The Political Economy of Local Governments' Expenditures

by

Linda Gonçalves Veiga
Economic Policies Research Unit
Universidade do Minho
P-4710-057 Braga – Portugal
Tel.: +351-253-604568
Fax: +351-253-676375
E-mail: linda@eeg.uminho.pt

Abstract:
Although the literature on the political economy of public finance is already quite extensive, most articles analyse the behaviour of central governments. Furthermore, studies about the Portuguese economy are scarce. The present article contributes for a better understanding of these phenomena by testing the influence of political factors on municipal expenditure decisions in Portugal. The dataset used in the empirical work has information for all mainland Portuguese municipalities from 1979 to 2000. The tests performed reveal that local politicians increase capital expenditures before elections, particularly on roads and streets construction. Results also indicate that when the mayor belongs to the party that dominates the municipal assembly capital expenditures are higher. Finally, no support was found for partisan effects on incumbents' investment expenditures choices.

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1. INTRODUCTION

Recently, a growing body of literature analysed the impact of political factors on economic policy decisions, particularly on fiscal policy. Although the international research on this topic is already quite extensive,[1] most papers analyse de behaviour of central governments and very few focus on local authorities. Furthermore, the number of studies investigating the Portuguese reality, both at the central or local governments, is extremely small. The present research contributes for a better understanding of these phenomena in Portugal. It studies the impact of political factors on capital expenditure decisions in a sample composed of all mainland Portuguese municipalities, over a twenty two year period (from 1979 to 2000)

This article reveals that local politicians increase capital expenditures before elections, particularly on items highly visible by the electorate such as streets and roads construction. This behaviour is in accordance with the rational opportunistic theory, which predicts that incumbents increase public expenditures before elections in order to appear more competent, and improve their chances of winning the election. Evidence also suggests that the size of the opportunistic cycle does not depend on whether the mayor's political party has a majority in the local assembly. Political cohesion is, however, positively associated with the amount of capital expenditures spent in the municipalities. Regarding partisan theory, the tests performed reveal that the mayor's ideology does not determine the type of privileged investments.

[1] See Alesina, Cohen and Roubini (1997), Drazen (2000) and Persson and Tabellini (2002) for comprehensive discussions on this topic.

The next section briefly reviews the literature on the political economy of public finance. Section 3 presents a short digression on municipalities in Portugal, while section 4 describes the dataset. The empirical strategy used to investigate the impact of elections on municipal expenditures is explained in section 5 and the results obtained are present in section 6. Finally, conclusions are reported.

2. THE POLITICAL ECONOMY OF PUBLIC FINANCE

In the seventies, two seminal contributions, Nordhaus (1975) and Hibbs (1977), initiated the literature on political business cycles[2] (PBC). Nordhaus (1975) presented a model of opportunistic incumbents that manipulate the economy before elections in order to appear more competent and increase their probability of re-election. The model is based on adaptive expectations of voters and admits that incumbents are able to push the economy to their preferred combination of inflation and unemployment by manipulating fiscal and monetary policy. Therefore, before elections, incumbents generate an inflation surprise to decrease the unemployment rate and conquer a higher number of votes. Hibbs (1977) introduced the first partisan model. Shortly, it predicts that once in power, politicians try to favour the groups of the population by which they were elected. Parties have, therefore, different objectives for economic variables. In particular, Hibbs admits that left wing parties are supported by the lower classes of society, who suffer the most with unemployment increases, and consequently, when elected, they are mainly concerned with reducing unemployment. On the other hand, right wing parties obtain most of their votes from the upper classes of the

[2] For extensive revisions on the topic see Alesina, Cohen and Roubini (1997) and Price (1997).

population, who dislike inflation more than unemployment. When in office they, therefore, focus on price stabilization. Like in Nordhaus (1975), Hibbs (1977) admits a short-run Phillips curve exploitable through monetary and fiscal policy.

The rational expectations revolution required the reformulation of the first generation of PBC models. The idea that incumbents could systematically manipulate economic variables through aggregate demand shocks became no longer tenable. The introduction of rational expectations in the models gave birth to a second wave of contributions. Alesina (1987) presented the first rational partisan model. According to Alesina (1987) the existence of uncertainty regarding the ideology of the party that will win an election may cause inflation prediction errors for the period immediately after the balloting.[3] This makes it possible for governments to cause short run deviations in real economic variables from their natural rates immediately after elections. Cukierman and Meltzer (1986), Rogoff and Sibert (1988), Rogoff (1990), and Person and Tabellini (1990) developed opportunistic models with rational expectations. According to them, governments are opportunistic but differ in their level of competence, which they know before the electorate. Therefore, before elections, incumbents have an incentive to take advantage of this asymmetry of information by manipulating economic policy variables in order to appear the more competent possible.

