Separation of powers and political budget cycles: International evidence

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Abstract

Previous empirical work on political budget cycles has implicitly assumed the executive power has discretionary power in the choice of fiscal policy. In contrast, we analyze the consequences of separation of powers. To measure the effective checks and balances the executive power faces, we take into account the formal checks and balances provided by the legislative power, as well as the extent of rule of law. Using a cross-country panel, we find that effective checks and balances moderate political budget cycles, and that stronger cycles in developing countries may be due to weaker effective checks and balances there. We then isolate the discretional component of cycles, and separate new and old democracies. While cycles are particularly pronounced in new democracies, we also find evidence of cycles in old democracies. Furthermore, effective checks and balances raise the persistence of the budget surplus in old democracies.

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I. Introduction

In recent work on the international evidence on Political Budget Cycles (PBC), Shi and Svensson (2002a, 2002b) find they are widespread. However, PBC are particularly pronounced in developing countries, something they relate to greater corruption and less informed voters.

Looking at the subset of democratic countries, Persson and Tabellini (2002) also find PBC are widespread, being stronger in presidential countries and in countries with proportional elections. Brender and Drazen (2004) also analyze democratic countries.

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Once they take into account that new democracies have particularly strong PBC, cycles are not significant in the remnant countries, whether developed or developing, and whatever their form of government, electoral rules, or level of democracy.

What we add to this ongoing debate about the factors behind PBC is a look at the role of constitutional checks and balances that reduce the discretion of the executive. This issue has been mostly overlooked in the empirical literature, perhaps because fiscal policy is usually modeled in the theoretical models on opportunistic cycles as an issue where there is single policy maker (see Saporiti and Streb 2004). A precedent is Schuknecht (1996), who suggested that stronger PBC in developing countries might be due to the existence of weaker checks and balances.

To measure nominal or formal checks and balances, we use the Henisz (2000) political constraints variable *polcon3*, which is based on the idea of veto players. We then construct a measure of effective checks and balances, which is the product of *polcon3* and the ICRG measure of rule of law. Our aim is to single out the role of effective checks and balances in moderating PBC, and to then isolate the component of cycles due to the discretionary power of the executive.

We focus on the behavior of the budget surplus because it is the most sensitive indicator of PBC. We also look at the effect of checks and balances on the persistence of the budget surplus, taking into account the suggestion in Tsebelis (2002) that more veto players imply that it is harder to change the status quo. In this regard, more persistence should imply that it is harder to manipulate the budget to provoke, among other things, PBC.

Section II has a review of the theoretical and empirical literature on political budget cycles most closely connected to our study. Section III describes the dataset,

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suggestions that helped to start off this study. We greatly appreciate the help from Adi Brender and Allan

which draws mainly on Brender and Drazen (2004), plus some series from Henisz (2002) and the ICRG. Section IV presents our econometric evidence. Section V has the conclusions and questions for further research.

II. Brief literature review

A. Theoretical framework

Two key references on rational electoral cycles are Rogoff (1990) and Lohmann (1998). Rogoff (1990) models electoral cycles in fiscal policy, building on earlier work by Rogoff and Sibert (1988). Under asymmetric information, he shows that cycles can be interpreted as a signal of the competency of the incumbent.

Lohmann (1998a) models electoral cycles in monetary policy. She makes the nice point that even if one abstracts from the signaling problem, there will still be cycles under asymmetric information about the policy process. The underlying issue is a credibility problem, by which the executive cannot credible commit to not pursue expansionary policy before elections. This credibility problem carries over to fiscal policy. In a setup like the Rogoff (1990) model, where there is no debt, during electoral periods the incumbent will want to lower taxes, and to distort the composition of government expenditure towards consumption expenditure and away from capital expenditure, since the latter only becomes visible after elections. Shi and Svensson (2002a), who include debt, show that the incumbent will have an incentive to both raise total expenditure and lower taxes, thereby increasing the budget deficit.

Our divergence with the earlier literature on rational PBC stems from dropping the assumption there is a single fiscal authority with full discretion over fiscal policy.[1]

Drazen, who kindly provided their complete database on political budget cycles to carry out this research.

[1] Persson, Roland and Tabellini (1997) sparked off fruitful research on the implications of separation of powers for fiscal policy, but they did not consider its implications for moderating electoral cycles. In the

Once one recognizes that in constitutional democracies the process of drafting, revising, approving and implementing the budget requires the concourse of the legislature, it is clear that the possibility of PBC will depend on the leeway that the legislature allows the executive in pursuing electoral destabilization.

