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# Elections and Opportunistic Budgetary Policies in Greece

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## **Abstract**

We consider the presence of electorally motivated cycles in Greece's fiscal policies from 1974 to 2011 and find strong evidence of pre-electoral manipulation. In the election years the government's primary balance deteriorates via increased expenditures. The political budget cycle appears subdued in the post-Maastricht treaty period, which implies tighter constraints on public finances. We demonstrate, however that the opportunistic manipulation of public finances lives on, albeit through a different channel. In particular, we produce evidence of electoral effects in the composition of expenditures, with the expenses for Compensation to Employees increasing during election years. Furthermore, our results show that snap elections affect expenses positively, while prolonged incumbencies affect negatively the government's primary balance and revenues. Finally, no evidence of partisan effects exists in Greece's fiscal policies.

**Keywords:** Political Budget Cycles, Greece, Elections

**JEL Classification:** D72, H6, C22

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## 1 Introduction

The crisis in Greece and the country's admission to the joint EU-IMF financial support program motivated a number of political economy analyses of the causes of Greece's failure. Along with the country's weak/inadequate institutions, the myopic, self-interested and opportunistically motivated ruling elites in Greece have often been identified as partly responsible for the country's current economic predicament. Clientelistic practices and rent-seeking activities that empower special interest groups at the expense of general economic well-being feature prominently as important contributing factors to the failures of the Greek economy. In this paper we study one aspect of these activities by focusing on the presence of opportunistically motivated cycles in Greece's fiscal policies. During the few decades before the crisis politicians faced only limited checks and balances and few restrictions in drawing up the budget and deciding over fiscal policies. This environment allowed incumbents to adopt opportunistic policies aiming to enhance their reelection prospects without being punished by the electorate for mismanaging public finances. We consider the electorally motivated budgetary decisions during two sub periods. The first is the full period from the restoration of democracy in Greece up until 2011 while the second starts after the Maastricht Treaty comes into effect in 1993, which introduced tougher restriction on the level of public deficit and debt. After the signing of the Maastricht Treaty and in the run up to the adoption of the euro, countries aspiring to join the Eurozone had to demonstrate compliance with the criteria set by the Maastricht Treaty and therefore policymakers enjoyed fewer degrees of freedom in pursuing discretionary policies. Our study advances the understanding of opportunistic fiscal policies in Greece in many ways. First, we extend the time range of the analysis. Second, we expand the analysis to the previously unexplored effect of elections on the composition of expenditures in order to investigate the presence of politically induced cycles beyond the most commonly studied areas of public revenues, expenses and government's primary balance. Third, we consider the implications of the Maastricht Treaty restrictions on budgetary policies which tighten the budget constraint of the countries that want to join the euro area. Finally, this is the first attempt to study the effect of snap elections, a common practice in Greece's politics, and the previously unexplored effect of prolonged incumbencies on public finances.

We use data from various sources: IMF's Historical Public Debt Database (Abbas et al., 2010), IMF's Government Financial Statistics database (GFS) and the Hellenic Statistical Authority. We also use a number of political variables, collected by the authors.. Our results uncover strong evidence of electoral cycles from 1974 to 2011, which can largely be attributed to the subsample 1974-1993. Once the constraints of the Maastricht treaty kick in the electoral cycles in fiscal policies seem to disappear. A clear electoral effect exists, however, on the composition of expenditures. We also document that snap elections are associated with increased expenses and that prolonged incumbencies negatively affect the primary balance and revenues.

The rest of the paper is organized as follows. Section 2 briefly reviews the literature on political budget cycles focusing on previous analyses of Greece's political cycle. Section 3 describes the data and our estimation strategy. Section 4 presents the results of our analysis and Section 5 concludes.

## **2 Literature Review**

### **2.1 Political Budget Cycles**

Political business cycles refer to cyclical fluctuations in governments' policies that occur along the electoral cycle. The *economic voting* hypothesis, i.e., the effect that the state of the economy has on electoral support of the government, backed by numerous studies published over a large period of time<sup>1</sup>, provides opportunistic politicians with the motive to enhance voters' well-being before elections to boost their chances to get reelected.

Nordhaus (1975) was the first to provide a model of opportunistically motivated politicians who try to secure re-election by exploiting the short-term Phillips curve. His model was criticized for implying naïve and irrational voters that can be deceived perpetually, while empirical evidence failed to support his hypothesis.<sup>2</sup> Since then, as a

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<sup>1</sup> Early studies include among others Kramer (1971), Fair (1978), Madsen (1980) and Lewis-Beck (1988). Nannestad and Paldam (1994) review early evidence. More recent studies include among others Swank and Eisinga (1999), Feld and Kirchgässner (2000), Chappell and Veiga (2000) and Tucker (2001). For reviews of the evidence see Chortareas (1999) and Lewis-Beck and Stegmaier (2013).

