

# Budget, expenditures composition and political manipulation

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## Abstract

This paper analyses the presence of political cycles in Portuguese governments' expenditures using monthly data over the period 1991-2013 for the main categories of government expenditures. The results indicate that Portuguese governments act opportunistically regarding the budget surplus and that they favour capital instead of current spending near to the elections. Moreover, right-wing governments are more prone to reduce expenditures and deficits after the elections than left-wing ones. A deeper disaggregated analysis of the components of government expenditures corroborates these findings while disentangles other relevant patterns of political manipulation in Portugal.

*Keywords:* Political budget cycles; Expenditure composition; 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 EU 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, no such analysis has been done for the Portuguese case and with this article we intend to fill this gap in the literature.<sup>1</sup> This study also constitutes an excellent testing ground to examine Brender and Drazen's (2005) claim that political budget cycles are a phenomenon 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 an extensive dataset to explore different levels and different aggregates related to fiscal policy. Contrary to the tradition of using quarterly or annual data, we make use of monthly data for the budget surplus, for current and capital expenditures and for their main components. The use of monthly data represents an important advantage in terms of level and detail of available information and in terms of the accuracy to control for

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<sup>1</sup> Nevertheless, there are some studies at the local/municipal level in Portugal that are worth mentioning: Veiga and Pinho (2007) and Veiga and Veiga (2007a, b).

the electoral and political effects. Moreover, the disaggregation of total expenditures allows us to check the existence of a competence signaling process similar to the one described by Rogoff (1990). In particular, going deeper in the composition of government expenditures for ten main areas of government spending allows us to explore different dimensions of the political budget cycle.

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. This later conclusion is supported by the more disaggregated analysis that follows, and other relevant patterns of political manipulations are also found in the component based empirical results.

The article is organized as follows. Section 2 provides a brief review of the literature. Section 3 describes the data and the econometric model 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.<sup>2</sup> Specifically, left-wing parties are relatively more concerned with unemployment (growth) than with inflation, whereas right-wing parties are especially worried with inflation control (Hibbs, 1977; Alesina, 1987; Alesina and Sachs, 1988).

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 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 theoretical 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

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<sup>2</sup> The partisan model generates policy effects after elections, while the opportunist model generates policy effects before elections.

(1990) highlighted the need to search budgetary cycles inside the broad aggregates, especially in the composition of government spending.<sup>3</sup> 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 increase 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

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<sup>3</sup>For empirical evidence on election motivated expenditure shifts see, for instance, Katsimi and Sarantidis (2012).

election years. Analysing the allocation of public expenditures in OECD countries, Potrafke (2011a) also finds that left-wing governments tend to increase expenditures on Public Services and Education.

For Portugal there is some relevant research done at the level of 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.<sup>4</sup> Using annual data from 1990 to 2011 for the 10 components of public expenditures defined by the OECD in the so called COFOG (Classification of the Functions of Government), Castro and Martins (2016) find that in election years governments tend to increase spending in items such as general public services, social protection and health care and that the overall budgetary opportunistic effects are found to be significantly more important than partisan effects. In this paper we check the former result using the economic classification of expenditures and assess whether the behavior of local authorities reported by Veiga and Veiga (2007a) is also present at the national level of Portuguese governance.

### **3. Data and econometric model**

The dataset used in this analysis to explore the presence of opportunism and partisan effects in the composition of Portuguese government expenditures comprises all the monthly data available for the ratio of current and capital government expenditures to the government total expenditures (*CurrExpd* and *CapExpd*),<sup>5</sup> government budget surplus

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<sup>4</sup> Also at local level, Veiga and Pinho (2007) analyse 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.

<sup>5</sup> 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 Table A.4 in Annex).

(*GovBS*) and unemployment rate (*UR*) over the period 1991:1 to 2013:6, collected from the Bank of Portugal.

In order to go deeper in the investigation of potential politically driven changes in the composition of Portuguese government expenditures, we also consider in this analysis seven of its components for the same time period. Following the economic classification these expenditures are: Personnel, Goods and Services, Interest, Subsidies, Current Transfers, Capital Goods and Capital Transfers (see Table A.2 in Annex for more details). Each component is then divided by the total expenditures – similarly to capital expenditures – and then estimated separately as a time series.