In this regard, Saporiti and Streb (2004) theoretically analyze the implications for PBC of considering the role of separation of powers, in a framework of asymmetric information on the budgetary process similar to the Lohmann (1998a) timing. The moderating influence of the legislature is largest when the status quo is given by the previous period's budget. In terms of the time-consistency literature on "rules versus discretion" that discusses how to solve the credibility problems faced by policy-makers, they find that separation of powers is needed to make the budget rule credible, i.e., to commit the executive to not doing stimulative policies in electoral periods. If there is perfect compliance with the budget law, separation of powers is sufficient to make the budget rule credible. If there is imperfect compliance, the rule is not credible and PBC subsist. This theoretical study has clear empirical implications that are the focus of this paper: cycles will be highest in countries with low checks and balances or low observance of the rule of law.

B. Empirical evidence

There is a very rich empirical literature on electoral cycles in fiscal policy. Tufte (1978) provides early evidence on opportunistic fiscal cycles in the US and other countries. There is a wave of recent empirical work on PBC using panels of countries. We concentrate on the interesting studies by Shi and Svensson (2002a, 2002b), Persson and Tabellini (2002), and Brender and Drazen (2004), which form the foundation of our own research.

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case of monetary policy, Lohmann (1998b) and Drazen (2001) study how the delegation to an

Shi and Svensson (2002b) analyze, for a panel of 91 countries over the 1975-1995 period, the influence of a variable *ele* that takes value 1 in electoral years, and 0 elsewhere. They find that there is a pre-electoral cycle in the fiscal surplus that is much stronger in developing countries (the surplus falls 1.4 percentage points of GDP, against 0.6 percentage points in developed countries). The reason for this difference is not the revenue cycle, which falls 0.3 percentage points in both groups, but rather that spending rises much more strongly in developing countries. They are able to explain these differences across groups of countries in terms of larger rents for incumbents in developing countries, using as proxies either the Transparency International measure of degree of corruption, or an average of five ICRG institutional indicators (rule of law, corruption in government, quality of the bureaucracy, risk of expropriation of private investment, and risk of repudiation of contracts).

Shi and Svensson (2002a) look at a panel of 123 countries over the 1975-1995 period, comparing the *ele* variable to a *pbc* variable that equals *ele* in electoral years, and -1 in post-electoral years. The *pbc* variable almost invariably turns to be more significant, in statistical terms, than the *ele* variable. They again find that PBC are pervasive, and that cycles are stronger in developing countries than in developed countries (the *pbc* variable has a coefficient of –1.0 in developing countries, and -0.4 in developed countries). They explain the differences in terms of a variable *sum*, the weighted average of two indicators. First, the variable *rents*, an average of the five ICRG indicators mentioned above. The rationale is that greater rents give greater incentives to produce cycles. Second, the variable *informed voters*, the product of number of radios per capita and a dummy that measures the freedom of broadcasting. The rationale is that a greater proportion of informed voters can reduce the problems of

independent central bank can moderate electoral cycles. However, a single authority decides fiscal policy.

asymmetric information that allow cycles to take place. They find that the composite variable *sum* explains the differences between developing and developed cycles in regard to *ele* (however, they overlook to report the results with *pbc*).

Persson and Tabellini (2002) restrict their panel to 60 democratic countries over the 1960-1998 period. They distinguish between pre- and post-electoral components of electoral cycles in fiscal policy. Though they do not test whether the differences are statistically significant, there appears to be a clear asymmetry in government expenditures, which is significantly cut the year after elections, while there is no pattern in the year before elections. On the other hand, ta x cuts before elections are followed by similar hikes after elections. This pattern is reflected in the electoral behavior of the budget surplus, which falls 0.1 percentage points of GDP before elections, and rises 0.4 percentage points afterwards. Controlling for the effect of the level of democracy, they find there are cycles not only in the whole range of democracies (polity index from the Polity IV dataset between 1 and 10), but also in the countries with the best democratic institutions (polity index of 9 or 10). Persson and Tabellini (2002) also analyze the effect of electoral rules and forms of government on PBC. As to electoral rules, they find a statistically significant difference in the case of spending before elections, which tends to fall in majoritarian countries, and to rise in proportional countries (though these effects are not statistically significant in themselves, the difference is). As to the form of government, the differences are more prominent. In presidential countries, the post-electoral effects of a fall in expenditure, and a rise of taxes and surplus, are stronger than in parliamentary countries, and the differences tend to be statistically significant.

