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*"Elections and Governments` Behavior
An Application to Portuguese Municipalities"*

Cesar Coelho

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NÚCLEO DE INVESTIGAÇÃO EM POLÍTICAS ECONÓMICAS
UNIVERSIDADE DO MINHO

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Elections and Governments' Behaviour
An Application to Portuguese Municipalities

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Abstract:

Governments have an important role at defining the course of the economy. It is crucial, therefore, to understand their behaviour, their motivations and the factors underlying their policies, once the economy evolution can not be dissociated from the institutional and political background. This paper tests the relation between the economy and politics at the local administration level. Specifically, using a Portuguese municipalities' panel dataset, it tests opportunistic and partisan behaviour of local governments, either on instruments of local economic policy or on local economic outcomes. The main findings are: (i) local governments adopt an opportunistic behaviour, observed both on instruments and outcomes; and (ii) there is no evidence of partisan behaviour whatsoever. These results lead to important issues at light of the Stability and Growth Pact requirements.

Keywords: political business cycles, political economy, government behaviour

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1. Introduction

Governments are a major player on the definition of economic outcomes. Their choices on issues like fiscal and monetary policy, trade and foreign policy, market regulation, or income redistribution can decisively influence the course of the economy. Having this significant role in mind, it is crucial to understand Governments behaviour, namely their motivations and the forces that lie behind their decisions and policies. The traditional perspective of policymaking, where a benevolent social planner's exclusive purpose is to maximize the welfare of a representative individual, fails to rationally explain why we observe certain cyclical economic fluctuations, or why economies exhibit particular performances at some moment in time. A political-economic framework enlightens these cyclical fluctuations, by accounting for institutional and political constraints on policymaking, and emphasizing the role of policymakers' ideological and opportunistic incentives. These incentives are one of the factors most appointed by economists and political scientists as underlying governments' behaviour, and allow understanding why policies initially suboptimal and scarce, are in fact the outcome of rational behaviour and agents maximizing their utility. Governments have the incentive to apply policies accordingly with their ideological goals, and to strategically use policies to manipulate the economy and influence their reelection prospects. By doing so, they create a policy and economic bias in the current period and constrain policy and economic performance in future periods.

The research streams basically in two leading lines, following the seminal works of Downs (1957), by one side, and Hotelling (1929) and Key (1966), on the other. Downs stresses that the incumbent's main purpose is being reelected, which will depend essentially on voters' inference, based in his past policies and actions, about his future behaviour¹. Hotelling and Key present a different perspective, introducing the concept of retrospective voting. They argue that the incumbent concerns mainly in achieving his ideological goals, and that voters largely ignore his past policies and actions, either focusing on

¹ This line of research led to the Opportunistic Model of the Political Business Cycle, first modelled by Nordhaus (1975) and MacRae (1977).

economic performance and outcomes². In a slightly different and unifying perspective, Frey and Schneider (1978) address a model where governments' behaviour is merely ideological, but will reveal an opportunistic behaviour and strategically manipulate instruments of economic policy if they notice their popularity beneath some arbitrary level near elections.

Latest research³ can be allocated between these two different perspectives. It departs, in both perspectives, from the basic ideas of time inconsistency and credibility of policies, and has some form of uncertainty as key element, either about government competence, preferences over economic outcomes, or election results. In the research line of Downs and opportunistic behaviour by governments⁴, Rogoff and Sibert (1988) and Rogoff (1990), departing from uncertainty about government competence, infer that governments will use monetary or fiscal policy to signal the highest competence possible (referred as the ability to generate higher revenue or level of public services), maximizing their reelection prospects. In the same line, Alesina and Cukierman (1990) argue that governments face a trade-off between the policies that maximize their chances of reelection and their most preferred policies. In this case uncertainty is about governments' actions or policies, which are not observed, complying voters to use observed measures of economic performance as proxies of incumbents' policy preferences. Finally, Harrington (1993) develops a model that joins both approaches, stating that governments' opportunistic behaviour can be observed either on economic policies or economic outcomes.

Following the research line of Hotelling and partisan government behaviour⁵, on other hand, Alesina (1987) and Alesina and Sachs (1988) present a model based on uncertainty about election outcomes, which leads to cyclical economic fluctuations on measures of economic performance like inflation, income, or unemployment. Tabellini and Alesina (1990) present a model where there is uncertainty about future majorities' preferences on budget composition and

² From this line of research arises the Partisan Model of the Political Business Cycle. Hibbs (1977, 1982) and Fiorina (1981) constructed the conceptual framework of the Partisan Model.

³ We can find extensive survey of the literature in Gärtner (1994), Alesina, Roubini, and Cohen (1997), Drazen (2000) or Persson and Tabellini (2002).

⁴ Research has developed with contributions of Rogoff and Sibert (1988), Persson and Tabellini (1990), Rogoff (1990) and Harrington (1993), who reconciled the Opportunistic Model of PBC with rational expectations.

