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Cristina Vicente*, Ana-María Ríos and María-Dolores Guillamón

Departamento de Economía Financiera y Contabilidad, Facultad de Economía y Empresa, University of Murcia, Campus de Espinardo, Murcia, Spain

ABSTRACT

The aim of this paper is to analyze how the implementation of the Budgetary Stability Law has affected Political Budget Cycles generated by Spanish local governments. Specifically, we study whether the evolution of debt, budget deficit, capital spending and current spending over the electoral cycle has changed after the introduction of this law. We use a sample of 132 Spanish municipalities with more than 50,000 inhabitants (including the provincial capitals) during the period 1995-2009. Our results show that the Budgetary Stability Law has avoided electoral cycles in debt. On the contrary, the adoption of this law has not mitigated the incumbents' incentives to manipulate deficit, capital spending and current spending with electoral aims. Nevertheless, it has caused a change in the way in which mayors manipulate fiscal policy over the electoral cycle. The opportunistic expansion covered both preelectoral year and the electoral year before the implementation of this fiscal rule, while after that, deficit and spending increases are confined in the election year.

Comportamiento electoral y estabilidad presupuestaria

RESUMEN

En este trabajo analizamos la influencia de la entrada en vigor de la Ley de Estabilidad Presupuestaria en los Ciclos Políticos Presupuestarios generados por los gobiernos locales españoles. En concreto, estudiamos si la evolución de la deuda, del déficit, del gasto de capital y del gasto corriente a lo largo del ciclo electoral se ha visto modificada tras la introducción de dicha ley. Para ello utilizamos una muestra formada por 132 municipios españoles con más de 50.000 habitantes (incluidas las capitales de provincia) durante el periodo 1995-2009. Nuestros resultados muestran que la Ley de Estabilidad Presupuestaria ha evitado la creación de Ciclos Políticos Presupuestarios en la deuda. Por el contrario, la aprobación de dicha ley no ha atenuado los incentivos de los políticos para manipular el déficit, el gasto de capital y el gasto corriente con la finalidad de permanecer en el poder, si bien sí que ha supuesto un cambio en la forma en la que los alcaldes manipulan estas variables a lo largo del ciclo electoral. Antes de la aprobación de la ley se observaban expansiones oportunistas tanto en el año preelectoral como en el electoral, mientras que tras la entrada en vigor de la misma los incrementos del déficit, del gasto de capital y del gasto corriente se concentran en el año en el que se celebran las elecciones.

Introduction

The term Political Budget Cycles (PBC) refers to the reduction in taxes or to the expansion of public spending of the deficit or debt immediately prior to elections by the governing party in an attempt to favor its re-election (Drazen, 2008b). Before the arrival of PBC theories, studies on political cycles merely analyzed the effect of elections on the cyclic behavior of macroeconomic variables. In recent decades, however, the literature on electoral cycles has shifted its focus to budgetary variables, mainly because of the absence of empirical data supporting the existence of Political Business Cycles in countries (Drazen, 2008a).

Recent studies on PBC have started to address factors that determine the magnitude of the electoral cycle. One factor detected has been budgetary stability rules, since governments that are clearly limited by these rules will find it harder to increase spending or cut taxes prior to elections (Alt and Rose, 2007).

*Autor para correspondencia.
Correo electrónico: cristina.v.o@um.es (C. Vicente Oliva).

To date, most studies have examined the influence of the Stability and Growth Pact on the cycles generated by the central governments of the euro countries. (Buti and Van den Noord, 2004; Mink and de Haan, 2006; Von Hagen, 2006; Efthyvoulou, 2011). Nevertheless, we should consider that one consequence of the Pact has been that many countries have brought in budgetary rules to limit the spending of regional and local administrations. The reason for this is that for a country to comply with the Pact all the administrations, not just central government, have to chip in if the limits established are not to be exceeded.

The purpose of our study is to determine how Spanish local governments' opportunist behavior has been affected by the 2001 Budgetary Stability Act, which puts strict limits on the deficit and debt public administrations are allowed to run into. This law attempts to assure municipalities' financial health (under the terms of the European System of National and Regional Accounts, SEC-95). One of the main motives of the Act was, indeed, to help "accelerate the reduction in debt" of these entities.

Specifically, our aim here is to study the effect that the Budgetary Stability Act (BSA) has had on the size of the PBC. We compare the impact of election dates on municipal debt, deficit and capital expenditure and current expenditure before and after the arrival of above-mentioned Act. Empirical literature on PBC at subnational levels reports that politicians manipulate these variables in order to increase their chances of re-election (Drazen and Eslava, 2010; Veiga and Veiga, 2007; Bastida, Beyaert, and Benito, 2012).

This paper contributes to the literature by showing for the first time the effect of a budgetary regulation, deriving the Stability and Growth Pact, on how local governments manipulate debt, deficit, capital expenditure and current expenditure during the electoral cycle.

This paper also shows the evolution of debt, deficit, capital expenditure and municipal current expenditure in each of the years comprising the electoral cycle, unlike other studies, which only take into account the election year itself. We can, therefore, analyze not just whether the application of the Act has affected the electoral cycle but how it has done so. In other words, it may be that this law has not eliminated the electoral cycle but has influenced how it is generated.

Our findings show that application of the BSA has had an effect on political budgetary cycles, although the effect varies depending on the variable analyzed. While electoral cycles for debt have disappeared following the introduction of the BSA, the cycles generated for deficit, capital expenditure and current expenditure persist. In these three cases the law has led to a change in how politicians manipulate them during the electoral cycle.

