.02	-0.02	0.03	-0.03	0.03^{*}	0.01
	(0.70)	(-1.08)	(1.19)	(-1.57)	(1.85)	(0.46)
Majoritarian Election=1 \times Population in 1,000s	0.06^{***}	-0.00	0.03^{**}	-0.01	0.02^{***}	-0.00
	(2.95)	(-0.03)	(2.17)	(-0.51)	(3.22)	(-0.65)
Direct Mayor=1	0.02	0.01	0.02	0.01	0.00	-0.00
	(0.82)	(0.32)	(1.07)	(0.31)	(0.25)	(-0.09)
Direct Mayor= $1 \times$ Population in 1,000s	-0.02	-0.03*	-0.03	-0.02^{*}	0.00	-0.00
	(-0.80)	(-1.77)	(-1.57)	(-1.77)	(0.20)	(-0.77)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	-0.15^{***}	-0.06**	-0.13^{***}	-0.04	-0.10***	-0.04**
	(-4.73)	(-2.13)	(-4.53)	(-1.56)	(-4.63)	(-2.06)
Majoritarian Election=1 \times Direct Mayor=1 \times Population in 1,000s	-0.07***	0.01	-0.03	0.02	-0.02^{***}	-0.00
	(-2.67)	(0.36)	(-1.26)	(1.38)	(-3.23)	(-0.46)
Constant	0.57^{***}	0.54^{***}	0.56^{***}	0.53^{***}	0.56^{***}	0.50^{***}
	(30.81)	(23.50)	(31.73)	(25.58)	(42.05)	(34.71)
Observations	840	840	1092	1092	2419	2419
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Table A.14: Property tax without municipalities that crossed the threshold:local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	$h{=}2000$	$h{=}2000$	h=2119	h=2119	$h{=}5000$	$h{=}5000$
Population in 1,000	0.09	-0.01	0.04	-0.03	0.07^{***}	0.00
	(1.43)	(-0.17)	(0.74)	(-0.51)	(3.39)	(0.03)
Majoritarian Election=1	-0.00	-0.05	-0.06	-0.09	0.03	0.02
	(-0.04)	(-0.67)	(-0.68)	(-1.09)	(0.51)	(0.28)
Majoritarian Election= $1 \times$ Population in 1,000	-0.24^{***}	-0.06	-0.20***	-0.05	-0.06***	0.03
	(-3.22)	(-0.85)	(-2.88)	(-0.85)	(-2.89)	(1.54)
Direct Mayor=1	0.48^{***}	0.27^{***}	0.42^{***}	0.24^{**}	0.49^{***}	0.31^{***}
	(5.46)	(2.82)	(4.67)	(2.50)	(7.50)	(4.84)
Direct Mayor= $1 \times$ Population in 1,000	0.01	0.12^{*}	0.11	0.18^{***}	-0.02	0.00
	(0.16)	(1.80)	(1.53)	(2.88)	(-0.96)	(0.20)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	0.38^{***}	0.27^{***}	0.44^{***}	0.31^{***}	0.16^{*}	0.05
	(3.29)	(2.62)	(3.73)	(2.99)	(1.93)	(0.66)
Majoritarian Election= $1 \times \text{Direct Mayor}=1 \times \text{Population in 1,000}$	0.31^{***}	0.05	0.17^{*}	-0.02	0.06**	-0.00
	(3.13)	(0.54)	(1.87)	(-0.26)	(2.07)	(-0.14)
Constant	4.95^{***}	5.45^{***}	4.98^{***}	5.44^{***}	4.98^{***}	5.56^{***}
	(68.59)	(62.09)	(67.52)	(62.91)	(93.58)	(97.58)
Observations	967	967	1036	1036	2902	2902
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *

