

Political cycles and government expenditures: Evidence from Portugal

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Abstract

This paper examines the presence of political cycles in Portuguese governments' expenditures. Two empirical analyses are considered in this study: one using monthly data for the main categories of government expenditures; and the other using annual data for a deeper disaggregation of their components. The results indicate that Portuguese governments act opportunistically regarding the budget surplus and that they also favour capital instead of current spending near elections. Furthermore, right-wing governments tend to be more concerned in reducing expenditures and deficits after the elections. We also find evidence that the choice of the expenditure components to be increased during election periods generally relates to more visible items such as general public services, social protection and health care.

Keywords: Political Budget cycles; Portugal; Elections; Fiscal policy.

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1. Introduction

This paper investigates the presence of political budget cycles in the Portuguese fiscal policy. Policy makers in democracies have clear incentives to use economic policies to their own advantage. Therefore, the influence of electoral concerns and government ideology on short-term economic performance has been an important topic in Public Choice. Empirics has consistently shown evidence of periodical shifts in economic aggregates associated with political motives, although mixed results are found regarding the partisan or opportunistic nature of these cycles. This article focuses on the particular case of government spending and budget, and on the individual case of Portugal. This type of investigation in a European Union country has an intriguing feature. We know that the Stability and Growth Pact constrains UE members' fiscal policy, however not much else really remains to maneuver before elections and, in reality, some studies have found evidence that, although constrained, fiscal policy exhibits political motives. However, Portuguese reality is under-researched especially at the national level and constitutes an excellent testing ground to examine Brender and Drazen's (2005) claim that political budget cycles are a phenomena of new democracies. Furthermore, in recent years we have witnessed a renewed interest on the understanding of fiscal policy determinants and outcomes, more so in the case of a country like Portugal that since the turn of the decade is experiencing budgetary control difficulties.

We use two extensive datasets to explore different levels and different aggregates related to fiscal policy. The first makes use of monthly data for the budget surplus and for the two main components of expenditures: current and capital expenditures. The use of monthly data is an important advantage when it comes to accurately control electoral effects. Also, the disaggregation of total expenditures allows us to check the existence of a

competence signaling process similar to the one described by Rogoff (1990). We then go deeper in the composition of government expenditures by using a second dataset of annual data for the ten main areas of government spending in order to check for political budget cycles.

The results provided by this study are quite interesting. They show an opportunistic behaviour by the Portuguese governments in what concerns to aggregated expenditures and the government budget surplus. They also show that right-wing governments are more concerned in reducing expenditures and the government deficit after the elections than left-wing ones. There is also evidence of strategic manipulation of the composition of expenditures, as more is spent in election years on capital expenditures, probably on items that are highly visible to electorate. Moreover, the component based analysis provides further evidence of Portuguese governments' dissimilar preferences over different expenditure components. Independently of its ideology, they usually choose to increase those expenditure components that have more visibility and impact in terms of electoral return: general public services, social protection and health care.

The article is organized as follows. Section 2 provides a brief review of the literature. Section 3 describes the data and the econometric models to be used in the empirical analysis. The empirical results are presented and discussed in section 4 and section 5 concludes.

2. Review of the literature

The seminal work of Downs (1957) emphasizes the idea that economic strategies are not politically harmless nor political choices are free of economic concerns. To better

understand this relationship numerous scholars have tried to comprehend how the ideological preferences of governments, the electoral agenda, and the competition between parties affect macroeconomic variables. Two main theories emerge from the literature: the political business cycle approach (Nordhaus, 1975) and the partisan theory (Hibbs, 1977). The first assumes that politicians have no policy preferences, so they act "opportunistically" selecting the policies that maximize their electoral support. They create unusual favorable economic conditions before an election and - in order to correct this artificial unbalance - contractionary measures are implemented immediately after the elections. Alternatively, the partisan theory does not view politicians as homogenous, arguing that different parties have different policy objectives, behaving, when in office, in a partisan manner.¹ Specifically, left-wing parties are relatively more concerned with unemployment (growth) than with inflation, whereas right-wing parties are especially worried with inflation control.

In the 1980's and 1990's rational versions of both theories emerged, exploring the assumption that voters form expectations rationally. In a context where competence and asymmetric information are the key elements, both rational partisan models (Alesina, 1987; Alesina and Sachs, 1988) and rational opportunistic models (Rogoff and Sibert, 1988; Rogoff, 1990) resulted in the reduction of policymaker's ability to induce political cycles.

Empirical studies suggest that favorable economic conditions benefit governments (Hibbs, 2006). Partisan behavior seems to be more frequent in developed countries (Alesina and Roubini, 1992; Alesina et al., 1997), while opportunistic behavior appears to

¹ The partisan model generates policy effects after elections, while the opportunist model generates policy effects before elections.

gather more support in developing countries (see, for instance, Brender and Drazen, 2009; Vergne, 2009; and Shi and Svensson, 2006).

Along with the other main economic aggregates, governments' fiscal policy has also been studied to see if it is governed by political as much as economic considerations. The extension of the traditional approaches to fiscal policy is straightforward: boosts in expenditures and/or revenue reductions prior to elections should signal opportunistic behavior, while in the partisan perspective left-wing governments are more prone to budget deficits than their counterparts. The actual modeling of political budgetary cycles came with Rogoff and Sibert's (1988) work that presented a model of adverse selection underlining competence and asymmetric information. A further refinement made by Rogoff (1990) highlighted the need to search budgetary cycles inside the broad aggregates, especially in the composition of government spending. The model considers that the most efficient way for governments to signal competence is to divert spending from capital spending to current spending thus favoring transfers and more visible programs. The idea is to increase those expenditures that send the strongest signals, consequently trading those that generate benefits over time for those that are noticeable immediately.

