

Political determinants of municipal accounts: quasi-experimental evidence from Portugal.

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Abstract

Relying on financial and political data for all 278 municipalities in mainland Portugal over the period 1981 to 2012, this study investigates the impact of having an elected majority in the municipal assembly on different items of the local current and capital accounts with a Regression Discontinuity design. Overall, there is evidence of a causal positive impact of having a majority in the assembly on the most relevant items of the current and capital revenue and expenditure accounts. In particular, treated municipalities raise more revenues through current and capital transfers, but also spend more in expenditures with personnel and in investment goods.

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1 Introduction

There are few issues that raise as much interest as the financial performance of national and sub-national governments. As such, studies on the economic, institutional and political determinants of public finance abound. This paper focuses on the latter and follows a micro approach in the sense that sub-national governments are the units under study. Specifically, financial and political data on the 278 Portuguese mainland municipalities constitute the underlying dataset.

A popular branch of the literature on the political determinants of public finance emphasizes the importance of fragmentation at both the executive and legislative levels of political institutions. It finds theoretical support on two well known theories dealing with division of political power. One is found in the seminal work by Alesina and Drazen (1991) on disagreement among agents in the decision making process. Basically, versions of this model try to explain why coalition governments have a disadvantage in building consensus based on the premise that the larger the number of players the harder it is to achieve cooperation.

A second set of models is based on ‘the common pool problem’ as presented in Weingast et al. (1981) and Shepsle and Weingast (1981). The first empirical application of this theoretical idea to political fragmentation by Kontopoulos and Perotti (1999) argues that internalizing the costs of fiscal policy is intrinsic to the fiscal policy decision making process itself. This led to a focus on the number of decision makers involved in the process which has been translated into empirical variables measuring either the number of parties in a coalition, if the interest lies on the legislative side, or the size of the cabinet, i. e. the number of spending ministers, if the focus is rather on the executive.

This paper relates more closely to the empirical work based on the theory developed around the first set of models by focusing on a very basic form of fragmentation of political power; whether or not there is a party holding a majority of seats in the the municipal assembly. Early empirical literature studying the policy implications of majorities vs. minority or coalition governments relies on qualitative or self-constructed variables of ‘government weakness’ (e. g. Roubini and Sachs (1989a,b)). In contrast, the present study employs a quasi-experimental method, the Regression Discontinuity (RD) design, and a particular feature of the Portuguese law which does not allow for post-electoral coalitions at the local level, to study to what extent a majoritarian assembly affects municipal current and capital accounts. RD designs have been used previously in the political fragmentation literature (Pettersson-Lidbom, 2008, 2012). Yet, to my knowledge it is the first time such

methodology is used to explicitly study the impact of majority vs. minority municipal assemblies on local finances.

As a result, an overall impact of majoritarian assemblies on current and capital accounts is causally identified. In line with previously mentioned studies relying on a similar approach, this paper finds that political strength, in the sense hereby studied, does not have an unambiguous positive effect on local finances. If on the one hand, municipalities run by a majority in the assembly are able to raise higher revenues. On the other hand, the same municipalities have also significantly higher expenditures. All in all, majoritarian assemblies are related to a larger government size.

The rest of the paper is structured as follows. The next section deals with the related literature on political fragmentation. Section 3 provides relevant aspects of the institutional framework. Section 4 describes the data and presents a first analysis of the financial and political landscape and section 5 explains the empirical method. Section 6 presents the main results while section 7 provides a robustness check. Finally, section 8 concludes.

2 Literature Review

The unprecedented attention devoted to fiscal policy in the last quarter of the twentieth century was largely due to the ever-increasing role of the government in industrial economies. Particularly the recurrent large deficits incurred by several OECD countries leading to significant rises in public debt. In this context, extensive research, theoretical as well as empirical, emerged trying to uncover the link between political or institutional arrangements and fiscal developments. The early literature however, heavily relied on cross-country variation as the goal was to explain the different countries' diverging experiences.

Cross-country analysis are however, often unreliable as they are prone to suffer from omitted variable bias. It is therefore not surprising that this early approach to the political determinants of public finance provided contradictory and inconclusive results. Depending on the choice of countries, time-frame, fiscal variables and index of government fragmentation, different studies report that weaker forms of government such as multi-party coalitions or minority governments either act poorly in reducing budget deficits in times of adverse economic shocks (Roubini and Sachs, 1989a,b; Edin and Ohlsson, 1991), have no impact at all on public debt and its growth (De Haan and Sturm, 1994, 1997; De Haan et al., 1999; Woo, 2003) and government spending (De Haan and Sturm, 1994, 1997), or conversely

are more fiscally conservative presenting actually lower deficits (Borrelli and Royed, 1995; Sakamoto, 2001).

More recently, studies relying on data at the local level have emerged. These have the advantage of dealing with an homogenous set of units subject to the same institutional rules, reducing the risk of bias due to omitted variables. At the municipal level, the political economy of local finances has been more and more subject to investigation. In particular, Norwegian local councils where the mayor and deputy mayor are from the same party which is in a majority position, appear to have significantly lower levels of administrative spending (Kalseth and Rattso, 1998) and raise lower income from fees (Borge, 1995) as opposed to the cases where mayor and deputy mayor are from different parties but the two combined have a majority, the mayor and the deputy mayor are from the same party but it has a minority position and the mayor and deputy mayor are from different parties that combined still have a minority position. Using the same approach to study the political determinants of budget deficits does not provide robust results (Borge, 2005). Additionally, revenues from user charges appear to be highest in case the mayor and deputy mayor are from different parties and have a minority as opposed to all other cases aforementioned (Borge, 2000).

Yet, the previously described literature relies on self-constructed indexes qualitatively measuring the strength or conversely the weakness of governments. Such approach implies ex-ante assumptions that are carried over to the regression framework. This drawback led to the use of other measures of political fragmentation. Specifically three variables are employed at large in most related studies: the Herfindahl index and cabinet and coalition sizes. In general, the more fragmented is the local government, as measured by these three variables, the more harmful is the impact on local finances (Kalseth and Rattso, 1998; Borge, 2005; Ashworth and Heynelds, 2005; Schaltegger and Feld, 2009; Baqir, 2002).¹

There are however important exceptions that also use these and other tailored measures of government fragmentation. Rattso and Tovmo (2002), relying on data from Danish local governments find no significant impact on total revenues nor expenditures of council fragmentation as measured by the Herfindahl index. Also, in the German Laender, public

¹Several cross-country studies also employed these alternative measures of government fragmentation reaching again inclusive results. For instance, for various samples of OECD countries, the number of parties in government and cabinet size appear to increase government spending as a fraction of GDP (Bawn and Rosenbluth, 2006) as well as the growth of the debt-to-GDP ratio (De Haan et al., 1999; Ricciuti, 2004), and are a significant determinant of central government expenditures (Volkerink and De Haan, 2001; Kontopoulos and Perotti, 1999; Perotti and Kontopoulos, 2002; Harrinvirta and Mattila, 2001). Harrinvirta and Mattila (2001) however do not find evidence of multi-party government having higher budget-deficits than one-party governments.

debt depends on the power of the finance minister rather than the composition of the state government (Jochimsen and Nuscheler, 2011), cabinet size does not have a relevant impact on public expenditure nor is the latter significantly different between coalition and single-party governments (Baskaran, 2013). At the level of the Swiss Cantons, the number of parties in government has no robust effect on public revenues nor expenditures (Schaltegger and Feld, 2009). In the US states, in general divided state governments, in the sense that the governor's party differs from that of the legislature, have been credited with larger deficits (Alt and Lowry, 1994; Poterba, 1994), however Bohn and Inman (1996) find no significant evidence of an adverse impact of divided governments on deficit behaviors.

Similar in nature to the approach in this paper is the work by Pettersson-Lidbom (2008, 2012) regarding Swedish and Finnish municipalities. Contrary to expectations and relying on RD designs, the author provides evidence of small Swedish coalitions spending significantly more than larger ones. Additionally, both in Finland and Sweden, larger cabinets are significantly related to lower public expenditure and employment.

All in all, the literature on the political determinants of public finance, in particular how government fragmentation impacts the levels of public expenditure and debt is largely inconclusive. Even though studies have recently followed a more micro approach delivering to a certain extent more credible results, several papers still rely on inappropriate self-constructed indexes, especially when studying the majority minority dichotomy.

3 Institutional Framework

The Constitution of the Portuguese Republic, in effect since the 25th April 1976, establishes three levels of local authority on mainland Portugal: the parishes, the municipalities and the administrative regions.² The parishes constitute the smallest administrative division and are grouped into municipalities, with each municipality encompassing by law at least one parish. Currently there are 4.050 parishes and 278 municipalities in continental Portugal. Despite having been established by the constitution, the administrative regions were never created. Municipalities are therefore the highest level of sub-national government in the continent.