<sup>2</sup> Alesina et al. (1997) conclude that there is no evidence of pre-electoral increase in economic activity in the US at it is also the case in other countries (see Lewis-Beck, 1988; Paldam, 1979). With regard to higher post

recent literature survey indicates, more than 540 articles and books on political business cycles have been published over that period (Dubois, 2016).

The view that politicians have the incentive to adopt more targetable policies prior to election has shifted attention to fiscal policy manipulation i.e. *political budget cycles*, with Rogoff and Sibert (1988) being among the first to present a model of rational voter behavior, where candidates have the incentive to signal their ‘competency’ by engaging in expansionary fiscal policy before elections. Extensive and robust empirical findings indicate that politicians manipulate fiscal policies before elections and suggest the occurrence of political budget cycles across developed and developing economies.

Tufte (1978) was among the first to provide evidence of electoral cycles focusing on direct transfers, while Frey and Schneider (1978a, 1978b) show increases in government expenditures prior to elections in both the US and the UK. Krueger and Turan (1993) find pre electoral fiscal manipulation in Turkey and Gonzalez (2002) identifies the presence of political business cycles in Mexico. Studies at the multi-country level include Ames (1987), who provides evidence of political cycles in government expenditures for 17 Latin American countries, Block (2002), who reveals pre-electoral expansionary fiscal policy in 44 sub-Saharan African countries and Schuknecht (1996), who provides similar results for 35 developing countries.

Recent evidence identifies the importance of several factors in conditioning the occurrence and size of PBCs at the national level. For instance, Shi and Svensson (2006) consider the level of economic development and document that PBCs occur both in developed and developing countries but their magnitude is larger in the latter. Persson and Tabellini (2003) argue that constitutional features like the electoral system and the form of government are important in explaining variation in PBCs across countries. Brender and Drazen (2005) attribute the occurrence of PBCs to the age of democracy and elections held in newly established democracies, where voters have relatively limited experience with democratic processes. Contrary to this view, Alt and Lassen (2006), focus on transparency and argue that PBCs can also emerge in old established democracies when budget institutions operate in an opaque environment. The effectiveness of checks and balances

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electoral inflation, Alesina et al. (1997) find such evidence across OECD countries and the U.S. but for the latter only for the elections held before 1979.

(Streb et al., 2009) and the stringency of fiscal rules (Rose, 2006) are also significant in explaining the presence of opportunistic fiscal cycles. Klomp and De Haan (2013) reexamine the literature on PBCs and provide supportive evidence regarding their occurrence, which is found to be conditional on various political and institutional features like the ones already mentioned.<sup>3</sup>

Opportunistically induced cycles tend to be of greater magnitude in developing countries and new democracies, while in old democracies larger deficits occurring during the election year have a negative impact on the possibility of reelection. Brender and Drazen (2008) shifted research on PBCs towards subnational governments, effects on the composition of expenditures and on other policy instruments like public employment.

A number of studies reveal the presence of political budget cycles in local governments (e.g., Veiga and Veiga, 2007; Sakurai and Menezes-Filho, 2011, Sjahrir et al., 2013), while other research focuses on the composition of expenditures. For example, Drazen and Eslava (2010) consider cycles in Colombian municipalities and show shifts in the pre-electoral composition of local government expenditures towards visible expenses such as infrastructure spending, while at the same time other less visible types of expenses like interest payments contract. Katsimi and Sarantides (2012) also suggest that elections affect the composition of fiscal policy in both developed and established democracies, documenting shifts towards current expenditures at the cost of capital investment for 19 OECD economies.

## **2.2 Political Cycles in Greece**

A number of studies investigate aspects of the political-economic nexus in Greece, while some of them explicitly focus on the effect of elections on incumbents' policies. Alogoskoufis and Philippopoulos (1992) study the interaction between inflation, unemployment, the exchange rate regime, and political parties in Greece from 1958 to 1989, and suggest that under floating exchange rates left-wing administrations in Greece were associated with higher on average inflation rate, albeit without any negative effect on unemployment. Yet, when Alogoskoufis et al. (1998) take into account structural equations

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<sup>3</sup> For a review of the relevant literature see Drazen (2000), Franzese and Jusko (2006), and De Haan and Klomp (2013).

for wage inflation, price inflation and unemployment, their results show that there are no partisan differences in inflation; a finding that also explains the aforementioned absence of partisan cycles in unemployment. Bratsiotis (2000) argues that the Single European Act signed in 1986 had an important effect on partisan inflation cycles in Greece, with left-wing governments in Greece, being associated with higher levels of inflation before the act but not afterwards as a more anti-inflationary stance was adopted.