Since fiscal policy is, for most voters, an obscure subject, it is very attractive for manipulation by opportunistic governments. Opportunistic behaviour leads to an increase in public expenditures or a reduction of taxes before elections to transmit the idea that incumbents are doing a good job with public financial

[3] Following Hibbs (1977), Alesina (1987) assumes that parties' ideology conditions their inflation preferences. Right wing parties prefer lower inflation rates than left wing parties.

accounts. The higher the quantity of public goods/services a government can offer for a given amount of public revenue, the more competent it is.

Three main results emerge from the international literature testing political business cycles on central governments. First, most authors find evidence in favour of partisan theory, with stronger support for rational models. Second, partisan effects are stronger in countries with stable governments and clear ideological differences among competing parties. Third, evidence in favour of opportunistic business cycles is weak.

Recently, a growing body of literature has investigated the impact of other political factors on public finance. Issues such as the use of debt as a strategic variable (Person and Svensson, 1989; Alesina and Tabellini, 1990), the influence of budgetary institutions (Alesina and Perotti, 1996), the effect of conflicts among parties forming governmental coalitions (Roubini and Sachs, 1989), and the impact of "wars of attrition" between groups with conflicting objectives on the timing of fiscal stabilizations (Alesina and Drazen, 1991) have been addressed.[4] Despite the extensive number of empirical studies using cross-country data to investigate central governments' fiscal policy decisions, the number of publications performing similar analysis for state or local governments within countries other than the U.S. and Germany is quite scarce.[5]

[4] See chapter 9 in Alesina, Cohen and Roubini (1997), Drazen (2000) and Persson and Tabellini (2002) for comprehensive discussions on these topics.

[5] For the U.S. state and local governments see Gramlich (1991), Alt and Lowry (1994), Poterba (1994), Alesina and Bayoumi (1996), Bohn and Inman (1996) and Sørensen, Wu and Yosha (2001). For the German Länders see Seitz (2000) and Galli and Rossi (2002). For the Russian regions see Akhemedov, Ravichev and Zhuravskaya (2002), for Canadian provincial governments see Blais and Nadeau (1992), and for Israel see Rosenberg (1992).

The Portuguese reality is under researched both at the national and sub-national levels.[6] The present work intends to fill this gap in the literature by investigating the influence of political factors on Portuguese local governments' expenditure decisions. Portuguese Municipalities are used as laboratory.

3. MUNICIPALITIES IN PORTUGAL

This section presents some background information on institutional and public finance rules in Portuguese Municipalities. Democracy was re-established in Portugal in April 25, 1974 after 48 years of dictatorship.[7] Portuguese municipalities were formally established in the 1976 Constitution and the first municipal elections took place in December 1976. In mainland Portugal there are currently 278 municipalities.

Local governments are concerned with improving the well-being of the population that live in their territories. They promote social and economic development, territory organization, and supply local public goods (water and sewage, transports, housing, healthcare, education, culture, sports, defence of the environment and protection of the civil population).[8]

[6] There are only two studies analyzing Portuguese local governments. Baleiras and Costa (2001) work with a sample of thirty Portuguese mainland municipalities, from 1977 to 1993. Marta (2000) investigates municipalities from the Northern region of Portugal.

[7] The number of observations for studies intended to analyze the behavior of Portuguese central governments is small. Since the end of the dictatorship there were only 10 legislative elections in Portugal. Research on local governments provides many more degrees of freedom.

[8] Law 159/99 defines the areas of intervention of local governments.

There are no disparities in budgeting rules and institutions among Portuguese mainland municipalities,[9] although the law regulating local public finances changed during the period considered.[10] Municipalities are financially autonomous. They have their own employees and patrimony. Each year the executive organ of the municipality (town council) proposes to the legislative organ (municipal assembly) the local budget and the plan of activities, whose approval does not require the agreement of a higher-ranked authority. As part of the general government sector, local authorities are, however, subject to several control mechanisms by central government agencies. These control mechanisms limit their access to revenue and their expenditure choices.[11]

Political business cycles are more likely to occur on items whose timing of implementation is controlled by the mayor and which are visible to the electorate. Local Portuguese politicians have more freedom to manipulate municipalities' expenditures than revenues.[12] Therefore, our analysis concentrates on the former and, in particular, on capital expenditures. Current expenditure decisions are subject to greater rigidity. Items such as salaries don't have enough flexibility to be changed before elections, since they are regulated by rigid labour contracts, both in terms of duration and wage rates.