The paper is structured as follows. Section 2 offers a review of the literature on conditioned PBC. Section 3 provides a description of the sample, we define the variables used and we specify the econometric model. Section 4 analyzes the results and Section 5 concludes.

Conditioned political budget cycles

The first theoretical model on Political Business Cycles was developed by Nordhaus (1975). According to this author, governments manipulate monetary policy to create political cycles in macroeconomic results (growth, employment and inflation) and to increase the likelihood of their remaining in power. According to this model, voters' expectations are formed by adaptation. The implication is that governors who manipulate the economy by bringing in expansive policies before elections are rewarded by the voters even though their policies may undergo a volte face after the elections.

Later models incorporated rational expectations, i.e. they assumed voters would not be systematically taken in. These include the models by Rogoff and Sibert (1988) and Rogoff (1990), who were the first to focus on the role of fiscal policy as a cycle generator, the origin of PBC theories. The models developed by the authors mentioned are based information asymmetries between voters and governors regarding the competence of the latter. They assume that voters have an interest in electing the most competent leaders, which are those able to provide the most public goods with the lowest level of revenue. Since voters cannot directly observe the competence of the governor they have to infer this from the results of the fiscal policies. The electorate, therefore, prefers candidates who incur in higher spending or provide tax reductions prior to elections since this is a sign of their high level of competence.

Most studies on PBC have aimed mainly to provide empirical confirmation of the Rogoff and Sibert theory, and recent years have seen a wealth of papers that seek to identify the determinants of the size of political cycles. These studies make up part of the literature on conditioned PBC that analyzes which factors influence the incentives or the capacity of politicians to generate electoral cycles. Among the factors analyzed are the decision of a leader to stand for re-election, his political strength, the margin of victory expected in the forthcoming elections, the level of transparency and the existence of fiscal rules that limit or inhibit the deficit.

Regarding the decision to run for re-election or not, Besley and Case (1995), Rose (2006) and Alt and Rose (2007) examine whether governors who do not run for re-election generate a shorter electoral cycle than those who do. The results show that running for reelection or not does not affect a governor's opportunistic behavior, even though it was expected that those not seeking re-election would have fewer incentives to manipulate fiscal policy tools.

In terms of political strength, Geys (2007) reports that opportunist manipulation in election years increases the more parties there are in the government.

Elsewhere, Alt and Rose (2007) and Aidt, Veiga and Veiga (2011) find greater PBC when governors believe the elections will be tight affairs.

With regard to transparency, Alt and Lassen (2006a; 2006b) study the relation with electoral cycles, concluding that these are greater in less transparent countries. Likewise, Shi and Svensson (2002) indicate that the percentage of informed voters influences PBC.

Finally, many authors have examined the impact of budget stability laws on PBC. Rose (2006) analyzes whether budgetary regulations limit politicians' capacity to manipulate the budget to favor their re-election. Using a sample of American States, she concludes that only very strict fiscal regulations reduce electoral cycles in expenditure and deficit. Again with a sample of American States, Alt and Rose (2007) show budgetary stability regulations are associated with smaller increases in expenditure in the run-up to elections. According to these authors, the result was expected since budgetary stability regulations limit politicians' capacity to generate electoral cycles.

Among the studies on the influence of budgetary regulations on manipulation of budgets caused by elections, some scholars focus on the effects of the Treaty of Maastricht and the Stability and Growth Pact on PBC generated by the EU member country governments.

Buti and Van den Noord (2004), Mink and de Haan (2006), Von Hagen (2006) and Efthyvoulou (2011) report that the demands of budgetary discipline deriving from the Stability and Growth Pact have not lessened politicians' incentives to manipulate fiscal policy tools when an election looms, and they find evidence for the existence of PBC following the adoption of the Pact.

Hence, application of the Stability and Growth Pact has not led to the disappearance of electoral cycles. However, according to Von Hagen (2006), electoral cycles are affected by the Treaty of Maastricht. Their results indicate that during the period of economic convergence (between 1992 and 1998) no opportunist manipulation was observed

in election years. Awareness that non compliance with the conditions of Maastricht would mean exclusion from the European Monetary Union led voters to be more supportive of fiscal discipline. Therefore, cycles disappeared during the economic convergence period. Given the above, Von Hagen (2006) concludes that for budgetary regulations to be effective they have to fulfill two conditions: breaking them should imply a cost and citizens should perceive this.

As we have seen, most works have been of national scope, analyzing the cycles generated by central governments in the eurozone. They examine the effect of the application of the Stability and Growth Pact on opportunistic behavior of central governments. In their attempts to meet the requirements of the Pact, many European governments have established budgetary regulations which also limit the deficits of sub-national administrations.

While it would seem to be of importance to analyze whether the budgetary regulations stemming from the Stability and Growth Pact have restricted local governments' capacity to create electoral cycles, very few studies have addressed this issue. The only study to broach the question of the effect the entry of the Budgetary Stability Act has had on Political Budgetary Cycles in Spain is that of García, Prado and Cuadrado (2011), who show that the electoral cycle for debt has waned since the introduction of the law. As the study in question only looks at the use of debt for opportunistic goals, we believe that it is worthwhile extending the study to other budgetary variables that have been affected by this law.

Methodology

Sample

The sample comprises 132 Spanish municipalities of over 50,000 inhabitants (including the provincial capitals) during the period 1995-2009. It therefore covers the four municipal elections of 1995, 1999, 2003 and 2007.

