The Economic Effects of Constitutions:

Do Budget Institutions Make Forms of Government More Alike?

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Abstract[*]

According to an influential theoretical argument, presidential systems tend to present smaller governments because the separation between those who decide the size of the fiscal purse and those who allocate it creates incentives for lower public expenditures. In practice, forms of government vary greatly, and budget institutions—the rules according to which budgets are drafted, approved, and implemented—are one (of many) drivers of such variation. This paper argues that under more hierarchical budget rules, presidential and parliamentary systems generate a similar incentive structure for the executive branch in shaping the size of government. This hypothesis is tested on a broad cross-section of countries, presidentialism is found to have a negative impact on government size only when executive discretion in the budget process is low (that is, in a context of separation of powers). However, the negative effect of presidentialism on expenditures vanishes or is even reversed when the executive's discretion over the budget process is higher. Hence, budget institutions that impose restrictions on the legislature's ability to amend budget proposals can make political regimes look more alike in terms of fiscal outcomes.

JEL classifications: D72, D78, H61
Keywords: Presidentialism, Separation of powers, Budget Institutions, Size of government

1. Introduction

One of the main stylized facts in constitutional political economy is that the form of government affects the level of public spending. Among others, Persson and Tabellini, in a series of theoretical papers with G. Roland,[1] develop models of legislative bargaining that predict that presidential systems of government will produce smaller governments, and in subsequent empirically based work they provide evidence in support of this claim (Persson and Tabellini, 2003).

The logic behind their theoretical result is as follows. In presidential systems, decisions regarding the size of the budget and decisions regarding how to allocate the budget among alternative uses are made sequentially by different political actors, who respond to different constituencies. These actors could be the president and the legislature, or different committees within the legislature. If those who propose the size of the pie do not have a say in its allocation, and those who decide the allocation have incentives to benefit themselves and their bases of support, then taxes and spending levels are going to be set at low levels by the respective decision-maker, leading to a smaller size of government. In contrast, in parliamentary systems, with no such explicit separation of powers, a more cohesive government will make both budget decisions simultaneously (either because both votes are taken at the same time, or because the same actors make both decisions). The absence of checks and balances in this case makes it easier for a majority of politicians to collude and extract higher revenues from the population at large, which leads to larger governments as a result.[2] Persson and Tabellini, henceforth PT (2003) test this implication of their theory for a sample of 85 democratic countries, and they find the impact of the system of government to be large: other things equal, government spending in

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[1] See in particular Persson, Roland, and Tabellini (1997 and 2000). Even though PT are not the only authors who have explored this relationship, we base our analysis on their work because they are the ones who have received the most attention and praise. For example, according to Keefer (2004: 258) "The analysis in Persson et al. (2000) is the most rigorous linking characteristics of presidential and parliamentary systems to policy outcomes." See also Acemoglu (2005) and Rodden (2009) for similar appreciations.

[2] "Our results suggest that the two political regimes are associated with very different policy outcomes. Separation of powers in the presidential-congressional regime produces a smaller government . . . Intuitively, separation of powers enables the voters to discipline the politicians, and this reduces waste and moderates the tax burden. . . Legislative cohesion in the parliamentary regime, on the other hand, leads to a larger government. . . Intuitively, there is now further scope for collusion among politicians…" Persson and Tabellini (2000: 252)

countries with a presidential system is roughly 5 percentage points of GDP lower than in those with parliamentary democracies.[3]

Interestingly, while PT lump together all presidential and all parliamentary democracies as if the degree of separation of powers were homogenous, there is actually great *within* variation among government forms.[4] For example, across presidential systems, while the separation between those who decide on the size of the budget and those who allocate it may be a good description of what goes on in the United States, in other presidential systems (such as those in Latin America and Africa), the president actually has a significant amount of budget discretion not just regarding the size of the budget, but also regarding its allocation (Hallerberg, Scartascini, and Stein, 2009; ADB, 2008). Across parliamentary regimes, budget institutions vary widely too, and they affect the structure of the bargaining process within the *cabinet* (e.g., the agenda power of spending ministers *vis-à-vis* the finance minister) and within parliament (Hallerberg, Strauch, and von Hagen, 2009).

These examples suggest that the effect of the form of government on public expenditures should be conditional on the *budget institutions* in place, in particular, on those that affect the degree of separation of powers in the budget decision process between the two main branches of government: the Executive (Cabinet) and the Legislature.[5] Our paper tests this hypothesis empirically based on a sample of more than 80 democracies. Building on insights from the literature on budget institutions and a large cross-national budget practices and procedures survey, we proxy the degree of separation of powers by evaluating the relative powers in the budget process of the two branches of government during the approval stage of the budget process. We find that presidentialism has a larger negative impact on government size when executive discretion regarding budget allocation is low (that is, in a context of separation of powers). This finding is in line with PT's expectations. However, this result vanishes or is even

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[3] This result has been shown to be less robust when a larger sample of countries is included (Blume et al., 2009) but robust to improved estimation methods and relatively larger samples than the original PT one (Rockey, 2012). This paper recovers PT's results using an even larger sample than Blume's (Table 1, Column 1). There are reasons behind why PT's result should not be invariant to the sample used, and this paper offers one (not all presidential systems are alike); hence, sample selection matters.