The laws regulating local authorities are bound to the principle of administrative decentralization with local governments having their own assets, finances and personnel. They seek to ensure the well-being and pursue the interests of their population. Municipalities

²The Azores and Madeira autonomous regions comprise only parishes and municipalities.

in particular have responsibilities within several areas of the public sphere from the supply of public goods (energy, transportation and communication, education, culture, sports, health, housing, sanitation, social welfare and civilian and environmental protection) to territorial organization, promotion of local development and external cooperation.³

Local authorities' administration is the responsibility of their own political organs with the central government having only oversight powers in situations established by law. A municipality's representative organs are the municipal assembly, with decision-making powers, and the municipal council, the collegial executive organ which is accountable to the assembly. The focus of this paper is on municipal assemblies. The competences of the municipal assembly encompass not only the oversight of the municipal council and municipal services' activities, but also in its role as the legislative body to approve the budget plans and revisions, establish fees and their values, determine the remuneration of the municipal services administrative council members, approve the creation or reorganization of municipal services as well as their staff members, among others, under the municipal council's proposals.⁴

Municipal assemblies are elected simultaneously countrywide every four years, with the citizens eligible to vote being the ones registered within the area of each municipality.⁵ Political parties, individually or in coalition, and independent lists of organized registered electors may contest municipal elections.⁶ Municipal assembly members are elected through a proportional representation system of closed lists with seats distributed according to the D'Hondt method. The president of the assembly is elected by secret suffrage among the members of the assembly. In addition to the directly elected members also the chairmen of the municipality's parish councils constitute the municipal assembly. Yet, the number of directly elected members is by law greater than that of the chairmen of the parish councils.⁷

Deliberation processes are finalized through a roll call plurality voting, with the president of the assembly voting last and having the deciding vote in case of a tie. There is no requirement for a majority in the municipal assembly. Additionally, electoral rules do not

³Law No. 159/99 in *Diario da Republica* 215, Series I-A, 14th September 1999.

⁴Law No. 169/99 of 18th of September amended by Law No. 5-A/2002 in *Diario da Republica* 288, Series I-A, 11th January 2002.

⁵Until 1985 local elections took place every three years.

⁶In the following and for simplicity all forms of political platforms contesting municipal elections are referred to as parties.

⁷Even though the chairmen of the municipality's parish councils are less in number than the directly elected members, their presence threatens any majority position acquired by the latter as a result of the voting process. Still, given that all local elections take place at the same date, majorities in the municipal assembly are likely also reflected at the parish level.

allow for post-election official coalition formations. This institutional framework paves the way for informal negotiation among the parts of an assembly. In fact, there is evidence of bargaining activity at the executive council level in Portugal (Camoses and Mendes, 2009). By the same token, informal coalition formation is to be expected in the municipal assembly.

4 Data

The underlying dataset collects financial and electoral information on all 278 Portuguese mainland municipalities from 1981 to 2012. This time-frame covers nine out of eleven existent local elections.⁸

Electoral data, in particular the election dates and the municipal assembly elections results are available at the National Electoral Commission (*Comissão Nacional de Eleições*) and the General Directorate for Internal Affairs (*Direcção Geral da Administração Interna*) websites.⁹ The nine elections under study took place in 1979, 1982, 1985, 1989, 1993, 1997, 2001, 2005 and 2009. Except for the last two elections, which happened in October, all other election occurred in December.

Financial data on the municipalities local accounts are from the General Directorate for Local Authority's (*Direcção Geral das Autarquias Locais*) annual publication entitled Municipal Finances (*Finanças Municipais*) for the period between 1981 and 2002.¹⁰ From the year 2003 onwards data on municipal finances is available at the institution's website.¹¹

All fiscal variables are deflated to the year 2005 by the national consumer price index acquired from the World Economic Outlook Database of the International Monetary Fund. Additionally, this study uses the per capita values of the different fiscal variables, relying on the annual data on resident population per municipality from the Portuguese National Statistics Institute (INE).

4.1 Municipal Accounts

Municipalities present yearly their financial accounts, which consists of both current and capital accounts. While the first are of an operative and year-by-year nature, the latter

⁸Lack of critical data before 1981 and after 2012 leads to the exclusion of the 1976 and 2013 elections.

⁹<http://www.cne.pt> and <http://www.dgai.mai.gov.pt>

¹⁰This report was not compiled for the years 1984 and 1985. Data for these years are from the municipalities' official accounts and are incomplete.

¹¹<http://www.portalautarquico.pt/>

often involve long-term commitments less susceptible to change or repetition. Both consist basically of revenues and expenditure, each disaggregated into five main categories. The questions this study attempts to answer imply looking at spending and income items of current as well as capital accounts. This section provides a description and overview of the accounts' composition and structure.

Current revenues and expenditures are as mentioned of an operative nature, and ensure the short-term needs for the daily municipal affairs. Current revenues consist mainly of current transfers, income from taxes as well as fines and fees and proceeds from the sale of goods and provision of services. Subfigure (a) of Figure 1 shows the composition of current revenues with each item as a percentage of the total aggregate account averaged over the years under study. Current transfers are the main source of income accounting for close to 60% of total current revenues. These come primarily from the central government or other central administration and the EU.

The second most important source of current income are taxes amounting to over 20% of current revenues. Yet, due to the little tax autonomy enjoyed by the municipalities, the impact of a majority upon tax revenues is not taken into consideration in the empirical analysis.¹²

Despite the relatively small magnitude, income raised from fines and fees is subject to further analysis. These are in general revenues coming from the application of pecuniary sanctions in the exercise of public law, or from the attribution of licenses e. g. for owning pets or fire guns, as well as hunt licenses.

Subfigure (b) of Figure 1 in turn, provides the structure of municipal current expenses. These comprise primarily expenditures with personnel, the acquisition of goods and services, current transfers and debt charges. Expenditures with personnel alone account on average for almost half of total current expenditures over the entire time-frame. The acquisition of goods and services in turn, amounts to over 30% of current expenses, however as any major sale or acquisition of goods must be approved by the local council these items are left out of the study. As such, with regard to current spending the focus is on the impact of a majority on expenditures with personnel.

Subfigures (a) and (b) of Figure 2 provide the same graphical analysis for capital revenues and expenditures, respectively. Capital accounts usually imply a change in financial liabilities or fixed assets which are often subject to long-term depreciation. Capital revenues thus primarily include capital transfers, financial liabilities and assets and the sale of

¹²Most municipal taxes are entirely exogenous to local governments as tax parameters and basis are set by higher tiers of government.

investment goods. Capital transfers, which account for approximately 80% of total capital revenues are the sole item under study on the income side. These are financial contributions meant to finance capital expenses again coming from the central government, other central administrations and the EU.

Finally, capital expenditures consist mainly of the acquisition of investment goods, capital transfers and financial assets and liabilities. As before, the focus is upon only one of the items; the acquisition of investment goods accounting for over 80% of total capital expenditures. These are expenses that imply an increase in fixed assets and can result from own production or the purchase from a third party.

4.2 Municipal Politics

Election dates in Portugal are defined exogenously from the perspective of local authorities. The main parties competing in local elections are the same that are represented in the national parliament. Additionally, and increasingly over the years, independent local lists often successfully contest these elections. Contrary to what happens at the national level, at the local level pre-electoral coalitions are formed, even amongst the most popular parties.¹³

Pre-electoral coalitions can be seen as individual parties as they run as a single political entity with a single policy platform and therefore aligned interests. Negotiation of terms and bargaining occurs pre-elections and typical post-election coalition dynamics are thereby limited. As such, in this paper the critical difference is whether there is a contesting entity with a majority of seats in the municipal assembly or not. Being that contesting entity a single party, a pre-electoral coalition or an independent list of organized citizens.

As there is no expressed need for a majority in the assembly for the normal course of operations there are two post-election case scenarios. The first, where there is a majority in the assembly with a party having at least half of the directly elected seats. Or there is no party with a majority of seats. In this case consensus may be difficult to build as every representative belongs to a minority. Given that, as mentioned before, formal post-electoral coalitions are not laid down by law, negotiation and bargaining take place with the formation of unofficial coalitions even if vote by vote where the usual dynamics seen in post-electoral coalition formation processes are at play. The two distinct groups in this study are thus majority assemblies as opposed to minority or informal coalition assemblies.

¹³The center-left PS and center-right PSD, which usually gather more than 40% votes in national elections, often run together with other political allies in municipal elections.

Figure 3 provides some insight on the distribution of majority and minority assemblies across the relevant time-frame. Even though majority assemblies are the most common scenario, subfigure (a) shows that in every election at least around a quarter of all municipalities had a minority assembly. Subfigure (b) in turn, provides information on within municipality assembly variation. It shows that the majority of municipalities, over 200 out of 278, had during the period under study both majority and minority assemblies. Around 40 municipalities always had a majority in the assembly and less than ten always had minorities.

Finally, Figure 4 shows how the distribution of majority and minority assemblies for all elections across the 18 Portuguese districts.¹⁴ The purpose of this graph is simply to show that minority or by the same rational majority assemblies are not correlated geographically but rather randomly distributed across the country.

5 Econometric Strategy

Since Hahn et al. (2001) formally recognized the RD design as superior to other non-experimental approaches, its presence at large in the economics literature considerably increased. This ascribed superiority is due to several features that bring this method close to a random experiment. Basically, the identification strategy behind this quasi-experimental design relies on the assumption that the probability of receiving treatment changes discontinuously as a function of one or more underlying variables. If the individuals are unable to precisely control this underlying assignment variable, treatment variation is by consequence ‘as good as random’ (Lee, 2008).

