CFCM

CENTRE FOR FINANCE, CREDIT AND MACROECONOMICS

Working Paper 15/14

Political budget cycles and media freedom

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Produced By:

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Abstract:

This paper examines the effects of elections on the conduct of central governments' fiscal policies. To do so, it uses a unique panel database that includes disaggregated spending and revenue series at the central government level for multiple countries over the 1975-2010 period. After examining political environments under which incumbent governments generate political budget cycles (PBCs), we compare the *relative* importance of factors influencing cycles. Media freedom is identified as the factor that plays the most critical role. Specifically, we find robust evidence that the electoral effect on budget deficits under low media freedom is significantly larger than under high freedom, even when other determinants of PBCs are controlled for. We then show that what drives the election-year rise in budget deficits under low media freedom is an increase in the current, not capital, component of public expenditure.

Keywords: Political budget cycles; Central government; Voter information; Media Freedom; Fiscal policy composition

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1   Introduction

Which political considerations *best* explain the occurrence of political budget cycles? And, which *components* of public spending and revenue are manipulated prior to elections in response to considerations?

To address these questions, we assemble a new comprehensive dataset on disaggregated expenditure and revenue series, which covers around 70 developed and developing countries over the period 1975-2010 at the central government level. We then examine circumstances under which fiscal manipulations may occur. Specifically, we condition our analysis on various political considerations suggested by the political budget cycle (PBC) literature: 1) those affecting the readiness and incentives of incumbent politicians to behave opportunistically, such as the predictability of the timing of elections and the competitiveness of elections; 2) those affecting the capacity of the opportunistic measures to yield additional votes, such as the maturity of democracy and the degree to which voters are informed; and 3) characteristics of political institutions, such as proportional versus majoritarian electoral rules. Critically, after showing that each of these factors shapes PBCs in the context of our dataset, we systematically compare their *relative* importance, to identify the one that plays the *most* important role. Finally, making use of the disaggregated fiscal data series, we examine which fiscal *components* drive the electoral effects on budget deficits.

Our results are as follows. First, we find that the degree to which voters are informed about incumbents' fiscal policy conduct is the most important conditioning factor for PBCs amongst those we have considered. However, a deeper investigation of voters' informedness suggests that it is the degree of media freedom that is critical. Specifically, we provide robust evidence that when media freedom is low, and thus when the information content is possibly influenced by a government, the electoral effect on budget deficits is large, even when the other conditioning factors are controlled for. We also find that

when an incumbent government engineers an election-year rise in budget deficits under low media freedom, it does so primarily by increasing current (but not capital) expenditures.

This paper is organized as follows. Section 2 presents the literature review, highlighting various conditioning factors for PBCs investigated previously. After, Section 3 describes the dataset, Section 4 explains the empirical methodology. The empirical results are presented in Section 5. Finally, Section 6 discusses the results and provides concluding remarks.

2   Elections and opportunistic fiscal policy conduct: a literature review

In their seminal paper, Rogoff and Sibert (1988) show that, before elections, incumbent politicians may opportunistically engage in expansionary fiscal policies to increase their chances of re-election. This is accomplished by reducing taxes (immediately visible to the electorate) financed through seigniorage (observable with a lag), thus generating a budget cycle. Subsequently, Rogoff (1990) extends the analysis to pre-electoral manipulation of the composition of public spending, suggesting that opportunistic incumbents signal their competence to the electorate by shifting spending towards (immediately observed) consumption expenditure and away from investment expenditure (visible only after the election). Following these contributions, several studies empirically examined the possible occurrence of political budget cycles, highlighting circumstances under which incumbents conduct fiscal manipulation to increase re-election prospects. In what follows, we review the literature, organizing the conditioning factors into 1) those affecting the readiness and incentives of incumbents to behave opportunistically; 2) those affecting the capacity of opportunistic behavior to generate additional votes; and 3) those characterizing political institutions.[1]

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[1] For recent surveys on conditional budget cycles, see Veiga (2010) and de Haan and Klomp (2013), respectively.

2.1   Factors affecting the readiness and incentives of politicians to act opportunistically

For incumbents to manipulate fiscal policies, certain conditions need to be satisfied. One important condition is the *predictability of the timing of elections*. Some studies, using panels of countries, suggest that PBCs are more prevalent in samples including only predetermined elections; that is, elections held in the last year of a constitutionally fixed term for the legislature or executive (e.g., Shi and Svensson, 2006, and Efthyvoulou, 2012). The *fragmentation of the government* appears to be another key factor, affecting the ability of politicians to implement their most preferred policies. Regarding this point, Chang (2008) finds that, in OECD countries, fiscal policy manipulation during elections is constrained when policymaking power is dispersed among multiple veto players.[2]

Turning to factors affecting incumbents' incentives to generate PBCs, Efthyvoulou (2012), using data for EU member countries from 1997 to 2008, emphasizes the importance of *electoral competitiveness* on politicians' incentives to generate PBC.[3,4] Additionally, *changes in ideology* may affect politicians' incentives to engage in PBCs. Alesina and Tabbellini (1990) indicate that spending and deficits increase before elections when politicians expect to be replaced by an opponent with a different ideology, in order to limit the options of the newly elected candidate.[5] Finally, the *level of rents extracted while in office* is likely to influence the incentives to remain in power and, thus, the incentive for incumbents to engage in electoral fiscal manipulations. In this regard, Shi and Svensson (2006) argue that one of the

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[2] Veto players are actors whose agreement is necessary for changing an existing policy. They can be political parties in a coalition or political organs that have formal veto powers. The larger the number of veto players and the ideological differences among them, the more difficult it is to change the *status quo*.