[4] In this paper we highlight one such difference. See Keefer (2004) and Voigt (2011) for examples about other areas in which the analysis may be expanded.

[5] These rules are usually called *procedural* budget institutions, and can be arranged along a "collegial-hierarchical" continuum, depending on the powers within the executive and *vis-à-vis* the legislature. Other types of budget institutions include i) fiscal limits or numerical rules and ii) transparency rules (Alesina and Perotti, 1995; Alesina et al., 1999).

reversed when executive discretion over the budget process is higher (or when legislative discretion is lower). In other words, when the separation of powers restriction is no longer binding—now the president can appropriate all the rents associated with a larger government size—she has an incentive for higher taxes and spending (as in PT's parliamentary case). Hence, budget institutions that impose restrictions on the legislature's ability to amend budget proposals can make political regimes look more alike in terms of fiscal outcomes. This last finding has not been addressed by the extant literature.

This paper complements recent studies that look at the effect of budget institutions on the size of the government, such as Blume and Voigt (2013). Similarly to their findings, more restrictive budget institutions (by themselves) tend to reduce the size of the government.[6] The paper also pursues some of the extensions suggested by Keefer (2004: 258) through checking if PT's "conclusions are sensitive to changes in [their] assumptions," and by Voigt (2011: 321) through adding some relevant independent variables to the analysis and using them interactively with the form of government.

The paper proceeds as follows. The next section briefly summarizes the PT argument and extends their discussion to the role of budget institutions and interactions with different forms of government. Sections 3-5 describe the data, empirical exercises, and robustness checks, respectively. Section 6 concludes.

2. Political Regimes, Separation of Powers, and the Budget Process

In the Persson and Tabellini models, the forms of government are represented by differences in the specific allocation to political actors of decision-making authority on a key piece of legislation: the budget. As such, regimes differ in the way the budget process is organized, in particular, by the division of agenda-setting powers and the rules of legislative bargaining that define who makes budget proposals, and who can approve, amend, or veto them. In presidential systems, the budget process is modeled as the *sequential* assignment of policy decisions (first, *size*, and then *allocation* of the budget across sectors or projects) to different government

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[6] In this short paper we do not dedicate much space to the very prolific and influential literature on the role of budget institutions in fiscal outcomes, even though it has provided the inspiration and conceptual framework for the work we develop here. Among some of the most influential works see von Hagen (1991), Alesina and Perotti (1995), von Hagen and Harden (1995), Alesina et al. (1999), Hallerberg et al. (2007), Hallerberg, Strauch and von Hagen (2009), and Blume and Voigt (2013).

branches (the executive and the legislature),[7] or to different committees within the legislature.[8] This results in "separation of powers" during the approval stage.[9] In parliamentary regimes, voting on the same policy issues is not sequential: taxes and budget composition are jointly proposed by a majority coalition. Given the existence of a confidence requirement, a government crisis ensues if the budget proposal is vetoed by one of the coalition partners. This results in higher legislative cohesion under parliamentarism.

While such generalizations serve the purpose of presenting major institutional differences between government forms, the approach of representing presidential and parliamentary systems based on the budget prerogatives of different actors may obscure as much as it clarifies in the absence of a detailed discussion of *budget institutions*, that is, the rules according to which budgets are drafted, approved, and implemented (Alesina and Perotti 1995). Specifically, while the PT model of presidentialism (parliamentarism) may be a good approximation to the form of government in the United States (United Kingdom), budget procedures vary greatly *within* these systems, and thus we should expect fiscal outcomes to reflect such sources of variation.

Take, for example, the variation across presidential regimes. In the case of Chile, the President has the upper hand *vis-à-vis* the legislature, not only with regards to the size of the budget, but also regarding its allocation. After the Executive submits the budget proposal to the Congress, the legislature may only reduce the size of budget items, and cannot reallocate the budget (even if it were to compensate any potential increases in one item with decreases in another). In Brazil, while legislators can and do amend the budget proposal—typically by including geographically targeted programs that benefit their constituents—it is the President who can ultimately decide whether these amendments are funded, even though they have been approved in the budget. Finally, while in most countries the legislature can *de jure* affect both the size and the composition of the budget, in a number of them such as Argentina, Bolivia, Paraguay or the Dominican Republic, the Executive has *de facto* power to reallocate spending during budget execution (Hallerberg, Scartascini and Stein, 2009). Such dynamics are not unique to presidential systems in Latin America. Across Africa, while some legislatures have unrestricted powers to amend the budget (e.g., Botswana), in others (such as South Africa) the

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[7] See Persson, Roland, and Tabellini (1997).
[8] See Persson, Roland, and Tabellini (2000).
[9] Ferejohn and Krehbiel (1987) provide an earlier theoretical treatment of *sequential budgeting* in the context of a median voter model.

legislature may not make any changes; it can only approve or reject the budget as a whole (ADB, 2008).