As is standard in the literature, this section presents the RD design in the context of the Rubin Causal Model set up with potential outcomes (Hahn et al., 2001; Lee and Lemieux, 2010). In general, the objective is to identify the causal effect of a binary treatment variable on an outcome variable across individuals. For each individual there is a pair of potential outcomes depending on whether or not they receive treatment. Formally, let Y_i be any of the fiscal outcome variables aforementioned, where i indexes municipal assemblies. Then, $Y_i(0)$ and $Y_i(1)$ are the pair of potential outcomes, with $Y_i(0)$ being the outcome without exposure to treatment and $Y_i(1)$ the one with exposure. Since it is not possible to observe the pair $Y_i(0)$ and $Y_i(1)$ together, the common practice is to look at averages of $Y_i(1) - Y_i(0)$

¹⁴Even though administrative regions were never created, municipalities are grouped into 18 districts created in 1835.

over sub-populations, i. e. average effects of the treatment. In this context, treatment refers to whether there is a majority in the municipal assembly. As such, let $M_i \in 0, 1$ determine assignment to treatment, with $M_i = 0$ if i has no majority in the assembly, and $M_i = 1$ otherwise. Then, the observed outcome can be written as:

$$Y_i = (1 - M_i) \cdot Y_i(0) + M_i \cdot Y_i(1) = \begin{cases} Y_i(0) & \text{if } M_i = 0 \\ Y_i(1) & \text{if } M_i = 1 \end{cases}$$

Assignment to treatment in turn, depends on an underlying variable, known in the literature as ‘running’ or ‘forcing’ variable, being on either side of a fixed cutoff. In the present framework, the existence of a majority in the municipal assembly depends on whether or not a party has at least 50% of the seats. If S_i measures the maximum seat share held by a party in any given assembly, the point $S_i = c = 50\%$ determines the discontinuity in the assignment variable. This renders a treatment assignment mechanism typical of a sharp RD design, where M_i deterministically depends on S_i . Formally, $M_i = 1 \{S_i \geq c\}$, with all units scoring at least c receiving treatment, and all units scoring less than c being assigned to the control group. Thus, one only observes $E[Y_i(0)|S]$ to the right of the cutoff and $E[Y_i(1)|S]$ to the left, and estimates:

$$\lim_{s \downarrow c} E[Y_i|S_i = s] - \lim_{s \uparrow c} E[Y_i|S_i = s] \tag{1}$$

which equals

$$E[Y_i(1) - Y_i(0)|S_i = c] \tag{2}$$

interpreted as the average causal effect of the treatment at the cutoff.¹⁵ This inference is only possible due to the assumed continuity of the underlying functions $E[Y_i(0)|S]$ and $E[Y_i(1)|S]$ (Hahn et al., 2001). This allows the use of the average outcome of the minority assemblies as a valid counterfactual to the average outcome of the ones having a majority.

Even though RD designs are estimated in the literature relying as often on parametric as on nonparametric regressions, best practice is to see these methods as complements rather than substitutes. As such, baseline results are derived using a parametric series estimation approach relying on different bandwidths around the cutoff and different polynomial functions of the running variable (up to a quartic degree). While robustness tests

¹⁵Assuming the mentioned limits exist (Hahn et al., 2001).

rely on nonparametric local linear regression as suggested in Hahn et al. (2001). Both methodologies are estimated relying on the following general RD model:

$$y_{i,t} = \tau M_{i,t} + f(S_{i,t}^n) + M_{i,t}f(S_{i,t}^n) + \alpha_i + \lambda_t + \epsilon_i \text{ if } |S_{i,t}^n| < h, \quad (3)$$

where τ is the average treatment effect estimate, $y_{i,t}$ is any of the fiscal outcomes variables, $M_{i,t}$ is the assignment to treatment binary variable and $S_{i,t}^n$ is the normalized maximum seat share held by a party in council. Normalizing the running variable so that the cutoff equals zero is a standard procedure in the literature. It involves a simple calculation, $S_{i,t}^n = S_{i,t} - c$, so that the assignment variable $M_{i,t}$ changes discontinuously from zero to one when $c = 0$. Additionally, $f(S_{i,t}^n)$ is a flexible polynomial of the normalized seat share that is linear in the context of a nonparametric regression analysis but goes up to higher degrees in case of parametric series estimation. The interaction term allows the regression function to have different slopes to the right and left of the cutoff. Finally, α_i and λ_t control for individual and time fixed effects, respectively.¹⁶

As aforementioned, the parametric approach is performed relying on series estimation using different bandwidths around the cutoff. In particular, bandwidths of 5.0, 7.5, 10.0, 12.5, 15.0 and 50, to study from relatively small brackets to the full sample. The choice of bandwidth involves a tradeoff between precision and bias, as a larger bandwidth is more precise given the increase in the observations but less likely to fit a linear specification. As such, baseline estimates rely on polynomials up to a quartic specification. Estimates from the nonparametric approach provided as robustness tests on the other hand rely on significantly smaller bandwidths around the cutoff. The disadvantage of this approach resides on its reduced sample size. Still, it is critical that results using both methodologies are aligned as theoretically randomization is only guaranteed in the neighborhood of the fixed cutoff point but precision is greater the larger the number of observations.

The validity of an RD design ultimately depends on the individuals' ability to precisely influence the assignment variable. As it deterministically depends on the outcome of the universal, direct and secret suffrage of the citizens of every given municipality, manipulation of the assignment variable is reasonably ruled out. This renders a variation in treatment in the neighborhood of the cutoff 'as good as randomized'. This implies that any discontinuous jump identified in the outcome variable in this neighborhood can be entirely attributed to

¹⁶Fixed effects are include as is common practice in the literature in order to improve efficiency and reduce finite sample bias.

the change in treatment assignment at that point and interpreted as the causal effect of treatment.

Also, since assignment is by construction independent of observable and unobservable individual characteristics, there is no need to include control variables in the regression model. Guaranteeing that control and treatment group are not systematically different is nevertheless important. Yet, given that the vast majority of municipalities has had both minority as well as majority assemblies over the course of the years such concerns are addressed.¹⁷

6 Results

6.1 Current Accounts

Figure 5 provides the RD graphs for the different items of current revenues. Subfigure (a) shows a clear positive discontinuity at the zero cutoff, suggesting a causal increase in revenues from current transfers due to the existence of a majority in the assembly. The same assessments can be made regarding subfigures (b) and (c) showing similar discontinuities at the cutoff for revenues from fines and fees and total revenues, respectively.

For current expenditures, the relevant RD graphs are in Figure 6. Likewise, both subfigures (a) and (b) show a noticeable positive discontinuity at the zero cutoff. Graphical evidence thus suggest a causal increase coming from the presence of a majority in the assembly also on current expenditures, particularly expenditures with personnel and the total aggregate account.

The corresponding regression results are collected in Table 1 and 2 for current revenues and expenditures, respectively. All regression use as dependent variables the per capita logarithm values of the different revenue and spending items. Overall, coefficient estimates are positive and mostly significant for every item of the current accounts under study, across bandwidths and polynomial specifications.

On the revenue side, municipalities run by a majority in the assembly receive significantly higher current transfers and appear to be more able to raise income from fines and fees, though to a less robust extent. Whereas the first result might be due to an increased bargaining power of majorities vs minorities, the latter suggests that majority assemblies are better able to enforce the payment of fines and fees to the municipality. Both translate

¹⁷See Figure 3 (b).

into a positive and mostly significant average treatment effect on the total aggregate current revenue account.

On the spending side, expenditures with personnel suffer a highly significant positive effect from treatment. As do total current expenditures. Majoritarian assemblies thus spend on average significantly more than minority ones.

6.2 Capital Accounts

Figure 7 and 8 show the RD graphs for the capital revenues and expenditures items, respectively. Subfigures (a) and (b) of Figure 7 for capital transfers and total capital revenues, as well as subfigures (a) and (b) of Figure 8 for investment and total capital expenditures, all show a positive discontinuity at the zero cutoff. Overall, these suggest, as with the current accounts, a causal increase in both capital revenues and expenditures due to the presence of a majority in the municipal assembly.

Regression results are collected in Table 3 for capital revenues and Table 4 for the expenditures. Coefficient estimates are in general positive and often significant. Contrary to what was uncovered for the current accounts, here results are more significant and robust to the different specifications for revenues rather than expenditures.

Assemblies run by a majority lead to additional income from capital transfers and an overall increase in the capital revenues' aggregate account. As before, it appears that municipalities having a majoritarian assembly have a better hand in raising revenues next to the central government and other central administrations.

On the spending side, treated assemblies appear to have on average higher expenditures with investment goods and higher average total capital expenses. These results are however not significant in most of the specifications.

6.3 Discussion

Overall, there appears to be a causal impact of having a majority in the municipal assembly on local current and capital accounts. This impact is visible to different extents, on the major components of current and capital revenues and expenditures, particularly current and capital transfers, expenditures with personnel and investment.

As a consequence, also at the aggregate level, i. e. total revenues and total expenditures, a similar significant impact of treatment is found, especially for total current revenues and

expenditures and total capital revenues. Further investigation is needed in order to assess whether this implies an improvement or deterioration of the current and capital accounts.

So far this results are in themselves revealing of local politics' dynamics. Probably the most relevant result, in economic and political terms, is the high significance of the impact of a majority on current and capital transfers. Not only because municipalities in general heavily depend on these transfers but also because despite being mainly unconditional, they are defined through formulas that should ensure that resources transferred to municipalities are not subject to political manipulation (da Silva, 2008). Still, there exists established evidence on intergovernmental transfers and grants, as well as EU funds being influenced by political determinants in Portugal (Veiga and Pinho, 2007; Veiga, 2012; Veiga and Veiga, 2013). This paper complements previous analysis on the subject by adding a new political determinant of intergovernmental transfers: majoritarian municipal assemblies.

Estimates vary considerably, but an average of the significant coefficients suggest that having a majority in the municipal assembly brings around 15% more revenues per capita in current transfers, and 20% more in capital transfers. As average current and capital transfers per capita amount to around 210€ this means an additional revenue of 30€ in current transfers and 40€ in capital transfers per capita in municipalities receiving treatment.