Several studies, both at national and multi-national level, have provided evidence of the relationship between elections and fiscal policy manipulations. Shi and Svensson (2002a, b; 2006), using multi-country data, consistently capture political budget cycles and show that the effect is significantly stronger in less developed countries. In their latter article they find that, on average, fiscal deficits increases by 22% in election years. For a set of developed countries, Persson and Tabellini (2003) find a political revenue cycle, but no trace of political cycle in expenditures, budget or transfers. Focusing on EU countries

Andrikopoulos et al. (2004) do not find a fiscal electoral cycle, Mink and de Haan (2006) report a budget deficit increase in electoral years and a significant but small partisan effect on fiscal aggregates, while Efthyvoulou (2012) concludes that governments across the EU tend to generate budgetary opportunistic cycles and that these are much larger in the Eurozone countries. Highlighting institutional features, Persson and Tabellini (2002) show that the form of government (presidential or parliamentary) and the electoral rules (proportional or majoritarian) affect the configuration of budget cycles.

Other studies explore the expenditure components. Alesina (1988), for example, reports a small electoral cycle in transfers in the United States. For Canada, the results found by Blais and Nadeau (1992) suggest a short pre-electoral cycle observable on road expenditures and social services, while Potrafke (2010), focusing on direct transfer payments, finds that incumbents increase the growth of public health expenditures in election years. For Portugal there is some relevant research done but restricted to the local governments' political budget cycle. For example, Veiga and Veiga (2007a) report an increase in local governments' total expenditures before elections and a change in their composition that favors items immediately visible to the electorate, namely investment expenditures on overpasses, streets and complementary works, and on rural roads.² One of the main objectives of the present article is to check if this behavior of local authorities is also present at the national level of Portuguese governance.

² Also at local level, Veiga and Pinho (2007) analyze the political determinants related to the allocation of intergovernmental grants and Veiga and Veiga (2007b) find that there is an electoral payoff to opportunistic investment expenditures.

3. Data and econometric model

Two datasets are used in this analysis to explore the presence of opportunism and partisan effects in the composition of Portuguese government expenditures. The first comprises monthly data for the ratio of current and capital government expenditures to the government total expenditures (*CurrExpd* and *CapExpd*),³ government budget surplus (*GovBS*) and unemployment rate (*UR*) over the period 1991:1 to 2013:6, collected from the Bank of Portugal. Most studies use annual or quarterly data, however the use of monthly data has the important advantage of allowing a more accurate control of electoral timings. Following Alesina et al. (1997), some political variables were added to this dataset to control for opportunistic and partisan effects: variables that take value 1 in the previous # months to the elections, including the month of the elections (*PreElect#*); variables that take value 1 in the # months after the elections (*PostElect#*); a variable that takes value 1 when right-wing governments are in office and -1 in case of a left-wing government (*TPart*); variables that takes the value 1 in the # months after a right-wing party has taken office and -1 in the # months in case of a left-wing party (*RPart#*); and some variables equal to previous (*RPart#*) but that only include those cases in which an election changes the ideology of the government from the left to right or from right to left (*CRPart#*). All Portuguese governments have been led by the Social Democratic Party (PSD) or by the Socialist Party (PS), the first being on the right side of the political spectrum and the second on the left. A complete description of the variables is presented in Table A.1 of the Annex.

³ Note that total government expenditures is equal to current plus capital government expenditures, therefore, $CapExpd=1-CurrExpd$. The ratios are used in the empirical analysis because, contrary to their levels, they are stationary (see stationarity tests in Annex).

The second database explores the components of government expenditures in greater depth allowing the investigation of politically driven changes in the composition of expenditures. Here we use a panel of annual data for the 10 components of the Portuguese government expenditures over the period 1990-2011 as defined by the OECD (Table A.2 in Annex presents and describes them). Although each component could be estimated separately as a time series, we opted to organize the components in a panel due to the data's limited time span and to take advantage of the increased number of observations when testing. To control for political cycles we consider a dummy variable, *DPol*, that, when estimating opportunistic effects takes the value of 1 in the electoral year (and 0, otherwise), and when estimating partisan effects takes the value of 1 for left-wing governments (and 0, otherwise).⁴ Descriptive statistics for the variables used in this study are reported in Table A.3 of the Annex.

As we use two particular sets of data, different econometric techniques have to be employed. In the first case, we employ a dynamic time-series analysis where the dependent variables (*CapExpd* and *GovBS*) will depend upon some of their lags, the change in unemployment rate,⁵ and a set of political variables:

$$CapExpd_t = \alpha + \sum_{j=1}^J \gamma_j CapExpd_{t-j} + \beta \Delta UR_t + \lambda Opport_t + \delta Partisan_t + \sum_{i=1}^{11} Mi_t + \varepsilon_t \quad (1)$$

where $t=1991:1, \dots, 2013:6$ and *Mi* represent monthly dummy variables that are included in the model to control for seasonality; in a second set of regressions the dependent variable *CapExpd* is replaced by *GovBS*.

⁴ For further details, see Tables A.1 and A.2 in Annex.