[3] This factor was already a focus of the `political business cycle' literature starting in the 1970s. For instance, Frey and Schneider (1978a, 1978b) argue that when the election is competitive and incumbents are in danger of losing, they have a larger incentive to adopt expansionary policies before elections to stimulate the economy.

[4] At the local government level in Portugal, Aidt, Veiga and Veiga (2011) take into account the interaction between the magnitude of the opportunistic distortion and the margin of victory, and show that incumbents behave more opportunistically when they expect elections to be more competitive.

[5] Partisan cycles were described by Hibbs (1997). For a survey of the impact of ideology on categories of public spending and revenues, see Franzese (2002).

reasons for PBCs to be larger in developing countries is that incumbent politicians gain more private benefits when in power than those in developed countries.

2.2   *Factors affecting the capacity of opportunistic behavior to generate additional votes*

While favorable conditions may render incumbents' fiscal manipulations possible, it also matters whether or not such actions are likely to yield additional votes. Both Rogoff and Sibert's (1988) and Rogoff's (1990) seminal models of rational PBCs rely on temporary information asymmetries regarding the incumbent leader's competence to explain PBCs. Opportunistic incumbents use fiscal policy to signal competence. According to Rogoff (1990: 22), "PBCs may be a socially efficient mechanism for diffusing up-to-date information about the incumbent's administrative competence."

Shi and Svensson (2006) and Alt and Lassen (2006a) follow a different theoretical approach to explain PBCs. They develop career-concerns models that do not involve signaling, but rather emphasize moral hazard problems. They argue that, under asymmetric information, all incumbents (not only competent ones) have an incentive to create PBCs if they have the power to do so. According to Shi and Svensson (2006), PBCs are larger in developing than in developed countries because in the latter there is a larger *share of informed voters*, making fiscal policy manipulations less effective. In a similar vein, Alt and Lassen (2006a) emphasize that fiscal policy transparency makes it harder to hide manipulations in fiscal policy, and therefore, diminishes the incidence of PBCs. Alt and Lassen (2006a and 2006b) claim that fiscal electoral cycles are not confined to, or driven by, weaker and newer democracies, as argued by Brender and Drazen (2005). They show that, even among advanced democracies, opportunistic electoral cycles appear where budget institutions are less transparent. Thus, voter information is a crucial factor determining the magnitude of fiscal manipulations.

Brender and Drazen (2005) highlighted the importance of the *maturity of democracy*, showing that PBCs are more important in new, rather than in established, democracies. This is presumably

because, when voters lack experience with electoral manipulations, or lack the information needed to evaluate them, opportunistic measures will gain their support more effectively. Following this argument Brender and Drazen (2013), using a panel of 71 democracies, present evidence for election-year effects on the composition, rather than on the level, of expenditure under established democracies.[6] In line with their results, Katsimi and Sarantides (2012), focusing on a panel of 19 OECD countries (established democracies), show that for countries with predetermined electoral periods, current expenditure increases at the expense of capital expenditure, while there is no evidence of an increase in total expenditure or the deficit.[7]

2.3 Characteristics of political institutions

Finally, Persson and Tabellini (2003: 8.5) shed light on the role of political institutions in shaping PBCs, focusing on *electoral rules* (single versus multiple-district elections) and the *system of government* (presidential versus parliamentary democracies). Based on Persson and Tabellini's (1990) career-concerns model, where individual accountability is stronger under majoritarian elections than in proportional elections,[8] they argue that the former generate sharper incentives to create tax and spending fluctuations around elections. By analogy, they also predict stronger electoral cycles under presidential regimes. Regarding effects on the composition of electoral spending manipulations, Persson and Tabellini predict

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[6] They also examine post-election development in the composition of expenditures. Using an index of changes in the composition of central government expenditures, they conclude that leadership changes do not influence the composition of expenditures in the first two years of the term, but they result in greater compositional changes over a four-year period, particularly in developed countries.

[7] However, they suggest that total revenue may decrease, driven by a fall in direct taxation.

[8] Furthermore, in proportional systems, incentives for good individual performance by a politician may be diluted because citizens vote on a list and, consequently, elections are a less powerful tool to discipline policymakers.

stronger incentives for the adoption of broad policy programs to woo the voters, such as welfare-state spending, under proportional electoral rules.[9]

Using a panel of 60 countries, Persson and Tabellini (2003) found effects of constitutional provisions on the existence and composition of electoral cycles in fiscal policy. They claim that tax cuts in electoral years are universal, but only in presidential regimes they are reversed immediately after the elections. Second, only incumbents in majoritarian countries reduce spending during election years. Third, expansions in welfare spending in the proximity of elections are only visible in proportional democracies. In a similar vein, Chang (2008), focusing on OECD countries, shows that before elections, incumbents increase social welfare spending under proportional representation, while they raise district-specific spending (including infrastructure investments such as construction and transport spending) under plurality (majoritarian) rules.