Brender and Drazen (2004) study a panel of 69 democratic countries over the 1960-2001 period. They concentrate on pre-electoral effects using the *ele* variable. They distinguish which countries are new democracies, i.e., countries that have elections in the sample period that belong to the first four competitive elections. The idea behind this is that voting may require a local learning process that matures with electoral experience, so the problems of asymmetric information may be alleviated over time. When all countries are pooled, the electoral effect on the budget surplus of the first four elections is between -1 and -1.2 percentage points of GDP, while the rest of the elections have a negligible effect on the budget surplus. When they partition the data, Brender and Drazen (2004) find that PBC are statistically significant in new democracies, which are typically countries with 15 years or less of democracy (they only take the first four competitive elections, if they fall within the sample period, as belonging to new democracies). On the other hand, old democracies show no evidence of cycles using the *ele* variable, whether in OECD countries or not, and whatever the level of democracy (countries with a polity index between 0 and 9, or an index of 10), the form of government (presidential or parliamentary), or the electoral rules (majoritarian or proportional).

Our starting point is the Brender and Drazen (2004) database. We want to see to what extent effective checks and balances have explanatory power, once one controls for the variables in Brender and Drazen (2004). A precedent is Schuknecht (1996), who conjectures that stronger PBC in developing countries are related to weaker checks and balances. We look at nominal checks and balances, corrected for the degree of observance of the rule of law to have a measure of effective checks and balances.

III. Data

We construct the panel data set using several sources. We basically use the dataset compiled by Brender and Drazen (2004) to study the influence of new democracies on PBC. The *polcon* measure built by Henisz (2002), corrected for the degree of observance of the rule of law (using the ICRG indexes), is used to explore the role of effective checks and balances.

The sample size is basically restricted by the availability of fiscal data in some countries, and by the data on rule of law, which is only available since 1982 (for that reason, we also define a dummy variable on rule of law to characterize each country over the whole period).

From Brender and Drazen (2004), we take a data set of 68 developed and developing countries with annual observations for the period between 1960 and 2001 which are democracies (we exclude Sweden, due to change in the series in the early 1990s). A democracy filter is used, since the sample is restricted to years in which the polity index from Polity IV is non-negative, indicating that the country is a democracy, not an autocracy without competitive elections.

The Brender and Drazen dataset covers macroeconomic indicators (GDP, per capita GDP, GDP growth rate), and fiscal variables (government surplus, total expenditures, total revenues) whose primary sources are the IMF *International Financial Statistics* (IFS) and the World Bank *World Development Indicators*. It also covers political data on level of democracy from the Polity IV Project, and on election dates from the Institute for Democracy and Electoral Assistance, the International Foundation for Electoral Systems, the Database of Political Institutions (DPI) Version 3, and several other sources.

Variables on political constraints come from the Henisz (2002) POLCON dataset. The variable *polcon3* is an index designed to measure the political constraints facing the executive to implement a policy. It takes into account the extent of alignment across the executive and legislative branches of government. More alignment increases the feasibility of policy change and implies less political constraints for the executive.

An index value of 0 implies no constraints and complete political discretion. As the value increases, more political constraints are implied (when the legislative power has a single chamber, *polcon3* may reach a maximum of 2/3. when there is absolutely no alignment; when there are two chambers, the maximum is 4/5, when neither of the chambers is aligned with the executive).

The variable *rule of law* is from the International Country Risk Guide (ICRG) indicators. This variable is based on a scale from 0 to 6 characterizing the strength and impartiality of the legal system and the general observance of the law.