Table A.15: Grants without municipalities that crossed the threshold: local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	$h{=}2000$	$h{=}2000$	h = 1964	h = 1964	h = 5000	$h{=}5000$
Population in 1,000	-0.04	0.03	-0.04	0.02	-0.04***	-0.02*
	(-1.39)	(1.21)	(-1.08)	(0.81)	(-4.10)	(-1.78)
Majoritarian Election=1	-0.14^{***}	0.02	-0.13^{***}	0.02	-0.15^{***}	-0.02
	(-3.02)	(0.56)	(-2.74)	(0.57)	(-4.43)	(-0.79)
Majoritarian Election= $1 \times$ Population in 1,000	0.02	-0.04	0.02	-0.02	0.01	-0.01
	(0.47)	(-1.14)	(0.44)	(-0.68)	(0.62)	(-0.55)
Direct Mayor=1	0.15^{***}	0.26^{***}	0.15^{***}	0.26^{***}	0.13^{***}	0.20^{***}
	(3.40)	(5.78)	(3.24)	(5.65)	(3.85)	(6.06)
Direct Mayor= $1 \times$ Population in 1,000	-0.00	-0.07**	0.00	-0.06*	0.01	-0.01
	(-0.11)	(-2.43)	(0.11)	(-1.85)	(0.73)	(-1.08)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	-0.08	-0.14^{***}	-0.07	-0.12^{**}	0.03	-0.05
	(-1.29)	(-2.93)	(-1.12)	(-2.43)	(0.61)	(-1.49)
Majoritarian Election=1 \times Direct Mayor=1 \times Population in 1,000	-0.08	0.02	-0.08	0.03	-0.01	0.00
	(-1.58)	(0.60)	(-1.52)	(0.69)	(-0.65)	(0.25)
Constant	5.70^{***}	5.59^{***}	5.69^{***}	5.59^{***}	5.70^{***}	5.60^{***}
	(154.12)	(133.08)	(150.29)	(130.35)	(206.31)	(188.58)
Observations	967	967	937	937	2902	2902
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Table A.16: VFI without municipalities that crossed the threshold: local linear regression, band-width=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	h=2000	$h{=}2000$	$h{=}2218$	h=2218	$h{=}5000$	$h{=}5000$
Population in 1,000	-0.03*	-0.01	-0.02	-0.01	-0.01***	-0.00
	(-1.66)	(-0.39)	(-1.48)	(-1.07)	(-2.93)	(-0.54)
Majoritarian Election=1	0.01	-0.01	0.02	-0.01	0.03^{*}	0.01
	(0.42)	(-0.69)	(0.82)	(-0.70)	(1.65)	(0.54)
Majoritarian Election= $1 \times$ Population in 1,000	0.06^{***}	0.00	0.06^{***}	0.02	0.02^{***}	-0.00
	(3.24)	(0.24)	(3.37)	(1.23)	(3.38)	(-0.54)
Direct Mayor=1	0.01	0.02	0.02	0.02	-0.01	-0.01
	(0.46)	(0.63)	(0.82)	(0.89)	(-0.43)	(-0.44)
Direct Mayor= $1 \times$ Population in 1,000	-0.02	-0.04^{**}	-0.03*	-0.04^{***}	0.00	-0.00
	(-0.93)	(-2.33)	(-1.87)	(-2.91)	(0.42)	(-0.73)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	-0.14^{***}	-0.07**	-0.14^{***}	-0.06**	-0.09***	-0.04^{**}
	(-4.59)	(-2.48)	(-4.56)	(-2.15)	(-4.42)	(-2.03)
Majoritarian Election= $1 \times \text{Direct Mayor}=1 \times \text{Population in 1,000}$	-0.07***	0.01	-0.03	0.04^{*}	-0.02***	-0.00
	(-2.62)	(0.60)	(-1.30)	(1.78)	(-3.25)	(-0.38)
Constant	0.58^{***}	0.54^{***}	0.58^{***}	0.54^{***}	0.57^{***}	0.50^{***}
	(29.97)	(23.18)	(30.03)	(24.05)	(40.95)	(33.85)
Observations	959	959	1090	1090	2882	2882
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *

Table A.17: (log) income from personal and corporate taxation per capita: local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	h=2000	h=2000	h=2809	h=2809	h = 5000	h = 5000
Population in 1,000	0.10^{*}	0.06	0.12^{**}	0.07	0.08***	0.05^{***}
	(1.90)	(1.09)	(2.22)	(1.58)	(3.79)	(2.61)
Majoritarian Election=1	0.30^{***}	0.10	0.29^{***}	0.07	0.27^{***}	0.08
	(3.32)	(1.16)	(3.41)	(0.90)	(3.91)	(1.21)
Majoritarian Election=1 \times Population in 1,000	-0.07	-0.08	-0.11^{*}	-0.09*	-0.04	-0.04
	(-1.09)	(-1.24)	(-1.82)	(-1.87)	(-1.45)	(-1.63)
Direct Mayor=1	0.37^{***}	0.67^{***}	0.38^{***}	0.65^{***}	0.40^{***}	0.73^{***}
	(4.17)	(9.86)	(5.48)	(11.32)	(8.54)	(18.92)
Direct Mayor= $1 \times$ Population in 1,000	0.03	0.08	0.01	0.05	-0.00	0.00
	(0.40)	(1.32)	(0.28)	(1.31)	(-0.15)	(0.36)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	0.16	0.15	0.13	0.14^{*}	0.04	0.06
	(1.10)	(1.34)	(1.24)	(1.77)	(0.51)	(1.04)
Majoritarian Election=1 \times Direct Mayor=1 \times Population in 1,000	0.06	-0.03	0.06	-0.01	0.01	0.01
	(0.45)	(-0.28)	(0.83)	(-0.18)	(0.48)	(0.38)
Constant	4.19^{***}	4.09^{***}	4.18^{***}	4.15^{***}	4.24^{***}	4.17^{***}
	(53.23)	(40.45)	(54.50)	(46.26)	(68.45)	(57.48)
Observations	959	959	1471	1471	2882	2882
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Table A.18: (Net migration: local linear regression, bandwidth=2,000 (Columns 1 and 2), according to CCT (Columns 3 and 4) and 5,000 (Columns 5 and 6) with time and province fixed effects

	()	((2)	()	(-)	(=)
	(1)	(2)	(3)	(4)	(5)	(6)
	h=2000	h=2000	h = 1505	h = 1505	h = 5000	$h{=}5000$
Population in 1,000	0.02	0.04	0.42	0.41^{*}	-0.03	-0.06**
	(0.24)	(0.40)	(1.53)	(1.85)	(-1.31)	(-2.28)
Majoritarian Election=1	0.06	-0.04	0.30	0.16	-0.08	-0.22^{**}
	(0.42)	(-0.35)	(1.46)	(0.96)	(-0.91)	(-2.33)
Majoritarian Election= $1 \times$ Population in 1,000	0.09	0.02	-0.28	-0.34^{**}	0.02	0.03
	(0.91)	(0.25)	(-1.33)	(-2.04)	(0.78)	(0.96)
Direct Mayor=1	-0.19	0.06	-0.01	0.18	-0.15^{*}	-0.04
	(-1.57)	(0.53)	(-0.09)	(1.07)	(-1.73)	(-0.49)
Direct Mayor= $1 \times$ Population in 1,000	0.12	0.09	-0.22	-0.27	0.05^{*}	0.04^{*}
	(0.99)	(0.95)	(-0.76)	(-1.07)	(1.75)	(1.66)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	0.30	0.32^{*}	0.14	0.18	0.18	0.17
	(1.59)	(1.73)	(0.52)	(0.72)	(1.55)	(1.51)
Majoritarian Election= $1 \times \text{Direct Mayor}=1 \times \text{Population in 1,000}$	-0.06	0.06	0.32	0.50^{*}	-0.07	-0.06
	(-0.35)	(0.46)	(0.99)	(1.70)	(-1.64)	(-1.54)
Constant	0.01	-0.04	-0.20	-0.16	0.07	0.14
	(0.07)	(-0.27)	(-1.34)	(-0.64)	(0.81)	(1.04)
Observations	954	954	683	683	2885	2885
Time effects	NO	YES	NO	YES	NO	YES
Fixed effects	NO	YES	NO	YES	NO	YES

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *

Table A.19: Falsification tests - property taxes, cut-off=4,000;7,000;10,000;15,000: LLR, bandwidth=2,000, before the 2002 reform with time and province fixed effects

	(1)	(2)	(3)	(4)
	Property tax pc	Property tax pc	Property tax pc	Property tax pc
Population in 1,000	0.00	-0.03	-0.09*	-0.09*
	(0.06)	(-0.66)	(-1.68)	(-1.86)
cut-off4=1	-1.87			
	(-1.45)			
cut-off4=1 \times Population in 1,000s	-0.11			
	(-1.39)			
cut-off7=1		0.40		
		(0.52)		
cut-off7=1 \times Population in 1,000s		0.04		
		(0.70)		
cut-off10=1			1.35^{*}	
			(1.93)	
cut-off10=1 \times Population in 1,000s			0.15^{**}	
			(2.17)	
cut-off15=1				0.52
				(1.05)
cut-off15=1 \times Population in 1,000s				0.12
				(1.38)
Constant	5.60^{***}	5.32^{***}	4.87***	5.14***
	(9.39)	(9.43)	(10.36)	(22.39)
Observations	5145	5594	2902	1046