The significant treatment effect on revenues from fines and fees is for different reasons equally interesting. It appears as though municipalities having a majority in the assembly pay more attention to the enforcement of the public law and are more successful in collecting related revenues. Despite the low economic relevance of this source of revenue which accounts on a per capita average for only 12€, the magnitude of the effect is worth mentioning. Having a majority in the municipal assembly raises additional revenues from fines and fees of around 5€ per person.

The treatment effect of having a majority in the assembly is clearly seen also on the expenditures side. Expenditures with personnel increase by about 29% which scaled by the average per capita expenditures across municipalities and time amounts to spending 30€ more per person in municipalities having a majority in the assembly. Unfortunately, there is no information on whether this increase is the result of setting higher salaries, providing further work related contributions or the hire of a larger staff. Investment in turn, is on average 8% higher in treated municipalities. Taking into account the average investment level this correspond to an additional 20€ per capita spending on investment goods.

All in all, an hypothetical municipality with average population size and average values of the different current and capital revenue and expenditure items on the one hand spends around 1M€ more in personnel, and 0.7M€ more on investment goods, but on the other hand raises extra revenues of 2.6M€, from current and capital transfers (1M€ and 1.4M€, respectively) and proceeds from fines and fees (0.2M€).

7 Robustness Test

As a robustness check of the findings provided by the baseline estimates equation 3 is estimated by nonparametric local linear regression relying on very small bandwidths. Robustness is also tested with regards to the choice of kernel with the use of both a triangular as well as a rectangular kernel in the estimation process. Results are collected in Tables 5 and 6 which provide the estimates referring to current and capital accounts, respectively.

Coefficient estimates are consistently positive generally supporting the results from the baseline regressions. While most of the results remain significant to the use of this approach, estimates for the average treatment effect on total current and capital expenditures, total capital revenues and investment are never significant. However, this might be simply due to the lower sample size implied by the very small bandwidths employed.

Moreover, the magnitude of the present coefficients differs from the ones in the baseline regressions. As precision increases with sample size, estimates provided by the baseline parametric regressions are likely more reliable. Economic implications of the treatment should therefore be based on the previous coefficient estimates as done in section 6.3.

Overall, results from nonparametric local linear regression largely support the baseline assessments. For reasons already mentioned these results are often not significant and less reliable for economic analysis due to the lack of precision of the coefficient estimates.

8 Conclusion

This paper studies the impact of fragmentation at the level of the local assembly on current and capital accounts. Given the underlying political framework, particularly the lack of a majority requirement for the normal functioning of the local political affairs, there are both assemblies that have a party holding a majority and where no party holds a majority of seats. Furthermore, these assemblies where no majority exists can be regarded in two

ways: simply as composed of minority parties on their own, or as having informal coalitions that may guarantee or not a plurality of votes.

Contrary to theoretical expectations, which dictate that both minorities and coalitions spend more resources as a consequence of bargaining and lack of political power, results suggest that majorities on the one hand spend more but on the other hand are also able to raise higher revenues.

As recent work on political fragmentation argues, concentration of political power can be just as harmful as its dispersion. Just as a majority has the power of building consensus around important spending decisions, it also has the power to increase spending without having to face a powerful opposition.

While neither majorities nor minorities can be legitimately avoided, it is important to understand the advantages and limitations of both political outcomes and that one is not necessarily better than the other.

Acknowledgments

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References

- Alesina, A. and A. Drazen (1991). Why are stabilizations delayed? *American Economic Review* 81, 1170–1188.
- Alt, J. E. and R. C. Lowry (1994). Divided government, fiscal institutions, and budget deficits: evidence from the States. *The American Political Science Review* 88, 811–828.
- Ashworth, J. and B. Heynelds (2005). Government fragmentation and budgetary policy in 'good' and 'bad' times in flemish municipalities. *Economics & Politics* 17, 245–263.
- Baqir, R. (2002). Districting and government overspending. *Journal of Political Economy* 110, 1318–1354.

- Baskaran, T. (2013). Coalition governments, cabinet size, and the common pool problem: Evidence from the German states. *European Journal of Political Economy* 32, 356–376.
- Bawn, K. and F. Rosenbluth (2006). Short versus long coalitions: Electoral accountability and the size of the public sector. *American Journal of Political Science* 50, 251–265.
- Bohn, H. and R. P. Inman (1996). Balanced-budget rules and public deficits: evidence from the U.S. states. *Carnegie-Rochester Conference Series on Public Policy* 45, 13–76.
- Borge, L.-E. (1995). Economic and political determinants of fee income in Norwegian local government. *Public Choice* 83, 353–373.
- Borge, L.-E. (2000). Charging for public services: the case of utilities in Norwegian local governments. *Regional Science and Urban Economics* 30, 703–718.
- Borge, L.-E. (2005). Strong politicians, small deficits: Evidence from Norwegian local governments. *European Journal of Political Economy* 21, 325–344.
- Borrelli, S. A. and T. J. Royed (1995). Government ‘strength’ and budget deficits in advanced democracies. *European Journal of Political Research* 28, 225–260.
- Camos, P. J. and S. M. Mendes (2009). Party politics and local government coalition formation in Portugal. In D. Giannetti and K. Benoit (Eds.), *Intra-party politics and coalition governments*. London: Routledge.
- da Silva, J. (2008). Local governments in Portugal. *Urban Public Economics Review* 9, 55–74.
- De Haan, J. and J.-E. Sturm (1994). Political and institutional determinants of fiscal policy in the European Community. *Public Choice* 80, 157–172.
- De Haan, J. and J.-E. Sturm (1997). Political and economic determinants of OECD budget deficits and government expenditures: A reinvestigation. *European Journal of Political Economy* 13, 739–750.
- De Haan, J., J.-E. Sturm, and G. Beekhuis (1999). The weak government thesis: Some new evidence. *Public Choice* 101, 163–176.
- Edin, P.-A. and H. Ohlsson (1991). Political determinants of budget deficits: Coalition effects versus minority effects. *European Economic Review* 35, 1597–1603.

- Hahn, J., P. Todd, and W. Ven der Klaauw (2001). Identification and estimation of treatment effects with a regression-discontinuity design. *Econometrica* 69, 201–209.
- Harrinvirta, M. and M. Mattila (2001). The hard business of balancing budgets: A study of public finances in seventeen oecd countries. *British Journal of Political Science* 31, 497–521.
- Jochimsen, B. and R. Nuscheler (2011). The political economy of the German Länder deficits: weak governments meet strong finance ministers. *Applied Economics* 43, 2399–2415.
- Kalseth, J. and J. Rattso (1998). Political control of administrative spending: The case of local governments in Norway. *Economics & Politics* 10, 63–83.
- Kontopoulos, Y. and R. Perotti (1999). Government fragmentation and fiscal policy outcomes: Evidence from OECD countries. In *Fiscal Institutions and Fiscal Performance*. University of Chicago Press.
- Lee, D. S. (2008). Randomized experiments from non-random selection in U.S. house elections. *Journal of Econometrics* 142, 675–97.
- Lee, D. S. and T. Lemieux (2010). Regression discontinuity designs in economics. *Journal of Economic Literature* 48, 281–355.
- Perotti, R. and Y. Kontopoulos (2002). Fragmented fiscal policy. *Journal of Public Economics* 86, 191–222.
- Pettersson-Lidbom, P. (2008). Do parties matter for economic outcomes: a regression-discontinuity approach. *Journal of the European Economic Association* 6, 1037–1056.
- Pettersson-Lidbom, P. (2012). Does the size of the legislature affect the size of government: Evidence from two natural experiments. *Journal of Public Economics* 96, 269–278.
- Poterba, J. M. (1994). State responses to fiscal crises: The effects of budgetary institutions and politics. *Journal Of Political Economy* 102, 799–821.
- Rattso, J. and P. Tovmo (2002). Fiscal discipline and asymmetric adjustment of revenues and expenditures: Local government responses to shocks in Denmark. *Public Finance Review* 30, 208–234.

- Ricciuti, R. (2004). Political fragmentation and fiscal outcomes. *Public Choice* 118, 365–388.
- Roubini, N. and J. D. Sachs (1989a). Government spending and budget deficits in the industrial countries. *Economic Policy* 4, 99–132.
- Roubini, N. and J. D. Sachs (1989b). Political and economic determinants of budget deficits in the industrial democracies. *European Economic Review* 33, 903–938.
- Sakamoto, T. (2001). Effects of government characteristics on fiscal deficits in 18 OECD countries. *Comparative Political Studies* 34, 527–554.
- Schaltegger, C. A. and L. P. Feld (2009). Do large cabinets favor large governments? evidence on the fiscal commons problem for Swiss cantons. *Journal of Public Economics* 93, 35–47.
- Shepsle, K. A. and B. R. Weingast (1981). Political preferences for the pork barrel: A generalization. *American Journal of Political Science* 25, 96–111.
- Veiga, L. G. (2012). Determinants of the assignment of EU funds to Portuguese municipalities. *Public Choice* 153, 215–233.
- Veiga, L. G. and M. M. Pinho (2007). The political economy of intergovernmental grants: evidence from a maturing democracy. *Public Choice* 133, 457–477.
- Veiga, L. G. and F. J. Veiga (2013). Intergovernmental fiscal transfers as pork barrel. *Public Choice* 155, 335–353.
- Volkerink, B. and J. De Haan (2001). Fragmented government effects on fiscal policy: New evidence. *Public Choice* 109, 221–242.
- Weingast, B. R., K. A. Shepsle, and C. Johnson (1981). The political economy of benefits and costs: A neoclassical approach to distributive politics. *Journal of Political Economy* 89, 642–664.
- Woo, J. (2003). Economic, political, and institutional determinants of public deficits. *Journal of Public Economics* 87, 387–426.