⁵ ADF and PP unit root tests reported in Table A.4 in Annex indicate that it is the first difference in the unemployment rate that is stationary. The other variables are not following a unit root process.

In the panel data analysis we also employ a dynamic model to test for the predictions of the opportunistic and partisan theories on the components of government expenditures:

$$\Delta CompExpd_{it} = \alpha + \gamma \Delta CompExpd_{it-1} + \lambda DPol_t \cdot Comp_i + \eta_i + u_{it} \quad (2)$$

where $i=1, \dots, 10$, $t=1991, \dots, 2011$, and $Comp_i$ is a dummy variable that takes the value of 1 for component i of the government expenditures. As the sum of all shares of the components to the government total expenditures is equal to 1, one of the expenditure components has to be excluded from the regression analysis.⁶

In dynamic estimations the fixed effects estimator is biased. The estimators that take into account that bias can be grouped into: the instrumental variables estimators; and bias-corrected estimators. According to the large sample properties of the GMM methods, the dynamic estimator proposed by Arellano and Bond (1991) will also be biased if employed to our specification given that we only have 10 individual-components in the dataset and a number of time periods significantly larger. Hence, a bias-corrected estimator is more appropriated here. Therefore, we apply Bruno's (2005a, 2005b) bias-corrected least squares dummy variable estimator for dynamic panel data models with small N . The empirical results from the time-series and panel data analyses are presented in the next section.

4. Empirical results

The results for the time-series analysis are presented in Tables 1 and 2. We start by considering as dependent variable the ratio of government capital expenditures to the

⁶ This issue will be clarified below in the analysis of the empirical results, as well as why the first difference of $CompExpd$ is used.

total expenditures (*CapExpd*). Four lags of this variable are needed to control for the autocorrelation in the error term. Lag two of the change in the unemployment rate was also considered given that it provided the highest level of significance for its estimated coefficient. As expected, when the unemployment rate rises, the ratio of capital expenditures decreases, a fact that can be justified by the consequent increase in the current expenditures to pay those additional unemployment subsidies. In the estimations explaining the governments' capital expenditures percentages reported in Table 1, a set of political variables is introduced. The first two regressions try to analyze the government's opportunism regarding the timing of the elections. The first tries to capture the *ex-ante* effect and the second the *ex-post* effect that are predicted by the theory. Several periods were considered before and after the elections but the ones reported in the tables were those that produced the highest significant coefficients.

[Insert Table 1 around here]

On the one hand, we observe that before elections – in particular, half a year before elections – the ratio of government capital expenditures to the total expenditures tends to increase, a result in line with those found by Veiga and Veiga (2007a) for Portuguese local governments. This effect is compensated by a decreased in the ratio of current expenditures to the total.⁷ On the other hand, during a period of six months after the elections, the ratio of government capital expenditures to the total decreases significantly.⁸ These results point to a complete opportunistic cycle that favours capital

⁷ As mentioned above, $CapExpd=1-CurrExpd$ by definition. This means that there is symmetry in the effects when the variable *CurrExpd* replaces *CapExpd* in the regressions. Hence, there is no need to replicate those results here, since the respective coefficients will be the same (as well as the respective standard errors) but with symmetric signs.

⁸ More specifically, half a year before elections this ratio increases by about 1.9 percentage points, while during the six month period after the elections it decreases by about 2.3 percentage points. For longer

expenditures before elections and current expenditures after. Probably the preference for capital expenditures before elections is related to competence signalling. Increased spending on short term interventions in order to improve highly visible infrastructures like, for instance, roads, schools and hospitals; increased spending to speed up the conclusion of infrastructures being constructed to coincide with election dates, and other potential “ribbon cutting” capital expenditures may explain the pre electoral cycle found. In a sense, our results contradict Rogoff’s (1990) model that posits an increase in current expenditures rather than in capital expenditures near elections. However, the key note here is that governments’ should focus on visible expenditures as they send strong competence signals. So capital versus current spending in Rogoff’s model seems to be a bit different than the two typical types of expenditures found in accounting. As such, the conclusion drawn from our results is that probably the Portuguese governments give preference to visible capital expenditures rather than visible current expenditures when elections are approaching and the contraction that follows the elections corrects the unbalance by favouring current expenditures.

Next, we test for the presence of partisan effects. We start by testing the traditional partisan theory using a dummy that takes value 1 for right-wing governments and -1 for left-wing ones. No significant effects are found in this case. The same result is observed when we test for the rational partisan theory using the variable *RPart#*. Several periods after the elections were considered, but none has produced significant coefficients. Hence, we report the results for the one that produced the lowest *p*-value (*RPart6*). However the degree of electoral surprise may be greater when the party elected represents an ideological shift in power. Alesina et. al. (1997) argue that the electoral

periods before the elections, no significant coefficients were found; after the elections, we were able to find some significant effects (but only marginally) until nine months after the elections have occurred.

outcome of re-election can be less surprising than an actual ideological change in government. Therefore, as a refinement of the *Rpart#* variable, we employ *CRPart#* that takes the value 1 (-1) in the # months starting with a change to a right-wing (left-wing) government. Results in regression 6 provide an interesting result: right-wing governments seem to be more prone to cut on capital expenditures after elections than left-wing parties. More specifically, while both types of governments tend to restrict capital expenditures until about six months after the elections as part of the opportunistic behaviour, right-wing governments tend to promote deeper and longer cuts in time; they tend to keep those cuts until about two years after the elections, exhibiting a partisan preference in accordance with theoretical expectations. This conclusion is also corroborated when all political variables are included in the model (regression 7) and even when the growth rate of government capital expenditures (homologous variation) is used instead of its ratio to the government total expenditures (see column 8). This last estimation shows that the results found using the ratio of capital expenditures to total expenditures still hold in the more traditional growth rate approach.