Variation in budget procedures is also present across parliamentary governments. For example, while in the United Kingdom parliamentary amendments to the cabinet's budget proposal are very limited (in the spirit of PT models), in Italy such restrictions are absent. In addition, budget amendments may not always cause the fall of a government (see, for example, the procedures in Denmark, Austria, and Spain). Finally, while global votes on the total budget are taken in a plurality of countries, this is far from being the general rule (Hallerberg, Strauch and von Hagen, 2009).

Budget institutions affect the rules of the game and hence, fiscal outcomes, either by imposing restrictions on the results of the budget process (*fiscal or numerical rules*), by distributing agenda power and responsibilities among the various actors that participate in budget negotiations, such as the Executive *vis-à-vis* the Legislative branch (*procedural rules*), or by increasing access and quantity of information (*transparency rules*), as discussed by Alesina et al. (1999). Our general argument is that the impact of political regimes on government size should be conditional on the specific *procedural rules* (either more collegial or more hierarchical) in place. More hierarchical rules concentrate budgetary power in the finance ministry inside the cabinet, and in the executive relative to the legislature. While much of the literature has concentrated on the way such hierarchical rules mitigate the common pool problem,[10] following PT, we stress a different causal mechanism: the separation of powers problem, or the way the decision on budget *size* is combined with (or separated from) *allocative* decisions.

In particular, we expect PT's result to obtain (presidentialism reduces government size) only when budget institutions are such that the basic assumption of separation of powers between the two branches is maintained (i.e., when the legislature can amend the executive's proposal). However, as the president gains power in budget negotiations (or, as the legislature becomes a more passive actor), the degree of separation of powers is reduced, and hence we should expect presidential systems to behave more like parliamentary regimes in terms of defining the size of

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[10] Which results from the fact that each individual wants to extract the maximum he or she can from a common fund, ignoring the effect of this behavior on the total size of the fund, and therefore, collective welfare. See Blume and Voigt (2013) and references therein.

the government (now the president has fewer qualms about sending a larger budget to the legislature, since she can appropriate the benefits associated with a larger government size).[11]

This analysis can be formally derived using the models developed by PT, in particular, those readily available in Persson and Tabellini (2000).[12] In the standard model of presidential-congressional regimes, there is a two-stage budget procedure in which proposals on government size and spending allocation are assigned to different actors. In the parlance of budget institutionalism, that model assumes implicitly lax budget procedures (or low hierarchy), in the sense that the legislature can modify the executive's budget proposal. However, what happens when budget institutions restrict what the legislature can do? By definition, the legislature has lower leeway to modify the budget, and thus under those conditions presidential systems should approximate the model that PT dub the "simple legislature" (where the same actor proposes levels and allocation simultaneously).[13] As PT show, the size of the government should be smaller in the first case (presidential system with separation of powers) than the second (PT 2000: 266).

Summarizing, defining G as government size, L a parliamentary country, P a presidential country, and BI the existence of restrictive (more hierarchical) budget institutions, we expect that:

$G^P < G^L$ (PT's unconditional result)

$G^L_{BI} < G^L$ (Budget institutions literature result for parliamentary countries)

But since hierarchical budget institutions reduce the common pool (G^P falls) and they also reduce the separation of powers (G^P increases), then

G^P_{BI} should not be necessarily lower than G^P, and

G^P_{BI} should not be necessarily lower than G^L_{BI}.

These conditional relationships have not been previously analyzed in the literature.

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[11] Of course, the independent effect of budget institutions as a mechanism to reduce common-pool problems should still be in place for both types of regimes. The key difference we stress is that there is an additional (and inverse) channel of influence—reduction of the separation of powers—that has more bite for presidential countries.

[12] See especially Chapter 10. We do not replicate their models here for reasons of space and because they have become part of the standard toolkit of most political economists.

[13] If "the decisions on taxes is combined with allocative decisions, we return to the equilibrium of the simple legislature" (Persson, Roland and Tabellini, 2000: 1143).

3. Data

We use central government expenditure as a measure of the size of government (we also use fiscal revenues in the robustness section); sources and definitions are included in the Appendix. Following Shugart and Carey (1992), we code forms of government with a dummy variable if the political constitution allows for the direct election of a president, and the confidence of the lower house is not necessary for the executive to remain in power (*PRES*).[14] This definition allows us to capture the conceptualization in PT: presidential systems present higher accountability to voters, lower cohesion across branches, and hence lower collusion. To obtain a measure of the degree of separation of powers in the budget making process, we use the latest wave of the Survey on Budget Practices and Procedures (2007-2008).[15] Based on a question regarding the powers of the legislature to amend the executive budget proposal, we generate a variable, *executive budget discretion,* which takes value 1 when "the Legislature may not make any changes; it can only approve or reject the budget as a whole." This variable captures exactly the essence of our argument because it implies that in those countries where the variable takes a value 1 the decision on size and allocation is made jointly. In the robustness section, a discrete version of the variable is used, and we also run a placebo test using another budget institutions variable.[16] Information on this question is available for 92 countries and spans a diverse sample of countries, including countries with diverse political institutions, from different geographic regions, and at all stages of economic development. Table A.1 in the Appendix provides the list of countries included in the survey, and Table A.2 presents the sources and definitions of the variables used in the empirical analysis.