Table 1: CURRENT REVENUES.

	5	7.5	10	12.5	15	50
Tranfers						
Linear	0.120*** (0.040)	0.032 (0.022)	0.014 (0.019)	-0.003 (0.017)	-0.001 (0.015)	0.038*** (0.014)
Quadratic	0.098 (0.105)	0.144*** (0.055)	0.081** (0.041)	0.061** (0.031)	0.046 (0.029)	-0.007 (0.021)
Cubic		0.307** (0.132)	0.221*** (0.076)	0.181*** (0.060)	0.137*** (0.053)	0.071** (0.033)
Quartic			0.203 (0.136)	0.222** (0.105)	0.259*** (0.088)	0.153*** (0.053)
Fines and Fees						
Linear	0.061 (0.108)	0.062 (0.062)	0.082 (0.054)	0.024 (0.044)	0.024 (0.042)	0.064* (0.038)
Quadratic	0.477** (0.212)	0.016 (0.127)	0.059 (0.111)	0.133 (0.087)	0.085 (0.080)	0.018 (0.053)
Cubic		0.588** (0.233)	0.170 (0.157)	0.088 (0.157)	0.210 (0.137)	0.040 (0.088)
Quartic			0.743*** (0.280)	0.342 (0.239)	0.066 (0.199)	0.149 (0.134)
Total						
Linear	0.059** (0.027)	0.034** (0.015)	0.020 (0.012)	0.017 (0.011)	0.015 (0.011)	0.037*** (0.010)
Quadratic	0.027 (0.066)	0.060* (0.035)	0.059** (0.029)	0.045** (0.022)	0.035* (0.020)	0.002 (0.016)
Cubic		0.118 (0.082)	0.068 (0.050)	0.082* (0.043)	0.084** (0.038)	0.047* (0.027)
Quartic			0.164* (0.093)	0.112* (0.067)	0.080 (0.056)	0.072* (0.037)
N	3732	5239	5814	7038	7346	8596

This table presents RD regressions for revenues from current transfers and fines and fees, and total current revenues. Estimates for the average treatment effect of having a majority in the municipal assembly are reported for different bandwidths (5.0, 7.5, 10, 12.5, 15, 50) and different polynomial specifications of the running variable (from linear to quartic). Municipality and year fixed effects are included in all models. Standard errors are clustered at the municipality level and robust to heteroscedasticity. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***).

Table 2: CURRENT EXPENDITURES.

	5	7.5	10	12.5	15	50
Personnel						
Linear	0.178*** (0.042)	0.070*** (0.022)	0.061*** (0.019)	0.045*** (0.017)	0.047*** (0.017)	0.069*** (0.017)
Quadratic	0.172* (0.099)	0.229*** (0.056)	0.114*** (0.040)	0.098*** (0.031)	0.075** (0.030)	0.025 (0.022)
Cubic		0.367*** (0.124)	0.314*** (0.080)	0.261*** (0.065)	0.189*** (0.055)	0.075** (0.034)
Quartic			0.323*** (0.123)	0.324*** (0.109)	0.359*** (0.091)	0.196*** (0.052)
Total						
Linear	0.111*** (0.033)	0.041** (0.018)	0.031** (0.015)	0.028** (0.014)	0.028** (0.014)	0.050*** (0.014)
Quadratic	0.126* (0.074)	0.170*** (0.043)	0.083** (0.033)	0.057** (0.024)	0.047** (0.023)	0.015 (0.018)
Cubic		0.192** (0.096)	0.234*** (0.061)	0.201*** (0.051)	0.137*** (0.044)	0.061** (0.028)
Quartic			0.195* (0.099)	0.263*** (0.086)	0.294*** (0.074)	0.143*** (0.044)
N	3732	5239	5815	7040	7352	8601

This table presents RD regressions for expenses with personnel and total current expenditures. Estimates for the average treatment effect of having a majority in the municipal assembly are reported for different bandwidths (5.0, 7.5, 10, 12.5, 15, 50) and different polynomial specifications of the running variable (from linear to quartic). Municipality and year fixed effects are included in all models. Standard errors are clustered at the municipality level and robust to heteroscedasticity. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***).

Table 3: CAPITAL REVENUES.

	5	7.5	10	12.5	15	50
Transfers						
Linear	0.139** (0.055)	0.049 (0.034)	0.035 (0.029)	0.019 (0.025)	0.017 (0.025)	0.032 (0.022)
Quadratic	0.280** (0.120)	0.166** (0.079)	0.108* (0.058)	0.071 (0.046)	0.054 (0.043)	0.018 (0.031)
Cubic		0.268 (0.188)	0.269*** (0.094)	0.212*** (0.082)	0.165** (0.070)	0.051 (0.049)
Quartic			0.219 (0.196)	0.368** (0.145)	0.333*** (0.121)	0.118* (0.067)
Total						
Linear	0.143** (0.056)	0.068** (0.034)	0.053* (0.029)	0.035 (0.027)	0.026 (0.025)	0.041* (0.022)
Quadratic	0.243 (0.148)	0.170** (0.074)	0.137** (0.057)	0.122*** (0.044)	0.107** (0.042)	0.029 (0.032)
Cubic		0.350** (0.163)	0.277*** (0.096)	0.239*** (0.085)	0.199*** (0.070)	0.112** (0.049)
Quartic			0.190 (0.202)	0.388** (0.153)	0.347*** (0.119)	0.175** (0.072)
N	3615	5078	5632	6806	7107	8319

This table presents RD regressions for revenues from capital transfers and total capital revenues. Estimates for the average treatment effect of having a majority in the municipal assembly are reported for different bandwidths (5.0, 7.5, 10, 12.5, 15, 50) and different polynomial specifications of the running variable (from linear to quartic). Municipality and year fixed effects are included in all models. Standard errors are clustered at the municipality level and robust to heteroscedasticity. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***).

Table 4: CAPITAL EXPENDITURES.

	5	7.5	10	12.5	15	50
Investment						
Linear	0.081 (0.061)	0.066* (0.038)	0.058* (0.034)	0.031 (0.030)	0.023 (0.030)	0.050* (0.027)
Quadratic	0.121 (0.156)	0.065 (0.086)	0.123** (0.061)	0.118** (0.048)	0.094** (0.046)	0.018 (0.035)
Cubic		0.174 (0.175)	0.048 (0.117)	0.058 (0.097)	0.108 (0.082)	0.073 (0.055)
Quartic			0.251 (0.188)	0.212 (0.152)	0.059 (0.134)	0.078 (0.080)
Total						
Linear	0.054 (0.052)	0.037 (0.033)	0.040 (0.028)	0.016 (0.025)	0.007 (0.024)	0.027 (0.022)
Quadratic	0.058 (0.136)	0.009 (0.070)	0.046 (0.054)	0.090** (0.042)	0.073* (0.040)	-0.000 (0.030)
Cubic		0.166 (0.139)	0.050 (0.090)	0.008 (0.077)	0.062 (0.067)	0.064 (0.047)
Quartic			0.128 (0.156)	0.192 (0.126)	0.024 (0.099)	0.041 (0.066)
N	3615	5078	5634	6808	7114	8324

This table presents RD regressions for investment expenses and total capital expenditures. Estimates for the average treatment effect of having a majority in the municipal assembly are reported for different bandwidths (5.0, 7.5, 10, 12.5, 15, 50) and different polynomial specifications of the running variable (from linear to quartic). Municipality and year fixed effects are included in all models. Standard errors are clustered at the municipality level and robust to heteroscedasticity. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***).

Table 5: CURRENT ACCOUNTS.

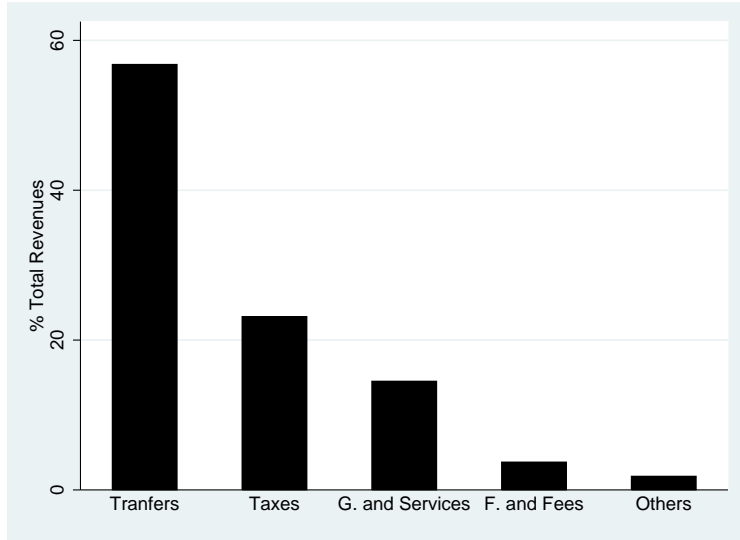
	Triangular Kernel			Rectangular Kernel		
	0.8	0.9	1.0	0.8	0.9	1.0
Current Revenues						
Transfers	0.134*** (0.048)	0.134*** (0.046)	0.134*** (0.045)	0.135*** (0.036)	0.135*** (0.036)	0.135*** (0.037)
Fines&Fees	1.777*** (0.351)	1.761*** (0.341)	1.749*** (0.337)	1.680*** (0.300)	1.680*** (0.300)	1.680*** (0.302)
Total	0.279*** (0.078)	0.275*** (0.076)	0.272*** (0.075)	0.255*** (0.067)	0.255*** (0.067)	0.255*** (0.068)
Current Expenditures						
Personnel	0.220*** (0.079)	0.227*** (0.078)	0.232*** (0.079)	0.260*** (0.079)	0.260*** (0.079)	0.260*** (0.080)
Total	0.157 (0.119)	0.156 (0.116)	0.155 (0.116)	0.151 (0.106)	0.151 (0.106)	0.151 (0.107)
N	166	172	181	166	172	181

This table presents RD regressions for the different items of current revenues and expenditures. Estimates for the average treatment effect of having a majority in the municipal assembly are reported for different bandwidths (0.8, 0.9, 1.0), for a triangular and rectangular kernel and a linear polynomial specification of the running variable. Municipality and year fixed effects are included in all models. Standard errors are clustered at the municipality level and robust to heteroscedasticity. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***).