The ensuing data panel includes variables of financial, political and demographic natures. The municipal financial data were taken from the Spanish Public Sector Economic Database (BADESPE) and from the Ministry of the Finance and Public Administrations. They have been deflated using the Consumer Price Index prepared by the Spanish National Statistics Institute (INE). Statistical sources granting us access to political information were the Spanish Ministry of Internal Affairs and Ministry for Territorial Policy. Finally, the INE and the Economic Annual of "La Caixa" has provided the information needed to construct the demographic variables.

Variables

The main interest of our study is to analyze whether the entry of the BSA has reduced the size of the PBC. We define four dependent variables: debt per capita (*debtpc*), deficit per capita (*deficitpc*), capital expenditure per capita (*capitalexppc*) and current expenditure per capita (*currentexppc*). These were chosen on the basis of the literature on electoral cycles at subnational level as possible tools used by politicians to sway citizens' votes (Khemani, 2004; Medina and Lema, 2004; Veiga and Veiga, 2007; Drazen and Eslava, 2010; García, Prado and Cuadrado, 2011).

The effect of the electoral calendar is captured by three binary variables: *preelec* which takes the value 1 for the year before the elections and 0 in the remaining cases, *elec* which takes the value 1 for the year of the elections and 0 in the remaining cases and *postelec* which takes the value 1 for the year after the elections and 0 otherwise. Using this procedure we can observe the behavior of the budgetary variables in each stage of the electoral cycle, something which would not have been possible if we had defined

only a binary variable that took two values: election year and non election year. Recent studies that use the former procedure are Foucault, Thierry and Paty (2008), Rose (2006) and Alt and Rose (2007). In order to consider the effect of the BSA, we have defined the variable *BSA*, which takes the value 1 in the years 2003-2009 and 0 in the remaining cases. Although this law came into effect in January 2002, the first budgets to be drawn up under it were in 2003.

As well as the variables already described, we have considered a series of control variables such as political strength, the political sign of the mayor, population density, population, unemployment rate, tax revenue and transfers received.

Aspects like political strength or political sign are considered determinants of the municipal financial situation. Hence, we take into account these variables to control for political effects.

Roubini and Sachs (1989) maintain that coordination problems in fragmented governments may suppose high costs, an argument referred to in the literature as the "Roubini and Sachs weak government hypothesis" (RSH). We include the variable *strength* in order to analyze it.

The variable *politicsign* has been included in the model given the common assumption that progressive parties favor increasing public expenditure while conservative parties tend to reduce it (Seitz, 2000; Tellier, 2006). Cusack (1997) defines this idea through the concept "political parties matters" (PPM). However, ideology may not be a relevant factor in explaining the municipal financial situation. According to Benito, Bastida and Muñoz (2010), specific characteristics of municipalities may force local governments into certain policies to improve specific situations, regardless of their political sign.

Population density is included in the model in the variable *popden*, even though the literature has not clearly shown its influence on the municipal financial situation[1].

We have also included the variable *population*, for the municipality's population. Hempel (1973), Hulten and Peterson (1984) and Rivers and Yates (1997) hold that population growth leads to increased municipal expenditure. Likewise, Mitchell (1967), Pogue (1970), Escudero and Prior (2002), Vallés and Zárete (2001) find a positive relation between debt level and population.

Some studies (Holcombe and Williams, 2008; Carruthers and Ulfarsson, 2008; Foucault, Thierry and Paty, 2008) include unemployment rate as a variable (*unemployment*) to explain local government expenditure. Holcombe and Williams (2008), for example, report that municipal expenditure is positively related to employment rate. It is also likely that an increase in unemployment rate brings with it an increase in deficits, which in the long run causes greater debt (Feld and Kirchgässner, 2001).

We also consider the effect of transfers proceeding from higher level governments since it is expected that these will lead to an increase in local expenditure (Dahlberg, Mörk, Rattsø and Hanna 2008).The variable total transfers per capita (*totaltransfpc*) will be used as an explanatory variable in debt regression; the variable capital transfers per capita (*capitaltransfpc*) will be used as an explanatory variable in the capital expenditures regression and the variable current transfers (*currenttransfpc*) in the current expenditures regression.

Finally, we include the variable *taxrevenuepc* since it is generally assumed that higher taxes increase total expenditure (Carruthers and Ulfarsson, 2008). Nevertheless, it is worth noting that an increase in tax levels may not necessarily suppose an increase in the total non financial expenditure. In fact, if a municipality has an excessive level of debt it may use part of the revenue from taxes to better its financial situation. Feld and Kirchgässner (2001) state that

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1 Some authors find that per capita public expenditure tends to increase when population density increases (Ladd and Yinger, 1991; Ladd, 1994; Holcombe and Williams, 2008). Others, meanwhile, report the opposite (Pettersson-Lidbom, 2001; Burchell and Mukherji, 2003; Litman, 2004; Carruthers and Ulfarsson, 2008).

there is a substitution effect between taxes collected and debt assumed (Table 1).

Model specification

To analyze the effect of the BSA on the PBC the following model is estimated:

$$y_{it} = \alpha y_{it-1} + \beta_1 preelec_{it} + \beta_2 elec_{it} + \beta_3 postelec + \lambda_1 preelec_{it} \cdot BSA_t + \\ + \lambda_2 elec_{it} \cdot BSA_t + \lambda_3 postelec_{it} \cdot BSA_t + \gamma X_{it} + c_i + \varepsilon_{it} \quad (1)$$

where subindex i is the municipalities, t is the year, y_{it} is the dependent variable and y_{it-1} is the lagged value of the dependent variable. X_{it} is the control variables vector (*strength, politicsign, popden, population, unemployment, taxreveneuepc, totaltransfpc, currenttransfpc* and *capitaltransfpc*). c_i is the individual effect of the municipality, y ε_{it} is the error term.