Most studies use annual or quarterly data, however the use of monthly data not only increases the number of available observations but also has the important advantage of allowing a more accurate control of electoral timings. However, standard explanatory variables like the openness of the economy, corruption indexes and other annual based economic variables are simply too aggregate to be included in our model. Following Alesina et al. (1997), some political variables were added to this dataset to control for opportunistic and partisan effects at the two different dimensions/disaggregated levels considered in this study: 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.<sup>6</sup> A complete description of the variables is presented in Table A.1 of the Annex. Descriptive statistics for the variables used in this study are reported in Table A.3 of the Annex.

We provide a time series analysis employing an OLS estimator over a dynamic specification to account for the autocorrelation in the error term. The dependent variables (*CapExpd*, *GovBS*, or each of the expenditures components) are assumed to be a function of all their significant lags, the change in unemployment rate,<sup>7</sup> and a set of political variables (*Opport* and *Partisan*):

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

where  $t=1991:1, \dots, 2013:6$  and  $Mi$  represent monthly dummy variables that are included in the model to control for seasonality; *Opport* includes the *PreElect#* and *PostElect#* variables whilst *TPart*, *RPart#* and *CRPart#* are the set of variables in *Partisan*. In a second group of regressions *CapExpd* is replaced by *GovBS*. Additionally in the expenditure component analyses, we replace *CapExpd* by each of the seven types of expenditures – one at a time. In both of these experiments, the set of regressors in the right side of the equation remains unchanged. The empirical results from all these experiments are presented and analysed in the next section.

#### 4. Empirical results

In this section, we provide a set of empirical results on the presence of opportunistic and partisan effects in government expenditures and budget. We start by analysing the

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<sup>6</sup> We have 7 national elections in our sample period, which are the following (with the respective changes in the political orientation of the government): 06/10/1991 (no change: right government in office); 01/10/1995 (change in government from right to left); 10/10/1999 (no change left government in office); 17/03/2002 (change in government from left to right); 20/02/2005 (change in government from right to left); 27/09/2009 (no change); 05/06/2011 (change in government from left to right).

<sup>7</sup> 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.

effects at the lowest degree of disaggregation, comparing effects related to capital and current expenditures. We then look for evidence of opportunistic and/or partisan behaviour regarding the government budget surplus. Finally, we go deeper inside expenditures and explore the presence of political effects at a more disaggregated level, considering seven components of current and capital expenditures, as given by the economic classification.

#### **4.1 Results for capital expenditures and government budget surplus**

We start by considering as dependent variable the ratio of government capital expenditures to the 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 decrease in the ratio of current expenditures

to the total.<sup>8</sup> On the other hand, during a period of six months after the elections, the ratio of government capital expenditures to the total decreases significantly.<sup>9</sup> These results point to a complete opportunistic cycle that favours capital 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

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<sup>8</sup> 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.

<sup>9</sup> 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 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.

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 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 are disposed 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 elections 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.<sup>10</sup> 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 million 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 and even if no ideological change occurs (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 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)

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<sup>10</sup> 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.

argument that before elections governments' tend to act opportunistically to gather public support and afterwards follow ideological preferences.

In sum, this 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.

#### **4.2 Results for the composition of government expenditures**

A similar analysis is now provided for each of the seven components of government expenditures as defined by the economic classification: *Personnel*, Goods and Services (*CurrGoods*), *Interest*, *Subsidies*, Current Transfers (*CurrTransf*), Capital Goods (*CapGoods*) and Capital Transfers (*CapTransf*). Each of these dependent variables is also used in the empirical estimations as its ratio to the total expenditures. A summary of the results is presented in Table 3.<sup>11</sup> It is commonly argued that right-wing parties tend to reduce public expenditures and promote policies that deregulate the public sector while left-wing parties favour more state intervention and are more vigorous in implementing policies that redistribute income and improve the overall social conditions<sup>12</sup>. As such, general expectations are that left-wing governments should exhibit higher levels of overall public spending than their counterparts. Specifically, expenditures with Personnel and Current Transfers may be those categories more likely to reflect this pattern. As to the other

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<sup>11</sup> Here we only present a summary of the most pertinent results due to space limitations, but the complete set of results for the estimation of each individual regression – with the respective expenditure component as dependent variable – is available upon request.

<sup>12</sup> On this matter see, for instance, Potrafke (2011b) and Herwartz and Theilen (2017).

components we have no prior expectations as there is some mixed signalling associated with them.