Studies on the presence of partisan and electoral effects in Greece do not only focus on inflation and unemployment but also on other policy instruments. For instance Andrikopoulos et al. (1998) use cointegration analysis and find evidence supporting the presence of electoral cycles in economic outcomes as well as some electoral and partisan effects on policy instruments. Laopodis et al. (2016) also report on the effects of Greece's politics on the economy and argue that the two main political parties that have been alternating in power are associated with increased budget deficits. The authors use an unrestricted VAR model for the period 1970–2014 to test the impact of each of the two main parties on the budget deficit-to-GDP ratio during election and non-election years controlling for the role of tax evasion. Similarly, Lockwood et al. (2001) use annual data from 1960 to 1997 and provide evidence that pre-election years are associated with rising expenditures and falling taxes, an effect that becomes weaker in the post Maastricht period, namely after 1993. Their evidence also suggests that between 1974 and 1992 no partisan differences are to be found in Greece regarding the fiscal policies adopted by the Socialist and Conservative governments.

Another set of studies shift the focus of electoral effects beyond fiscal policy instruments and economic outcomes. For example, Siokis and Kapopoulos (2007) provide evidence on the presence of partisan and electoral effects in the Athens Stock Exchange from 1988 to 2004 with volatility increasing more in the period before elections and during right wing incumbencies. Skouras and Christodoulakis (2014) explore the role of electoral effects on misgovernance in Greece. More specifically they investigate how elections affect two different aspects of state administrative responsibilities, that of controlling wildfires and fighting tax evasion. They show that around elections both wildfires and tax evasion increase. They attribute this to electoral campaigning that negatively affects governing, and to the relaxing of law enforcement that may benefit specific segments of the electorate and

interest groups. In addition, they show that elections affect certain subcategories of tax revenues documenting the presence of adverse electoral effects on revenues from transaction taxes.

Chortareas et al. (2016a) study the presence of political budget cycles in Greece's municipalities. They produce evidence of pre-electoral manipulation through increased expenditures and excessive borrowing that occurs irrespective of whether a mayor is running for re-election or is aligned with the central government. Cycles at the municipal level are present in the post-Maastricht period with increased expenditures and election year opportunistic excesses positively affecting incumbents' re-election prospects. Chortareas et al. (2016b) consider the composition of employment in terms of employment relationship and find evidence of pre-electoral manipulation in municipal employment. Their evidence shows that increases in the number of municipal employees during election years can be attributed to increases in contract employees.

### **3 Data and Estimation Strategy**

#### **3.1 Data**

Our annual data on the Greek government's *revenues*, *expenditures* and its *primary balance* were obtained from IMF's historical debt database (Abbas et al.; 2010). The time span of our investigation ranges from 1974, the year during which democracy was restored in Greece, up to 2011, the last year for which data are available in the database. During the time dimension of our investigation 13 elections were held in years 1974, 1977, 1981, 1985, twice in 1989, 1990, 1993, 1996, 2000, 2004, 2007 and 2009. The data we use on the composition of expenditures come from IMF's Government Financial Statistics database and cover five subcategories namely the *compensation of employees*, expenses on the *use of goods and services*, *interest expenses*, *subsidies* and *social benefits*, with data being available from 1995 and onwards. Data on the population structure and unemployment come from the Hellenic Statistical Authority (HSA). The political variables used were collected by the authors. Descriptive Statistics of the variables used are presented in Appendix A, Table A.1.



### 3.2 Estimation

We estimate a model that uses a typical political budget cycle specification of the form:

$$y_{jt} = \alpha + \beta y_{jt-1} + \gamma Elections_{it} + \delta X_{kt} + u_{jt} \quad (1)$$

where the dependent variable  $y_{jt}$  denotes each one of the  $j$  fiscal variables used,  $y_{jt-1}$  is the lag of the dependent variable used to capture persistence in the fiscal variables,  $X_{kt}$  is a vector of  $k$  control variables, and  $Elections_{it}$  is a dummy variable capturing the electoral effect. The dummy variable takes the value of one in election years and zero otherwise. The term  $u_{jt}$  represents the *i.i.d.* error term. The vector  $X_{kt}$  includes economic, demographic and political explanatory variables. The economic variables include Greece's unemployment rate and real GDP's growth rate. The demographic variables are the percentages of the population under 15 years old and over 65 years old (%Pop<15, %Pop>65), which can capture the effects of population structure. The political variable, aiming to capture partisan effects, is a variable that takes the value of -1 during the years where the incumbent was of left-wing political orientation, the value of 0 if the incumbent did not belong to either left or right wing party or in case of coalition governments, and the value of 1 if the incumbent was of right-wing political orientation. A set of unit-root tests suggest that most of the fiscal variables used contain a unit root so we first difference our data to avoid misleading inference. Political and demographic variables enter our estimation in levels.<sup>4</sup>

## 4 Results

### 4.1 Baseline Evidence

Table 1 presents our baseline results. Columns (1) to (3) shows results from estimating Eq. (1) when we do not include a linear time trend in our specification, while Columns (4)

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<sup>4</sup> Detailed results are available from the authors upon request.