To conclude the literature review, although a few studies (e.g., Alt and Lassen, 2006b) attempted to disentangle some of the conditioning factors for PBCs, no study has systematically investigated the relative importance of a number of conditions simultaneously. In the empirical investigation, we try to fill this gap in the literature. We also contribute to the literature by moving beyond electoral effects on the budget deficit, to examine particular budget components that drive changes in the deficit.

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[9] Under proportional electoral systems incumbents need to please one half of the voters, while in majoritarian systems they only need to please roughly one fourth (half the voters in half the districts). Therefore, majoritarian electoral rules induce politicians to target spending to smaller (geographical) groups.

3   The dataset

In what follows, we describe the assembly of a panel dataset covering central governments' expenditure and revenue series, elections and other political variables, and other control variables (including macroeconomic series), for developed and developing countries, over the period 1975-2010.[10]

We assemble a public finance dataset at the central government level, based on the IMF's Government Finance Statistics (GFS) yearbook. A key innovation of this dataset is to bridge major methodological changes in the GFS manual (GFSM). These changes were implemented from the mid-1990s to the early-2000s, with the introduction of GFSM2001, which replaced the older GFSM1986. In essence, we retrieve all historical spending and revenue data available for all countries that have reported data to the GFS yearbook for the 1975-2010 period, and then assemble comparable data series for disaggregated expenditure and revenue, referring to Wickens (2002), who details the methodological differences between the two manuals.[11]

Our first task is to distinguish democratic and non-democratic regimes across the countries in the sample. Despite the widespread use of the variable *POLITY2* from the *Polity IV* database to identify democracies, it has recently come under considerable criticism, as it attributes similar scores in quite different situations. Vreeland (2008) calls special attention to the problems of *POLITY2* when dealing with anocracies, that is, cases in the borderline between democracies and dictatorships (values of *POLITY2* close to zero). Cheibub, Gandhi and Vreeland (2010), among others, argue that using a specific score of

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[10] Descriptive statistics for the variables used in the estimations are reported in Table A.1 of the Appendix. Although we gathered data for more than 100 countries, missing values for budget deficits and media freedom bring the number of countries down to the following 69 in most estimations: Argentina, Australia, Austria, Bahamas, The Barbados, Belgium, Belize, Bolivia, Bulgaria, Burundi, Canada, Chile, Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Fiji, Finland, France, Germany, Greece, Grenada, Guatemala, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malta, Mauritius, Mexico, Moldova, Mongolia, Netherlands, New Zealand, Nicaragua, Norway, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sri Lanka, Sweden, Thailand, Turkey, Ukraine, United Kingdom, United States, Uruguay, and Vanuatu.

[11] A more detailed description of the construction of the fiscal dataset is provided in the Appendix.

POLITY2 to identify democracies may not be the best choice, as some of its components are poorly conceptualized and its scoring of democracy, ranging from +10 (strongly democratic) to -10 (strongly autocratic), is not precise. Given the problems with *POLITY2*, we use instead the democracy dummy variable (DD) of Cheibub, et al. (2010). We only consider democracies in our dataset (DD=1). In the case of new democracies, the year of the switch from dictatorship to democracy is used as the reference for the beginning of democracy in the respective country. The number of elections/years from then on determines when a new democracy becomes an established one (as in Brender and Drazen, 2005).[12]

Data on the elections, since 1975, for the chief executive are from the 2012 version of the *Database of Political Institutions* – DPI (see Beck et al., 2001). Presidential elections are considered for presidential systems (*SYSTEM*=0), while legislative elections are used for parliamentary systems and other systems in which the president is not elected by universal suffrage. We construct an election-year dummy variable (*Election_year*) which takes the value of one in the election year, and equals zero otherwise.[13] Since in several countries (e.g. Canada, UK, and USA) the fiscal year is not coincident with the calendar year, the election-year variable is adjusted taking into account the fiscal year and the month in which the elections took place.[14]

Data from the DPI is also used to distinguish proportional representation electoral systems from majoritarian ones and presidential systems from parliamentary ones. Several other variables, related to ideology, shares of votes/seats, fractionalization, polarization, checks and balances, etc., are also obtained from the DPI. Other political variables used include the Henisz (2000) index of political constraints and an

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[12] As a robustness test, we also created a democracy dummy variable which takes the value of 1 when *POLITY2* is greater or equal to zero (as in Brender and Drazen, 2013). The identification of established and new democracies using *POLITY2* and the democracy dummy of Cheibub et al. (2010) leads to similar results.

[13] The variables *EXELEC* and *LEGELEC* from DPI were used to determine the year in which each election occurred.

[14] For example, if the fiscal year starts in April and the elections take place in March of year *t*, then the relevant fiscal year is that of year *t-1*. Thus, *Election_year* will equal 1 in *t-1* instead of *t.* Information on the fiscal year of each country was obtained from the IMF's GFS Yearbook, while the variables *DATEEXE,* and *DATELEG,* from DPI, were used to identify the month of each election.

institutional index built along the lines of that of Shi and Svensson (2006) that uses data from the International Country Risk Guide.

We include in all our estimations a set of control variables that might affect the behavior and composition of public finances, including those used in Brender and Drazen (2005) and also a set of decade dummies:

- *Log of GDP per capita at 2005 constant US dollars*: obtained from the *World Development Indicators* – WDI (World Bank). This variable controls for the income level of the countries.

- *Trade (% GDP):* sum of exports and imports as a percentage of GDP (also from the WDI). This variable controls for the effects of trade openness on public finances.