The definitions of variables used in the regressions are as follows (unless otherwise stated, the variables are taken from the Brender and Drazen 2004 database):

texp: total expenditure as a percentage of GDP

texp1: *texp* lagged one year

trg: total revenue and grants as a percentage of GDP

trg1: *trg* lagged one year

bal : fiscal balance as a percentage of GDP, equal to *trg*-*texp*

bal1: *bal* lagged one year

lgdp_pc: natural log of GDP per Capita

gdpr: annual growth rate of GDP

trd: share of international trade as a percentage of GDP

pop65: fraction of population above 65

pop1564: fraction of population between 15 and 64

lnpi: natural log of 1 plus the inflation rate (source: IFS)

lnpi2: square of *lnpi*

p3: *polcon3*, the political constraints index (source: Henisz 2002) *locom*: the Law and Order index, supplemented by the Rule of Law index for the early yeras subce 1982 when the former is not available (source: ICRG)[2]

locom4: dummy variable for *locom*. Takes the value 1 for a given country if *locom* ≥ 4 for all the years reported, and 0 otherwise.

pbcwb: PBC dummy, which takes the value 1 in election year, -1 in the year following the election and 0 otherwise (source: our construction, based on variable *ele* in Brender and Drazen 2003).[3]

pbcwb_p3_locom: interaction variable that equals *pbc**(*p3*/.75)*(*locom*/6)

pbcwb_p3_locom4: interaction variable that equals *pbc**(*p3*/0.75)**locom4*

pbcwbdis4: *pbcwb**(1-(*p3*/.75)*(*locom*/6))

pbcdis8: *pbcwb**(1-(*p3*/.75)**locom4*)

bal1_p3_locom: interaction variable that equals *bal1**(*p3*/.75)*(*locom*/6)

bal1_p3_locom4: interaction variable that equals *bal1**(*p3*/.75)*(*locom4*)

devel: Filter variable that takes value 1 when country belongs to OECD.

newd: Filter variable for New Democracy. Takes the value 1 if the country is a new democracy, i.e., if the country has an election that belongs to first four competitive elections, and 0 otherwise.

IV. Evidence of PBC in Budget Surplus

This Section studies the influence of electoral cycles on the behavior of the budget surplus (*bal*). The dummy *pbc*, which takes value 1 in electoral years, –1 in post-electoral years, and 0 otherwise, is meant to capture pre- and post-electoral effects. This variable is based on the *ele* variable in Brender and Drazen (2003), which only takes

[2] When there are overlapping observations, the *rule of law* variable is an unbiased predictor of *law and order*, since the intercept is zero and the coefficient is 1.

[3] It imposes the restriction that the expansion prior to the election and the contraction after the election are of the same magnitude.

elections when the polity index is non-negative.[4] All regressions use country fixed effects.

The use of fixed effects estimators in a regression with lagged dependent variables, as in our case, introduces a potential bias. Since the order of the bias is 1/T, were T is the length of the panel, we expect a small bias in our sample which covers the 1960-2001 period (we later also try a GMM estimator, to make sure the results are robust to different econometric methodologies).

We first look at the difference between cycles in OECD and non-OECD countries, and the role that effective checks and balances may be playing. Then, following Brender and Drazen (2004), we control for the influence of new democracies. Though cycles are particularly strong in new democracies, we find that isolating the discretional componente of cyles, PBC are still significant in old democracies. Effective checks and balances also increase the persistence of policy outcomes, though not in new democracies. We also control for the effect of form of government (presidential or parliamentary), but his has no significant inluence once one distinguishes between new and old democracies. The electoral rules (proportional of majoritarian) do not seem to have a significantly different effect, except in persistence which seems to be larger with proportional rules in old democracies.

A. PBC in OECD and non-OECD countries

We first try to see if our variables can help explain the pattern observed by Shi and Svensson (2002a,b) that electoral cycles are stronger in developing countries. As a benchmark, Column (1) of Table 1 shows the *pbcwb* dummy by itself. The cyclical effect is a fall of 0.3 p.p. of GDP in the surplus before elections, and an equivalent rise after elections. Column (2) of Table 1 shows that in OECD countries this effect is

[4] Brender and Drazen (2004) adjust the election years in several countries, based on the difference

slightly smaller (0.24 p.p. of GDP), and in non-OECD countries it is slightly larger (0.36 p.p. of GDP). Note however that, given all our control variables, these differences do not seem to be statistically significant.

<Table 1>

The final columns include our two variants of effective checks and balances. First, the multiplicative variable where *pbcwb* is multiplied by *p3* (which is given by *polcon3*, divided by 0.75, since the highest reported value of *p3* is 0.72) and by rule of law (*locom*, divided by 6). In the second variant, *pbcwb* is multiplied by *p3*/0.75 and a dummy variable *locom4*, which takes value 1 if *locom* is larger than 4 in all years that are reported for a given country, and 0 otherwise. This second treatment implies treating rule of law as a fixed characteristic. This has the advantage of extending the available data.