	(1)	(2)	(3)	(4)
	Real grants pc	Real grants pc	Real grants pc	Real grants pc
Population in 1,000s	0.00	-0.00	-0.01	-0.01
	(0.17)	(-0.12)	(-0.61)	(-0.40)
cut-off4=1	-0.02			
	(-0.05)			
cut-off4=1 \times Population in 1,000s	-0.00			
	(-0.07)			
cut-off7=1		-0.08		
		(-0.34)		
cut-off7=1 \times Population in 1,000s		-0.01		
		(-0.53)		
cut-off10=1			0.22	
			(0.89)	
cut-off10=1 \times Population in 1,000s			0.02	
			(0.67)	
cut-off15=1				-0.22
				(-1.12)
cut-off15=1 \times Population in 1,000s				-0.05
	F 05***			(-1.26)
Constant	5.95^{***}	$5.(8^{+++})$	$5.0(^{***})$	$5.(3^{+++})$
	(34.74)	(28.98)	(30.31)	(55.00)
Observations	5143	5594	2902	1046

Table A.20: Falsification tests - grants, cut-off=4,000;7,000;10,000;15,000: LLR, bandwidth=2,000, before the 2002 reform with time and province fixed effects

Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *

Table A.21: Falsification tests - VFI, cut-off=4,000;7,000;10,000;15,000: LLR, bandwidth=2,000, before the 2002 reform with time and province fixed effects

	(1)	(2)	(3)	(4)
	VFI	VFI	VFI	VFI
Population in 1,000s	0.01	0.01	0.02	0.03**
	(1.18)	(1.64)	(1.47)	(2.56)
cut-off4=1	-0.02			
	(-0.08)			
cut-off4=1 \times Population in 1,000s	-0.00			
	(-0.12)			
cut-off7=1		-0.19		
		(-1.38)		
cut-off7=1 \times Population in 1,000s		-0.02		
		(-1.61)		
cut-off10=1			-0.14	
			(-0.94)	
cut-off10=1 \times Population in 1,000s			-0.02	
			(-1.30)	
cut-off15=1				-0.21
				(-1.04)
cut-off15=1 \times Population in 1,000s				-0.05
				(-1.56)
Constant	0.71^{***}	0.72^{***}	0.72^{***}	0.68^{***}
	(6.88)	(7.11)	(6.25)	(11.92)
Observations	4801	5337	2805	1028

Table A.22: Estimations using cubic spline

	(1)	(2)	(3)	(4)	(5)	(6)
	Property tax	Property tax	Grants	Grants	VFI	VFI
	(0.94)	(0.63)	(-1.77)	(-1.58)	(-1.48)	(-0.95)
Majoritarian Election=1	0.05	0.08	-0.13^{***}	-0.04	0.01	-0.00
	(0.52)	(1.06)	(-3.10)	(-1.02)	(0.42)	(-0.24)
Direct Mayor=1	0.48^{***}	0.33^{***}	0.13^{***}	0.16^{***}	-0.01	-0.02
	(5.35)	(4.10)	(3.07)	(4.14)	(-0.60)	(-1.16)
Majoritarian Election= $1 \times \text{Direct Mayor}=1$	0.25^{**}	0.13^{*}	-0.04	-0.08*	-0.10***	-0.05**
	(2.34)	(1.73)	(-0.83)	(-1.78)	(-3.96)	(-2.43)
Constant	4.98^{***}	5.66^{***}	5.70^{***}	5.58^{***}	0.57^{***}	0.49^{***}
	(62.44)	(77.69)	(149.35)	(156.56)	(29.84)	(27.51)
Observations	7438	7438	7438	7438	7335	7335

 Conservations
 7436
 7436
 7436
 7436

 Robust standard errors clustered at municipality level; t-statistics in brackets; p 0.01 *** 0.05 ** 0.1 *
 0.05 ** 0.1 *