- *Output gap*: logarithmic difference between real GDP and its trend (obtained using the Hodrick-Prescott filter). Data for the real GDP is from the *World Economic Outlook* (IMF). The output gap controls for the effects of business cycles on public finances.

- *Percentages of the population below 15 and above 65 years old:* These demographic variables were obtained from the WDI and control for the effects of demography on public finances.

- *1970s, 1980s, 1990s, 2000s:* decade dummy variables used to control for the passage of time.[15]

4   Empirical analysis

In this section, we first present empirical models. After presenting the baseline model, we clarify how we compare the relative importance of political considerations as conditioning factors for political budget

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[15] Although we also considered the option of using year dummy variables, the problem is that, with 36 years of observations, their inclusion greatly increases the number of instruments in system-GMM estimations. In fact, for those estimations where a lower number of countries is available, the number of instruments is sometimes higher than the number of countries, which is likely to make the instrument matrix invalid. Thus, although the results are very similar in general, we preferred to take time effects into consideration through the inclusion of decade dummy variables (leaving out the dummy for the 2000s). The results are also very similar when we use instead a quadratic time trend. These results are not shown here, but are available from the authors upon request.

cycles. Then, we discuss the estimation methods, highlighting the way we address the innate endogeneity issues within dynamic panel models.

4.1 Empirical models

4.1.1 Baseline model

To test for *unconditional* electoral effects on fiscal variables, we use the following baseline model:

$$f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta ELY_{it} + X'_{it}\delta + \mu_i + \varepsilon_{it} \quad i = 1, \dots, N \quad t = 1, \dots, T_i \tag{1}$$

where f_{it} is a fiscal variable in country i in year t and p is its number of lags included in the model, ELY_{it} is an electoral variable,[16] X_{it} is a vector of control variables (including the decade dummies), μ_i is the effect of country i, ε_{it} is the error term, and α, β, and δ are parameters or vectors of parameters to be estimated.

4.1.2 Models with conditioning factors

As summarized above, however, several factors may *condition* the occurrence of political budget cycles: (1) factors that influence the readiness and incentives of incumbents to act opportunistically, (2) factors that affect the capacity of opportunistic policies to generate additional votes, and (3) characteristics of political institutions. While a number of studies present empirical results accounting for one or more of these factors, little is known about their relative importance as a driver of PBCs. Filling this gap in the PBC literature is the primary objective of the present study.

Before discriminating between different conditioning factors, we start by examining each factor individually, to confirm whether the results shown in the previous literature hold in the context of our comprehensive dataset. For this purpose, we take the following two approaches. First, we repeat

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[16] We also estimated a model including a lag of the electoral variable, in order to capture opportunistic effects that may happen in the year before elections. In general, when the electoral variable and its lag are included at the same time, only the contemporaneous value is statistically significant. This indicates that electoral manipulation of fiscal variables tends to occur closer to elections. These results are not shown here but are available from the authors upon request.

estimating equation (1) for several subsamples with specific political attributes. Second, using the entire sample, we interact the election year variables with dummy variables that proxy those political attributes:

$$f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta_1(ELY_{it} * D_{it}) + \beta_2\big(ELY_{it} * (1 - D_{it})\big) + \phi D_{it} + X'_{it}\delta + \mu_i + \varepsilon_{it} \qquad (2)$$

$$i = 1, \dots, N \quad t = 1, \dots, T_i$$

where D_{it} is a dummy variable that proxies a specific condition, and the remaining variables and parameters are as defined in equation (1).

To compare the relative importance of these conditions, our strategy is again twofold. The first approach is to estimate equation (2) for subsamples characterized by different political attributes. The idea is to determine if any of the conditioning factors (e.g., the extent of voter information) produce differing electoral effects on fiscal variables, even when different political attributes are controlled for. The second, complementary, approach is to directly examine the explanatory power of each condition in a fully-nested specification based on the entire sample. That is, we include the election-year variable together with its interactions with all the conditioning factors simultaneously in the same estimation:

$$f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta ELY_{it} + \sum_{k=1}^{m}\big[\gamma_k\big(ELY_{it} * D_{kit}\big) + \phi_k D_{kit}\big] + X'_{it}\delta + \mu_i + \varepsilon_{it} \qquad (3)$$

$$i = 1, \dots, N \quad t = 1, \dots, T_i$$

where m is the number of conditioning factors included simultaneously and the variables are defined as in equations (1) and (2).

In what follows, we only report results for the following 5 conditioning factors, for which evidence of PBCs and of the impacts of the conditioning factors turns out to be robust across estimation techniques in our sample: predetermined elections; close/disputed elections; low degree of voter information; new democracies; and proportional electoral systems.[17] Thus, the corresponding dummy variables used in equations (2) and (3) are defined as (with m=5 in equation (3)):

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[17] Several additional tests, whose results, for brevity, are not reported in the paper, were also performed. First, we investigated if government fragmentation influences its ability to engender fiscal electoral cycles. Second, we used

- *Predetermined election:* equals 1 when the elections are held in the last year of a constitutionally fixed term, and equals zero otherwise. (*Not Predetermined election = 1 - Predetermined election*)

- *Close election:* equals 1 when the difference in vote shares between the major government party and opposition parties (or candidates, in presidential elections) is smaller than 10 percentage points, and equals zero otherwise. (*Not Close election = 1 – Close election*)

- *IMD High:* equals 1 when the index of media diffusion (IMD), defined as in Shi and Svensson (2006), is higher than its sample median, and equals zero otherwise. (*IMD Low = 1 - IMD High*). *IMD* is a composite of the measures of media freedom and the extent of information diffusion.[18]

- *Established democracy:* takes the value of 1 after ten years have passed and four democratic elections have taken place in the country after it became a democracy, and equals 0 otherwise.[19] (*New democracy = 1 – Established democracy*).