[9] Overseas municipalities, belonging to the islands of Madeira and Açores, are treated differently from those in the mainland.

[10] Law 1/79, Decree-Law 98/84, Law 1/87, and currently Law 46/98.

[11] For a description of local public finances, rules and performance, in Portugal see Baleiras (1998).

[12] Transfers from the Central Administration and the E.U. represent a very important source of funding for municipalities.

Capital expenditures in Portuguese municipalities include investment expenditures implemented by the municipality[13] and capital transfers to the counties ("freguesias"). Investment expenditures are divided in four categories, some with sub-components: (1) acquisition of land, (2) housing, (3) other buildings, and (4) diverse constructions. The "Other buildings" item includes: (3.1) sports, recreational and schooling infrastructures; (3.2) social equipment; and (3.3) other. The "Diverse constructions" category is composed of the following items: (4.1) overpasses, streets and complementary work; (4.2) sewage; (4.3) water captation, treatment and distribution; (4.4) rural roads; (4.5) infrastructures for solid waste treatment; and (4.6) other.

4. THE DATASET

This paper investigates the capital expenditure accounts of all mainland Portuguese municipalities (278). The period under analysis goes from 1979 to 2000, covering six electoral terms.

Data on the municipalities' area and the local accounts was obtained from the Municipalities General Direction's ("Direcção Geral das Autarquias Locais") annual publication called *Finanças Municipais (Municipal Finances)*. This journal exists from 1978 to 1983 and from 1986 to 1999. For the two missing years, 1984 and 1985, data was obtained directly from the municipalities' official accounts. Data collection is still under process. We currently have 126 observations for 1984 and 130 for 1985.

[13] The delimitation of areas of public investment between the central and local administration was defined in decree-law 77/84 and law 159/99.

Data on municipal area and population was acquired from the Marktest's *Sales Index* dataset and consumer price indexes from the IMF's *International Financial Statistics.* Political data, namely election dates and municipal electoral results, were obtained from the National Electoral Commission ("Comissão Nacional de Eleições") and from the Technical Staff for Matters Concerning the Electoral Process ("Secretariado Técnico dos Assuntos para o Processo Eleitoral") of the Internal Affairs Ministry.

5. THE METHODOLOGY

This paper attempts to determine the impact of political factors on Portuguese Municipal total capital expenditures and its components, namely whether there is evidence of political business cycles. It concentrates on the expenditure side since local governments have more freedom to manipulate expenditures than revenues.

The empirical work starts by analysing total capital expenditures and total investment. For these two series the baseline model consists of the following specification:

$$Exp_{it} = \alpha_i + \beta(L)Exp_{it} + \chi Cap\_Transf_{it} + \delta PElect_{it} + \varepsilon Majority_{it} + \phi(Maj*PElect)_{it} + \gamma(ReCand*PElect)_{it} + e_{it} \quad (1)$$

Where the dependent variable, Exp_{it}, represents real *per capita* total capital expenditures or real *per capita* total investment. Both series are measured in real terms, to control for price increases over time, and they are defined in *per capita*

terms in order to take into account size differences among municipalities. $(L)Exp_{it}$ are lags of the dependent variable.[14]

To control for fixed differences in capital expenditures among municipalities, dummies for all municipalities except one were included in the model (α_i).[15] Real *per capita* capital transfers for each municipality (Cap_Transf_{it}) is used as a control variable. Capital transfers include, among others, transfers from the Central Administration (namely through the Equilibrium Financial Fund) and from the European Union, such as the structural funds. They represent around 70% of total capital municipal revenues. Their evolution is, therefore, likely to limit the use of capital expenditures with electoral purposes. This variable is also used to control for changes in the macroeconomic situation of the country over time.

In order to test if local incumbents behave opportunistically before elections by increasing capital expenditures, mandates were divided in pre and post-electoral periods. Two pre-electoral periods (*PElect*) are considered alternatively: the election year; and, the election year and the year before.[16] Two dummy variables (*Elect_Year* and *Year_Bef_El)* were created corresponding to these specific years. A positive sign is expected for the estimated coefficients associated with them.

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[14] The optimal number of lags was determined according to their statistical significance and the absence of auto-correlation.

[15] An F-test on the global significance of these variables allowed us to reject the hypothesis that they are globally not significant with a 1% significance level. A Hausman test performed to determine whether a random effects model would outperform the fixed effects model, suggested that the estimation of a fixed effects model is more appropriate.