**[Insert Table 3 around here]**

In Table 3, only the results for the coefficients on the political variables are reported, meaning that each coefficient relates to a single regression that was estimated including the necessary lags of the dependent variable to eliminate any error autocorrelation, the required (lagged) change in the unemployment rate, and monthly dummies to control for seasonality. At the bottom of the table the number of months used for each political variable is also reported. Several periods were considered before and after the elections but the ones reported in the tables were those that produced the lowest  $p$ -values for the respective estimated coefficient.

It seems that there is no political tempering with public wages and current transfers that include assistance to the unemployed, fire fighters and other non-reimbursable monetary flows that help institutions face their current expenditures. At some degree these are unexpected results as a common sense approach would find their tempering plausible and electorally effective. Maybe the permanent nature of increases in wages and transfers is refraining governments from using them electorally. Manipulating these categories would increase public spending not just in the electoral year but in the years to follow and, in terms of popularity, it would simply be too costly to reduce wages and transfers after elections to correct the pre-electoral boosts.<sup>13</sup>

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<sup>13</sup> Nevertheless, one event stands out from the recent Portuguese political history and it exemplifies a clear political manipulation in one of these budget categories. In 2009 – year of legislative elections in Portugal and while the international economic crisis was spreading across the western world – Socialist Prime Minister José Socrates announced a 2.9% increase in the wages of the civil servants. This was the largest wage increase since the start of this century and the first in three years. This political decision was viewed as an evident attempt to improve the popularity of the government at the time. Although we do not find evidence that this opportunistic behaviour is systematic across our sample, this is an example of simultaneous opportunistic and partisan behaviour, since expenditures with personnel are expected to increase more with left-wing governments.

As expected, the results at this more disaggregated level of public expenditures also show evidence of opportunistic and partisan behaviour. Regarding the first group of effects, we observe that the ratio of expenditures on capital goods to total expenditures increases before elections. This is in line with our findings at a more aggregated level and reinforces Rogoff's (1990) argument that public spending should be diverted to items more visible to voters before elections. We also found evidence of a post electoral cycle related to capital transfers as these expenditures tend to decrease after the elections. These results help clarify the capital components in which political cycles play a major role.

When we take a closer look to the disaggregated governments' current expenditures traditional partisan effects clearly dominate. The ratios of current goods and services, subsidies, and interests all seem to be higher when right-wing parties are in office as opposed to left ruling. We had no prior theoretical expectations regarding partisan effects on these particular components, however as it seems that right-wing parties favour them, probably the expenditures that are being increased in these components are those with the military, price grants and other expenditures theoretically more attached to the right. Regarding the interest component, in general governments pay current interests from loans negotiated in the past. As we find evidence that this partisan effect appears to be stronger in the first half of the term it seems that right-wing governments could be paying, at least in part, the above average indebtment of previous governments, in particular left-wing ones. In this sense our results are in accordance with theoretical expectations that left-wing parties are more prone to deficits than their counterparts.

When looking at capital transfers both opportunistic and partisan effects seem to be at play, revealing some puzzling results. The effects found seem to indicate a post electoral reduction on this component in the six months following an election, and that this reduction is reinforced and holds for the first half of a term when a change in the political orientation of the government occurs with the election of a "new" right-wing government. This "new" right-wing government (PSD) tends to be more concerned in reducing capital transfers until

two years after the elections than a “new” left-wing government (PS). So, the post electoral reductions in capital expenditures observed in table 1 (see column 6), are essentially due to movements in capital transfers.

As a robustness check to the overall results found in table 3, we also estimated each expenditure component considering the simultaneous inclusion of all political variables and, in addition, regressed each component with only those political variables that proved to be statistically significant in the “all variables in” regressions. In general, the results corroborate the opportunistic and partisan effects found above.<sup>14</sup>

## 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 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 point out to the presence of a full opportunistic 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

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<sup>14</sup> Those results are not presented here due to space limitations, but they are available from the authors upon request. In particular, in those regressions in which *Rpart#* and *CRPart#* were found to be jointly significant (*Personnel* and *Current Transfers*), we tested the null that the sum of their coefficients was zero. Test results did not reject the null, so we conclude that there are no rational partisan effects found in the referred components. Moreover, we also checked some interaction effects upon public expenses depending on the level of either unemployment or inflation while a rightist or a leftist party is in office, but no relevant interaction effects were found.

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.

When taking a closer look at expenditures, detailing and analysing their components, we found that the contraction of capital expenditures after elections is due to a reduction in the capital transfers and not related to variations on the Gross Fixed Capital Formation. Furthermore, we observe that the ratio of expenditures on capital goods to total expenditures increases before elections, confirming the already found opportunistic behaviour on aggregate capital expenditures, and reinforcing the idea that public spending is systematically being diverted to items more visible to voters before elections.