- *Proportional representation:* takes the value of 1 for proportional representation electoral systems, and equals zero otherwise. *Majoritarian = 1 – Proportional representation.*[20]

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the Henisz (2000) index of political constraints as an indicator of the government's ability to generate PBC. Third, following Shi and Svenson (2006), we proxied the level of rents extracted while in power, using an institutional index constructed with indicators provided by the International Country Risk Guide (ICRG). Fourth, we analyzed whether electoral effects differ among developed/developing countries, and among strong/weak democracies. Fifth, following Alesina and Tabellini (1990), we examined whether changes in the ideology of the government influence the magnitude of opportunistic fiscal measures. Finally, the role of the system of government (Persson and Tabellini, 1999, 2003a, 2003b) in shaping PBCs was also examined. Although we often observed results consistent with these works in the context of our dataset, the results either lacked significance or robustness.

[18] Using the Freedom House data on the freedom of broadcast as a proxy for media freedom, we assign the classifications of Free, Partially Free and Not Free the numerical values of 2, 1 and 0, respectively (we use the general freedom of the press status after 2000 because no separate scores for freedom of broadcast and for printed press are available after that year). Then, the index of media diffusion (IMD) is obtained by multiplying this series by that of the number of radios per capita (taken from the Cross National Time Series database – CNTS) as a proxy for information diffusion. We define as high IMD the values above or equal to the sample median. This variable is defined for observations for countries that are democracies and for which data on the budget deficit is available.

[19] As in Brender and Drazen (2013), democracies are classified as new during the first four democratic elections, and become established thereafter. We also require that at least 10 years have passed since the country became a democracy. Changing this threshold to 15 years does not change the results.

[20] Several countries have mixed systems, under which some of the legislators are elected according to proportional representation rules, while others are elected according to majoritarian rules. In these cases, the electoral system

4.2 Empirical methodology

The estimation of the linear dynamic panel data models using OLS produces biased coefficients, since the lagged dependent variable is endogenous with respect to the country effects. OLS estimation will be inconsistent, even assuming fixed or random effects, because the lagged dependent variable is correlated with the error term, even if the latter is not serially correlated (see Arellano and Bond, 1991). This bias becomes smaller as the number of periods increases. Given that our dataset covers a 36-year period, it would be safe to simply estimate a fixed effects model. However, our panel is unbalanced and the average number of observations per country in most regressions is considerable smaller. Thus, the fixed effects model may still suffer from dynamic panel bias.

Arellano and Bond (1991) developed a Generalized Method of Moments (difference-GMM) estimator that solves the problems mentioned above by taking first differences of the dynamic equations and instrumenting predetermined and endogenous variables with their available lags in levels. But, when taking first differences, the cross-sectional relationship between the dependent and explanatory variables is lost. Furthermore, as shown by Blundell and Bond (1998), lagged levels may be weak instruments for first-differences if the series are persistent. According to Arellano and Bover (1995), efficiency can be improved by adding the original equation in levels to the system, that is, by using the system-GMM estimator that combines the first-differenced and levels equations. Thus, in what follows, we use system-GMM, *as well as* fixed-effects estimators.

When estimating system-GMM models, we take account of the possibility that fiscal variables affect macroeconomic performance.[21] Specifically, we treat GDP per capita, trade and the output gap as

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was classified as proportional if the majority of the legislators in the lower house of the parliament is elected under proportional representation rules (when the variable HOUSESYS of DPI equals zero).

[21] When using fixed-effects estimators, we mitigate endogeneity/simultaneity problems by lagging all control variables (except for election-year dummies) by one period.

endogenous variables, while treating the lagged dependent variable as predetermined. However, when there are several endogenous variables in a model, the number of instruments can easily become very large, leading to over-fitting of the data which can bias t-statistics upwards. Thus, to avoid this problem (and having in mind the fact that more distant lags are usually weak instruments) we limit the lag length to that strictly necessary to have a valid instrument matrix.[22] Since Hansen tests never reject the validity of the instrument matrix and second order autocorrelation is always rejected, there is evidence supporting the validity of our results. Furthermore, Difference-in-Hansen tests do not reject the validity of the subsets of instruments.

5   Empirical results

This section presents results, starting with models including unconditional electoral effects on fiscal variables. Then, after showing the role of the above-mentioned 5 political attributes as conditioning factors for PBCs, we compare the relative importance of those factors.