⁵ Chappel and Keech (1986), Alesina (1987), and Alesina and Sachs (1988) brought rational behaviour into Partisan Models of the PBC.

budget deficits. Under this hypothesis, they conclude that there can be observed significant differences on budget deficits among governments.

This way, rational opportunistic and partisan behaviour can be observed either on economic policy instruments or economic outcomes. The empirical work tests both types of behaviour largely on economic outcomes, and at the central government level. There are a few efforts to apply the research at the local administration level, like Rosemberg (1992) and Baleiras and Costa (2001). These authors present a new explanation concerning local governments' behaviour: they care with their future income in case of electoral defeat, which leads them to boost expenditure before elections in the attempt to maximize their reelection prospects. Literature is still scarce at this level, however.

This paper tests the hypothesis about governments' behaviour at the local administration level. Departing from the ideas of Frey and Schneider (1988), Rosenberg (1992), and Harrington (1993), opportunistic and partisan local government behaviour is tested both on instruments of local economic policy and measures of economic performance, available at the local level. Specifically, using a panel dataset for 86 Portuguese municipalities, the opportunistic and partisan models are tested on components of local government expenditures (as proxies of economic policies) between 1979 and 2000, and on local employment growth (as economic outcome), between 1985 and 2000.

Section 2 presents a short analysis to public finance of Portuguese municipalities, essential to the comprehension of the model applied. The following section presents the model and description of the variables included, and finally empirical results are presented. Concluding remarks follow in last section.

2. Portuguese municipalities' public finance

The Portuguese Republic is a representative democracy that has in the President of the Republic, the Assembly of the Republic, the Government and the Courts its organs with supreme authority. The constitution of 1976

establishes that the democratic organization of the State also includes Local Authorities, which on the mainland are the parishes, municipalities, and administrative regions.

Local Authorities are corporate bodies with representative organs serving the particular interests of the population in their territorial areas, being responsible⁶ for its economic development, organization, and for the supply of public goods and services like water, clearance, healthcare, culture, sports, environment, public security, or transportation.

Town councils have a major role between these representative organs⁷, stated not only by the weight they have in Local Authorities public finances, but also by the burden of their duties, once it is the town council who proposes and executes the annual municipal budget, and entails the municipality plan options to follow. The budgetary process is homogeneous among Portuguese mainland municipalities, which have autonomy to establish and manage their own budget, workers, and heritage, leaving an inspecting and regulating role to central government. Therefore, the autonomy at the disposal of local governments to establish their own budgets is exercised between institutional and ruling boundaries imposed by central governments in the local public finance law⁸.

In Portuguese municipalities, the town council mayor has more flexibility to influence local expenditures than local revenues, and inside expenditures he can more easily manipulate capital expenditures than current expenditures⁹, which is the reason why the analysis will focus mainly the occurrence of political business cycles in the capital expenditures of town councils. Investment expenditures are one of the most important components of capital expenditures¹⁰, and include (1) acquisition of land, (2) housing, (3) other buildings, (4) diverse constructions, (5) transport material, (6) machinery and equipment, and (7) other investments. (3.1) sports, recreational and school infrastructures, (3.2) social equipment, and (3.3) other investments in other

⁶ Law n.º 159/99 enacts the responsibilities of Local Authorities.

⁷ Local Authorities representative organs are the Town Council, the Municipal Assembly, and the Parishes Council.

⁸ Since its institution, Local Authorities public financing has been ruled by Law 1/79, Decree-Law 98/84, Law 1/87, and the current Law 46/98.

⁹ Transfers from central government and E.U. to local governments have a significant weight in total revenue of Local Authorities. In other hand, salaries are an important component of current expenditures, making them more inflexible.

¹⁰ The categories of municipalities' expenditures and revenues are defined in the local public finance law.

buildings are part of other buildings, while diverse constructions include (4.1) overpasses, streets and complementary school, (4.2) sewage, (4.3) water caption, treatment and distribution, (4.4) rural roads, (4.5) infrastructures for solid waste treatment, and (4.6) others.

Having in mind the rules and institutional constraints imposed by central governments, town councils have freedom to decide when, how much and on which of these components they will invest, opening space to partisan or opportunistic behaviour.

3. Methodological issues

The analysis of political business cycles is based in a balanced panel dataset of the 86 municipalities belonging to North region Nuts II¹¹. Partisan and opportunistic behaviour of local governments are tested both on the municipalities' budget balance and expenditures between 1979 and 2000, as measures of local instruments of economic policy, and on the employment growth rate between 1985 and 2000, as proxy of local economic outcomes.