Finally, the results indicate the presence of partisan effects in some current expenditures components. For instance, right-wing governments appear to pay more interests on debt than left-wing ones. Hence, our results seem to suggest that right-wing governments could be paying, at least in part, the above average indebtedness of left-wing governments.

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## List of Tables

**Table 1. Empirical results for the government capital expenditures**

	Opportunism		Partisan				All	Growth
	(1)	(2)	Traditional	Rational				
			(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>	<b>0.019*</b> <b>(0.011)</b>						0.016 (0.011)	
<i>PostElect6</i>		<b>-0.023**</b> <b>(0.011)</b>				<b>-0.023**</b> <b>(0.011)</b>	<b>-0.020*</b> <b>(0.011)</b>	<b>-0.432**</b> <b>(0.202)</b>
<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>					<b>-0.012*</b> <b>(0.007)</b>	<b>-0.012*</b> <b>(0.007)</b>	<b>-0.023**</b> <b>(0.009)</b>	<b>-0.239**</b> <b>(0.121)</b>
No. Obs.	267	267	267	267	267	267	267	255
R <sup>2</sup>	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%.  $\Delta$  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>	<b>-0.297*</b> <b>(0.157)</b>						<b>-0.269*</b> <b>(0.159)</b>	<b>-0.303**</b> <b>(0.155)</b>
<i>PostElect12</i>		0.064 (0.086)					0.056 (0.086)	
<i>TPart</i>			<b>0.102**</b> <b>(0.042)</b>			0.054 (0.050)	0.049 (0.055)	
<i>RPart12</i>				<b>0.192***</b> <b>(0.069)</b>		<b>0.141*</b> <b>(0.083)</b>	<b>0.163*</b> <b>(0.088)</b>	<b>0.193***</b> <b>(0.069)</b>
<i>CRPart24</i>					<b>0.204**</b> <b>(0.094)</b>		0.019 (0.086)	
No. Obs.	259	259	259	259	259	259	259	259
R <sup>2</sup>	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%.  $\Delta$  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. Results by component of government expenditures – one variable at a time**

	<i>Personnel</i>	<i>CurrGoods</i>	<i>Interest</i>	<i>Subsidies</i>	<i>CurrTransf</i>	<i>CapGoods</i>	<i>CapTransf</i>
<i>PreElect#</i>	0.010 (0.007)	-0.001 (0.001)	-0.013 (0.012)	-0.003 (0.003)	-0.004 (0.008)	<b>0.004*</b> <b>(0.002)</b>	0.018 (0.011)
<i>PostElect#</i>	0.010 (0.010)	<b>0.041**</b> <b>(0.022)</b>	0.021 (0.015)	0.001 (0.002)	-0.011 (0.013)	-0.002 (0.002)	<b>-0.020*</b> <b>(0.011)</b>
<i>TPart</i>	0.001 (0.003)	<b>0.002**</b> <b>(0.001)</b>	<b>0.163***</b> <b>(0.006)</b>	<b>0.002**</b> <b>(0.001)</b>	-0.001 (0.004)	0.001 (0.001)	-0.001 (0.004)
<i>RPart#</i>	-0.012 (0.010)	0.001 (0.001)	<b>0.012*</b> <b>(0.007)</b>	0.003 (0.002)	-0.008 (0.009)	0.001 (0.001)	0.012 (0.015)
<i>CRPart#</i>	0.007 (0.008)	(0.002) (0.002)	-0.023 (0.024)	0.003 (0.003)	0.027 (0.017)	-0.0016 (0.0013)	<b>-0.013*</b> <b>(0.007)</b>
No. Obs.	265	265	267	265	265	265	267
Months	<i>PreElect9</i>	<i>PreElect12</i>	<i>PreElect8</i>	<i>PreElect6</i>	<i>PreElect11</i>	<i>PreElect8</i>	<i>PreElect6</i>
	<i>PosElect3</i>	<i>PosElect3</i>	<i>PosElect5</i>	<i>PosElect12</i>	<i>PosElect3</i>	<i>PosElect11</i>	<i>PosElect6</i>
	<i>RPart3</i>	<i>RPart9</i>	<i>RPart24</i>	<i>RPart6</i>	<i>RPart6</i>	<i>RPart12</i>	<i>RPart3</i>
	<i>CRPart9</i>	<i>CRPart9</i>	<i>CRPart3</i>	<i>CRPart6</i>	<i>CRPart3</i>	<i>CRPart24</i>	<i>CRPart24</i>