5.1   Unconditional effects

We first estimate the unconditional electoral effects on fiscal variables. Table 1, using the System-GMM and the fixed effects (FE) methods, shows estimation results of equation (1) for total expenditure, total revenue, and the budget deficit (as percentages of GDP). Those for System-GMM are the two-step results, using robust standard errors corrected for finite samples. T-statistics are presented in parentheses and the degree of statistical significance is signaled with asterisks. The number of instruments and the results

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[22] The baseline specification uses the two periods lagged levels of the fiscal variables and of the other endogenous variables as instruments in the first-differenced equations and their once-lagged first-differences are used in the levels equation. The exogenous variables are used as their own instruments (the collapse option of the *xtabond2* Stata command is used to avoid an excessive number of instruments). The lag structure is adjusted when the baseline specification mentioned above does not pass all Hansen and difference-in-Hansen tests.

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of AR(1), AR(2), Hansen and difference-in-Hansen tests for System-GMM and the adjusted R-squared for FE are reported at the foot of the table. The first lag of the dependent variable (*L.CG_gdp*) is always statistically significant, demonstrating that there is considerable persistence in all fiscal series.

[Table 1]

The election dummy variable is statistically significant, with the expected sign, regardless of the estimation method used. Specifically, during election years, total expenditure is estimated to increase by around 0.33 percentage points of GDP, total revenue falls from 0.2 to 0.22 percentage points of GDP, and budget deficits rise by 0.53 to 0.65 percentage points of GDP. The most robust evidence of political budget cycles is for the budget deficit, for which the election dummy is highly statistically significant, both in System-GMM and FE estimations. Regarding the control variables, the log of GDP per capita at 2005 constant US dollars, trade as a percentage of GDP, and the percentage of population below 15 years of age are statistically significant in only one System-GMM estimation (column 5). They all seem to have a positive effect on deficits. The percentage of population above 65 years is never statistically significant. The output gap is statistically significant, with a positive sign, in columns 2 and 6, which indicates a positive effect on expenditure and deficits. Last, the decade dummy variables for the 1970s and 1980s are never statistically significant,[23] while the dummy for the 1990s is statistically significant, with a negative sign (in columns 2 and 6).[24] [25]

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[23] This implies that expenditures, revenues and deficits in those decades were not significantly different from those of the 2000s, once we control for the other explanatory variables.

[24] This suggests that expenditures and deficits were smaller in the 1990s than in the 2000s.

[25] The results of Table 1, and of the following tables, do not change significantly when democracy is defined according to the *POLITY2* variable of the Polity IV database. They also remain valid when the sample is restricted to predetermined elections only. These results are not shown here, but are available from the authors upon request.

5.2   Comparing the relative importance of competing political considerations

We now consider the role of conditioning factors in the creation of PBCs. Specifically, we first confirm that the above-mentioned 5 different conditional factors all play a role individually, and then attempt to identify which factor may be *most* important. For brevity, we focus on impacts of electoral effects on the budget deficits, and examine how different fiscal measures change under the key condition identified. To facilitate the comparison of relative importance of different factors, the following analyses are based on the observations for which all the factors are available. Because the freedom of broadcast index, a component of the index of media diffusion (IMD), is only available since 1979, and because there are missing values for some countries, the total number of observations drops to 884 (from 961 in Table 1).

To examine the role of conditioning factors individually, we estimate our baseline model of equation (1) for subsamples characterized by different political attributes. Table 2 reports the results, focusing on the coefficients and standard errors for the election year variable for brevity. There is robust evidence of PBCs when we restrict the sample to predetermined elections[26] (estimations 1 and 2), close elections[27] (5 and 6), low index of media diffusion (9 and 10), new democracies (13 and 14), and proportional representation electoral systems (17 and 18). Meanwhile, the evidence of PBCs is considerably weaker, or nonexistent, when elections are not predetermined (3 and 4), or not close (7 and 8), when the index of media diffusion is high (11 and 12), in established democracies (15 and 16), or in majoritarian electoral systems (19 and 20).[28] These results confirm previous works such as Brender and Drazen (2005), Shi and Svensson (2006), Efthyvoulou (2012), and Persson and Tabellini (2003), which

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[26] This sub-sample includes the entire term preceding and including a predetermined election (the election year and the previous years of the same fixed term).

[27] This sub-sample includes the entire term preceding and including a close election (the election year and the previous years of the same term).

[28] Although the budget deficit is statistically significant in 4 estimations, it is only marginally significant in three of them (estimations 4, 7 and 11), and it is never significant for both System-GMM and FE.

indicate that the predictability and competitiveness of elections, the share of informed voters, the maturity of democracy, and electoral rules are conditional factors affecting PBCs in our dataset.

[Table 2]

To complement the above analyses, we estimate equation (2) for the full sample, interacting each of the conditioning dummies with election-year dummies. The first and second columns of Table 3 summarize the results. For each conditioning factor, the results are largely consistent with the sub-sample analyses (Table 2). For instance, in the model where dummies for predetermined and non-predetermined elections are included, the significant electoral effects (on budget deficits) are observed only for predetermined elections. However, Wald tests indicate that only when the conditioning factor is the degree of information dissemination (i.e., IMD Low vs High), do the electoral effects differ significantly. Notice that this is already suggesting the particular importance of voters' informedness as a driver of PBCs.

[Table 3]

Next, we estimate equation (2) for the five different sub-samples characterized by the five different political attributes (predetermined elections, close elections, low index of media diffusion, new democracies, and proportional electoral rules). Columns 3 to 12 of Table 3 present the results. While these are again generally consistent with the above findings, what is noticeable from the Wald test results in the third row is that the level of voters' information plays a key role in differentiating the electoral effects in many different sub-samples (including sub-samples characterized by predetermined elections, close elections, and proportional electoral rules, albeit only with Fixed effects estimators for the last subsample). Although the predictability of elections, new democracies and proportional electoral systems also differentiate the effects in certain subsamples,[29] the role of voters' information appears to stand out.