to (6) shows results when we do. Our evidence suggests that Political Budget Cycles are to be found in Greece's finances with our results being similar both with and without a linear time trend. The results also show the effect of parliamentary elections on fiscal policies adopted. More specifically, from 1974 to 2011, elections had a negative effect on government's primary balance [Columns (1) and (4)]. Results in Columns (3) and (6) indicate that this can be attributed to increased expenses that occur during election years. The respective coefficient of the *Elections* dummy is significant at the 5% significance level when *primary balance* is the dependent variable (whether we include a linear time trend or not), while when we use *government expenses* as the dependent variables the coefficient is significant at the 1% significance level when we do not include a linear time trend and at the 5% level when we do. Our results suggest that during election years the annual change in government's primary balance (as a % of GDP) deteriorates by 2.098, while the annual change in government's expenses (as a % of GDP) increase by 1.746 (both figures correspond to the case when a linear time trend is included in our specification). With respect to the other variables used, evidence shows the absence of partisan effects on Greece's fiscal policies. This finding is similar to the one that Lockwood et al. (2001) provide, where they document that no differences in effects on fiscal policies can be found between right-wing and left-wing governments in Greece. Moreover, our results demonstrate that the population structure affects fiscal policies. Specifically, higher percentages of the population above 65 years old and below 14 years old negatively affect the primary balance via a negative effect on revenues and a positive effect on expenses.

< INSERT TABLE 1 ABOUT HERE >

As Brender and Drazen (2005) document the importance of the "new democracy" effect in the emergence of Political Budget Cycles we test if opportunistic cycles in Greece disappear with the maturing of democratic institutions. Following Brender and Drazen (2005) who consider the first four elections after a country has acquired democratic institutions to be the ones corresponding to the "*new democracy*" status, we restrict our

sample to the years after 1985 to capture the “mature democracy” period.<sup>5</sup> Contrary to the evidence provided by these authors that Political Budget Cycles cease in mature democracies we show that they are present in Greece in both its mature and immature phases. Table 2, Columns (1) to (3) suggest that opportunistic politics remain present throughout as the effect of elections in the years after 1985 and up until 2011 is similar to our baseline findings, i.e., a deterioration in the primary balance due to increases in expenditures. Once again, partisan effects are absent as the coefficient of the *partisan* variable is not statistically significant.

With regards to the presence of *Political Budget Cycles* it is only after the Maastricht treaty is implemented that electoral effects disappear. Table 2, Columns (4) to (6), presents estimation results when we restrict our sample to the post-1993 period. Evidence shows that there are no electoral effects as the coefficient of the *Elections* dummy is not significant for any of the fiscal variables used. This finding corroborates similar results in other studies that also suggest the absence of electoral effects after the coming into force of the Maastricht treaty and during the run-up to the EMU (see for example Lockwood et al., 2001).

< INSERT TABLE 2 ABOUT HERE >

Yet, as *Political Budget Cycles* tend to emerge where we can’t see them (Alt and Lassen, 2005), a number of studies focus on the effect of elections on the composition of expenditures and not just on their overall level.<sup>6</sup> Table 3 presents our results when we consider the composition of expenditures in Greece. Since data are available only after 1995, we cover the years after the implementing of the Maastricht treaty and up until 2011, a period where no electoral effects are to be found in government expenses as we documented before. We retain our analysis at the level of general government expenses for compatibility with the data from IMF’s Historical Debt Database (Abbas et al., 2010) used before. Results in columns (1) to (5) document that elections positively affect the

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<sup>5</sup> In 1985 the fourth election after the restoration of democracy was held with elections in 1974, 1977 and 1981 being the previous three ones.

<sup>6</sup> Brender and Drazen (2008) argues that in advanced democracies fiscal imprudence before elections negatively affects an incumbent’s re-election prospects as deficit adverse voters punish opportunistic politics.

*Compensation to Employees* subcategory of expenditures as the respective coefficient is statistically significant at the 5% level. This finding corroborates the empirical findings in Chortareas et al. (2016b) that document pre-electoral increases in municipal employment.

< INSERT TABLE 3 ABOUT HERE >

## 4.2 Extensions and Further Evidence

We first examine how the year before elections affects fiscal policy. For this we introduce a *Years Before Elections* dummy that takes the value of one in the year before elections and zero otherwise. Evidence presented in Table 4, Columns (1) to (3), shows that the deterioration in government's primary balance starts in the year prior to elections as the coefficient of the dummy is negative and statistically significant at the 10% level. Nevertheless, this deterioration is not due to increased expenses but due to a negative effect on the revenue side. The coefficients of the *Elections* dummy remain qualitatively the same as in our baseline specification. This is also the case with the rest of the variables.

Since numerous elections in Greece from 1974 to 2011 were held before the end of the constitutionally mandated government term (4 years) we test the effect of snap elections on government policies. For this we substitute our *Elections* dummy with a *SnapElections* dummy variable that takes the value of one in the years where snap elections were held and zero otherwise.<sup>7</sup> Our results presented in Table 4, Columns (4) to (6), indicate that snap elections are associated with increased expenses as the respective coefficient has a positive sign and is statistically significant at the 10% level.