[16] The election year is considered as pre-electoral since municipal elections always took place in December. In Portugal, municipal election dates are exogenously set. Until 1985 they took place every three years and since then they occur every four years. Municipal election dates were the following: December 12, 1976; December 16, 1979; December 12, 1982; December 15, 1985; December 17, 1989; December 12, 1993; December 14, 1997; and December 16, 2001.

If the mayor's party has an overall majority in the municipal assembly, there is greater probability that the latter will approve a budget and a plan of activities that reflects her/his preferences. Therefore, the degree of political cohesion may influence the capacity to implement investment projects and the occurrence of political cycles. In order to test this hypothesis a dummy variable (*Majority*) was created, that takes the value of one when the local incumbent's party has an overall majority in the municipal assembly, and zero otherwise. Interactions of this variable with those used to test opportunistic cycles (*Maj*PElect*) were also introduced in the model.

Since politicians running for another term may have a stronger incentive to behave opportunistically before elections than those who are not, two dummy variables were created to identify the municipalities where the mayor is running again for office. *ReCan*PElect* assumes the value of one in the pre election period when the mayor is running for another term and zero otherwise.

To refine the analysis, investment expenditures were disaggregated in its components, which required the definition of another model. Because the characteristics of the municipalities, such as its population density (Pop_Dens_{it}) and the percentages of the population having less than 15 years ($\%PopUnder15_{it}$) or more than 65 years ($\%PopOver65_{it}$), may influence local governments' investment priorities, these control variables were added to the model described in equation (1).[17] The population density was included to capture the municipalities' degree of urbanization. Individuals under 15 years or over 65 years have specific

[17] The inclusion of a variable measuring the wealth of the municipalities would be desirable. Unfortunately for a sample with this time dimension (1979-2000) such a variable has not yet been found.

needs regarding schooling, healthcare, elderly care, etc..[18] The stronger these groups are the more pressure they are likely to exert on local governments to invest on items that fulfil their needs.

Taking into account Hibbs' partisan theory according to which incumbents try to favour the groups of the population by which they were elected, one would expect the mayors' ideology to condition the type of public investment they privilege. In particular, left-wing incumbents are expected to attribute higher priority to investments that benefit the lower classes of the population. Tests of partisan effects were performed in investment components by including as an independent variable a dummy ($Righ_t$) that assumes the value of one when the municipality is governed by a right-wing incumbent and a value of zero otherwise.[19] According to partisan theory, a negative sign is expected for the estimated coefficient associated with this variable when the dependent variable is an item of capital expenditures that contributes more for the well-being of the less favoured. In sum, the model used for each investment component was the following:[20]

$$Exp_{it} = \alpha_i + \beta(L)Exp_{it} + \chi Cap\_Transf_{it} + \delta Pop\_Dens_{it} + \varepsilon \%PopUnder15_{it} + \phi \%PopOver65_{it} + \gamma PElect_{it} + \eta Majority_{it} + \iota(Maj*PElect)_{it} + \varphi(ReCand*PElect)_{it} + Right_{it} + e_{it} \quad (2)$$

[18] In Portugal municipalities are responsible among other thinks, for public kinder gardens, elementary schools, day centers for the elderly, home for the aged, and primary healthcare.

[19] The Socialist Party (PS), the Portuguese Communist Party (PCP), and the People's Democratic Union (UDP) were considered as left, while the People's Democratic Party / Social Democratic Party (PPD/PSD) and the Democratic and Social Center / People's Party (CDS/PP) were classified as right.

[20] As before, they are all measured in real *per capita* terms.

To refine partisan theory tests, regressions were also ran on a model using as dependent variable the weight of each investment component on total investment. Explanatory variables were the same as those considered in equation (2) with the exception of Cap_Transf_{it}, *ajorityit* and $Maj*PElect_{it}$ and $ReCand*PElect_{it}$ that were excluded.

6. EMPIRICAL RESULTS

This section starts by presenting some descriptive statistics of the main variables used in the empirical work (table 1). OLS estimations, controlling for fixed effects, of the models described above are then presented.

[Table 1]

We first tested the influence of political factors on real *per capita* total capital expenditures. Results, shown in table 2, clearly indicate that capital expenditures are positively affected by the amount of capital transfers received by the municipalities.