Additionally, we also test for the presence of opportunism and ideological effects concerning the government budget surplus (*GovBS*). The respective results are shown in Table 2. Only lag 12 of the dependent variable is needed to control for the autocorrelation in the error term. Regarding the unemployment rate, its fifth lag is the one that provides the highest level of significance for its estimated coefficient. The results show that when the unemployment rate rises, the government surplus decreases. This can be due to the consequent increase in the current expenditures with unemployment subsidies and, at the same time, this may indicate a slowdown in the economic activity, and a consequent decrease in tax revenues.

[Insert Table 2 around here]

In the following analysis, we pursue a similar pattern to the one considered in Table 1. We start by controlling for the presence of political opportunism before considering the partisan effects. In columns 1 and 2, we observe that before elections – in particular, a quarter before elections – the government budget surplus decreases (or the deficit increases) on average by about 300 millions of euros; however, after the elections no significant effects are found even though the coefficient on *PostElect12* is positive.⁹ This means that, in this case, the political opportunism is only significantly felt before the elections and that probably has its origin in the expenditures' pre-electoral boost reported in Table 1. After elections the receipts might be counterbalancing the contraction of expenditures reported previously.

Regarding the partisan or ideological effects, we find evidence of both traditional and rational partisan effects. However, the rational partisan effects have proved to be more relevant than the traditional ones (see regression 6). The change in government ideology with the elections is also important. Regression 5 shows that a new right-wing government will contribute to an increase of around 200 millions of euros in the government budget surplus until about two years after the elections. Nevertheless, this effect remains valid during the first year after the elections even if no change in the ideology is verified (see regressions 4 and 6).

When both the opportunistic and partisan effects are controlled for at the same time in the same regression (columns 7 and 8), we confirm the importance of both effects simultaneously and can conclude that Portuguese governments tend to act opportunistically before the elections, with right-wing governments being more

⁹ A period of 12 months after the election is chosen because it is the one that presents the lowest *p*-value for the respective estimated coefficient.

concerned with budget control than the left-wing ones, especially after the elections. This result combines features of both partisan and opportunistic theory and it is in line with Frey and Schneider's (1978) argument that before elections governments' tend to act opportunistically to gather public support and afterwards follow ideological preferences.

In sum, this first analysis shows that Portuguese governments act opportunistically regarding expenditures and the respective budget surplus. Moreover, our results also show that right-wing governments tend to be more concerned in reducing expenditures and the government deficit after the elections. However, two important questions remain to be answered: Which components of the expenditures play the main role in that opportunistic behaviour? Furthermore, do right or left-wing governments have a similar behaviour regarding the composition of those expenditures? These are two important issues that we try to answer in the next step of this study.

To proceed with that analysis we collected data for the components of government expenditures from the OECD. According to the classification of governments' functions (COFOG), regarded by the OECD as the appropriate basis to examine the structure of government expenditure, there are ten components to be considered: general public services; defence; public order and safety; economic affairs, environmental protection, housing and community amenities; health; recreation, culture and religion; education; and social protection. Each of these expenditures is observed over the period 1990-2011. This means that we can form a panel where the individuals are the components of the expenditures which are observed over that period of time.

As the time span is relatively small, instead of the traditional time series analyses a dynamic panel data model is employed to detect on which components Portuguese governments tend to act politically. As the number of individuals/components is small, we

employ Bruno's (2005a, 2005b) bias-corrected least squares dummy variable estimator to correct for the bias in this dynamic model. The Blundell and Bond (1998) estimator is used as the initial estimator where the instruments are collapsed as suggested by Roodman (2009), which avoids using invalid or too many instruments. We undertake 25 repetitions of the procedure to bootstrap the estimated standard errors.¹⁰ The dependent variable is the change in the respective expenditures component as percentage of the total expenditures.¹¹ To control for the opportunistic effects, we multiply a dummy that takes the value of 1 in the election years (*DPol*) by each of the individual components (here also represented by an individual dummy variable that takes the value of 1 for the respective component). As the sum of the percentages for all components adds up to 100%, this means that we can only use nine of the components in the estimations. We start by leaving the defence component out of the estimations and considering social protection as the baseline category for comparisons. Hence, all but one of the remaining nine multiplicative dummies are included in the model. The results are shown in Table 3.

[Insert Table 3 around here]

Our findings indicate that expenditures on general public services tend to increase in election years at the expenses of social protection; a similar effect is found for health expenditures, but expenditures in economic affairs present a substantial decrease in election years (see column 1 in Table 3). The other components of expenditures do not change significantly relatively to social protection. The results are very similar when we

¹⁰ The results do not qualitatively change with more repetitions (50, 100 or 200) or when the Arellano and Bond (1991) estimator is chosen as initial estimator. Those results are available upon request.