Finally, we test the effect of prolonged incumbencies on fiscal policies. We introduce a *YearsinOffice* variable that counts the number of years a party has been in office. Evidence presented in Table 4, columns (7) to (9), suggest that prolonged incumbencies have a negative effect on the primary balance and revenues as the respective coefficients are both negative and statistically significant at the 5% level.

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<sup>7</sup> We code as snap elections the elections that occurred in any year before the one corresponding to the final (fourth) of a government's term.

< INSERT TABLE 4 ABOUT HERE >

## 5 Conclusion

This paper considers the presence of *political budget cycles* in Greece as a manifestation of clientelistic and rent seeking practices. We study the years from the restoration of democracy up until 2011 and focus on the general government's primary balance, expenses and revenues. For the years after 1995, where data are available, we also study how elections affect the composition of expenditures. Moreover, we investigate how snap elections and prolonged incumbencies affect public finances. Our results provide evidence on the existence of politically induced cycles in Greece's public finance and verify previous studies that document the absence of such effects in the aftermath of the Maastricht treaty. Yet, in contract to a popular and casual interpretation, our results suggest that the opportunistically induced cycles did not vanish after 1993. Instead they manifest themselves in different and more subtle ways, and in particular in the composition of expenditures. More specifically, our results document the presence of electoral effect in the *Compensation to Employees* subcategory of expenses. Our evidence also suggests that snap elections are associated with a deterioration in public finances as they positively affect expenses. Prolonged incumbencies are found to negatively affect the primary balance and revenues; a finding that suggests a more relaxed attitude on behalf of the incumbents with respect to public finances. We show the absence of partisan effects. Politicians in Greece are found to be opportunistically motivated and have remained so even in the presence of strict rules with regard to fiscal policies as those ushered in after 1993. The emergence of political cycles in the composition of expenditures suggest that more profound checks and balances should be put into force to deter the well-established and long standing opportunistic behavior adopted by incumbents before elections.

## References

- Abbas, S.M.A., Belhocine, N., ElGanainy, A.A., Horton, M.A., 2010. A Historical Public Debt Database. International Monetary Fund.
- Alesina, A., Roubini, N., Cohen, G., 1997. Political Cycles and the Macroeconomy. MIT Press, Cambridge, MA.
- Alogoskoufis, G.S., Lee, D.-H., Philippopoulos, A., 1998. Exchange-Rate Regimes, Political Parties and the Inflation-Unemployment Tradeoff: Evidence from Greece. *Open Economies Review* 9, 39–51.
- Alogoskoufis, G.S., Philippopoulos, A., 1992. Inflationary expectations, political parties and the exchange rate regime: Greece 1958–1989. *European Journal of Political Economy* 8, 375–399.
- Alt, J.E., Lassen, D.D., 2006. Transparency, Political Polarization, and Political Budget Cycles in OECD Countries. *American Journal of Political Science* 50, 530–550.
- Alt, J.E., Lassen, D.D., 2005. The Political Budget Cycle is Where You Can't See It: Transparency and Fiscal Manipulation (EPRU Working Paper Series No. 05-03). Economic Policy Research Unit (EPRU), University of Copenhagen. Department of Economics.
- Ames, B., 1987. Political Survival: Politicians and Public Policy in Latin America. University of California Press, Berkeley, CA.
- Andrikopoulos, A.A., Prodromidis, K.P., Serletis, A., 1998. Electoral and Partisan Cycle Regularities: A Cointegration Test. *Journal of Policy Modeling* 20, 119–140.
- Block, S.A., 2002. Political business cycles, democratization, and economic reform: the case of Africa. *Journal of Development Economics* 67, 205–228.
- Bratsiotis, G.J., 2000. Political parties and inflation in Greece: the metamorphosis of the Socialist Party on the way to EMU. *Applied Economics Letters* 7, 451–454.
- Brender, A., Drazen, A., 2008. How Do Budget Deficits and Economic Growth Affect Reelection Prospects? Evidence from a Large Panel of Countries. *American Economic Review* 98, 2203–2220.
- Brender, A., Drazen, A., 2005. Political budget cycles in new versus established democracies. *Journal of Monetary Economics* 52, 1271–1295.