To perform the analysis we use the following autoregressive model¹²,

$$Y_{it} = \alpha(L)Y_{it} + \beta X_{it} + \eta_i + v_{it}, \quad i = 1, \dots, N; \quad t = 1, \dots, T \quad (1)$$

where Y_{it} is the dependent variable¹³ in the municipality i , year t (mainly, it refers to the expenditure category or to the employment growth rate of municipality i in year t). $\alpha(L)Y_{it}$ are the lagged values of the dependent variable. X_{it} is a vector of political and control explanatory variables. η_i is a time invariant individual specific effect that allows sectional heterogeneity, and v_{it} is a disturbance term.

¹¹ Territorial Unit Nomenclature, level 2.

¹² This analysis follows the specification used in Alesina and Roubini (1992), and Alesina, Roubini and Cohen (1997).

¹³ Budget balance, total expenditures, total current expenditures, total capital expenditures, and all the capital expenditures components referred in the previous section are the dependent variables to be used in when government behaviour is tested in local instruments of economic policy (all expenditure and other nominal variables are expressed in *per-capita* terms at 1995 prices). As local economic outcomes, dependent variables are the employment growth rate, number of firms' growth rate, and employment growth rate by sector.

Two dummy variables were constructed to test the opportunistic hypothesis. *Electoral Year*_{it} assumes value 1 when year *t* is an election year, and 0 otherwise. *Year Before Elections*_{it}, by its turn, assumes value 1 when year *t* is the year previous to the election year, and 0 otherwise. Local elections in Portugal were held in 1976, 1979, 1982, 1985, 1989, 1993, 1997, and 2001, always in December. The coefficients associated to these variables should be positive, once it is expected a boost in expenditures (or in employment) from a government adopting an opportunistic behaviour. To test the partisan behaviour, a dummy variable *Left*_{it} has been settled, taking value 1 when a left-wing party detains the town council of the municipality *i* in year *t*, and 0 otherwise.

A set of control variables is included in the estimations. When the dependent variable is an expenditure category, the corresponding category of transferences is used as control variable¹⁴. When the dependent variable is the employment growth rate, Gross Domestic Product real growth rate is the control variable. A set of demographic control variables is included in all regressions. *%Population Under 15*_{it} is the percentage of population under fifteen years old of the municipality *i* in year *t*; *%Population Above 15*_{it} is the percentage of population above sixty five years; *Population Density*_{it}; *Coast*_{it} is a dummy variable assuming value 1 in municipalities that belong to districts along the coastline (richer and more developed), and 0 otherwise; *Population Category*_{it}, which assumes value 1 when municipality is Oporto, 2 for municipalities with population over 40000, 3 for municipalities with population between 10000 and 40000, and 4 for the remaining municipalities¹⁵. Table 1 presents descriptive statistics of the series used.

[Insert here Table 1]

Data on local finances and on municipalities population were obtained from the *Direcção Geral das Autarquias Locais* annual publication *Finanças Municipais*, published from 1979 to 1983 and from 1986 to 2000. For the

¹⁴ Given the weight of transferences from central administration and from the E.U. to local governments in their revenues, it is expected that expenditures will be very sensible to changes in transferences.

¹⁵ These categories follow the ones used in legislation to establish the mayors' salaries.

missing years some of the series were obtained directly in municipalities¹⁶, but data is still incomplete. The percentages of population under 15 and above 65 years old were collected in the 1970, 1981, 1991 and 2001 *Census* and in the *Anuário Estatístico Regional* (Regional Statistical Yearbook) published by the Portuguese National Institute of Statistics (INE). Series on the area of municipalities were gathered from the Markttest's *Sales Index* dataset. The consumer price index was obtained from the *Organization for Economic Cooperation and Development Statistical Compendium*, and data on employment was acquired in the Labour and Social Security Cabinet's (*Ministério da Segurança Social e do Trabalho*) *Quadros de Pessoal* dataset. Political data was obtained from the Portuguese National Electoral Commission (*Comissão Nacional de Eleições*) and from the Technical Staff for Matters Concerning the Electoral Process (*Secretariado Técnico para os Assuntos Eleitorais*).

Arellano and Bond (1991), Blundell and Bond (1998) and Bond (2002) state that the OLS and the Within Groups estimators of α and β in equation 1 are biased and inconsistent. In order to obtain asymptotically efficient estimators, Arellano and Bond (1991) propose an estimator based in the Generalised Method of Moments (GMM), which departs from the first-differencing transformation of equation 1 and treats the model as a system of equations, one for each time period,

$$\Delta Y_{it} = \alpha(L)\Delta Y_{it} + \beta\Delta X_{it} + \Delta v_{it}, \quad i = 1, \dots, N; \quad t = 1, \dots, T \quad (2)$$

This estimator, known as first-differenced GMM, uses as moment conditions in the above differenced equation the lagged levels of predetermined and endogenous variables (instruments of their differenced values), and first differenced values of strictly exogenous variables. Supposing the strongest assumption that there is no contemporaneous correlation, and that the X_{it} series is strictly exogenous and correlated with the individual effects η_i , the vector $(v_{i,1}, \dots, y_{i,t-2}, x_{i,1}, \dots, x_{i,T})$ form the set of all available instruments that can be used in equation 2.