The model also includes the variables of interest in our study, i.e. the cycle variables (*preelec, elec* and *postelec*) and the interaction terms between these binary variables and the binary variable *BSA*. The effect of the electoral calendar on the budgetary variables prior to the BSA is shown in the coefficients of the cycle variables (*preelec, elec* and *postelec)* although the impact of the elections on the budgetary variables after the BSA came in is reflected by the sum of the coefficients of these variables and the interaction terms. Ascertaining if the cycle has really changed after the law came in is done by observing the significance of the coefficients of the interaction terms. If these are significant we can conclude that electoral cycles observed as from 2003 differ from those occurring prior to the law.

We expect to find smaller electoral cycles after the BSA came in, since according to the literature, the fiscal regulations limiting or prohibiting deficit should diminish politicians' capacity to manipulate fiscal policy tools, and so prevent the appearance of PBC (Rose, 2006).

The estimation method used is the Generalized Moments Method (GMM), developed by Arellano and Bond (1991).

Results

Table 2 shows the results obtained by the model described in the previous section.

The second column gives the estimations to evaluate the effect of the entry of BSA on the PBC on debt. Note that the coefficients of the cycle variables should be interpreted in relation to the base year, i.e. the second year after elections.

In terms of debt, the positive and significant coefficient of variable *preelec* indicates that prior to the BSA, local governments took on more debt in the year prior to an election. On the other hand, coefficients of variables *elec* and *postelec* are negative and significant, suggesting that in an election year and the year after debt levels decrease, albeit very slightly during the election year itself, with the greatest adjustment occurring in the year after. From the above, we can state that prior to the BSA there was an electoral cycle for debt characterized by a considerable increase in debt in the year preceding elections and an adjustment during the year following the elections. In contrast, after the law, no electoral cycles are detected for municipal debt. The significant coefficient for the interaction term *preelecxBSA* indicates that following the entry of the BSA, the

Table 1
Definition of variables and descriptive statistics

Variable	Description	Source	Mean	St. dev.	Min.	Max.
debtpc	Debt in euros per capita (real € 2001)[1]	Spanish Ministry of the Finance and Public Administrations	420.06	228.55	.00	1,764.66
deficitpc	Budgetary deficit in euros per capita (real € 2001)	BADESPE (1995-2002) database	−17.98	101.87	−1711.19	476.77
capitalexppc	Capital expenditure in euros per capita (real € 2001)	and the Spanish Ministry	154.42	91.87	6.19	754.43
currentexppc	Current expenditure in euros per capita (real € 2001)	of the Finance and Public Administrations (2003-2009)	455.07	138.08	152.29	1,172.91
preelec	Pre-election year	Own elaboration	.20	.40	.00	1.00
	Takes value 1 in the pre-election year and 0 otherwise					
elec	Election years		.26	.44	.00	1.00
	Takes value 1 in election years and 0 otherwise					
postelec	Post-election years		.27	.44	.00	1.00
	Takes value 1 in post-election years and 0 otherwise					
BSA	Budgetary Stability Act		.47	.50	.00	1.00
	Value 0 for all the years between 1995 and 2002					
	Value 1 for 2003 and thereafter					
strength	Political strength	Spanish Ministry of Internal	.50	.50	.00	1.00
	Value 0: municipal government in coalition	Affairs and Ministry				
	of 2 or more political parties.	for Territorial Policy				
	Value 1: formed by a single-party government					
politicsign	Political sign of the governing party		.48	.50	.00	1.00
	Left-wing = 0;					
	Right-wing = 1					
popden	Population density of municipality	Spanish National Institute	2,529.22	3,405.67	41.22	19,273.20
population	Population of municipality	of Statistics	167,855.10	306,810.10	26,312.00	3,255,944.00
unemployment	Unemployment rate in municipality	Economic Annual of "La Caixa"	5.17	2.06	1.40	15.60
totaltransfpc	Total transfers received from regional and central government in euros per capita (real € 2001)	BADESPE (1995-2002) database and the Spanish Ministry	256.44	102.86	92.17	862.06
capitaltransfpc	Capital transfers received from regional and central government in euros per capita (real € 2001)	of the Finance and Public Administrations (2003-2009)	47.32	48.28	.00	384.67
currenttransfpc	Current transfers received from regional and central government in euros per capita (real € 2001)		209.45	87.75	65.74	829.67
taxrevenuepc	Tax revenue in euros per capita (real € 2001)		411.42	151.11	161.72	1,220.83

[1] Budgetary data have been deflated using the Consumer Price Index of the Spanish National Institute of Statistics.