- Chortareas, G., 1999. Political business cycles: Theory, evidence, and extensions. in J. M. Mbaku and M. S. Kimenyi (eds.), *Institutions and Collective Choice in Developing Countries: Applications of the Theory of Public Choice*, Ashgate, 113-144.
- Chortareas, G., Logothetis, V., Papandreou, A.A., 2016a. Political budget cycles and reelection prospects in Greece's municipalities. *European Journal of Political Economy* 43, 1–13. doi:10.1016/j.ejpoleco.2016.02.001
- Chortareas, G., Logothetis, V., Papandreou, A.A., 2016b. Employment Cycles in Greece's Local Governments. *Journal of Economic Policy Reform*.
- Drazen, A., 2000. *Political economy in macroeconomics*. Princeton University Press, Princeton, N.J.
- Drazen, A., Eslava, M., 2010. Electoral manipulation via voter-friendly spending: Theory and evidence. *Journal of Development Economics* 92, 39–52.
- Dubois, E., 2016. Political business cycles 40 years after Nordhaus. *Public Choice* 166, 235–259.
- Franzese, R.J., Jusko, K.L., 2006. Political-Economic Cycles, in: Weingast, B.R., Wittman, D.A. (Eds.), *The Oxford Handbook of Political Economy*. Oxford University Press, New York, pp. 545–564.
- Frey, B.S., Schneider, F., 1978a. A Politico-Economic Model of the United Kingdom. *Economic Journal* 88, 243–53.
- Frey, B.S., Schneider, F., 1978b. An Empirical Study of Politico-Economic Interaction in the United States. *The Review of Economics and Statistics* 60, 174–83.
- Gonzalez, M. de los A., 2002. Do Changes in Democracy Affect the Political Budget Cycle? Evidence from Mexico. *Review of Development Economics* 6, 204–24.
- Haan, J. de, Klomp, J., 2013. Conditional political budget cycles: a review of recent evidence. *Public Choice* 157, 387–410.
- Katsimi, M., Sarantides, V., 2012. Do elections affect the composition of fiscal policy in developed, established democracies? *Public Choice* 151, 325–362.
- Klomp, J., De Haan, J., 2013. Do political budget cycles really exist? *Applied Economics* 45, 329–341.
- Krueger, A.O., Turan, I., 1993. The politics and economics of Turkish policy reform in the 1980's, in: Bates, R., Krueger, A.O. (Eds.), *Political and Economic Interactions in*

- Economic Policy Reform: Evidence from Eight Countries. Basil Blackwell, Oxford.
- Laopodis, N., Merika, A.A., Triantafillou, A., 2016. Unraveling the political budget cycle nexus in Greece. *Research in International Business and Finance* 36, 13–27.
- Lewis-Beck, M.S., 1988. *Economics and Elections: The Major Western Democracies*. Ann Arbor: University of Michigan Press.
- Lockwood, B., Philippopoulos, A., Tzavalis, E., 2001. Fiscal policy and politics: theory and evidence from Greece 1960–1997. *Economic Modelling* 18, 253–268.
- Nordhaus, W.D., 1975. The Political Business Cycle. *Review of Economic Studies* 42, 169–90.
- Paldam, M., 1979. Is There an Electional Cycle? A Comparative Study of National Accounts. *The Scandinavian Journal of Economics* 81, 323–342.
- Persson, T., Tabellini, G.E., 2003. *The Economic Effects of Constitutions, Munich lectures in economics*. MIT Press, Cambridge, Mass.
- Rogoff, K., Sibert, A., 1988. Elections and Macroeconomic Policy Cycles. *The Review of Economic Studies* 55, 1–16.
- Rose, S., 2006. Do fiscal rules dampen the political business cycle? *Public Choice* 128, 407–431.
- Sakurai, S., Menezes-Filho, N., 2011. Opportunistic and partisan election cycles in Brazil: new evidence at the municipal level. *Public Choice* 148, 233–247.
- Schuknecht, L., 1996. Political Business Cycles and Fiscal Policies in Developing Countries. *Kyklos* 49, 155–170.
- Shi, M., Svensson, J., 2006. Political budget cycles: Do they differ across countries and why? *Journal of Public Economics* 90, 1367–1389.
- Siokis, F., Kapopoulos, P., 2007. Parties, Elections and Stock Market Volatility: Evidence From a Small Open Economy. *Economics & Politics* 19, 123–134.
- Sjahrir, B.S., Kis-Katos, K., Schulze, G.G., 2013. Political budget cycles in Indonesia at the district level. *Economics Letters* 120, 342–345.
- Skouras, S., Christodoulakis, N., 2014. Electoral misgovernance cycles: evidence from wildfires and tax evasion in Greece. *Public Choice* 159, 533–559.



- Streb, J.M., Lema, D., Torrens, G., 2009. Checks and Balances on Political Budget Cycles: Cross-Country Evidence. *Kyklos* 62, 426–447.
- Tufte, E.R., 1978. *Political Control of the Economy*. Princeton University Press, Princeton, New Jersey.
- Veiga, L., Veiga, F., 2007. Political business cycles at the municipal level. *Public Choice* 131, 45–64.