¹¹ The first difference of the variable is used because the panel unit root tests are not clear regarding its stationarity in level. The Fisher unit root tests based on the Phillips-Perron tests do not reject the null hypothesis that all panels contain unit roots for the *CompExpd* variable, but reject it when its first difference is considered (see Table A.4 in Annex). Therefore, $\Delta CompExpd$ is used as dependent variable.

leave the dummy for environmental protection out instead of defence (see column 2). We also checked for partisan effects in the components of the expenditures (see column 3), but no relevant results were found.¹²

Next, we explore whether the dynamics of those components is influenced or not by the elections and ideology (columns 4 and 5). The dependent variable is replaced by the growth rate of the components (*GrExpd*).¹³ Regarding the election effects, we observe that the growth rate of expenditures on defence, public order and safety, economic affairs and housing, and community amenities decreases substantially during election years in comparison with social protection. The results seem to confirm for some cases the idea of increases in those expenditures that are related to items more immediately visible to voters. The findings on the partisan side remain weak: only housing and community amenities seem to present a higher growth rate in comparison to social protection when a left-wing party is in office.

Concerning this evidence, we conclude that the opportunistic effects are much more relevant than the partisan effects when we focus our analysis on the components of public expenditures. The panel data framework used allows us to more clearly understand the potential electoral differences between the components, by enabling the construction of a matrix where the estimated impact of each component is compared with all the others. To construct that matrix we depart from regression 1 in Table 3, leaving outside one component at a time and considering different basis categories in order to collect all the possible effects between the ten expenditure components considered in this study.

¹² In this case, the variable *DPol* takes the value of 1 when a left-wing government is in office and 0 otherwise.

¹³ As here the sum of the growth rates do not adds up to 1 or 100%, we do not need to exclude any category from the estimations, but we keep social protection as the basis category.

The results of that extensive analysis are reported in Table 4 and compare each component (first column) with the respective basis-category (in line).

[Insert Table 4 around here]

The results present some interesting patterns. Noticeably, the biggest losers in election years are defence and economic affairs. While the results for the first were expected, we had no prior expectations regarding the second mainly due to the mix between strong/weak signalling and short/long term characteristics found in the aggregate's composition. Expenditures on economic affairs seem to be penalized relatively to health, environmental protection, recreation, education and social protection.

As to the components preferred in election years clearly public services and also health and social protection seem to stand out. In election years the percentage of general public services to the total of public expenditures increases when compared with all the other components, except with health. Expenditures on health also tend to increase in the election years relatively to defence, public order and safety, economic affairs and social protection. These components exhibit strong signalling characteristics and can provide electoral effects in the short-run. The results are in line with previous findings (see, for instance, Blais and Nadeau, 1992 and Potrafke, 2010). Possibly one of the reasons for public services to be so highlighted in election years is because it includes general transfers between different levels of the governmental structure. Those transfers probably increase in order to conclude constructions or are used on other highly visible items. In fact, Veiga and Pinho (2007) found evidence that political factors exert an important role in the distribution process of intergovernmental grants at Portuguese local elections.

5. Conclusions

In this paper we analyse whether public expenditures in Portugal are politically driven near elections and whether right-wing governments tend to be more constrained when it comes to spending than left-wing governments.

The two empirical analyses employed in this paper to examine these questions revealed the existence of both opportunistic and partisan effects, although electoral ones were found to be relatively more significant and robust. In general, the way Portuguese governments are found to “play” with aggregated expenditures and the respective components is consistent with previous studies and theoretical expectations. Results reveal the presence of the full opportunist cycle in capital expenditures as described by Nordhaus (1975). Both pre-electoral expansions and post-electoral contractions are found, however this last effect disappears when we examine the budget deficit. Furthermore, right-wing governments tend to be more concerned in reducing expenditures and the government deficit after the elections than left-wing ones. It seems that Portuguese governments act opportunistically when they really need to and behave in a partisan manner when they can. Moreover, the disaggregated analysis also provides some striking additional findings that tend to corroborate some of the aspects found on the time series analyses. In particular, they show that governments, independently of its ideology, usually choose to increase those expenditure components that have more visibility and impact in terms of electoral return: general public services, social protection and health care. Therefore, we conclude that Portuguese governments act opportunistically not only with the overall expenditures but also favouring those components that can provide them with the best chances of gaining popular support and, therefore, winning the elections.

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List of Tables

Table 1. Empirical results for the government capital expenditures

	Opportunism		Partisan				All	Growth
	(1)	(2)	Traditional	Rational		(7)	(8)	
			(3)	(4)	(5)			(6)
<i>CapExpd(-1)</i>	0.153** (0.062)	0.151** (0.062)	0.161*** (0.062)	0.157** (0.062)	0.149** (0.062)	0.139** (0.062)	0.116* (0.063)	-0.146** (0.063)
<i>CapExpd(-2)</i>	0.074 (0.062)	0.072 (0.062)	0.081 (0.062)	0.080 (0.062)	0.073 (0.062)	0.064 (0.062)	0.051 (0.062)	-0.076 (0.060)
<i>CapExpd(-3)</i>	0.109* (0.062)	0.106* (0.062)	0.106* (0.063)	0.105* (0.063)	0.102 (0.063)	0.101 (0.62)	0.093 (0.062)	0.094 (0.060)
<i>CapExpd(-4)</i>	0.194*** (0.61)	0.198*** (0.061)	0.189*** (0.061)	0.191*** (0.061)	0.181*** (0.061)	0.190*** (0.061)	0.190*** (0.061)	0.229*** (0.060)
$\Delta UR(-2)$	-0.093*** (0.029)	-0.090*** (0.029)	-0.093*** (0.031)	-0.095*** (0.030)	-0.081*** (0.030)	-0.080*** (0.030)	-0.091*** (0.030)	-1.309** (0.509)
<i>PreElect7</i>	0.019* (0.011)						0.016 (0.011)	
<i>PostElect6</i>		-0.023** (0.011)				-0.023** (0.011)	-0.020* (0.011)	-0.432** (0.202)
<i>TPart</i>			0.001 (0.004)				0.007 (0.005)	
<i>RPart6</i>				0.009 (0.010)			0.014 (0.011)	
<i>CRPart24</i>					-0.012* (0.007)	-0.012* (0.007)	-0.023** (0.009)	-0.239** (0.121)
No. Obs.	267	267	267	267	267	267	267	255
R ²	0.392	0.394	0.384	0.386	0.391	0.401	0.415	0.163
B-G test	0.941	0.853	0.923	0.882	0.907	0.695	0.776	0.497
SBIC	-616.0	-617.0	-612.8	-613.5	-615.6	-614.6	-604.6	861.2