Despite, the first differenced GMM estimator presents a problem, once lagged values of the variables levels are poor instruments for first differences,

¹⁶ These series were kindly given by the Economic Policies Research Unit.

mainly when variables show persistence in time. Further moment conditions are available if, however, we assume that X_{it} series is uncorrelated with the individual effects η_i . This is the case in Blundell and Bond (1998), who propose an extended version of the first-differenced GMM, known as system GMM. In this case a new set of valid instrumental variables is available for the untransformed levels equation, making the system GMM estimator a combination of the set of moment conditions specified for the equations in first differences with these additional moment conditions specified for the equations in levels¹⁷.

Estimates stressed in this study are obtained using the two step variant of the system GMM estimator, asymptotically more efficient than the one step variant after applying the finite-sample correction to the two step covariance matrix suggested by Windmeijer (2000), in order to correct the downward biases in the estimates of the standard error.

4. Opportunistic and partisan behaviour: empirical results

We begin by testing opportunistic and partisan behaviour of local governments in the local instruments of economic policy. Table 2 presents the system GMM estimates for the regressions on total expenditures, total current expenditures, total capital expenditures, and budget balance. Total transfers from the central administration and the E.U. to municipalities, current transfers, and capital transfers are the transfers categories used as control variables, respectively, in the total expenditures, current expenditures, and capital expenditures regressions. At the bottom of each table are presented the $m1$ and $m2$ statistics suggested by Arellano and Bond (1991) to test serial correlation of first and second order, respectively, and the Hansen J statistic to test over-identifying restrictions¹⁸.

¹⁷ Efficiency is increased by joining the equation in levels to the system. In this equation, levels of predetermined and endogenous variables are instrumented with lags of their own first differences.

¹⁸ The Hansen J statistic is robust to heteroskedasticity or autocorrelation, and consists in the minimized value of the two step GMM criterion function.

[Insert here Table 2]

All variables present statistical evidence of opportunistic behaviour. In the electoral year and in the preceding year total, current, and capital expenditures are larger than in the remaining years, with the particularity of the opportunistic effect having a bigger magnitude in the year before elections. Everything else constant, real *per capita* total expenditures (1995 prices) increase on average by 12,01 euros in the electoral year and 16,47 euros in the previous year, which corresponds to an increase of 4,42% and 5,65% relative to the sample average, respectively. Those increases are of 8,54 euros in the year before elections (the only statistically significant), in the case of capital expenditures, and 1,46 euros in the same year, in the case of current expenditures (relative increases of 5,09% and 1,19%, respectively). The budget balance, by its turn, decreases 28,51 euros in the electoral year, and 10,89 euros in the preceding year (respective relative changes of).

Left is the variable that captures politicians' partisan behaviour. Estimates are only marginally significant (10% level) in the total and capital expenditures regressions, and no significant at all in current expenditures, and all indicate that right-wing governments have larger expenditures than left-wing ones. Just in the budget balance there is a statistically significant partisan effect, indicating that left-wing local government budgets surpass on average 71,77 euros per person (1995 prices) the budgets of their right-wing counterparts.

In what concerns to control variables, as expected, in all expenditure regressions the estimate corresponding to the transferences category is positive, indicating a positive impact of transferences in expenditures. The weight of the population under 15 years old seems to be associated at smaller expenditures and an increase in the budget balance. With the opposite effect, municipalities with a larger percentage of population above 65 years old or municipalities located in the coast have larger expenditures and a decrease in their budget balances.

In an attempt to induce more detail in the analysis, regressions over investment expenditures components were run. Significant results are shown in Table 3¹⁹.

[Insert Table 3 here]

With the exception of housing, opportunistic effects begin on the year before elections in all other investment expenditures components. Total investment expenditures, everything else constant, are larger on average by 5,73 euros per person (1995 prices) in the electoral year, (relative increase of 3,95% to the sample average) and 7,65 euros in the preceding year (5,28%). These values are, respectively, of 3,43 euros (14,19%) and 6,77 euros (28,03%) in other buildings expenditures, 4 euros (12,74%) and 1,68 euros (5,36%) in rural roads (diverse constructions) expenditures, 2,87 euros (36,98%) in housing expenditures (in the electoral year, the only estimate statistically significant), and 6,02 euros (12,33%) in total diverse constructions expenditures (in the year before elections). Statistically significant partisan behaviour, in other hand, is encountered only in total investment expenditures. Left-wing local governments' investment expenditures are, on average, lesser by 23,98 euros per person than investment expenditures of right-wing local governments. There are other investment expenditures components where right-wing parties seem to have smaller expenditures levels than their left-wing counterparts. This sign variability reinforces the lack of evidence favouring politicians' partisan behaviour on local instruments of economic policy, and enlightens opportunistic behaviour at this level as the only significant result stressed by the analysis. Similar results were achieved, for instance, in Galli and Rossi (2002), or Veiga and Veiga (2004)²⁰.