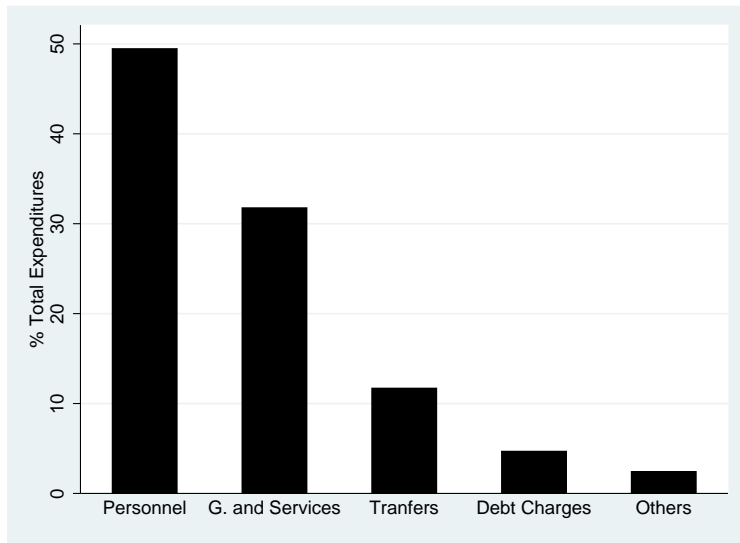
Table 6: CAPITAL ACCOUNTS.

	Triangular Kernel			Rectangular Kernel		
	0.8	0.9	1.0	0.8	0.9	1.0
Capital Revenues						
Transfers	0.103** (0.051)	0.104** (0.048)	0.105** (0.047)	0.108*** (0.042)	0.108*** (0.042)	0.108*** (0.042)
Total	0.089 (0.147)	0.092 (0.141)	0.095 (0.138)	0.108 (0.117)	0.108 (0.117)	0.108 (0.118)
Capital Expenditures						
Investment	0.227 (0.146)	0.223 (0.141)	0.219 (0.139)	0.200 (0.124)	0.200 (0.124)	0.200 (0.125)
Total	0.151 (0.128)	0.151 (0.125)	0.150 (0.123)	0.147 (0.111)	0.147 (0.111)	0.147 (0.112)
N	166	172	181	166	172	181

This table presents RD regressions for the different items of capital revenues and expenditures. Estimates for the average treatment effect of having a majority in the municipal assembly are reported for different bandwidths (0.8, 0.9, 1.0), for a triangular and rectangular kernel and a linear polynomial specification of the running variable. Municipality and year fixed effects are included in all models. Standard errors are clustered at the municipality level and robust to heteroscedasticity. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***).

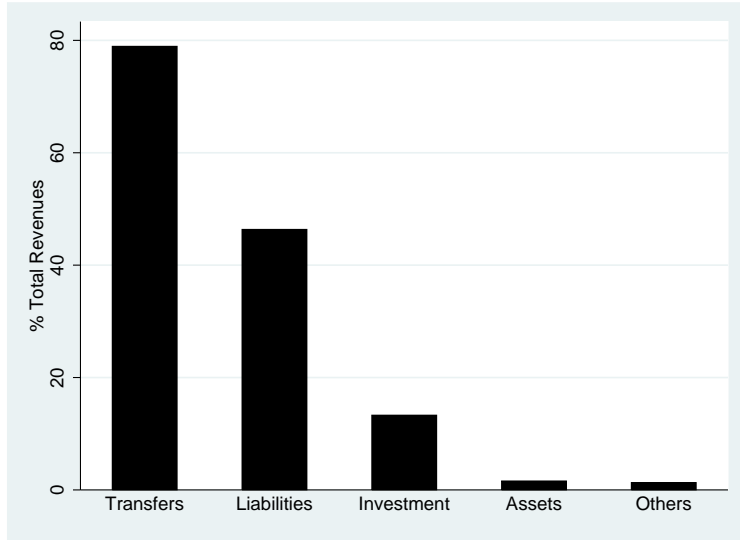


(a) Current Revenues

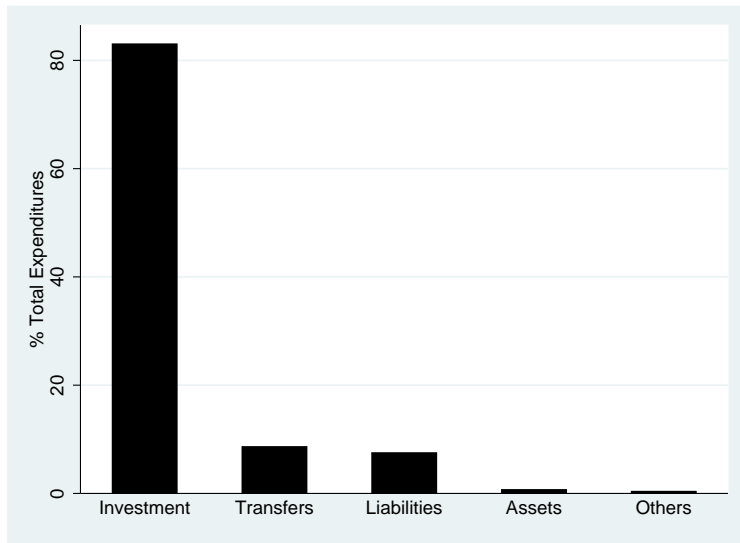


(b) Current Expenditures

Figure 1: Overview of Current Accounts. This figure shows the percentage each category of the current accounts weights in total revenues (a) and expenditures (b).

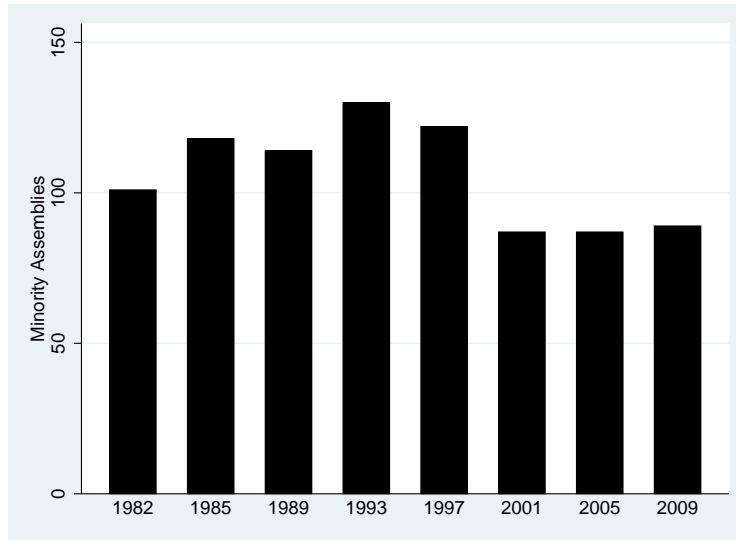


(a) Capital Revenues

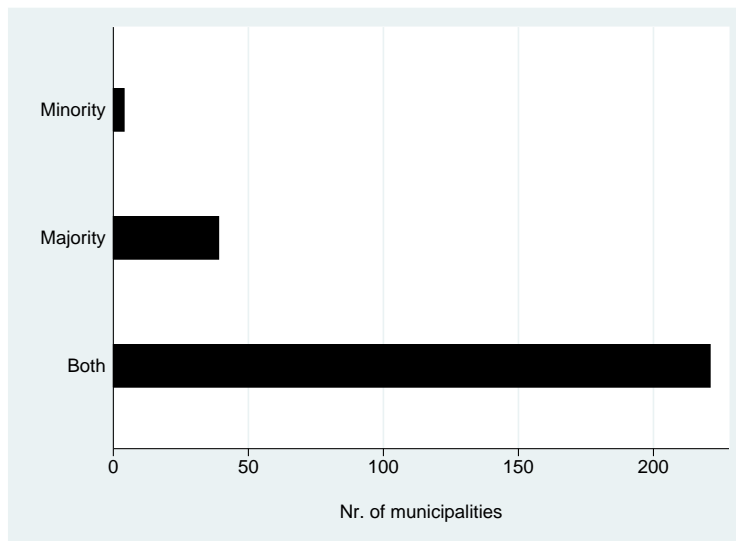


(b) Capital Expenditures

Figure 2: Overview of Capital Accounts. This figure shows the percentage each category of the capital accounts weights in total revenues (a) and expenditures (b).



(a) Minorities



(b) Assemblies

Figure 3: Political Landscape. This figure provides evidence of between and within variation of assembly types across the 278 municipalities from 1981 to 2012.