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[14] Our definition thus encompasses PT's classification, who code regimes as presidential if the confidence requirement is not necessary for the executive to remain in power.

[15] The database on Budget Practices and Procedures is developed by the OECD and the World Bank, with the collaboration of the IDB. This comprehensive database covers 359 questions on almost every topic related to budget practices and procedures. It includes information on every stage of the budget process in each of the branches of government. In the last round, 92 countries have answered the survey, which is available at: http://www.oecd.org/governance/budgetingandpublicexpenditures/internationalbudgetpracticesandproceduresdatabase.htm

[16] One of the limitations of this variable is that it only captures the *formal* aspects of the budget process, whereas actual practices may differ significantly from the written rules, especially in countries with low levels of institutionalization.

4. Evidence

In order to make the results easily comparable with the existing literature and to show that the differences we may find are not driven by changes to the original specification, we follow the same empirical strategy as PT.[17] Table 1 presents results from a cross-sectional analysis in which the size of government is regressed on a number of political and economic variables. Following the criteria in PT, each model is run on two different samples of democracies: a "broad" sample, including those countries with a Freedom House (Gastil) Index below 5, and a "narrow" sample, based on a stricter definition of democracy (a Freedom House index below 3.5).[18]

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[17] Blume et al. (2009) follow the same empirical strategy for similar reasons.

[18] The Freedom House or Gastil Index on political rights and civil liberties varies on a discrete scale from 1 to 7, with low values associated with better democratic institutions. According to each index, countries scoring 1 or 2 are "free," and countries scoring from 3 to 5 are "semi-free," while those scoring 6 or 7 are "non-free." Because a 3.5 value is quite arbitrary, in the robustness section we also use an alternative criterion that is more commonly used in the literature (polity2 > 0).

Table 1. Determinants of the Size of Government (OLS)

Dependent Variable:	CG Expenditures				CG Revenues		CG Expenditures	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PRES	-3.344*	-4.029**	-4.048*	-4.394*	-4.306*	-4.589*	-4.495**	-3.336
	(1.826)	(1.665)	(2.288)	(2.403)	(2.372)	(2.519)	(2.183)	(2.776)
Executive discretion dummy			-8.207***	-7.339***	-6.785***	-5.159**	-7.325***	
			(2.224)	(1.846)	(2.169)	(2.270)	(1.740)	
PRES*Executive discretion dummy			9.650**	10.940***	6.542*	3.886	13.809***	
			(3.865)	(2.370)	(3.640)	(3.437)	(3.322)	
MAJ	-2.773**	-1.248	-2.091	-1.781	-2.785*	-2.366	-1.920	-1.557
	(1.262)	(1.300)	(1.475)	(1.674)	(1.538)	(1.728)	(1.579)	(1.701)
GDP	-0.381	-0.871	0.558	-0.491	0.632	0.579	0.216	0.473
	(0.960)	(1.111)	(1.087)	(1.165)	(1.119)	(1.436)	(1.182)	(1.113)
TRADE	0.014	0.048**	0.028	0.021	0.034*	0.039*	0.017	0.010
	(0.025)	(0.020)	(0.021)	(0.019)	(0.019)	(0.023)	(0.018)	(0.018)
POP65	0.924***	1.123***	0.908***	0.870***	0.711**	0.719**	0.909***	0.934***
	(0.226)	(0.220)	(0.271)	(0.300)	(0.298)	(0.316)	(0.283)	(0.283)
POP15_64	-0.127	-0.134	-0.097	-0.015	-0.142	-0.115	-0.153	-0.194
	(0.184)	(0.205)	(0.228)	(0.254)	(0.244)	(0.322)	(0.245)	(0.247)
FH	0.655	-0.890	-1.036	1.810	-0.714	-1.394	1.212	1.172
	(0.879)	(1.215)	(1.120)	(1.141)	(1.156)	(1.923)	(1.069)	(1.002)
FED	1.452	1.514	1.927	1.523	2.032	1.213	2.101	1.739
	(1.569)	(1.855)	(2.033)	(2.037)	(1.986)	(2.038)	(2.013)	(2.076)
OECD	4.801*	6.016**	4.482*	4.245	5.171**	5.625*	2.893	2.359
	(2.464)	(2.586)	(2.505)	(2.598)	(2.557)	(2.975)	(2.635)	(2.713)
Low executive discretion								-0.573
								(2.463)
Medium executive discreiton								-3.088
								(4.576)
High executive discretion								-7.702***
								(1.995)
PRES*Low executive discretion								-2.444
								(3.587)
PRES*Medium executive discreiton								1.655
								(5.679)
PRES*High executive discretion								12.489***
								(4.039)
Constant	31.926***	40.270***	32.255**	19.000	33.499**	35.898**	26.093**	27.736**
	(10.876)	(11.879)	(12.613)	(13.617)	(13.568)	(17.122)	(12.952)	(13.431)
Sample	broad	narrow	broad	narrow	broad	narrow	Polity2>0	Polity2>0
Observations	121	91	76	72	76	65	77	77
R-squared	0.567	0.652	0.684	0.685	0.652	0.641	0.683	0.69