Tests of opportunistic and partisan behaviour on local economic outcomes are shown in tables 4 and 5. Synthetically, evidence indicates that employment

¹⁹ Partisan and opportunistic behaviour have been tested also in current and other capital expenditure components. These results are available upon request.

²⁰ Other studies find evidence of partisan behaviour at local level. Allers, De Haan and Sterks (2001) is one example.

and number of firms' growth accelerate in the electoral year²¹, and are relatively insensible to partisan effects. Table 4 presents the results for these variables:

[Insert Table 4 here]

Coefficients associated to the electoral year variable present in both cases the expected sign and are statistically significant. Everything else constant, municipalities' employment growth rate increases, on average, by 0,034 per hundred points in the electoral year relative to other years (which represents a relative increase to the sample average of 0,425%). This increase is of 0,030 per hundred points (0,283%) in the number of firms' growth rate. There is a statistically significant partisan effect in the number of firms' growth rate, indicating that with left-wing mayors this variable is smaller by 0,203 per hundred points, relative to right-wing mayors. This partisan behaviour is not confirmed, however, in the regressions on employment growth rate by activity sector, presented in Table 5²² (this is here again reinforced by the sign's variability of the coefficient associated to the left variable).

[Insert Table 5 here]

This table presents the results for the activity sectors which show more sensibility to the political sector, and indicates consensual results in what concerns to the opportunistic behaviour at local level economic outcomes. In the electoral year, the employment growth rate increases, on average, by 0,139 per hundred points (relative change of 0,72%) in the non mineral metals sector, 0,054 (0,26%) in the construction sector, 0,036 (0,32%) in the trade sector, and 0,184 (0,55%) in the services to firms sector. With the exception of a marginally significant effect in construction, there is no evidence of partisan behaviour in the regressions on employment growth by activity sector. We can conclude that municipalities present significant opportunistic behaviour in the economic outcomes, but present no conclusive partisan behaviour. This result on local

²¹ As the year before elections' variable presents no significant results, it was suppressed from regressions on economic outcomes.

²² This table presents the most significant results. Full results are available upon request.

economic outcomes is in a certain way consistent with the mayor's opportunistic behaviour denoted in the local instruments of economic policy. In fact, the manipulation of municipalities' finances can help to explain, at least in part, the effects observed in their employment growth rates. The growth of expenditures here evidenced in the electoral year and, accordingly with presented results, mainly in the year preceding elections can be responsible for the boost of demand and local economy, expanding municipalities' employment growth.

5. Conclusion

From the results on Portuguese municipalities, the main conclusion arising from this work is that local governments denote an opportunistic behaviour, observed both on instruments of economic policy and measures of economic performance. There is no evidence of partisan behaviour by local governments. In particular, in what concerns to instruments of economic policy, (i) there are significant effects of opportunistic behaviour either on aggregate values of expenses, like Total Expenses, Current Expenses, Capital Expenses, and Total Investment Expenses, as (ii) on several investment expenses sub-components, like Housing, Other Buildings - Others, Total Diverse Constructions, and Rural Roads. Two additional considerations on instruments of economic policy deserve notice. First, (iii) the opportunistic behaviour is significant and, generally, presents higher magnitude in the year before elections (Portuguese local elections occur always at the end of fiscal year). Second, (iv) data does not allow reaching an explicit conclusion about partisan behaviour of local governments.

In what respects to economic outcomes, there is (v) significant empirical evidence of local governments' opportunistic behaviour on local employment growth and on the number of firms' growth. We also observe (vi) significant effects of opportunistic behaviour in some industrial sector's municipal employment growth, namely Industry of non Mineral Metals, Construction, Trade, and Industry of Services provided to Firms. (vii) There is no evidence of partisan behaviour by local governments on economic outcomes.

These results lead at two fundamental questions. First, by inducing frequent cyclical fluctuations on local economy, local governments are introducing inefficiencies in the economy and rousing a loss of social utility. Second, more specific, it may become alarming to central governments the uncontrolled use of discretionary policies by their counterparts at the local level, especially if we have in mind the short boundaries available to public finance imposed by the Stability and Growth Pact requirements. Therefore, these results appoint to a growing control of local public finance and the imposition of sharper rules in what concerns to the ability of local borrowing, which would limit the incentive to local governments adopt opportunistic behaviours.