[Table 2]

The estimation results presented in column 1 of table 2 reveal that total capital expenditures increase in election years, suggesting that Portuguese local governments behave opportunistically. The estimated coefficient associated with

the dummy variable *Majority* shows that municipalities where the mayor's party has an overall majority in the municipal assembly have greater capital expenditures than the others. However, the interaction of this variable with those used to capture the pre-electoral period (*Maj*Elect_Year*) indicate that political cohesion does not influence the dimension of the opportunistic cycle. Regarding the re-candidature effect (*ReCan*Elect_Year*), evidence does not support the hypothesis that incumbents who run for another term are more prone to increase capital expenses, in order to appear more competent and win the election, than those who are not running again. A possible explanation for this result is that, even when incumbents are not running for re-election, they generate an opportunistic cycle in order to support their political party's candidate, whose votes depend on their popularity.[21]

Because some municipal investments may require more than one year to be accomplished, the dummy for the years immediately before elections (*Year_Bef_El*) was introduced in the specification (column 2).[22] Although the estimated coefficient for this dummy is positive, as expected, it turned out not to be statistically significant.

Regressions reported in columns 3 and 4 are similar to the previous ones except that they exclude the interaction variables that were not statistically significant in previous regressions (*Maj*Elect_Year, Maj*Year_Bef_El, ReCan*Elect_Year* and *ReCand*Year_Bef_El*). Results are basically the same,

[21] To refine this result data on the number of consecutive mandates of each mayor is being collected. It is plausible that incumbents running for office for the third or more time do not need to woo the electorate before elections since their competence has already been revealed in previous mandates.

[22] Recall that until 1985 municipal elections took place every three years while after that they occurred every four years.

except that the dummy for the years immediately before elections is now highly statistically significant.

Under the hypothesis that local politicians may have an interest on who wins the national elections, a dummy variable equal to one in years in which legislative elections occurred and zero otherwise (*Leg_Elect_Year*) was introduced in the model. Column 5 presents the results for this specification. The positive and statically significant estimated coefficient associated with this variable reveals that, in fact, mayors increase capital expenditures in legislative election years. This suggests that local politicians also try to appear more competent before the electorate in legislative elections years in order to attract votes for the party they belong to.[23]

The paper proceeds by estimating analogous regressions for real *per capita* total investment. As can be seen in Table 3 results are essentially the same. Local politicians increase investment expenditures before municipal elections, particularly in balloting years. Municipalities governed by mayors belonging to the party that dominates the municipal assembly spend more on investment items than more politically fragmented municipalities. Finally, investment expenditures are higher in legislative election years. It should however be noted that in regression results presented in columns 2, 4 and 5 there is weak evidence that mayors who are running again for office increase investment expenditures in pre electoral periods more than those who are not re-running. This effect is nevertheless only visible in the years immediately before elections (*ReCan*Year_Bef_Elect*).

[23] The correlation between the legislative election years dummy and dummies for municipal election years is -.03, and with the preceding year is -.46.

[Table 3]

To refine the analysis the main components of investment (land acquisition, housing, other buildings, and several constructions), as well as their sub-categories, were also investigated. Three additional control variables (population density, percentage of the population under 15 years and percentage of the population over 65 years) and the dummy for the mayors' ideology (right=1) were added to the previous model (equation 2). Results also stress that the dimension of the opportunistic cycle does not depend on the existence of a majority in the municipal assembly of the mayor's party, nor on the fact that the incumbent is running again for office. The variables used to test these hypotheses were therefore excluded from the regressions.

As can be seen from table 4, capital transfers continues to be a highly significant variable explaining expenditures on investment components. The new control variables do not seem to exert a strong influence on the series, with the exception of the population density on "Housing"[24] and the percentage of the population under 15 years old on "Land Acquisition". Political factors have different impacts on these items. Opportunistic cycles are stronger on "Several Constructions" and "Other Building," and are not visible on "Housing" expenditures. For the first two series, evidence further confirmed that opportunistic

[24] The estimated coefficient for the population density is significant and negative for "Housing". Taking into account that Lisbon and Porto are the two biggest cities in Portugal and have a population density much higher (8 019 and 7 202 inhabitants by Km^2 respectively) than the rest of the country (224 inhabitants by Km^2), tests were also performed on a sample excluding these two municipalities. Results did not change, except that for "Housing" the density of the population turned out to be statistically significant at the 1% significance level and positively signed.

effects exist both in the election year and the preceding one, but they are stronger in the election year. There is strong evidence suggesting that municipalities' political cohesion increases expenditures in "Other Buildings" and weak evidence pointing that the same effect occurs on "Housing" expenditures. Results suggest that the mayor's ideology has no impact on expenditures decisions. On "Housing" expenditures the coefficient associated with the dummy for right-wing oriented incumbents turned out to be marginally statistically significant but with a sign that is contrary to our prior. Since the poorer are the main beneficiary of municipalities' investments on housing, according to Hibbs' partisan theory one would expect the estimated coefficient for this variable to be negatively signed. In legislative election years' expenditures on "Land Acquisition" and "Other Buildings" tend to increase, but the same does not happen on the other two series considered.