Table 2
Estimation of regressions

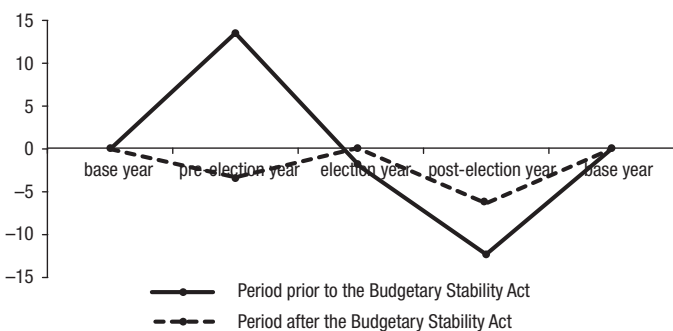| Dependent variables	debtpc	deficitpc	capitalexppc	currentexppc
debtpc(t-1)	.93*** (113.76)			
deficitpc(t-1)		.15*** (37.64)		
capitalexppc (t-1)			.33*** (40.65)	
currentexppc (t-1)				.65*** (139.90)
preelec	13.54*** (15.60)	18.81*** (18.35)	16.92*** (18.98)	−7.56*** (−19.01)
elec	−2.12* (−1.89)	27.62*** (18.52)	21.42*** (19.68)	−6.21*** (−13.60)
postelec	−12.31*** (−12.74)	4.47*** (3.70)	−17.20*** (−17.80)	−3.13*** (−7.61)
preelecxBSA	−16.81*** (−14.76)	−47.30*** (−28.16)	−9.66*** (−5.58)	17.07*** (38.57)
elecxBSA	1.99 (1.53)	27.90*** (13.95)	2.63* (1.80)	33.61*** (60.16)
postelecxBSA	5.95*** (4.33)	13.45*** (16.02)	3.29*** (3.35)	9.96*** (16.02)
strength	9.27 (1.28)	18.00*** (5.44)	26.56*** (4.02)	9.18*** (3.36)
politicsign	−10.64*** (−2.92)	−13.43*** (−4.86)	7.79*** (1.89)	−13.15*** (−4.42)
popden	−.03*** (−6.36)	.03*** (13.20)	.02*** (5.40)	.01*** (3.19)
population	.0003*** (22.98)	.0002*** (15.83)	.00008*** (8.63)	.0002*** (26.66)
unemployment	11.85*** (24.86)	11.74*** (35.41)	1.69*** (4.93)	3.90*** (26.14)
totaltransfpc	.02*** (2.87)			
capitaltransfpc			.57*** (53.68)	
currenttransfpc				.34*** (54.32)
taxrevenuepc	−.15*** (−24.44)		.19*** (26.68)	.17*** (34.54)
m2 (p-value)	−.24 (.807)	−.80 (.421)	−.62 (.537)	1.70 (.089)
Hansen (p-value)	121.33 (1.000)	120.12 (.762)	124.51 (1.000)	123.18 (1.000)
Observations	1,654	1,662	1,663	1,666

Significance: ***1%, **5%, *10%. Z values in brackets.

The tests performed confirm the model's validity: the test proposed by Arellano and Bond (*m2*) tests for the absence of second order serial correlation and the Hansen constraint over-identification test verifies the absence of correlation between tools and the error term.

year prior to elections sees a reduction in debt of €3.27 per capita (€13.54 – €16.81 = –€3.27). With respect to election year we observe how the coefficient of variable *elecxBSA* is not significant, implying that the behavior debt in the election year after the entry of BSA does not differ significantly than that shown prior to the law. The significant coefficient of the interaction term *postelecxBSA* indicates that the year after elections debt falls by €6.36 per capita (–€12.31 + €5.95 = –€6.36). Hence, the results above show how following the entry of the BSA debt has ceased to be manipulated since it does not increase in either pre-election or election years.

Figure 1 shows how, prior to the BSA, local governments generated electoral cycles for debt, increasing it significantly in the year before the elections and making adjustments in the year after the election. Nevertheless, we observe how the line describing debt behavior during electoral cycle after the entry of the law is almost flat, indicating that opportunist manipulation of debt has disappeared. Hence, the BSA has avoided the appearance of electoral cycles in debt in Spanish municipalities.

In terms of the variable deficit, the coefficient of variable *preelec* indicates that prior to the law, budgetary deficit increased by €18.81 per capita in the pre-election year with respect to the base year. In contrast, the significant coefficient of the interaction term *preelecxBSA* suggests that since the BSA came in, there is a reduction in deficit of €28.49 per capita (€18.81 – €47.30 = –€28.49) in pre-election years.

Secondly, we observe how the increase of deficit in an election year has doubled since the law came in. The value of the coefficient associated to *elec* indicates that the deficit increased €27.62 per capita in election years prior to the law. In contrast, since the law the electoral expansion of the deficit has been €55.52 per capita (€27.62 + €27.90 = €55.52), as is reflected by the sum of the coefficients of the variables *elec* and *elecxBSA*. These increases in deficit in election years in the two periods analyzed are statistically different as the coefficient of the interaction term is significant.

Finally, in both the period before and after the law came in deficit increased in the post-electoral year, even though this deficit expansion is much lower than that observed in the election years in both periods. Specifically, the coefficient for the variable *postelec* indicates that the deficit increased €4.47 per capita in the years after elections prior to the BSA. The increase in deficit in post-election years after the law came in has been €17.92 per capita (€4.47 + €13.45 = €17.92), as is indicated by the sum of the coefficients of the variable *postelec* and the variable *postelecxBSA*.

Figure 2 shows the effect of the electoral calendar on budgetary deficit before and after the BSA came into effect.

As the graph shows, prior to the BSA, opportunist expansion of the deficit covered both the election and the pre-election years. This opportunist use of the deficit has not disappeared with the entry of the law but is now concentrated in the election year. Unlike what occurred before the law, deficit is reduced significantly in the pre-election year.

Figure 1. Electoral cycle for debt.
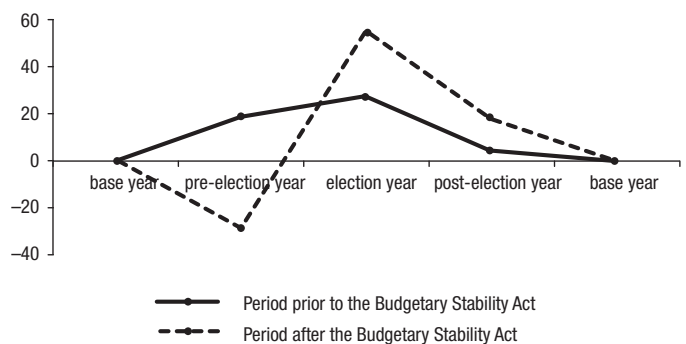
Figure 2. Electoral cycle for deficit.