References

- Alesina, Alberto (1987), "Macroeconomic Policy in a Two-party System as a Repeated Game", *Quarterly Journal of Economics*, 102:651-678.
- Alesina, Alberto, and Cukierman, Alex (1990), "The Politics of Ambiguity", *Quarterly Journal of Economics*, 105: 829-850.
- Alesina, Alberto, and Roubini, Nouriel (1992). Political Cycles in OECD Economies. *Review of Economic Studies*, 59:663-88
- Alesina, Alberto, Roubini, Nouriel, e Cohen, Gerald D. (1997). *Political Cycles and the Macroeconomy*. Cambridge, Massachusetts: The MIT Press
- Alesina, Alberto, and Sachs, Jeffrey (1988), "Political Parties and the Business Cycle in the United States, 1948-1984", *Journal of Money, Credit and Banking*, 20:63-82.
- Alesina, Alberto, and Tabellini, Guido (1990), "A Positive Theory of Fiscal Debts and Government ", *The Review of Economic Studies*, 57(3): 403-414.
- Allers, Maarten A., De Haan, Jakob, and Sterks, Cees G. (2001). Partisan Influence on the Local Tax Burden in the Netherlands. *Public Choice*, 106(1/2): 351-363.
- Arellano, Manuel, and Bond, Stephen R. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economic Studies*, 58: 277-297
- Baleiras, Rui N., and Costa, J. Silva (2001), "To be or not to be in Office Again, that is the Question – Political Business Cycles with Local Governments", *Working Paper*, Universidade Nova de Lisboa, Portugal.
- Bond, Stephen R. (2002). Dynamic Panel Data Models: A Guide to Micro Data Methods and Practice. *Portuguese Economic Journal*, 1: 141-162

- Blundell, R., and Bond, Stephen R. (1998). Initial Conditions and Moment Restrictions in Dynamic Panel Data Models. *Journal of econometrics*, 87: 115-143.
- Chappell, Jr., Henry W. and Keech, William R. (1986), "Policy motivation and party differences in a dynamic spatial model of party competition", *American Political Science Review*, 80:881-899.
- Direcção Geral das Autarquias Locais (1979-1983, 1986-2002). *Finanças Municipais*. Lisboa.
- Downs, Anthony (ed.), "An Economic Theory of Democracy", New York: Harper & Row, 1957.
- Drazen, Allan (ed.), "Political Economy in Macroeconomics", Princeton, New Jersey: Princeton University Press, 2000.
- Fiorina, Morris P. (ed.), "Retrospective Voting in American National Elections", New Haven: Yale University Press, 1981.
- Frey, Bruno S., and Schneider, Friedrich (1978), "An Empirical Study of Politico-Economic Interaction in the United States", *Review of Economics and Statistics*, 6(2): 174-183.
- Galli, Emma, and Rossi, Stefania P. (2002). Political Budget Cycles: The Case of the Western German Länder. *Public Choice*, 110(3/4): 283-303
- Gärtner, Manfred (1994), "Democracy, elections, and the macroeconomy: two decades of progress", *European Journal of Political Economy* 10 (1): 85-109.
- Harrington, Joseph E., Jr. (1993), "Economic Policy, Economic Performance, and Elections", *American Economic Review*, 83:27-42.
- Hibbs, Douglas A., Jr. (1977), "Political Parties and Macroeconomic Policy" *American Political Science Review*, 71(4): 1467-1487.
- Hibbs, Douglas A., Jr. (1982), "Economic Outcomes and Political Support for British Governments among Occupational Classes: A Dynamic Analysis", *American Political Science Review*, 76(2): 259-279.
- Hotelling, Harold (1929), "Stability in Competition", *The Economic Journal*, 39: 41-57.
- Key, V. O., Jr. (ed.), "The Responsible Electorate: Rationality in Presidential Voting, 1936-60", Cambridge, Massachusetts: Cambridge University Press, 1966.
- MacRae, C. Duncan (1977), "A Political Model of the Business Cycle", *Journal of Political Economy*, 85(2): 239-263.
- Nordhaus, William D. (1975), "The Political Business Cycle", *The Review of Economic Studies*, 42: 169-170.
- Persson, Thorsten, and Tabellini, Guido (eds.), "Macroeconomic Policy, Credibility and Politics", London, Harwood Academic Publishers, 1990.
- Persson, Thorsten, and Tabellini, Guido (2002), "Political Economics and Public Finance", in Auberbach A., and Feldstein, M., *Handbook of Public Economics*, vol. 3, Amsterdam, North-Holland, 2002.

- Rogoff, Kenneth (1990), "Equilibrium Political Budget Cycles", *American Economic Review*, 80:21-36.
- Rogoff, Kenneth, and Sibert, Anne (1988), "Elections and Macroeconomic Policy Cycles", *The Review of Economic Studies*, 55:1-16.
- Rosemberg, J. (1992), "Rationality and the Political Business Cycle: The Case of Local Government", *Public Choice*, 73:71-81.
- Veiga, Francisco José, e Veiga, Linda Gonçalves (2004c). Ciclos Político-económicos nos Municípios Portugueses. *Actas da II Conferência do Banco de Portugal: Desenvolvimento Económico Português no Espaço Europeu*. Lisboa.
- Windmeijer, F. (2000). A Finite Sample Correction for the Variance of Linear Two-step GMM Estimators. Working-paper 00/19, Institute for Fiscal Studies, London.