Notes: Standard-errors are in parentheses; significance level at which the null hypothesis is rejected: ***, 1%; **, 5%; and *, 10%. Δ is the first difference operator. All regressions include monthly dummies to control for seasonality. Four lags of the dependent variable are needed to control for autocorrelation; the *p*-value for the Breusch-Godfrey test to autocorrelation of order 1 is reported in the bottom of the table, as well as the Schwartz Bayesian Information Criterion (SBIC). The last column presents results for the growth rate of capital expenditures.

Table 2. Empirical results for the government budget surplus

	Opportunism		Partisan				Both	
	(1)	(2)	Traditional	Rational		(7)	(8)	
			(3)	(4)	(5)			(6)
<i>GovBS(-12)</i>	0.310*** (0.060)	0.309*** (0.060)	0.290*** (0.060)	0.303*** (0.059)	0.314*** (0.060)	0.295*** (0.059)	0.303*** (0.060)	0.307*** (0.059)
$\Delta UR(-5)$	-0.838*** (0.267)	-0.891*** (0.269)	-1.077*** (0.278)	-0.981*** (0.267)	-1.007*** (0.273)	-1.062*** (0.277)	-1.026*** (0.283)	-0.948*** (0.266)
<i>PreElect3</i>	-0.297* (0.157)						-0.269* (0.159)	-0.303** (0.155)
<i>PostElect12</i>		0.064 (0.086)					0.056 (0.086)	
<i>TPart</i>			0.102** (0.042)			0.054 (0.050)	0.049 (0.055)	
<i>RPart12</i>				0.192*** (0.069)		0.141* (0.083)	0.163* (0.088)	0.193*** (0.069)
<i>CRPart24</i>					0.204** (0.094)		0.019 (0.086)	
No. Obs.	259	259	259	259	259	259	259	259
R ²	0.462	0.455	0.467	0.471	0.465	0.473	0.482	0.479
B-G test	0.586	0.716	0.448	0.344	0.487	0.316	0.231	0.254
SBIC	564.8	568.0	562.4	560.7	563.6	565.0	577.4	562.2

Notes: Standard-errors are in parentheses; significance level at which the null hypothesis is rejected: ***, 1%; **, 5%; and *, 10%. Δ is the first difference operator. All regressions include monthly dummies do control for seasonality. Only the lag 12 of the dependent variable is needed to control for autocorrelation; the *p*-value for the Breusch-Godfrey test to autocorrelation of order 1 is reported in the bottom of the table, as well as the Schwartz Bayesian Information Criterion (SBIC).

Table 3. Empirical results for the decomposition of the government expenditures

	Elect	Elect	LeftGov	Elect	LeftGov
	(1)	(2)	(3)	(4)	(5)
$\Delta CompExpd(-1)$	0.106*	0.096	0.075		
	(0.065)	(0.069)	(0.059)		
$GrExpd(-1)$				0.159***	0.159***
				(0.044)	(0.047)
$DPol*PublicServ$	1.122***	1.121***	0.236	4.351	-1.728
	(0.297)	(0.297)	(0.370)	(4.976)	(6.222)
$DPol*Defence$		-0.294		-10.096**	-0.712
		(0.327)		(4.083)	(4.953)
$DPol*PublicOrder$	-0.322	-0.321	0.252	-8.729*	4.204
	(0.321)	(0.397)	(0.393)	(4.844)	(4.036)
$DPol*EconAffairs$	-1.000***	-0.998***	0.053	-10.874**	-2.067
	(0.390)	(0.362)	(0.313)	(4.287)	(5.716)
$DPol*Environment$	0.048		-0.017	3.698	-4.880
	(0.357)		(0.416)	(4.826)	(4.433)
$DPol*Amenities$	-0.237	-0.238	0.295	-13.315**	14.570**
	(0.364)	(0.371)	(0.513)	(5.435)	(7.039)
$DPol*Health$	0.510*	0.504*	-0.494	2.726	-6.079
	(0.298)	(0.303)	(0.476)	(3.861)	(5.411)
$DPol*Recreation$	0.164	0.163	0.027	5.181	-1.780
	(0.340)	(0.345)	(0.376)	(5.342)	(5.122)
$DPol*Education$	0.047	0.047	0.010	-1.443	-1.869
	(0.379)	(0.386)	(0.410)	(5.381)	(4.287)
No. Obs.	180	180	180	210	210

Notes: Standard-errors are in parentheses; significance level at which the null hypothesis is rejected: ***, 1%; **, 5%; and *, 10%. Δ is the first difference operator. A bias-corrected least squares dummy variable estimator for dynamic panel data models is employed. The Blundell and Bond (1998) estimator is used as the initial estimator. We undertake 25 repetitions of the procedure to bootstrap the estimated standard errors. The results do not qualitatively change with more repetitions (50, 100 or 200) or when the Arellano and Bond (1991) estimator is chosen as initial estimator.