Either variant of effective checks and balances is significant in OECD countries (columns 5 and 8), but not in non-OECD countries. Moreover, they have the theoretically expected positive sign, acting as a moderating factor of PBC (Saporiti and Streb 2004). Once one includes effective checks and balances, one can no longer say that the effect of cycles is stronger in non-OECD countries.

In Table 2, we isolate the discretional component of PBC, adjusting the original *pbcwb* variable by the effective checks and balances (in the extreme, an election would not be counted if the legislature where not at all aligned with the executive).

<Table 2>

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between fiscal and calendar year, but we preferred to stick to the original elections dates.

The results show that cycles are always significant at the 1% level, if one measures their discretional component, and that there are no appreciable differences between OECD and non-OECD countries once one focuses on the discretional component.

B. The effect of new democracies

Brender and Drazen (2004) consider the effect of a very simple filter variable that takes into account whether a country is a new democracy or not. In Table 3 we control for this effect. We not only consider the direct effect of checks and balances on cycles, but also the indirect effect through the persistence of fiscal variables.

Table 3 shows the results of the estimates with both our measures of effective constitutional checks and balances. Both variants of effective checks and balances are significant in the whole sample, and in the subsamples of new democracies and old democracies. Though the effect is slighlty smaller in old democracies, it is significant at the 5% level.

<Table 3>

Table 3. also shows how effective checks and balances affect the persistence of the budget surplus, where current checks and balances interact with the past surplus (*bal1_p3_locom* and *bal1_p3_locom4*). This has to do with the fact that Tsebelis (2002) points out that more checks and balances should lead to more persistence of policies. More persistence indicates less cyclical effects, i.e., less influence of PBC. This effect is not present in new democracies, however, only in old democracies.

Once one isolates the discretionary component of cycles in the *pbc* variable, the effect of PBC is between 0.5 p.p. (percentage points) and 0.8 p.p. of GDP according to our variant *pbcwbdis4*, and 0.3 and 0.5 pp. of GDP according to *pbcwbdis8*.

The estimates using GMM do not change the main conclusions outlined above.

<Table 4>

In summary, that larger effective checks and balances significantly increase the persistence of the budget surplus is an indirect indication of how checks and balances can limit PBC, making it harder for governments to reduce the surplus in election years.

C. The effect of form of government

Table 5 checks for the influence of presidential or parliamentary forms of government on PBC.

<Table 5>

Though cycles seem to be more significant in presidential countries, the coefficients in presidential and parliamentary coutnries do not differ significantly according to F-test. There does seem to be a difference in persistence, but this difference disappears once one divides countries into old and new democracies. We conclude that, once one accounts for the discretional element of cycles, these differences do nto seem to be very important (indeed, the approach of veto players tries to develop a metric common to all forms of government).

D. The effect of electoral rule

Table 6 checks for the influence of majoritarian or proportional rules on PBC.

<Table 6>

Cycles seem to be more significant in proportional countries, but the coefficients in proportional and majoritarian countries do not differ significantly according to F-test. There does seem to be a difference in persistence, but this is in favor of proportional countries where there is more poersistence (and hence less room for PBC). We conclude that, once one accounts for the discretional element of cycles, proportional systems still have an added effect (perhaps because there tend to be more veto palyers with proportional systems, something that not be completely captured by *polcon3*).

V. Cycles in Government Expenditure and Revenue

We now show the results with total expenditures and grants (*texp*) and total revenue (*trg*), to track the possible sources of the cycles described in Table 3.

<Tables 7 and 8>

Tables 7 and 8 show that PBC cycle is related for tendency of expenditure to go up, and revenues to go down, in election years (a pattern that is reversed after elections). Unlike the case of the budget surplus, however, these effects are almost never statistically significant (except for two of six cases in Table 7, and one of six cases in Table 8). On the other hand, effective chekcs and balances do not seem to affect the persistence of either expenditures or revenue.

VI. Final remarks

The measures of effective checks and balances we present here play a role in moderating PBC in the budget surplus. This role is still present when one separates out new democracies, where cycles are particularly strong.

We have an imperfect measure of the budget process, but it may be pointing to a promising path using more specific measures of the budget process. The literature on the budget process and budget institutions has looked at how this process influences the size of the public sector, but as far as we know its influence on electoral cycles has not been studied before.

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