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[29] It is worth noting that, in those cases, the Wald tests only marginally reject the hypotheses that the coefficients on the interaction variables are equal.

Further, we estimate an equation which includes the election-year variable, together with its interactions with all the different conditioning factors simultaneously (cf. equation 3). While columns 1 and 2 of Table 4 first confirm that the interaction of the dummy variable for low media diffusion with the election year dummy exhibits statistically significant effects in both system-GMM and fixed effects estimations, their significant effects remain even when the interactions of all the other conditioning factors are also included. Meanwhile, for the other interaction variables, only the interaction for proportional electoral systems is marginally significant in the system GMM estimation (column 2). Lastly, to more precisely check if conditioning factors influence the electoral effects on the budget deficit, we test the hypothesis of equality of the marginal effects when each interaction dummy variable is zero and one. The p-values of those tests (reported at the foot of Table 4) indicate that the hypothesis of equality of marginal effects of the election year over *IMD_Low* is rejected, which implies a significantly higher marginal effect of the election year when the index of media diffusion is low (*IMD_Low*=1) than when it is high (*IMD_Low*=0). The equality of marginal effects over the other conditioning dummies is only marginally rejected in column 2 for proportional electoral systems. Overall, these results reinforce our conclusion that the share of informed voters is a critical conditioning factor of PBCs.

[Table 4]

5.3   Disentangling voters' information: the crucial role of media freedom

The results described above indicate that voters' information, proxied by the index of media diffusion (IMD), is the most critical conditioning factor for PBCs. In this section, we go one step further. Specifically acknowledging that the IMD is a composite of media freedom and the prevalence of devices for disseminating information (proxied above by the freedom of broadcast and the number of radios per capita, respectively), we here investigate which of these components may make the IMD such a critical factor. This exercise is useful, because these two concepts, though seemingly correlated, reflect different aspects of voters' information. For example, even when the state controls news content of media outlets

(e.g., by exerting financial pressure on them) and voters' information is thus potentially biased, it does not mean that voters do not have means to receive the information.

With this motivation, the first row of Table 5 reports the results of estimations using only radios per capita as a conditioning factor. Although the interaction of the election year with radios per capita below the sample median is always statistically significant, and the interaction with radios per capita above (or equal to) the median is, at best, marginally significant, Wald tests only reject the equality of the coefficients in 4 out of 10 estimations. This suggests that when considering means of information diffusion alone, the results may be weaker than when media freedom is also taken into account (where we reject the equality of the coefficients in 7 out of 10 cases). What about other means of information diffusion? To address this question, we create a broader indicator of the means of diffusion, taking the average of radios, TVs, and newspaper circulation per capita. The results in the second row of Table 5 show that the Wald tests only reject the equality of the coefficients for the interaction variables in 2 out of 10 estimations, suggesting that the prevalence of information devices itself may not be a key driver of PBCs.

Next, we turn to the role of media freedom as another component of IMD. The status of the freedom of broadcast, which takes the discrete values of 0, 1, and 2, is inconvenient to use in classifying media freedom into the high and low-levels (particularly when we wish to divide observations into the equal-sized group). Instead, we use the overall Freedom of The Press (FOTP) scores of Freedom House, which are based on freedom of both broadcast and print, and take values in the region between 0 and 100.[30] The results in the third row of Table 5 clearly shows that PBCs occur when media freedom is low

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[30] The original FOTP scores are in decreasing order of freedom, that is, higher values correspond to lower freedom. In order to make the scores and their coefficients in the estimations more intuitive, we adjust the values, so that 0 corresponds to no freedom, while 100 to complete freedom. The ranges of each status are then: 0-30, Not Free; 31-60, Partially Free; and 61-100, Free. The FOTP scores (from 0 to 100) are available since 1993. From 1979 to 1992, only the broadcast and print freedom statuses (Free, Partially Free, and Not Free) are available. Using the scores of 1993 and the respective statuses, we attribute the same score backwards until 1979 if the status does not change during that period. When the status changes, we attribute the closest value of the range of values of the new status. For example, if the 1993 score corresponds to a status of Partially Free, but from 1979 to 1985 the status was Not Free, we attribute the score of 1993 backward until 1986, and then assign a score of 30 (the closest value of the range of the new status) from 1979 to 1985.

(below the sample median), with the Wald test rejecting the equality of the coefficients on the interaction variables in 9 out of 10 estimations (and the p-value in the only exception is just 0.14). Therefore, the general indication is that media freedom is a more important conditioning factor for PBCs than the means of information diffusion.

[Table 5]

As a complementary analysis, columns 1 and 2 of Table 6 report the role of media freedom in the electoral effect on budget deficits, while controlling for the effects of other conditioning factors simultaneously (cf. equation 3), as done above for the index of media diffusion (IMD) in columns 3 and 4 of Table 4. The interaction of the dummy variable for low media freedom (based on the overall FOTP scores) with the election year is statistically significant in both system GMM and fixed effects estimations (columns 1 and 2, respectively), while among those for the other conditioning factors, only that for proportional electoral systems is statistically significant in column 2. Regarding the marginal effects of the election year, they are significantly different across the values of the media freedom dummy, meaning that the electoral effects on budget deficits are higher when media freedom is low than when it is high. Although the Wald test marginally rejects the equality of marginal effects for proportional and majoritarian electoral systems in column 2, the same result does not hold in column 1.