Table 1: Descriptive Statistics.

Variable	Number Observations	Average	Standard Error	Minimum	Maximum
<i>Municipalities Finances Variables</i>					
Budget Balance	1753	-1.208	24.841	-257.240	699.638
Capital Transferences	1753	23.165	16.065	3.451	122.525
Current Transferences	1766	22.607	28.259	0	282.320
Total Transferences	1731	46.124	39.239	4.530	336.267
Total Expenditures	1754	58.489	34.447	2.290	318.877
Current Expenditures	1774	24.721	15.302	0	111.412
Capital Expenditures	1761	33.679	22.674	1.890	287.962
Investment Expenditures	1759	29.028	19.444	1.890	181.900
Housing	1698	1.555	4.099	0	69.422
Other Buildings – Others	1356	2.393	3.378	0	37.176
Diverse Constructions	1365	20.259	16.746	0	173.496
Rural Roads	1698	6.287	7.241	0	68.054
<i>Employment Variables</i>					
Employment Growth Rate	1260	0.080	0.190	-0.906	1.784
Number of Firms Growth Rate	1260	0.106	0.182	-0.611	1.849
Employment Growth Rate by Sector:					
Non Mineral Metals	978	0.194	0.920	-0.956	16.333
Construction	1245	0.207	1.147	-0.963	30
Trade	1260	0.111	0.243	-0.622	1.985
Services to Firms	835	0.336	1.114	-0.95	15.5

Notes: - Sources: *Municipal Finances*, DGAJ, 1979-2000; *Quadros de Pessoal*, MSST, 1985-2000.
- Units of finances variables: Thousands of Portuguese escudos.

Table 2: Political effects in municipalities' expenditures.

	Total Expenditures	Current Expenditures	Capital Expenditures	Budget Balance
Y(-1)	0,427 (6,43)***	0,692 (9,10)***	0,170 (4,09)***	-0,071 (-2,13)**
Y(-2)	0,135 (2,97)***	0,177 (3,00)***	---	-0,089 (-4,33)***
Y(-3)	---	0,075 (2,43)***	---	-0,100 (-3,35)***
Transferences	0,165 (1,72)**	0,007 (1,27)	1,065 (8,79)***	---
Electoral Year	2,408 (1,89)**	0,210 (1,05)	1,009 (1,16)	-5,716 (-3,53)***
Year Before Elections	3,302 (2,84)***	0,293 (1,65)**	1,713 (1,81)**	-2,184 (-1,36)*
Left	-5,540 (-1,58)*	-0,201 (-0,24)	-4,318 (-1,41)*	14,388 (1,75)**
Coast	10,623 (1,31)*	0,980 (1,14)	8,182 (2,81)***	-8,946 (-0,32)
% Pop. under 15 years old	-1,985 (-6,64)***	-0,146 (-2,09)**	-0,072 (-0,44)	2,063 (2,13)**
% Pop. above 65 years old	1,152 (1,85)**	0,159 (1,94)**	0,197 (0,51)	-2,651 (-1,68)*
Population Categories	4,815 (0,96)	0,971 (1,69)**	-0,463 (-0,20)	41,656 (2,59)***
Population Density	0,865 (1,22)	0,075 (0,75)	0,426 (1,59)*	1,084 (1,00)
N. of Observations	1455	1359	1616	1343
m1	-2,69	-3,02	-2,56	-1,79
m2	-0,89	-0,41	-0,41	0,26
Hansen	1,00	1,00	1,00	1,00

Notes:

- m1 and m2 are tests for first and second order serial correlation, respectively. These test the first differenced residuals in all regressions.
- System GMM results are two step estimates with heteroskedasticity consistent standard errors and test statistics, corrected for finite samples.
- Hansen is the Hansen J statistic test of the over-identifying restrictions for the GMM estimators, asymptotically X^2 . This test uses the minimized value of the corresponding two step GMM estimators.
- t Statistics in parenthesis. Significance level at which null hypothesis is rejected: ***, 1%; **, 5%; *, 10%.
- Units: Thousands of Portuguese escudos.
- Econometric software used was Stata 8.0.

Table 3: Political effects in municipalities' Investment expenditure components.