## Tables

**Table 1: Baseline Evidence (1974-2011)**

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	$\Delta$ Primary Balance	$\Delta$ Revenues	$\Delta$ Expend	$\Delta$ Primary Balance	$\Delta$ Revenues	$\Delta$ Expend
Lagged Dependent Variable	-0.356** (0.159)	-0.0915 (0.124)	-0.404*** (0.134)	-0.346** (0.161)	-0.0846 (0.124)	-0.407*** (0.130)
Elections	-2.153** (0.786)	-0.405 (0.545)	1.742*** (0.618)	-2.098** (0.781)	-0.397 (0.558)	1.746** (0.625)
$\Delta$ Real GDP growth rate	0.167 (0.308)	0.0201 (0.160)	-0.137 (0.191)	0.176 (0.313)	0.0207 (0.165)	-0.136 (0.192)
$\Delta$ unemployment	0.880** (0.417)	0.278 (0.203)	-0.353 (0.240)	0.660** (0.291)	0.251 (0.179)	-0.366 (0.278)
%Pop>65	-1.250** (0.514)	-0.590** (0.262)	0.449* (0.259)	-2.345*** (0.797)	-0.719 (0.522)	0.383 (0.511)
%Pop<14	-0.957** (0.404)	-0.368** (0.174)	0.639*** (0.201)	-0.342 (0.421)	-0.292 (0.275)	0.677** (0.320)
Partisan	0.150 (0.523)	0.0840 (0.264)	0.434 (0.328)	-0.0693 (0.487)	0.0555 (0.232)	0.422 (0.361)
Linear Time Trend				0.466* (0.250)	0.0563 (0.173)	0.0282 (0.180)
Constant	36.71** (14.97)	16.33** (6.939)	-17.49** (7.252)	-886.6* (493.0)	-95.30 (342.3)	-73.32 (356.3)
Observations	31	31	31	31	31	31
R <sup>2</sup>	0.41	0.16	0.60	0.46	0.17	0.60
F	3.636	1.395	12.77	4.939	1.518	11.08

**Notes:** The elections dummy takes the value of one during election years and zero otherwise. Estimates are based on OLS regressions and Newey-West standard errors. \*\*\*, \*\*, \* denote significance at the 1, 5, and 10-percent level respectively.

**Table 2: Restricted Sample**

	<b>1986-2011</b>			<b>1994-2011</b>		
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	$\Delta$ Primary Balance	$\Delta$ Revenues	$\Delta$ Expend	$\Delta$ Primary Balance	$\Delta$ Revenues	$\Delta$ Expend
Lagged Dependent Variable	-0.375** (0.163)	-0.0306 (0.114)	-0.532*** (0.0762)	-0.390 (0.235)	-0.0510 (0.335)	-0.636*** (0.0988)
Elections	-1.879* (0.973)	-0.201 (0.618)	1.660** (0.645)	-1.296 (1.242)	0.101 (0.665)	1.508 (0.984)
$\Delta$ Real GDP growth rate	0.236 (0.357)	-0.00771 (0.187)	-0.227 (0.169)	0.886** (0.360)	0.520* (0.245)	-0.334 (0.267)
$\Delta$ unemployment	1.090*** (0.304)	0.106 (0.224)	-0.986*** (0.284)	1.551** (0.610)	0.759 (0.533)	-1.162* (0.594)
%Pop>65	0.0114 (1.843)	-1.424 (0.983)	-3.217** (1.265)	2.902 (3.846)	-1.589 (2.190)	-6.452** (2.284)
%Pop<14	-0.234 (0.590)	-0.387 (0.292)	0.381 (0.319)	2.271 (1.960)	-1.052 (1.815)	-1.596 (1.440)
Linear Time Trend	-0.190 (0.469)	0.241 (0.239)	0.991** (0.374)	-0.555 (0.837)	0.137 (0.274)	1.552** (0.592)
Partisan	0.303 (0.539)	0.0562 (0.287)	0.122 (0.369)	0.631 (1.426)	0.967 (1.059)	0.270 (0.889)
Constant	384.2 (908.7)	-450.7 (461.8)	-1,933** (728.9)	1,026 (1,594)	-230.4 (512.4)	-2,970** (1,151)
Observations	26	26	26	18	18	18
R <sup>2</sup>	0.40	0.16	0.68	0.66	0.42	0.74
F	3.908	1.159	16.37	6.585	3.466	15.48

Notes: See Table 1

**Table 3: Composition of Expenditures (1995-2011)**

VARIABLES	(1)	(2)	(3)	(4)	(5)
	$\Delta$ Compens Employees	$\Delta$ GoodsnServices	$\Delta$ InterExp	$\Delta$ Subsidies	$\Delta$ SocBen
Lagged Dependent Variable	-0.273 (0.153)	-0.385 (0.244)	-0.104 (0.143)	-0.585 (0.374)	-0.768** (0.299)
Elections	0.566** (0.210)	0.498 (0.418)	-0.0673 (0.276)	0.000943 (0.0544)	0.179 (0.465)
$\Delta$ Real GDP growth rate	-0.227*** (0.0549)	0.0631 (0.0615)	0.0584 (0.0843)	0.00398 (0.0127)	-0.00305 (0.135)
$\Delta$ unemployment	-0.253** (0.0984)	0.0531 (0.124)	0.429 (0.273)	0.0649 (0.0373)	0.0732 (0.168)
%Pop>65	-0.125 (0.218)	-0.702 (0.756)	-0.942 (0.661)	0.0656 (0.176)	-3.524*** (0.761)
%Pop<14	1.097** (0.416)	-1.871** (0.633)	-2.327 (1.299)	-0.244 (0.139)	-2.432*** (0.623)
Partisan	-0.192 (0.124)	0.257 (0.225)	0.343 (0.332)	-0.0340 (0.0459)	0.369 (0.206)
Linear Time Trend	0.130 (0.0784)	-0.0717 (0.149)	0.0705 (0.140)	-0.0227 (0.0436)	0.696** (0.200)
Constant	-275.4 (159.5)	184.2 (283.6)	-89.83 (286.0)	47.97 (84.06)	-1,294** (387.0)
Observations	15	15	15	15	15
R <sup>2</sup>	0.84	0.73	0.89	0.83	0.75
F	31.64	20.39	44.79	37.74	31.56