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Columns 1 and 2 reproduce PT's (2003, Table 6.1, p. 159) basic specification using our available sample for the period under analysis (2005-2008).[19] In addition to PRES, this specification includes the following variables: a dummy variable indicating the presence of majoritarian electoral rules (MAJ), income per capita (GDP), the share of exports and imports in GDP (TRADE), the share of population between 15 and 64 years old (POP15_64), and greater than 65 (POP65), respectively; a dummy for federal (FED) and OECD countries (OECD), and the Freedom House score (FH).

Consistent with previous results, we find that presidential regimes are associated with smaller governments: government expenditures are between three and four percentage points of GDP lower than those in parliamentary democracies. Columns 3 and 4 introduce our main specification, in which presidentialism is interacted with a measure of the degree of separation of powers in the budget process, the *executive budget discretion* dummy. Consistent with previous work (e.g., Blume and Voigt, 2013) more restrictive budget institutions are associated with smaller governments because more hierarchical institutions reduce the common pool problem (Hallerberg, Strauch, and von Hagen, 2009).

Interestingly, the interaction between budget institutions and presidentialism has a positive sign. In order to understand the implications of the result in Column 3, Figure 1 shows the estimated effects (with associated confidence intervals) of presidentialism on the size of government under two different institutional scenarios: when executive discretion over the budget process is low (when the variable *executive budget discretion* equals 0) and high (when executive *budget discretion* equals 1 and the legislature has no power to amend the Executive proposal). The figure shows that the effect of PRES is only significant (and negative) when executive discretion over budget allocation is low, that is, when the legislature has leeway to change the executive/cabinet's budget proposal (hence, when there is separation of powers—as in the PT model). In contrast, the effect of PRES does not differ statistically from zero when budget procedures restrict the ability of the legislature to amend the budget (hence, when there is lower separation of powers).

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[19] Given the period of analysis, our sample size is more than 40 percent larger than PT's, and slightly larger than that of Blume et al. (2009).

Figure 1. Marginal Effects of PRES, with 90% Confidence Intervals

EBD=Executive Budget Discretion
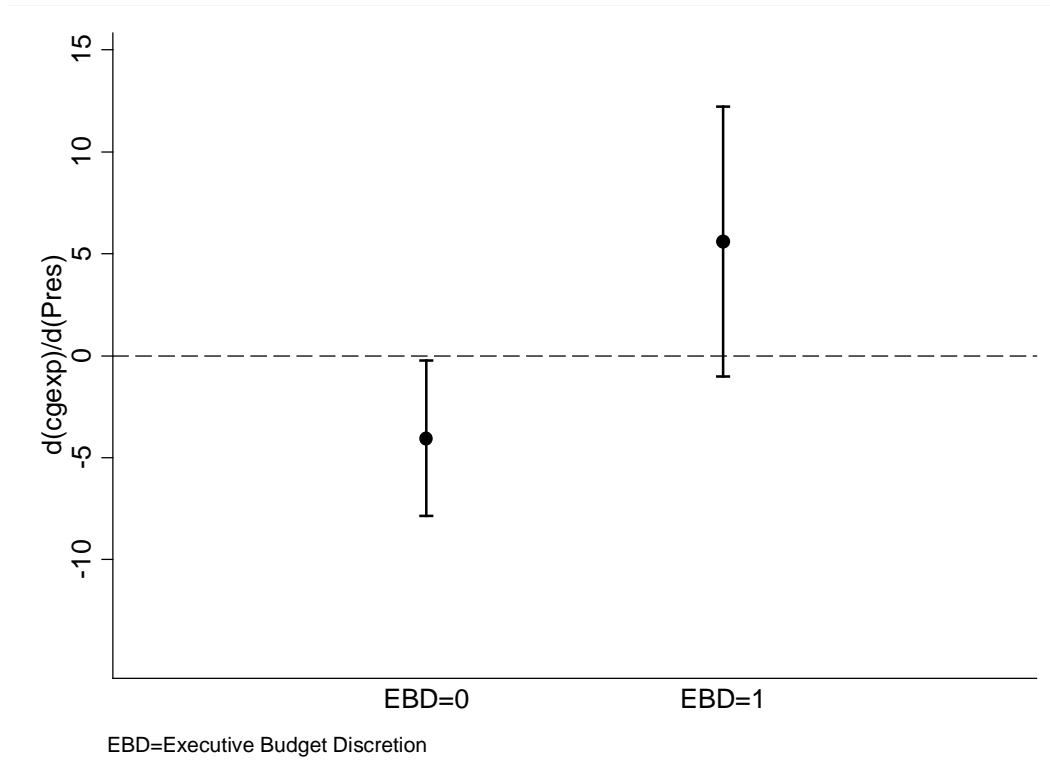
5. Robustness