[Table 4]

Because expenditures on "Other Buildings" and "Several constructions" are disaggregated in several items we then refined even further the analysis.[25] Table 5 shows estimation results for the sub-categories of these two series where stronger evidence supporting political business cycles was found. All estimation results presented support the hypothesis that incumbents increase expenditures in pre-electoral periods. Furthermore, evidence for this phenomenon is higher in

[25] Recall that "Other Buildings" is composed of the following items: "Sports, recreational and schooling infrastructures"; "Social equipment"; and "Other". "Several Constructions" includes: "Overpasses, streets and complementary work"; "Sewage"; "Water captation, treatment and distribution"; "Rural roads"; "Infrastructures for solid waste treatment"; and "Other".

expenditures on water captation, distribution and treatment, and particularly on streets/roads and complementary works. Taking into account that incumbents are trying to woo the electorate before elections, it is not surprising that they choose to manipulate items that are highly visible to the population.

[Table 5]

It is also important to mention that, with the exception "Water captation, treatment and distribution" and "Rural roads", none of the regressions ran on investment components revealed the existence of partisan effects on local governments' decisions. In order to confirm the robustness of this conclusion, tests were also performed on the weight of each type of municipal investment on total municipal investment. Once again, with the exception of the two series mentioned above, the dummy introduced to capture incumbents' ideology did not turn out as statistically significant. Since investments on water captation, treatment and distribution or on rural roads benefit the generality of the population the statistically significant coefficient associated with them does not provide support for Hibbs' partisan theory. Contrary to Hibbs' predictions, we can conclude that left-wing oriented incumbents do not seem to invest relatively more on items that favour the lower classes of the population such as housing or social equipment.

7. CONCLUSIONS

This paper investigates the impact of political factors on Portuguese municipalities' capital expenditures. It tries to determine whether there is evidence of political business cycles and if political cohesion in local governments

influences the amount of capital expenditures implemented in the municipalities. The dataset constructed has information for all mainland municipalities in Portugal over a twenty two year period, from 1979 to 2000.

Results obtained clearly show that capital expenditures are higher in the second half of the mandates, particularly in election years. The increase of capital expenditures before elections reflects the incumbents' opportunistic behaviour, since this may result from an attempt to appear more competent, increase popularity, and win the election. An investigation of the municipalities' investment components revealed that it is mainly on items highly visible by the electorate, such as roads/streets and complementary works that political cycles occur. The increase in capital expenditures occurs not only before municipal elections but also in legislative balloting years suggesting that local politicians try to attract votes for the party they belong to.

According to our prior there is evidence that capital expenditures are higher in municipalities where the mayor belongs to the party that dominates the municipal assembly. However, and contrary to our predictions, the data revealed that the size of the political business cycles is not influenced by local governments' political cohesion. It was also possible to conclude that incumbents running for another term do not behave more opportunistically the others. A possible explanation is that even when not running again for office, incumbents support their party's candidate, whose likelihood of winning the election also depends on their party's perceived competence.

Regarding ideological considerations, we found no evidence of partisan effects. Tests were performed on investment components series, as well as on the weight of each investment category on total investment. No substantial evidence

was found suggesting that left-wing incumbents spend relatively more on investment items that favour the poorer groups of the population.

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Table 1. Data descriptive statistics