	Total Investment Expenditures	Housing	Other Buildings – Others	Total Diverse Constructions	Diverse Const. – Rural Roads
Y(-1)	0,214 (6,83)***	0,549 (6,53)***	0,408 (6,14)***	0,275 (6,42)***	0,399 (9,98)***
Y(-2)	---	-0,119 (-3,27)***	-0,181 (-2,33)**	---	---
Transferences	0,971 (16,30)***	0,059 (2,18)**	0,021 (1,64)**	0,724 (8,76)***	0,186 (4,22)***
Electoral Year	1,148 (1,67)**	0,575 (1,71)**	0,687 (3,16)***	1,029 (1,24)	0,801 (1,63)**
Year Before Elections	1,533 (1,95)**	0,007 (0,04)	1,357 (5,50)***	1,206 (1,86)**	0,337 (1,33)*
Left	-4,807 (-2,29)**	-0,450 (-0,60)	-0,783 (-1,22)	-2,497 (-1,16)	-0,572 (-0,44)
N. of Observations	1614	1301	1158	1243	1492
m1	-4,09	-2,29	-3,53	-3,22	-4,35
m2	-1,46	-0,65	0,34	-1,29	-0,34
Hansen (p-value)	1,00	1,00	1,00	1,00	1,00

- Notes:*
- m1 and m2 are tests for first and second order serial correlation, respectively. These test the first differenced residuals in all regressions.
 - System GMM results are two step estimates with heteroskedasticity consistent standard errors and test statistics, corrected for finite samples.
 - Hansen is the Hansen J statistic test of the over-identifying restrictions for the GMM estimators, asymptotically χ^2 . This test uses the minimized value of the corresponding two step GMM estimators.
 - t Statistics in parenthesis. Significance level at which null hypothesis is rejected: ***, 1%; **, 5%; *, 10%.
 - Units: Thousands of Portuguese escudos.
 - Econometric software used was Stata 8.0.
 - Estimates of demographic control variables suppressed.

Table 4: Political effects in municipalities' employment and number of firms' growth.

	Employment Growth	N. Firms Growth
Y(-1)	-0,298 (-5,86)***	-0,380 (-6,56)***
Y(-2)	-0,205 (-5,38)***	-0,174 (-2,92)***
Y(-3)	-0,154 (-4,65)***	-0,113 (-3,28)***
PIB Growth	0,461 (1,95)**	0,104 (0,38)
Electoral Year	0,036 (2,81)***	0,033 (2,46)***
Left	-0,055 (-1,22)	-0,203 (-2,53)***
Coast	0,009 (0,13)	-0,015 (-0,11)
% Pop. under 15 years old	0,001 (0,06)	-0,017 (-1,32)*
% Pop. above 65 years old	0,004 (0,25)	-0,015 (-0,92)
Population Categories	-0,091 (-1,33)*	-0,184 (-1,79)**
Population Density	-0,035 (-1,98)**	-0,050 (-1,70)**
N. of Observations	1008	1008
m1	-4,03	-3,59
m2	0,06	0,68
Hansen (p-value)	0,99	0,99

- Notes:*
- m1 and m2 are tests for first and second order serial correlation, respectively. These test the first differenced residuals in all regressions.
 - System GMM results are two step estimates with heteroskedasticity consistent standard errors and test statistics, corrected for finite samples.
 - Hansen is the Hansen J statistic test of the over-identifying restrictions for the GMM estimators, asymptotically χ^2 . This test uses the minimized value of the corresponding two step GMM estimators.
 - t Statistics in parenthesis. Significance level at which null hypothesis is rejected: ***, 1%; **, 5%; *, 10%.
 - Units: Thousands of Portuguese escudos.
 - Econometric software used was Stata 8.0.

Table 5: Political effects in industrial sectors' employment growth.

	Non Mineral Metals	Construction	Trade	Services to Firms
Y(-1)	-0,120 (-3,04)***	-0,093 (-3,12)***	-0,405 (-6,33)***	-0,168 (-3,94)***
Y(-2)	-0,078 (-2,42)***	-0,083 (-0,79)**	-0,307 (-5,10)***	---
Y(-3)	---	0,003 (0,19)	-0,221 (-5,06)***	---
PIB Growth	1,633 (1,64)**	0,693 (1,08)	-0,028 (-0,06)	1,251 (0,83)
Electoral Year	0,139 (1,92)**	0,054 (1,40)*	0,036 (1,41)*	0,184 (1,80)**
Left	0,228 (0,79)	-0,063 (-1,39)*	0,228 (1,08)	0,124 (0,22)
N. of Observations	799	993	1008	741
m1	-3,66	-2,72	-4,25	-2,40
m2	0,08	0,03	0,42	-1,13
Hansen (p-value)	1,00	1,00	0,99	1,00

- Notes:*
- m1 and m2 are tests for first and second order serial correlation, respectively. These test the first differenced residuals in all regressions.
 - System GMM results are two step estimates with heteroskedasticity consistent standard errors and test statistics, corrected for finite samples.
 - Hansen is the Hansen J statistic test of the over-identifying restrictions for the GMM estimators, asymptotically χ^2 . This test uses the minimized value of the corresponding two step GMM estimators.
 - t Statistics in parenthesis. Significance level at which null hypothesis is rejected: ***, 1%; **, 5%; *, 10%.
 - Units: Thousands of Portuguese escudos.
 - Econometric software used was Stata 8.0.
 - Estimates of demographic control variables suppressed.

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