Columns 5-8 present several robustness checks to our baseline results. For example, in Columns 5 and 6, the dependent variable is government revenue instead. Similarly to PT, the results are somewhat less robust—even though the direction of the results is unchanged. In Column 7, we change the proxy for the level of democracy, considering only countries with strictly positive POLITY scores.[20] Interestingly, under this specification the size of the coefficient on the interaction term implies that government size under PRES is *larger* than in parliamentary regimes when budget procedures restrict the ability of the legislature to amend the budget. In other words, the separation of powers effect (now the president can appropriate all the rents associated with a larger government size, therefore she has an incentive for increasing taxes and spending) may even overcome the common-pool effect (the reduction in expenditures associated with a decision process which is less collegial). A similar finding is observed when we introduce in Column 8 an alternative (discrete) measure of the degree of separation of powers in the budget

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[20] The Polity score subtracts the country's score in an "Autocracy" index from its score in a "Democracy" index (resulting in a range from −10 to 10).

process. Using the coding strategy in Alesina et al. (1999), budget procedures are coded on a scale in which higher values imply higher restrictions on what the legislature can do once it receives the executive's budget proposal. The four options in the survey are:

- *No Executive discretion*: "The Legislature has unrestricted powers to amend the budget;"
- *Low Executive discretion*: "The Legislature may make amendments but only if it does not change the total deficit/surplus proposed by the Executive;"
- *Medium Executive discretion*: "The Legislature may only decrease existing expenditures/revenues (i.e., the Legislature cannot increase existing items nor create new ones);" and
- *High Executive discretion*: "The Legislature may not make any changes; it can only approve or reject the budget as a whole."

As observed from the list, while the different options seem to capture higher restrictions on the legislature, only the last category is clearly different from the others. As such, it is difficult to make predictions as to whether we should expect some linear or non-linear results, and whether to expect any differences at all among the first three categories. As long as the legislature has some amendment powers, then the separation of powers in the allocation exists (this is why we have relied on the dummy version as our main variable).

Using this variable, Figure 2 plots the marginal effects of presidentialism on government expenditures across the different values of the budget discretion measure.

Figure 2. Marginal Effects of PRES, with 90 Percent Confidence Intervals
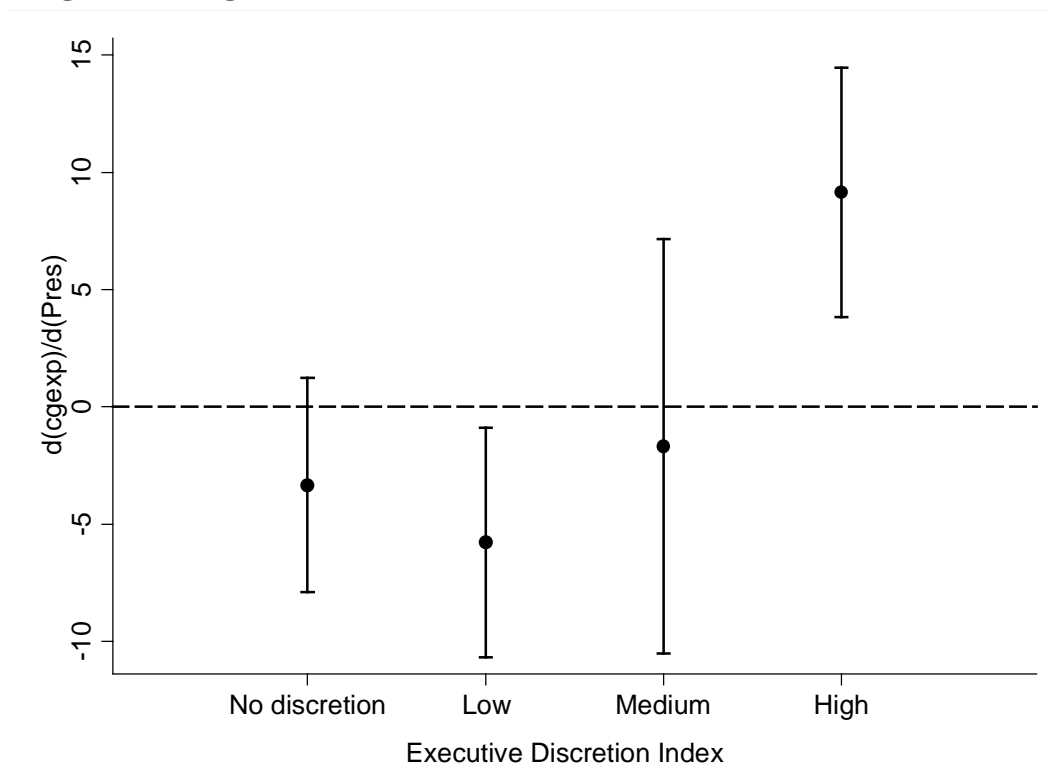
The figure shows that the impact of presidential systems on the size of government tends to be negative and significant when the budget procedures index takes low values—that is, when the legislature has more power to amend the budget. This result is consistent with PT's predictions. However, note that the effect tends to dissipate and is even *reversed* when the legislature loses prerogatives to amend the executive's proposal in the budget process (and hence the degree of separation of powers in the budget process is diminished). In fact, for very high values of this discrete index, PRES has a *positive* and significant coefficient on the size of government.[21]