Table 2. Election effects on the composition of government expenditures

	<i>PublicServ</i>	<i>Defence</i>	<i>PublicOrder</i>	<i>EconAffairs</i>	<i>Environment</i>	<i>Amenities</i>	<i>Health</i>	<i>Recreation</i>	<i>Education</i>	<i>SocialProtect</i>
<i>PublicServ</i>	--	1.414***	1.443***	2.122***	1.073**	1.359***	0.611	0.957**	1.074**	1.122***
	--	(0.434)	(0.428)	(0.487)	(0.452)	(0.407)	(0.426)	(0.416)	(0.542)	(0.297)
<i>Defence</i>	-1.414***	--	0.028	0.704	-0.342	-0.056	-0.798*	-0.457	-0.341	-0.294
	(0.434)	--	(0.491)	(0.491)	(0.529)	(0.531)	(0.425)	(0.557)	(0.521)	(0.327)
<i>PublicOrder</i>	-1.443***	-0.028	--	0.679	-0.370	-0.085	-0.832**	-0.486	-0.369	-0.322
	(0.428)	(0.491)	--	(0.485)	(0.437)	(0.523)	(0.416)	(0.548)	(0.510)	(0.321)
<i>EconAffairs</i>	-2.122***	-0.704	-0.679	--	-1.049*	-0.763	-1.511***	-1.165*	-1.048*	-1.000***
	(0.487)	(0.448)	(0.485)	--	(0.612)	(0.560)	(0.421)	(0.607)	(0.514)	(0.390)
<i>Environment</i>	-1.073**	0.342	0.370	1.049*	--	0.285	0.462	-0.116	0.001	0.048
	(0.452)	(0.529)	(0.437)	(0.612)	--	(0.536)	(0.521)	(0.487)	(0.546)	(0.357)
<i>Amenities</i>	-1.359***	0.056	0.085	0.763	-0.285	--	-0.747	-0.401	-0.284	-0.237
	(0.407)	(0.531)	(0.523)	(0.560)	(0.536)	--	(0.556)	(0.379)	(0.599)	(0.365)
<i>Health</i>	-0.611	0.798*	0.832**	1.511***	0.462	0.747	--	0.346	0.463	0.511*
	(0.426)	(0.425)	(0.416)	(0.421)	(0.521)	(0.556)	--	(0.490)	(0.395)	(0.298)
<i>Recreation</i>	-0.957**	0.457	0.486	1.165*	0.116	0.401	-0.346	--	0.117	0.164
	(0.416)	(0.557)	(0.548)	(0.607)	(0.487)	(0.379)	(0.490)	--	(0.484)	(0.340)
<i>Education</i>	-1.074**	0.341	0.369	1.048**	-0.001	0.284	-0.463	-0.117	--	0.047
	(0.542)	(0.521)	(0.510)	(0.514)	(0.546)	(0.599)	(0.395)	(0.484)	--	(0.379)
<i>SocialProtect</i>	-1.122***	0.294	0.322	1.000***	-0.048	0.237	-0.511*	-0.164	-0.047	--
	(0.297)	(0.327)	(0.321)	(0.390)	(0.357)	(0.365)	(0.298)	(0.340)	(0.379)	--

Annex

Table A.1 – Definition of the variables

Time series	
<i>CapExpd</i>	Ratio of the government capital expenditures to the government total expenditures.
<i>GovBS</i>	Government budget surplus (in billions of Euros).
<i>UR</i>	Unemployment rate.
<i>PreElect#</i>	Variable that takes the value of 1 in the month of the elections and in the previous # months to the elections; election dates: 10/1991; 10/1995; 10/1999; 03/2002; 02/2005; 09/2009; 06/2011.
<i>PostElect#</i>	Variable that takes value 1 in the # months after the elections.
<i>TPart</i>	Traditional partisan variable that takes the value of 1 when a right-wing government is in office and -1 in case of a left-wing government.
<i>RPart#</i>	Rational partisan variable that takes the value of 1 in the # months after a right-wing party has taken office and -1 in the # months in case of a left-wing party.
<i>CRPart#</i>	Variable equal to <i>RPart#</i> but that only includes those cases in which an election changes the ideology of the government (left to right or right to left).

Panel	
<i>CompExpd</i>	Government expenditures by component as percentage of the government total expenditures. The components of the total expenditures are specified in Table A.2.
<i>GrExpd</i>	Growth rate of government expenditure by component, in percentage.
<i>DPol</i>	Dummy for the political variables; it can either take the value of 1 for the electoral year (and 0, otherwise) or the value of 1 for left-wing governments (and 0, otherwise).

Sources: Online Statistics, Bank of Portugal (*BPstat*) and OECD Statistics from *Government at a Glance*.

Table A.2 – The components of the government total expenditures

General public services (*PublicServ*)

Executive and legislative organs; financial and fiscal affairs; external affairs; Foreign economic aid; General services; Basic research; R&D general public services; Public debt transactions; Transfers of a general character between different levels of government; other General public services.