So, our results agree with those of Buti and Van den Noord (2004), who show that after the adoption of the Stability and Growth Pact, eurozone governments have adopted restrictive fiscal policies in non election years in order to give an expansive fiscal policy in the election years.

As observed above, the prohibition on getting into debt laid down in the BSA has prevented politicians manipulating debt to favor their re-election, although it has not prevented the appearance of electoral cycles in non financial deficit.

The BSA meant that capital expenditure could only be financed by non financial revenues and not by debt. This explains why before the law one could find electoral cycles for debt which have since disappeared. However, given that local governments wish to continue to increase capital expenditure before elections, due to its high visibility to the electorate (Rosenberg, 1992; Veiga and Veiga2007a; Kneebone and Mckenzie, 2001), they use deficit expansion in the election year. So the law has not managed to mitigate electoral cycles for deficit.

In short, even though the law prohibits non financial deficit, local administrations have passed balanced budgets but have then liquidated them with important deficit amounts, so giving rise to the huge, unsupportable accumulated debt with suppliers and creditors of recent years.

As for capital expenditure, the positive and significant coefficients of variables *preelec* and *elec* in the fourth column of Table 2 indicate that before the law came into effect there was an increase in this expenditure in pre-election years (€16.92) and in the election years themselves (€21.42). Once the law came in, the expansion of capital expenditure occurred in both the pre-election and the election years. In both periods there was a reduction in expenditure in the post-election year. However, as figure 3 shows, although the BSA has not eliminated the cycle for capital expenditure, it has changed the way in which politicians manipulate it to serve re-election ends. Specifically, the increase in expenditure in the pre-election years prior to the law was almost double that observed after its entry. The magnitude of opportunist distortion has, moreover, been higher in election years since the law came in.

The results in the fifth column highlight that before the entry of the BSA there were no electoral cycles in current expenditure. The negative coefficients of variables *preelec*, *elec* and *postelec* indicate that in the pre-election, election and post-election years current expenditure is lower than for the base year, i.e. mayors do not increase this expenditure on account of the elections. However, electoral cycles in current expenditure have been observed since the entry of the law, because this budgetary variable shows a considerable increase in the election year ($-€6,21 + €33,61 = €27,40$). Figure 4 shows how after the entry of the BSA this budgetary tool has been used to influence citizens' votes. Indeed, prior to the law no opportunist manipulation of current expenditure is seen. As the graph shows, the line describing the evolution of expenditure for the period between one election and the next is almost flat, which, according to Alt and Rose (2007) is indicative of the absence of PBC.

As regards the other independent variables, the coefficient of the lagged dependent variable is significant and positive in all the regressions, indicating that municipal debt, deficit and expenditure in any given year is largely explained by that of the previous year.

For the variable *strength*, the results indicate that governments holding an absolute majority spend more and show higher levels of deficit than coalition and minority governments. The results do not confirm, therefore, the Roubini and Sachs (1989) hypothesis for a weak government, according to which the fragmentation of power at government level leads to higher public expenditure. One possible explanation is that the lack of agreement in minority governments may sometimes prevent getting spending projects under way.

The estimated coefficients for the variable *politicsign* reflect that progressive governments contribute significantly to increasing current expenditure, deficit and debt. Capital expenditure is,
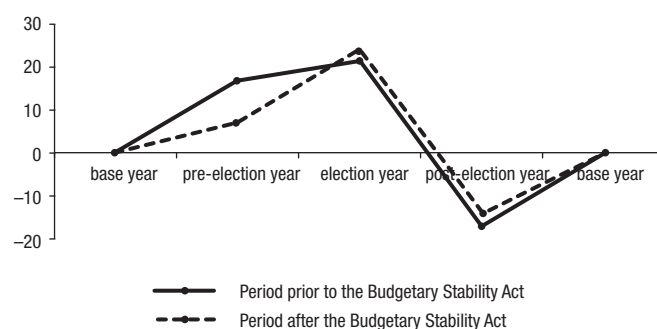

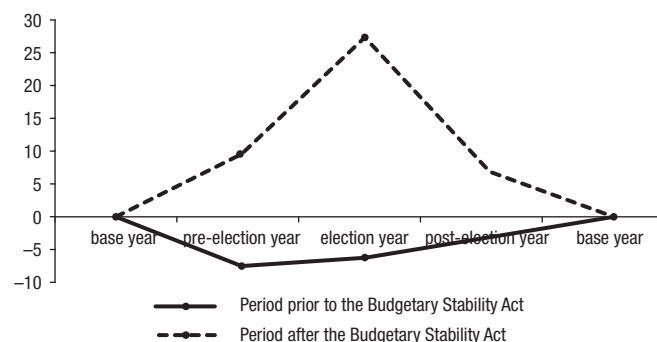**Figure 3.** Electoral cycle for capital expenditure.

Figure 4. Electoral cycle for current expenditure.

however, higher under conservative governments — a finding which agrees partially with PPI theory that left-wing governments spend more and take on more debt.

Population density (*popden*) has a positive impact on deficit, capital expenditure and current expenditure. This in line with the empirical literature, which states that population density positively affects municipal per capita expenditure (Ladd and Yinger, 1991; Ladd, 1994; Holcombe and Williams, 2008). In contrast, it has a negative effect on the level of debt. From Pettersson-Lidbom (2001), municipalities with higher population densities are expected to have higher debt levels, due to the effect of economies of scale.