	Variable type	Units	Mean	Max. value	Min.value	Stand. dev.	N. obs.
Real *per capita* total capital expenditures	Continuous	1 000 escudos	36.03	287.96	1.89	24.47	5 749
Real *per capita* total investment expenditures	Continuous	1 000 escudos	31.81	288.51	1.78	22.51	5 743
Real *per capita* land acquisition expenditures	Continuous	1 000 escudos	0.91	40.99	0	1.83	5 472
Real *per capita* housing expenditures	Continuous	1 000 escudos	1.88	100.97	0	4.64	5 473
Real *per capita* other buildings expenditures	Continuous	1 000 escudos	5.51	80.65	0	6.40	4 449
Real *per capita* sports, recreational and schooling infrastructures expenditures	Continuous	1 000 escudos	1.98	59.72	0	3.70	5 473
Real *per capita* social equipment expenditures	Continuous	1 000 escudos	0.31	41.75	0	1.37	5 468
Real *per capita* other expenditures	Continuous	1 000 escudos	2.93	61.35	0	4.61	4 424
Real *per capita* several constructions expenditures	Continuous	1 000 escudos	20.88	214.70	0	17.86	4 449
Real *per capita* overpasses, streets and complementary works expenditures	Continuous	1 000 escudos	4.41	84.22	0	5.82	5 470
Real *per capita* sewage expenditures	Continuous	1 000 escudos	2.38	69.09	0	3.89	4 450
Real *per capita* water capitation, treatment and distribution expenditures	Continuous	1 000 escudos	2.94	100.28	0	4.91	4 450
Real *per capita* rural roads expenditures	Continuous	1 000 escudos	5.91	152.86	0	8.79	5 474
Real *per capita* infrastructures for solid waste treatment expenditures	Continuous	1 000 escudos	0.22	98.90	0	2.07	4 442
Real *per capita* other expenditures	Continuous	1 000 escudos	4.01	122.24	0	6.88	4 175
Real *per capita* capital transfers expenditures	Continuous	1 000 escudos	26.06	249.74	3.04	19.48	5 741
Population Density	Continuous	Inhabitants by Km^2	278.64	9 688.55	6.72	877.52	6 053
Election Year	Dummy		0.27	1	0	0.44	6 056
Election Year and Year Before	Dummy		0.54	1	0	0.49	6 056
Majority	Dummy		0.58	1	0	0.49	6 049
Re-candidate_1	Dummy		0.20	1	0	0.40	5 789
Re-candidate_2	Dummy		0.42	1	0	0.49	5 631
Right	Dummy		0.47	1	0	0.49	6 049
Legislative Election Year	Dummy		0.36	1	0	0.48	6 056

Table 2. Tests on real *per capita* total capital expenditures

	1	**2**	**3**	**4**	**5**
Exp(-1)	.27 (27.04)***	.27 (26.85)***	.28 (27.78)***	.28 (27.89)***	.28 (28.12)***
Cap_Transf	.86 (64.28)***	.86 (64.36)***	.86 (65.11)***	.85 (65.12)***	.85 (65.20)***
Elect_Year	1.91 (2.10)**	2.56 (2.77)***	1.04 (2.93)***	1.94 (5.14)***	2.69 (6.17)***
Year_Bef_El		1.04 (1.21)		2.45 (6.94)***	3.34 (7.63)***
Majority	1.62 (3.82)***	1.27 (2.55)**	1.50 (3.89)***	1.55 (4.02)***	1.51 (3.92)***
Maj*Elect_Year	-.69 (-.91)	-.31 (-.40)			
Maj*Year_Bef_El		.79 (1.08)			
ReCan*Elect_Year	-.25 (-.29)	-.23 (-.26)			
ReCan*Year_Bef_El		1.08 (1.37)			
Leg_Elect_Year					1.41 (3.42)***
Adjusted R^2	.81	.81	.81	.81	.81
N. observat.	5 193	5 087	5 298	5 298	5 298

Notes: - T-statistics are in parentheses;
- Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%; and * 10%.
- Models estimated by OLS, controlling for fixed effects.

Table 3. Tests on real *per capita* total investment expenditures

	1	**2**	**3**	**4**	**5**
Exp(-1)	.30 (26.43)***	.30 (25.85)***	.31 (26.80)***	.30 (25.85)***	.30 (26.03)***
Exp(-2)	-.06 (-5.63)***	-.05 (-4.77)**	-.05 (-4.95)***	-.05 (-4.77)***	-.06 (-5.21)***
Cap_Transf	.77 (65.38)***	.77 (65.20)***	.77 (65.20)***	.77 (65.24)***	.77 (65.32)***
Elect_Year	2.01 (2.50)**	2.91 (3.52)***	2.41 (7.34)***	2.96 (4.07)***	3.62 (4.77)***
Year_Bef_El		1.05 (1.37)		1.46 (2.19)**	2.14 (3.04)***
Majority	1.37 (3.44)***	1.02 (2.13)**	1.28 (3.47)***	1.26 (3.44)***	1.27 (3.46)***
Maj*Elect_Year	-.29 (-.44)	-.65 (-.83)			
Maj*Year_Bef_El		.73 (1.09)			
ReCand*Elect_Year	.38 (.50)	.41 (.53)		.40 (.52)	.30 (.39)
ReCan*Year_Bef_Elect		1.33 (1.90)*		1.35 (1.94)*	1.35 (1.93)*
Leg_Elect_Year					1.20 (3.04)***
Adjusted R^2 N. observat.	.82 4 754	.83 4 648	.82 4 858	.83 4 648	.83 4 648

Notes: - T-statistics are in parentheses;
- Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%; and * 10%.
- Models estimated by OLS, controlling for fixed effects.