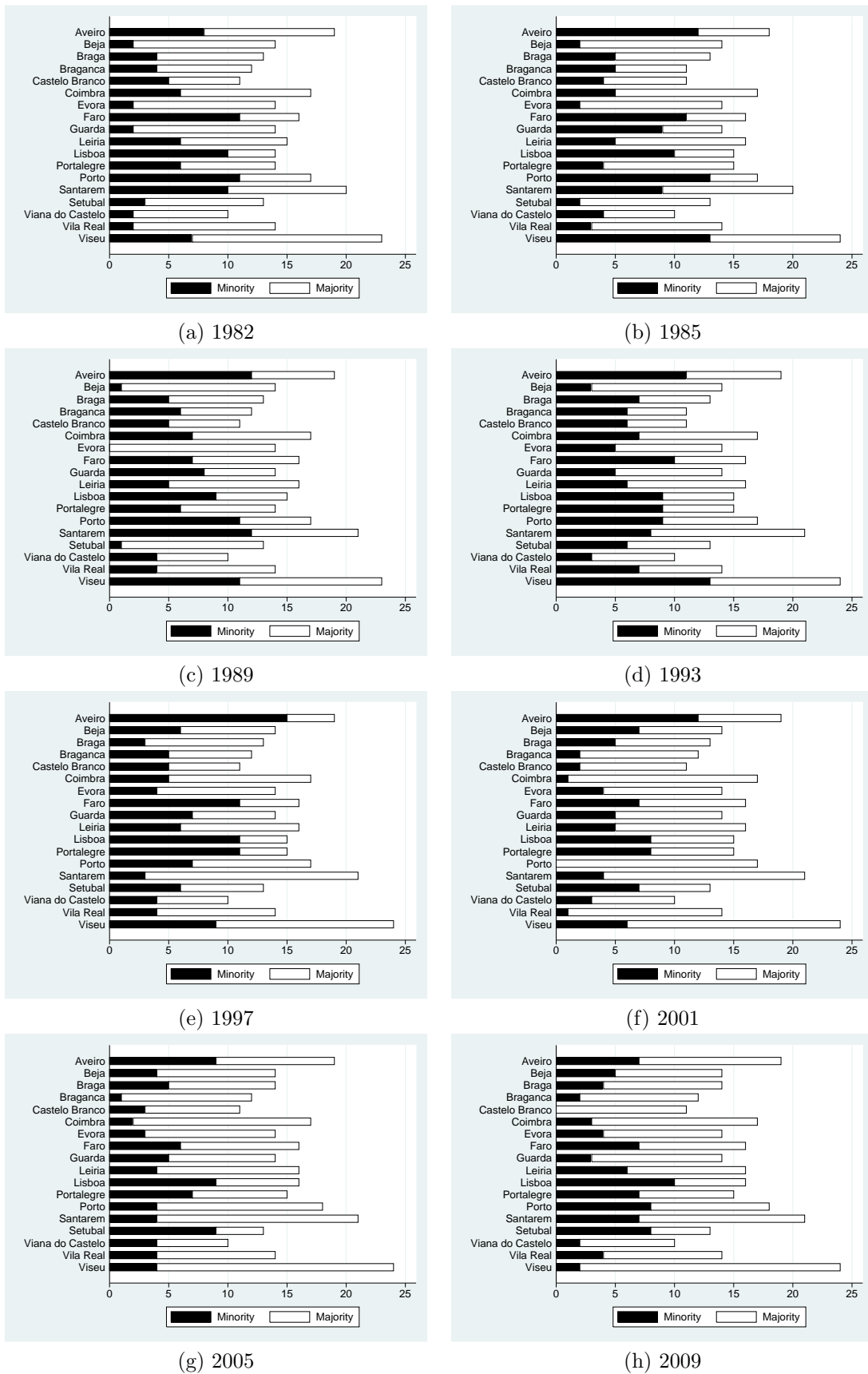
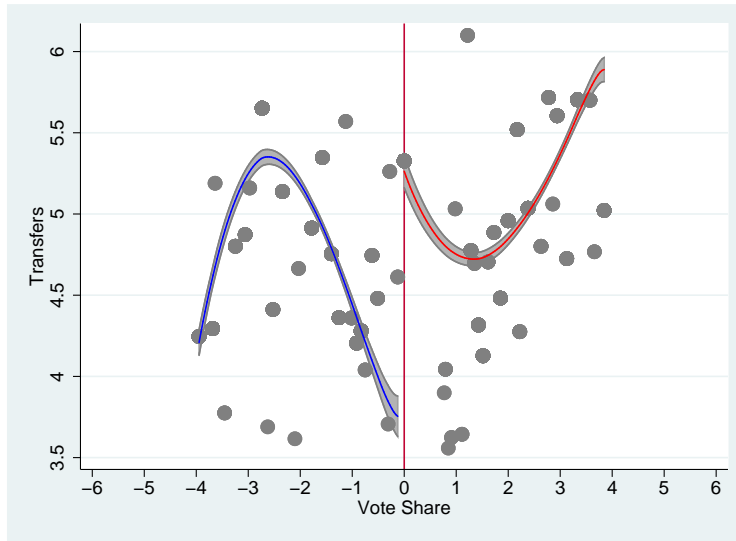
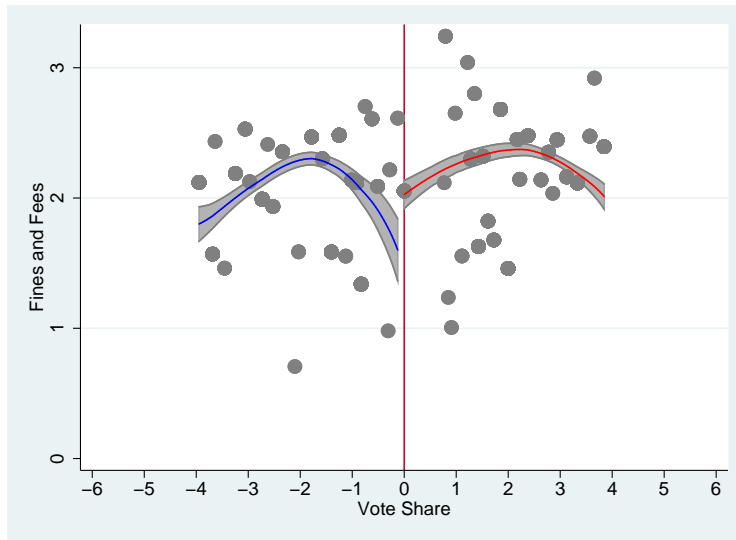


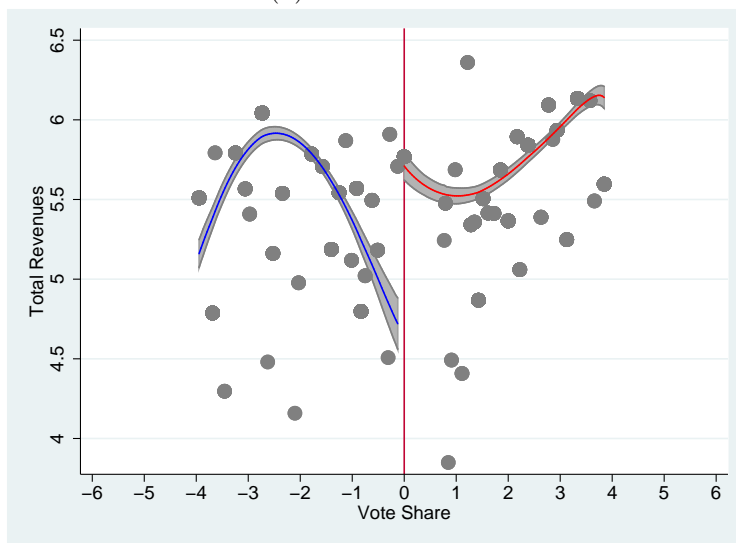
Figure 4: Majorities minorities relation per district per year. This figure shows how minority and majority assemblies are distributed over the years in the different districts.



(a) Transfers

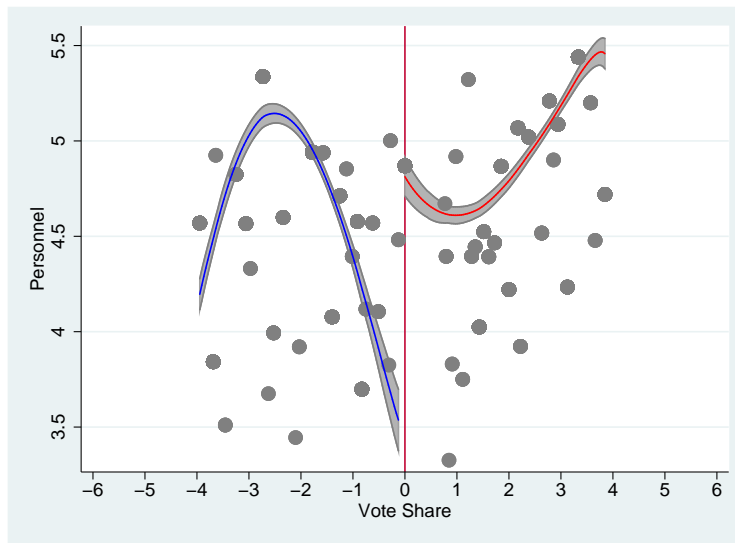


(b) Fines and Fees

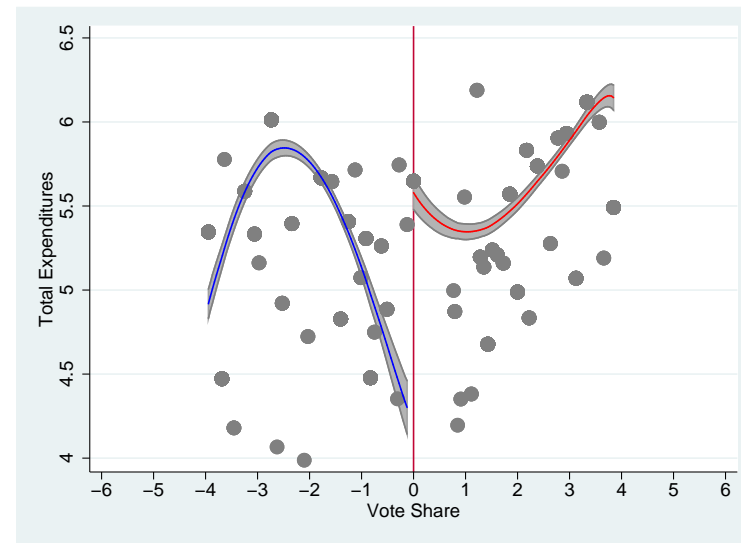


(c) Total Revenues

Figure 5: Treatment effect on the current revenue items. This figure shows RD graphs for the impact of a majoritarian assembly on different items of current municipal revenues. Observations are averaged within bins of size 0.001. The polynomial plots are constructed using a triangular kernel, a degree of 2 and a bandwidth of 4.