Population size (*population*) has a significant, although slight, impact on the financial variables studied. Estimations show that the greater the population, the higher the per capita debt, capital expenditure, current expenditure and deficit.

As expected, unemployment (*unemployment*) has a positive effect on deficit, debt and both expenditure categories.

In terms of transfers, the positive and significant coefficients for the *totaltransfpc, capitaltransfpc* and *currenttransfpc* in the regressions on debt, capital expenditure and current expenditure suggest that local governments increase public expenditure and debt when there is an increase of funds from transfers.

Finally, we find a positive impact of tax revenue (*taxrevenuepc*) on both expenditure categories, indicating that municipalities are using tax revenue money to increase expenditure. We also observe a substitution effect between tax revenue and debt, since the coefficient for the variable *taxrevenuepc* shows that local governments which collect more taxes have less debt.

Conclusions

The purpose of this paper is to analyze whether the Budgetary Stability Act has influenced the Political Budget Cycles generated by Spanish local governments. We took as our basis information on the debt, deficit, capital expenditure and current expenditure of

132 Spanish municipalities of over 50,000 inhabitants (including the provincial capitals) during the period 1995-2009.

The results show that after the introduction of the law local governments have ceased to manipulate debt as a means of increasing their chances of remaining in power. In contrast, the introduction of the Budgetary Stability Act has not reduced the size of the deficit cycle, although it has led to a change in its expansion pattern over the course of the electoral cycle. Prior to the law, deficit increased during the pre-election and the election years. After the law, deficit decreased in the year before the elections and increased considerably during the election year itself. Similarly, the electoral cycles in capital expenditure have not disappeared as a result of the law, although there has been a reduction in this expenditure in the pre-election year and increase of the same in election years since the law came in. In terms of current expenditure, unlike what was happening before 2003, since the Budgetary Stability Act came in, mayors have started to manipulate this budgetary variable to enhance their possibilities of reelection and there has been an increase in this expenditure in election years.

In short, the Budgetary Stability Act has avoided the creation of Political Budgetary Cycles in debt, but it has not reduced politicians' capacity to manipulate the other budgetary variables analyzed. Although it has not eliminated electoral cycles in deficit, capital expenditure or current expenditure, it has led to a change in how mayors manipulate these for electoral ends.

In order to explain why manipulation of deficit and not debt has continued after the law, it should be recalled that the law in question specifically prohibits local governments getting into debt, allowing them, instead, to liquidate budgets with a deficit on condition that this is compensated for in the budgets for the subsequent years.

The findings for the manipulation of deficit are in line with those reported by several other studies. Buti and Van den Noord (2004), Mink and de Haan (2006), Von Hagen (2006) and Efthyvoulou (2011) conclude that the budgetary demands deriving from the Growth and Stability Pact have not meant the disappearance of electoral cycles in the euro-zone countries since the benefit to be had from breaking the pact outweighs the costs of non compliance. One explanation for the fact that the Budgetary Stability Act has not served to avoid the expansion of deficit, capital expenditure or current expenditure in election years is that Spanish local governments were well aware that non compliance carried no penalization.

We therefore conclude that if the Budgetary Stability Act is to be fulfilled in all the years of a mandate there has to be some penalty clause to contain the incentives of politicians to manipulate budgetary variables in election years in order to favor re-election.

Acknowledgements

References

Aidt, T., Veiga, F., and Veiga, L. (2011). Election results and opportunistic policies: A new test of the rational political business cycle model. *Public choice*, 148, 21-44.

Alt, J., and Lassen, D. (2006a). Fiscal transparency, political parties and debt in OECD countries. *European Economic Review*, 50, 1403-1439.

Alt, J., and Lassen, D. (2006b). Transparency, political polarization, and political budget cycles in OECD countries. *American Journal of Political Science*, 50(3), 530-550.

Alt, J. and Rose, S. (2007). Context Conditional Political Budget Cycles. En Carles Boix and Susan Stokes (eds.), *Handbook of Comparative Politics* (p. 845-867), Oxford University Press.

Arellano, M., and Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, 58, 277-297.

Bastida, F., Beyaert, A. and Benito, B. (2012). Electoral cycles and local government debt management, *Local Government Studies (online)*. doi:10.1080/03003930.2012.683861.

Benito, B., Bastida, F. and Muñoz, M.J. (2010). Factores Explicativos de la Presión Fiscal Municipal. *Revista de Contabilidad – Spanish Accounting Review*, 13(2), 239-284.

Besley, T., and Case, A. 1995. Does Electoral Accountability Affect Economic Policy Choices? Evidence from Gubernatorial Term Limits? *Quarterly Journal of Economics*, 110(3), 769-798.

Burchell, R. and Mukhjerji, S. (2003). Conventional Development versus Managed Growth: The Costs of Sprawl. *American Journal of Public Health*, 93(9), 1534-1540.

Buti, M., and P. van den Noord (2004). Fiscal Discretion and Elections in the Early Years of EMU. *Journal of Common Market Studies*, 39(4), 737-56.

Carruthers, J., and Ulfarsson, G. (2008). Does Smart Growth Matter to Public Finance? *Urban Studies*, 45, 1791-1820.

Cusack, T. (1997). Partisan politics and public finance. Changes in public spending in the industrialized democracies, 1955-1989. *Public Choice*, 91(3-4), 375-395.

Dahlberg, M., Mörk, E., Rattsø, J., and Hanna Å. (2008). Using a discontinuous grant rule to identify the effect of grants on local taxes and spending. *Journal of Public Economics*, 92(12), 2320-2335.