Finally, we have also run all the regressions using an alternative budget indicator as a placebo test, in order to test whether our results are being driven instead by some unobserved mechanisms correlated to budget institutions reform. Based on IMF's fiscal rules database,[22] we introduce a dummy variable for those countries with balanced budget rules (BBR) under the

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[21] A differences test between the minimum and maximum categories of the index interacted with PRES show that these coefficients are statistically different from zero at conventional levels (p< 0.01).

[22] Available at http://www.imf.org/external/datamapper/FiscalRules/map/map.htm

period of analysis and interact it with PRES.[23] Using this variable we do not find any significant direct or indirect (interaction) effect for BBR (see Appendix, Table A.3). This evidence supports the idea that the effect we are picking up is indeed related to the mechanism we are describing.

Summing up, the evidence seems to suggest that the economic effects of constitutions, particularly the form of government, are conditional on the procedural powers of the executive and the legislature during the budget process. This relationship has been previously neglected by the extant literature.

6. Conclusion

That constitutions affect public policy outcomes has been long an undisputed fact. For example, the underlying framework of Buchanan and Tullock's (1962) *Calculus* relies on the fact that different decision rules (institutions) lead to different (policy) outcomes. Still, PT made comparative political economy results accessible to mainstream economists. Among those results, the fact that presidential systems lead to smaller governments (because of differences in the separation of powers) stands out as one of the most important stylized facts in the comparative politics of public finance literature

Still, as many others before us have argued, forms of government vary greatly. In particular, if the underlying theoretical framework relies on differences in the degree of separation of powers during budget negotiations, such features of the model should be duly measured and empirically tested. This paper offers a first step in this direction by interacting the form of the government with the prerogatives of the different branches during the budget process (where fiscal decisions are made). We find that budget procedures that reduce the separation of powers tend to dampen or even reverse the effects of presidentialism on total government expenditures and revenues (in addition to the more traditional result that they reduce the common pool problem).

This short paper does not aim to provide a single, unified answer for solving all the potential areas in which PT's work may be expanded and improved upon, but by highlighting one of the areas that need further development, it should help future researchers to build better empirical models and, hopefully, contribute to the development of the "art of constitutional political economy" (Voigt, 2011: 328).

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[23] The correlation between BBR and BDiscretion is negative (-0.11).

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Appendix

Table A1. Countries in Budget Survey

country	wbcode	country	wbcode	country	wbcode
Albania	ALB	Hungary	HUN	Poland	POL
Argentina	ARG	Iceland	ISL	Portugal	PRT
Australia	AUS	Indonesia	IDN	Qatar	QAT
Austria	AUT	Ireland	IRL	Romania	ROM
Belgium	BEL	Israel	ISR	Russian Federation	RUS
Benin	BEN	Italy	ITA	Rwanda	RWA
Bolivia	BOL	Japan	JPN	Serbia	SRB
Bosnia and Herzegovina	BIH	Jordan	JOR	Sierra Leone	SLE
Botswana	BWA	Kenya	KEN	Slovak Republic	SVK
Brazil	BRA	Korea, Rep.	KOR	Slovenia	SVN
Bulgaria	BGR	Kyrgyz Republic	KGZ	Solomon Islands	SLB
Burkina Faso	BFA	Latvia	LVA	South Africa	ZAF
Cambodia	KHM	Liberia	LBR	Spain	ESP
Canada	CAN	Lithuania	LTU	Suriname	SUR
Chile	CHL	Luxembourg	LUX	Swaziland	SWZ
Costa Rica	CRI	Madagascar	MDG	Sweden	SWE
Croatia	HRV	Malawi	MWI	Switzerland	CHE
Cyprus	CYP	Mali	MLI	Taiwan Province of China	TWN
Czech Republic	CZE	Malta	MLT	Tajikistan	TJK
Denmark	DNK	Mauritius	MUS	Thailand	THA
Ethiopia	ETH	Mexico	MEX	Tunisia	TUN
Fiji	FJI	Moldova	MDA	Turkey	TUR
Finland	FIN	Mongolia	MNG	Uganda	UGA
France	FRA	Mozambique	MOZ	Ukraine	UKR
Germany	DEU	Namibia	NAM	United Arab Emirates	ARE
Ghana	GHA	Netherlands	NLD	United Kingdom	GBR
Greece	GRC	New Zealand	NZL	United States	USA
Guinea	GIN	Papua New Guinea	PNG	Uruguay	URY
Haiti	HTI	Peru	PER	Venezuela, RB	VEN
Hong Kong SAR, China	HKG	Philippines	PHL	Vietnam	VNM