Table 4. Tests on real *per capita* investment components

	Investment Components			
	Land Acquisition	**Housing**	**Other Buildings**	**Several constructions**
Exp(-1)	.19 (11.51)***	.42 (25.50)***	.35 (20.37)***	.28 (19.92)***
Exp(-2)		-.12 (-7.10)***	-.08 (-4.53)***	-.06 (-4.81)***
Exp(-3)			-.05 (-3.17)***	
Cap_Transf	.01 (7.70)***	.02 (5.47)***	.14 (17.01)***	.61 (47.35)***
Pop_Density	-.0001 (-.43)	-.003 (-3.83)***	-.0007 (-.45)	.0006 (.27)
%PopUnder15	-.03 (-2.65)**	.01 (.43)	.04 (.77)	.05 (.69)
%PopOver65	.01 (.50)	.07 (.1.52)	-.02 (-.29)	-.24 (-1.93)*
Elect_Year	.03 (.47)	.08 (.52)	1.21 (4.61)***	2.34 (5.85)***
Year_Bef_El	.25 (3.45)***	.05 (.36)	.59 (2.31)**	1.60 (4.23)***
Majority	.11 (1.67)	.26 (1.69)*	.85 (3.37)***	.11 (.32)
Right	-.03 (-.35)	.36 (1.81)*	-.06 (-.21)	.03 (.06)
Leg_El_Year	.31 (4.68)***	.006 (.04)	.60 (2.34)**	-.18 (-.46)
Adjusted R^2	.17	.32	.38	.80
N. observations	4 805	4 230	3 530	3 807

Notes: - T-statistics are in parentheses;
- Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%; and * 10%.
- Models estimated by OLS, controlling for fixed effects.

Table 5. Tests on Other Buildings and Several Constructions components

	Other Buildings	***Several Constructions***				
	Other	**Overpasses, streets & compl. work**	**Sewage**	**Water captation, treatment and distribution**	**Rural roads**	**Other**
Exp(-1)	.30 (17.50)***	.36 (25.95)***	.54 (28.73)***	.39 (21.99)***	.34 (22.63)***	.33 (18.69)***
Exp(-2)	-.04 (-2.34)***		-.07 (-3.57)***	-.06 (-3.37)***	-.07 (-4.94)***	-.11 (-6.42)***
Exp(-3)				-.07 (-3.82)***		
Cap_Transf	.06 (10.93)***	.07 (12.16)***	.04 (9.41)***	.08 (14.01)***	.20 (24.60)***	.12 (14.10)***
Pop_Density	-.0002 (-.25)	-.001 (-1.39)	-.0001 (-.16)	-.00005 (-.04)	.0004 (.30)	.0009 (.49)
%PopUnder15	.02 (.56)	-.08 (-2.45)**	.09 (3.18)***	.10 (2.63)***	.04 (.95)	-.07 (-1.30)
%PopOver65	.06 (1.11)	.12 (2.32)**	.09 (2.24)**	-.23 (-3.90)***	-.42 (-5.08)***	.14 (1.61)
Elect_Year	.80 (4.17)***	.79 (4.11)***	.06 (.48)	.26 (1.37)	.80 (3.16)***	1.31 (4.81)***
Year_Bef_El	.57 (3.20)***	.62 (3.23)***	.22 (1.70)*	.49 (2.64)***	.16 (.66)	.84 (2.97)***
Majority	.39 (2.21)**	.09 (.53)	-.20 (-1.59)	.01 (.09)	.23 (.95)	.09 (.35)
Right	.20 (.88)	-.02 (-.09)	.10 (.64)	.46 (1.98)**	-.82 (-2.62)***	.04 (.12)
Leg_El_Year	-.02 (-.11)	.29 (.1.66)*	.34 (2.54)**	.49 (2.66)***	-.15 (-.62)	-.34 (-1.24)
Adjusted R^2	.29	.43	.48	.44	.58	.43
N. observat.	3 802	4 801	3 807	3 530	4 223	3 290

Notes: - T-statistics are in parentheses;
- Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%; and * 10%.
- Models estimated by OLS, controlling for fixed effects.