**Notes:** Only the results for the political variables are reported here, but the estimated specification also includes the necessary lags of the dependent variable, to eliminate any error autocorrelation, the (lagged) change in the unemployment rate, which has almost always a significant coefficient, and monthly dummies to control for seasonality. Each variable was included at a time in the respective estimated specification. Standard-errors are reported in parentheses; significance level at which the null hypothesis is rejected: \*\*\*, 1%; \*\*, 5%; and \*, 10%. The number of months used for each political variable is reported at the bottom of the table. Those are the ones that presented the lowest  $p$ -value for the respective estimated coefficients.

## Annex

**Table A.1 – Definition of the variables**

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<b>Time series</b>	
<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).

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**Sources:** Online Statistics, Bank of Portugal (*BPstat*).

**Table A.2 – The components of the government total expenditures (Economic classification)**

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### **GOVERNMENT CURRENT EXPENDITURES**

#### **Personnel (*Personnel*)**

Wages and other gratifications to public servants and to individuals that are hired by the state

#### **Goods and Services (*CurrGoods*)**

Other current expenditures non related to wages like, for instance: constructions and military works that are not in nature capital expenditures; spending with military material, desk material, food, uniforms; conservation, communications, transportation.

#### **Interest and other charges (*Interest*)**

Expenditures related to current public debt charges.

#### **Subsidies (*Subsidies*)**

Financial flows without reimbursement from the state to public companies. It includes also expenditures with price grants and subsidies to the production of goods considered essential.

#### **Current Transfers (*CurrTransf*)**

Non reimbursable monetary flows that have the objective of helping institutions or entities face their current expenditures. Examples: Assistance to the unemployed, fire fighters, and community based institutions like sporting clubs and non-profitable organizations.

### **GOVERNMENT CAPITAL EXPENDITURES**

#### **Capital Goods (*CapGoods*)**

Gross fixed capital formation.

#### **Capital Transfers (*CapTransf*)**

Non reimbursable Public spending to fund capital expenditures of another entity. Examples: compensations for damages in buildings or crops; amortization of loans.

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**Table A.3 – Descriptive Statistics**

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min.</b>	<b>Max.</b>
<b>Time Series</b>					
<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>Elect</i>	272	0.026	0.159	0.000	1.000
<i>TPart</i>	272	-0.118	0.995	-1.000	1.000
<b>Expenditures Components</b>					
<i>Personnel</i>	271	0.285	0.074	0.013	0.531
<i>CurrGoods</i>	271	0.033	0.018	0.007	0.131
<i>Interest</i>	271	0.130	0.098	-0.049	0.471
<i>Subsidies</i>	271	0.017	0.017	0.000	0.120
<i>CurrTransf</i>	271	0.415	0.115	0.183	0.700
<i>CapGoods</i>	271	0.018	0.021	0.000	0.214
<i>CapTransf</i>	271	0.093	0.073	0.012	0.467

**Sources:** See Tables A.1 and A.2. The components of public expenditures are all in the ratio to total expenditures.

**Table A.4 – Unit root tests**

	<b>Time Series</b>						
	<i>CapExpd</i>	<i>GovBS</i>	<i>UR</i>	$\Delta UR$			
<b>ADF</b>	-8.845 [0.000]	-13.13 [0.000]	1.306 [0.997]	-7.009 [0.000]			
<b>PP</b>	-13.63 [0.000]	-18.84 [0.000]	3.702 [0.999]	-7.744 [0.000]			
	<b>Expenditures components</b>						
	<i>Personnel</i>	<i>CurrGoods</i>	<i>Interest</i>	<i>Subsidies</i>	<i>CurrTransf</i>	<i>CapGoods</i>	<i>CapTransf</i>
<b>ADF</b>	-8.176 [0.000]	-12.84 [0.000]	-9.465 [0.000]	-11.66 [0.000]	-4.563 [0.000]	-12.54 [0.000]	-8.846 [0.000]
<b>PP</b>	-15.33 [0.000]	-18.57 [0.000]	-11.74 [0.000]	-17.03 [0.000]	-6.351 [0.000]	-17.24 [0.000]	-13.29 [0.000]

**Notes:** For sources, see Tables A.1, A.2 and A.3.  $\Delta$  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.