Drazen, A. (2008a). Political business cycles. The New Palgrave Dictionary of Economics. 2nd ed. Eds. Steven N. Durlauf and Lawrence E. Blume. Palgrave: Macmillan.

Drazen, A. (2008b). Political budget cycles. The New Palgrave Dictionary of Economics. 2nd ed. Eds. Steven N. Durlauf and Lawrence E. Blume. Palgrave: Macmillan.

Drazen, A., and Eslava, M. (2010). Electoral manipulation via voter-friendly spending. Theory and evidence. *Journal of Development Economics*, 92, 39-52.

Efthyvoulou, G. (2011). Political budget cycles in the European Union and the impact of political pressures. *Public Choice (online)*. doi: 10.1007/s11127-011-9795-x.

Escudero, P., and Prior, D. (2001). Descentralización de Servicios y endeudamiento: el caso de los ayuntamientos catalanes. *XI Congreso de la Asociación Española de Contabilidad y Administración de Empresas*. Madrid. September.

Feld, L.P., and Kirchgässner, G. (2001). Does Direct Democracy Reduce Public Debt? Evidence from Swiss Municipalities. *Public Choice*, 109(3-4), 347-370.

Foucault, M., Thierry, M., and Paty, S. (2008). Public spending interactions and local politics. Empirical evidence from French municipalities. *Public Choice*, 137(1-2), 57-80.

García, I.M, Prado, J.M, and Cuadrado, B. (2011). Do progressive governments undertake different debt burdens? Partisan vs. electoral cycles. *Revista de Contabilidad – Spanish Accounting Review*, 14(1), 29-57.

Geys, B. (2007). Government weakness and electoral cycles in local public debt: evidence from Flemish municipalities. *Local Government Studies*, 33(2), 237-251.

Hempel, G.H. (1973). Quantitative Borrower Characteristics Associated with Defaults on Municipal General Obligation. *Journal of Finance*, 28(2), 523-530.

Holcombe, R., and Williams, D. (2008). The Impact of Population Density on Municipal Government Spendings. *Public Finance Review*, 36(3), 359-372.

Hulten, C.R., and Peterson, G.E. (1984). Is the United States Underinvesting in Public Capital? The Public Capital Stock: Needs, Trends and Performance. *American Economic Review*, 74(2), 166-173.

Khemani, S. (2004). Political Cycles in a Developing Economy: Effects of Elections in the Indian States, Boston, The World Bank, Economic Development Research Group.

Ladd H., and Yinger J. (1991). America's Ailing Cities: Fiscal Health and the Design of Urban Policy. MD. Baltimore: Johns Hopkins University Press.

Ladd, H. (1994). Fiscal impacts of local population growth: A conceptual and empirical analysis. *Regional Science and Urban Economics*, 24, 661-686.

Litman, T. (2004). Evaluating Transportation Land Use Impacts, Victoria Transport Policy Institute, Canada.

Medina, L.M., and Lema, D. (2004). Electoral Budget Cycles: The case of the Argentine Provinces, MPRA Paper 21504, University of CEMA.

Mink, M., and de Haan, J. (2006). Are there political budget cycles in the euro area? *European Union Politics*, 7, 191-211.

Mitchell, W.E. 1967. The Effect of Debt Limit on State and Local Government Borrowing. The Bulletin 45. New York University, Institute of Finance.

Nordhaus, W. (1975). The political business cycles. *Review of Economic Studies*, 42, 169-190.

Pettersson-Lidbom, P. (2001). An Empirical Investigation of the Strategic Use of Debt. *Journal of Political Economy*, 109(3), 570-583.

Pogue, T.F. (1970). The effect of debt limits: some new evidence. *National Tax Journal*, 23(1), 36-49.

Rivers, M.J., and Yates, B.M. (1997). City Size and Geographic Segmentation in the Municipal Bond Market. *The Quarterly Review of Economics and Finance*, 37(3), 633-645.

Rogoff, K, (1990). Equilibrium political budget cycles. *American Economic Review*, 80, 21-36.

Rogoff, K. and Sibert, A. (1988). Elections and macroeconomic policy cycles. *Review of Economic Studies*, 55, 1-16.

Rose, S. (2006). Do fiscal rules dampen the political business cycle? *Public Choice*, 128(3-4), 407-431.

Roubini, N., and Sachs, J.D. (1989). Political and economic determinants of budget deficits in the industrial democracies. *European Economic Review*, 33(5), 903-938.

Seitz, H. (2000). Fiscal policy, deficits and politics of subnational governments: The case of the German Laender. *Public Choice*, 102, 183-218.

Shi, M., and Svensson, J. (2002). Political budget cycles in developed and developing countries, mimeo, IIES, Stockholm University.

Tellier, G. (2006). Public expenditures in Canadian provinces: An empirical study of politico-economic interactions. *Public Choice*, 126, 367-385.

Vallés, J., and Zárate, A. (2001). Situación financiera y crediticia de los municipios en España. Una aproximación por estratos de población. *Revista Valenciana de Economía y Hacienda*, 3, 83-110.

Veiga, L. and Veiga, F. (2007). Political business cycles at the municipal level. *Public Choice,* 131(1-2), 45-64.

Von Hagen, J. (2006). Fiscal Rules and Fiscal Performance in the EU and Japan, Discussion Papers 147, SFB/TR 15 Governance and the Efficiency of Economic Systems, Free University of Berlin, Humboldt University of Berlin, University of Bonn, University of Mannheim, University of Munich.