Table A2. Summary Statistics

(variables expressed as an average for the period 2005-2008)

Variable	Obs	Mean	Std. Dev.	Min	Max	Definition	Source
govexp_gdp	76	34.38	9.93	16.1	53.17	Central government revenue as % of GDP	World Economic Outlook (IMF)
govrev_gdp	76	33.56	9.77	14.6	56.24	Central government expenditure as % of GDP	World Economic Outlook (IMF)
PRES	76	0.43	0.50	0	1	Dummy = 1 if system presidential	Database of Political Institutions (DPI, WB)
Executive Budget discretion (dummy)	76	0.12	0.33	0	1	Dummy =1 if the Legislature may not make any changes to the budget	Survey on Budget Practices and Procedures
MAJ	76	0.56	0.48	0	1	Dummy = 1 if electoral rule majoritarian	Database of Political Institutions (DPI, WB)
GDP	76	8.31	1.65	5.06	10.89	Log of GDP per capita	World Development Indicators (WDI)
TRADE	76	90.59	43.07	26.8	302.5	Exports plus imports as % of GDP	World Development Indicators (WDI)
POP65	76	9.98	5.72	1.91	20.39	% of population above 65 years old	World Development Indicators (WDI)
POP15_64	76	64.14	6.03	48.8	71.78	% of population between 15 and 64 years old	World Development Indicators (WDI)
FH	76	5.95	1.15	3.3	7	Freedom House (Gastil) Index	Freedom House
POLITY	71	7.92	2.85	-2.4	10	Polity2 scores	Polity
FED	76	0.18	0.39	0	1	Dummy = 1 if system federal	Forum of federations, Persson and Tabelllini 2003
OECD	76	0.29	0.46	0	1	Dummy =1 if country is part of OECD	World Development Indicators (WDI)
BBR	76	0.54	0.50	0.00	1	Dummy =1 if country has numerical budget rule	IMF-Fiscal Rules Database
Executive budget discretion (discrete)	76	2.03	1.05	1	4	Index takes values 1-4. (1) No Executive discretion: "The Legislature has unrestricted powers to amend the budget"; (2) Low Executive discretion: "The Legislature may make amendments but only if it does not change the total deficit/surplus proposed by the Executive"; (3) Medium Executive discretion: "The Legislature may only decrease existing expenditures/revenues (i.e. the Legislature cannot increase existing items nor create new ones)"; and (4) High Executive discretion "The Legislature may not make any changes; it can only approve or reject the budget as a whole."	Survey on Budget Practices and Procedures

*Summary statistics for sample of countries included in models 3/8

Table A3. Placebo Test Using Balanced Budget Rules Indicator

	CG Expenditures		CG Revenues		CG Expenditures
	(1)	(2)	(3)	(4)	(5)
PRES	-1.997	-3.706	-3.341	-4.866	-1.658
	(2.534)	(2.716)	(2.759)	(3.013)	(2.507)
BBR	-2.246	-3.594	-3.393	-4.369	-2.856
	(2.398)	(2.655)	(2.434)	(2.780)	(2.595)
PRES*BBR	-1.809	0.657	0.553	3.006	-1.847
	(3.646)	(4.212)	(3.627)	(4.224)	(3.728)
MAJ	-2.805*	-2.125	-3.377**	-2.567	-2.589
	(1.486)	(1.575)	(1.537)	(1.647)	(1.623)
GDP	0.660	0.241	0.697	0.408	0.350
	(1.091)	(1.389)	(1.129)	(1.467)	(1.140)
TRADE	0.026	0.035	0.036*	0.047*	0.017
	(0.022)	(0.024)	(0.021)	(0.025)	(0.021)
POP65	1.210***	1.228***	1.011***	1.010***	1.277***
	(0.255)	(0.264)	(0.264)	(0.269)	(0.271)
POP15_64	-0.253	-0.174	-0.292	-0.215	-0.265
	(0.235)	(0.266)	(0.247)	(0.302)	(0.240)
FH	-0.593	-0.968	-0.159	-0.885	0.936
	(1.174)	(1.635)	(1.264)	(1.917)	(1.044)
FED	1.388	0.767	1.633	0.808	1.298
	(1.926)	(2.038)	(1.924)	(2.017)	(1.880)
OECD	2.892	4.378	4.341	6.001*	2.059
	(2.866)	(3.285)	(2.840)	(3.388)	(2.994)
Constant	37.051***	37.255**	37.611***	38.728**	31.387**
	(13.002)	(14.927)	(13.558)	(16.651)	(13.293)
Sample	broad	narrow	broad	narrow	Polity2>0
Observations	76	65	76	65	77
R-squared	0.664	0.678	0.639	0.639	0.664

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1