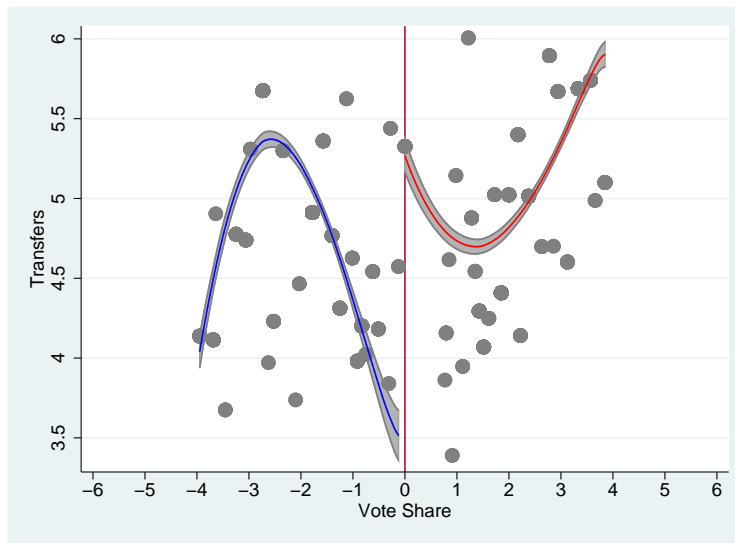


(a) Personnel

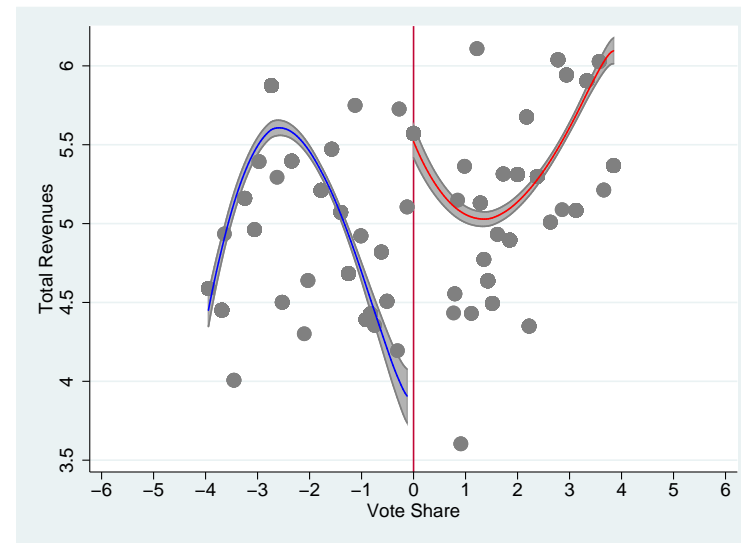


(b) Total Expenditures

Figure 6: Treatment effect on the current expenditure items. This figure shows RD graphs for the impact of a majoritarian assembly on different items of current municipal expenditures. Observations are averaged within bins of size 0.001. The polynomial plots are constructed using a triangular kernel, a degree of 2 and a bandwidth of 4.

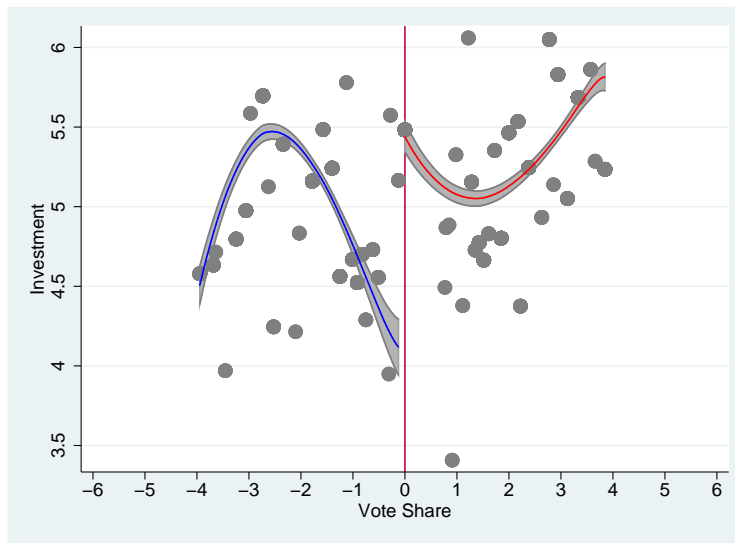


(a) Transfers

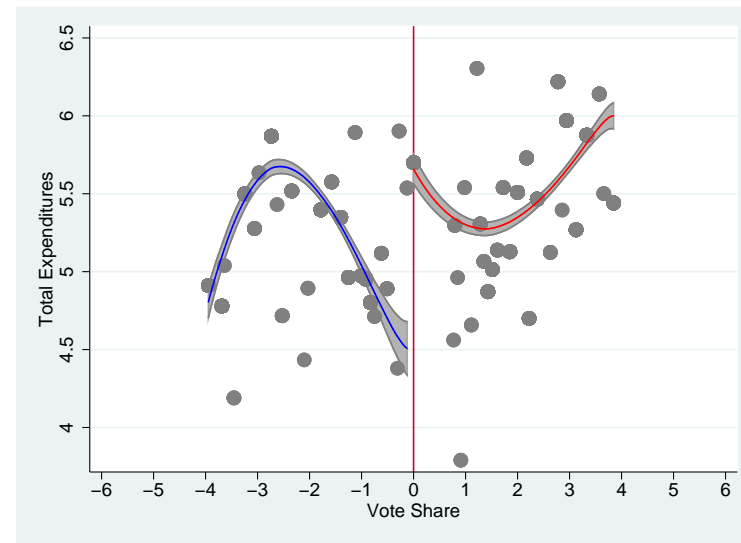


(b) Total Revenues

Figure 7: Treatment effect on the capital revenue items. This figure shows RD graphs for the impact of a majoritarian assembly on different items of capital municipal revenues. Observations are averaged within bins of size 0.001. The polynomial plots are constructed using a triangular kernel, a degree of 2 and a bandwidth of 4.



(a) Investment



(b) Total Expenditures

Figure 8: Treatment effect on the capital expenditure items. This figure shows RD graphs for the impact of a majoritarian assembly on different items of capital municipal expenditures. Observations are averaged within bins of size 0.001. The polynomial plots are constructed using a triangular kernel, a degree of 2 and a bandwidth of 4.

Table A.1: SUMMARY STATISTICS

Variable		Mean	SD	Min.	Max.	N
Current revenues per capita						
Transfers	overall	209.548	171.061	20.889	1422.781	8639
	between		122.403	47.821	699.042	278
	within		119.513	-338.001	1059.379	31.076
Fines and Fees	overall	12.292	13.751	0	589.077	8640
	between		7.343	2.651	56.954	278
	within		11.591	-36.718	551.454	31.079
Total	overall	374.14	244.663	21.06	1863.387	8646
	between		140.694	185.362	1012.734	278
	within		199.865	-314.466	1318.088	31.101
Current expenditures per capita						
Personnel	overall	171.711	134.211	2.031	1258.817	8640
	between		87.203	54.596	640.159	278
	within		101.882	-417.185	934.573	31.079
Total	overall	344.697	250.911	2.591	2007.682	8651
	between		147.903	135.399	1019.904	278
	within		202.489	-505.102	1529.911	31.119
Capital revenues per capita						
Tranfers	overall	211.833	171.996	0	1649.137	8327
	between		127.110	37.824	844.5539	278
	within		115.941	-418.027	1268.691	29.953
Total	overall	274.234	230.865	10.036	6509.115	8328
	between		149.967	61.147	957.385	278
	within		175.911	-468.457	6045.559	29.957
Capital expenditures per capita						
Investment	overall	251.281	189.531	11.463	2739.13	8324
	between		127.214	60.462	849.64	278
	within		140.723	-271.264	2477.32	29.942
Total	overall	301.534	221.420	15.085	5690.936	8333
	between		140.814	92.809	952.686	278
	within		171.133	-387.022	5318.037	29.975
Vote share	overall	3.497	9.666	-21.429	50	8802
	between		6.165	-12.061	30.824	278
	within		7.468	-21.473	45.534	31.662
Population	overall	34842.33	57666.8	1634	800156	8802
	between		57645.41	1928.969	615016.8	278
	within		9440.82	-110665	219981.5	31.662