Defence (*Defence*)

Military defence; Civil defence; Foreign military aid; R&D defence; other Defence expenditures.

Public order and safety (*PublicOrder*)

Police and Fire-protection; Law courts; Prisons; R&D public order and safety; other Public order and safety expenditures.

Economic affairs (*EconAffairs*)

General economic, commercial and labour affairs; Agriculture; forestry; fishing and hunting; Fuel and energy; Mining; manufacturing and construction; Transport; Communication; R&D economic affairs and other expenditures.

Environmental protection (*Environment*)

Waste management; Waste water management; Pollution abatement; Protection of biodiversity and landscape; R&D environmental protection; other Environmental protection expenditures.

Housing and community amenities (*Amenities*)

Housing development; Community development; Water supply; Street lighting; R&D housing and community amenities; other Housing and community amenities expenditures.

Health (*Health*)

Medical products, appliances and equipment; Outpatient services; Hospital services; Public health services; R&D health; other Health expenditures.

Recreation, culture and religion (*Recreation*)

Recreational and sporting services; Cultural services; Broadcasting and publishing services; Religious and other community services; R&D recreation, culture and religion; other Recreation, culture and religion expenditures.

Education (*Education*)

All education expenditures; Subsidiary services to education; R&D education; other Education expenditures.

Social protection (*SocialProtect*)

Sickness and disability; Old age; Survivors; Family and children; Unemployment; Housing; Social exclusion; R&D social protection; other Social protection expenditures.

Source: OECD (2009). *Government at a Glance*.

Table A.3 – Descriptive Statistics

Variables	Obs.	Mean	S.D.	Min.	Max.
<i>Time Series</i>					
<i>CapExpd</i>	271	0.111	0.081	0.014	0.482
<i>GovBS</i>	271	-0.560	0.823	-4.034	2.721
<i>UR</i>	271	7.840	3.313	3.900	17.80
<i>TPart</i>	272	-0.118	0.995	-1.000	1.000
<i>Panel</i>					
<i>CompExpd</i>	220	10.00	8.943	0.843	36.72
<i>GrExpd</i>	210	6.067	11.06	-47.59	43.59
<i>DPol (Elect=1)</i>	220	0.318	0.467	0.000	1.000
<i>DPol (LeftGov=1)</i>	220	0.591	0.493	0.000	1.000

Sources: See Tables A.1 and A.2.

Table A.4 – Unit root tests

<i>Time Series</i>	ADF	PP	<i>Panel</i>									
			LLC	IPS	Fisher-ADF				Fisher-PP			
					Inv. χ^2	Inv.N	Inv.L	M.Inv. χ^2	Inv. χ^2	Inv.N	Inv.L	M.Inv. χ^2
<i>CapExpd</i>	-8.845 [0.000]	-13.63 [0.000]			62.79 [0.000]	-5.098 [0.000]	-5.334 [0.000]	6.765 [0.000]	19.72 [0.476]	-0.238 [0.406]	-0.246 [0.403]	-0.045 [0.518]
<i>GovBS</i>	-13.13 [0.000]	-18.84 [0.000]			110.9 [0.000]	-8.177 [0.000]	-9.738 [0.000]	14.38 [0.000]	163.0 [0.000]	-10.59 [0.000]	-14.33 [0.000]	22.61 [0.000]
<i>UR</i>	1.306 [0.997]	3.702 [0.999]										
ΔUR	-7.009 [0.000]	-7.744 [0.000]										
<i>CompExpd</i>	-2.757 [0.003]	-0.762 [0.223]			62.79 [0.000]	-5.098 [0.000]	-5.334 [0.000]	6.765 [0.000]	19.72 [0.476]	-0.238 [0.406]	-0.246 [0.403]	-0.045 [0.518]
$\Delta ShareExpd$	-4.542 [0.000]	-4.999 [0.000]			110.9 [0.000]	-8.177 [0.000]	-9.738 [0.000]	14.38 [0.000]	163.0 [0.000]	-10.59 [0.000]	-14.33 [0.000]	22.61 [0.000]
<i>GrExpd</i>	-3.921 [0.000]	-4.600 [0.000]			106.1 [0.000]	-7.942 [0.000]	-9.304 [0.000]	13.61 [0.000]	115.0 [0.000]	-8.312 [0.000]	-10.06 [0.000]	15.02 [0.000]

Notes: For sources, see Tables A.1 and A.2. Δ is the first difference operator. For each test, we report the respective statistic and p-value (in square brackets). The ADF and PP tests are, respectively, the augmented Dickey-Fuller test and the Phillips-Perron test that a variable follows a unit-root process, with constant and one lag of the difference of the respective variable. The Levin-Lin-Chu (LLC) and Im-Pesaran-Shin (IPS) unit root tests are performed over the panel with constant and one lag; the null hypothesis is that “all panels contain unit-roots”. The LLC test assumes that all panels have the same autocorrelation coefficient, but the IPS test relaxes that assumption and allows each panel to have its own autocorrelation coefficient. The Fisher-type unit-root tests are based on augmented Dickey-Fuller (Fisher-ADF) tests and Phillips-Perron tests with drift and one lag in all regressions; the null hypothesis is that “all panels contain unit-roots”; these tests are conducted for each panel individually before combining the p-values from those tests to produce the overall test; the statistics and respective p-values (in square brackets) are reported for each type of Fisher test: inverse chi-squared, inverse normal, inverse logit and modified inverse chi-squared.