Notes: See Table 1

**Table 4: Further Evidence (1974-2011)**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	$\Delta$ Primary Balance	$\Delta$ Revenues	$\Delta$ Expend	$\Delta$ Primary Balance	$\Delta$ Revenues	$\Delta$ Expend	$\Delta$ Primary Balance	$\Delta$ Revenues	$\Delta$ Expend
Lagged Dependent Variable	-0.330** (0.132)	-0.127 (0.140)	-0.359*** (0.124)	-0.320** (0.135)	-0.0862 (0.141)	-0.409*** (0.123)	-0.300 (0.196)	-0.0264 (0.121)	-0.382** (0.149)
Year before Elections	-1.323* (0.644)	-0.608* (0.352)	0.843 (0.507)	-0.795 (0.664)	-0.455 (0.328)	0.397 (0.474)			
Elections	-2.488*** (0.812)	-0.593 (0.603)	1.948*** (0.622)				-2.612** (0.931)	-0.669 (0.619)	1.911** (0.730)
$\Delta$ Real GDP growth rate	0.249 (0.282)	0.0613 (0.151)	-0.195 (0.174)	0.283 (0.314)	0.0735 (0.152)	-0.199 (0.203)	0.162 (0.284)	0.0139 (0.142)	-0.139 (0.192)
$\Delta$ unemployment	0.870* (0.439)	0.288 (0.217)	-0.350 (0.230)	0.992** (0.465)	0.308 (0.220)	-0.457* (0.248)	0.515 (0.405)	0.0730 (0.184)	-0.234 (0.283)
%Pop>65	-1.205** (0.498)	-0.607** (0.283)	0.425* (0.242)	-1.344** (0.566)	-0.586* (0.332)	0.609** (0.277)	-1.072** (0.473)	-0.480* (0.249)	0.403 (0.266)
%Pop<14	-0.945** (0.402)	-0.389* (0.190)	0.627*** (0.192)	-1.085** (0.453)	-0.383 (0.226)	0.801*** (0.238)	-0.896** (0.373)	-0.331* (0.165)	0.625*** (0.206)
Partisan	0.284 (0.497)	0.166 (0.261)	0.327 (0.321)	0.250 (0.648)	0.114 (0.292)	0.321 (0.402)	-0.376 (0.609)	-0.223 (0.320)	0.599 (0.398)
SnapEle				-1.642 (1.037)	-0.182 (0.602)	1.632* (0.886)			
YrsinOffice							-0.308** (0.115)	-0.175** (0.0703)	0.107 (0.109)
Constant	36.39** (14.59)	17.26** (7.528)	-17.31** (6.807)	40.31** (16.47)	16.58* (9.022)	-22.71** (8.375)	34.25** (13.81)	14.70** (6.700)	-17.03** (7.308)
Observations	31	31	31	31	31	31	31	31	31
R <sup>2</sup>	0.46	0.20	0.63	0.34	0.17	0.53	0.47	0.23	0.61
F	3.761	2.218	11.80	1.687	1.504	6.340	4.457	2.365	11.51

Notes: See Table 1

## APPENDIX A

**Table A.1: Descriptive Statistics**

VARIABLES	N	Mean	SD	Min	Max
Revenues	38	33.30	6.759	20.86	43.35
Expenditures	38	40.75	7.678	25.26	53.81
Primary Balance	38	-1.762	3.444	-10.64	4.368
Elections	38	0.316	0.471	0	1
Unemployment	32	9.096	2.678	2.663	17.85
%Pop>65	38	15.25	2.395	12.03	19.36
%Pop<014	38	18.51	3.461	14.60	24.07
Partisan	38	-0.105	0.981	-1	1
Year before Elections	38	0.316	0.471	0	1
SnapEle	38	0.184	0.393	0	1
YrsinOffice	38	4.132	2.772	0	11
CompEmployees	17	11.05	0.941	9.600	13.10
GoodsnServices	17	5.800	0.573	4.800	6.700
InterExp	17	6.459	1.963	4.400	10.70
Subsidies	17	0.1000	0.150	0	0.600
SocBen	17	16.16	3.022	12.90	22.90