Finally, in columns 3 and 4, we directly compare the relative importance of different aspects of voters' information, while still controlling for all the other conditioning factors. To do so, we add dummy variables for the means of information diffusion (for values below their sample medians) simultaneously, together with their interaction terms with the election year dummies. Observe that the coefficients on the interactions between the media freedom dummy and the election year dummy are always statistically significant, while the remaining interactions containing different information variables are never statistically significant. The message is similar even when we rigorously compare the marginal electoral effects across the different values of dummy variables for all the different information variables: only

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media freedom robustly differentiates the electoral effects on budget deficits.[31] Overall, together with the results shown in Table 5, our conclusion is that amongst all the political attributes examined, media freedom stands out as the crucial conditioning factor for PBCs.

[Table 6]

5.4   Media freedom and the composition of expenditure and revenue

Having identified the crucial role of media freedom for the occurrence of PBCs, we now analyze which changes in expenditure or revenue components may drive the rise in budget deficits. Table 7, based on equation 2, presents the results both for the entire sample and for a sub-sample in which election dates are predetermined (for robustness check). Columns 1 to 3 show the results for expenditures, columns 4 and 5 for revenues, and column 6 reproduces the results for the budget deficit reported in Table 5. The results show that election-year increases in total and in current expenditures occur under low media freedom, with an indication of even sharper results for predetermined elections, for which the Wald tests always reject the equality of the coefficients of the interaction variables. Meanwhile, the degree of media freedom does not differentiate electoral effects either in capital spending or tax revenue. The conclusion is that low media freedom plays a critical role in generating PBCs, primarily by increasing the current component of public spending.[32]

The robustness of the results in Table 7 was checked by performing estimations for separate samples of low and high media freedom, i.e., below and above (or equal) to the sample median,

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[31] Although radios per capita and proportional electoral systems also seem to differentiate the electoral effects on budget deficits in the Fixed Effects estimation of column 4, the same does not apply to the System-GMM estimation of column 3, where media freedom is the only statistically significant differentiating factor.

[32] To report, a considerable set of additional estimations, covering the subcomponents of current expenditures and several components of revenues, were conducted. However, they do not produce clear and robust results, primarily because the number of observations tends to become lower when dealing with subcomponents of expenditures and revenues. Regarding expenditures, we examined electoral effects also on the subcomponents of current expenditure, including compensation of employees, use of goods and services, interest, subsidies, social benefits, and grants, divided further into grants abroad and grants to other government units. In terms of revenue, we additionally examined the electoral effects on social contributions, grants, and the subcomponents of tax revenues, including income taxes, taxes on payroll, property taxes, consumption taxes, and international taxes.

respectively. The results for the low-media-freedom sample are shown in Table 8, providing clear evidence that the observed election-year rise in deficits is driven by a rise in current expenditures, regardless of the estimation method or whether we consider all elections or only predetermined ones. Finally, the results of the estimations on a sample of high media freedom do not present robust evidence of PBCs, consistent with the results of Table 7.[33]

6   Discussion and Conclusion

Why does the degree of media freedom play such a key role in determining electoral patterns in budget deficits? The literature on the role of mass media in shaping economic and political outcomes provides some valuable clues to answer this question. For example, Besley and Prat (2006)'s theoretical model of democratic politics illustrates that media capture makes it less likely for bad politicians to be identified and thus replaced. This indicates that in the context of PBCs, low media freedom may prompt incumbent governments to manipulate fiscal policies to increase their re-election prospects. Also, Leeson (2008)'s finding that media capture lowers voters' political knowledge and participation suggests another possible channel thorough which media freedom affects electoral budget cycles. That is, to the extent that low media freedom produces politically ignorant and inactive individuals, politicians tend to be free from accountability to voters, and thus may use fiscal policies opportunistically.

Our result on media freedom and PBCs is important because it offers one possible way of relating existing theories of PBCs. That is, since several conditioning factors indicated in the previous literature are correlated with media freedom, it may provide a crucial link between those factors. For example, Djankov et al. (2003) show that state ownership of media is higher in more autocratic countries. This result

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[33] For brevity, these results are not reported in the paper, but they are available upon request. We also check if the results for the composition of expenditures and revenues remain the same when we use the index of media diffusion (IMD), based on Shi and Svensson (2006), instead of Media Freedom (proxied by the FOTP scores). The results (available upon request) are very similar and the conclusions drawn from them remain the same.

suggests that media freedom tends to be lower in new democracies (which were autocratic until relatively recently) than in established democracies. Also, fiscal transparency, proposed by Alt and Lassen (2006b) as a key conditioning factor of PBCs, is closely linked to media freedom, as illustrated by their definition (p531): "fiscal transparency allows voters, interest groups, and competing political parties to observe – or infer with better precision – causes and consequences of a government's fiscal policy, either directly or through the media." In fact, the correlation of Media freedom with the index of fiscal policy transparency from International Budget Partnership is high (0.64) in the context of our sample, albeit the latter variable's limited availability (available only after 2005) does not allow us to compare the relative importance of fiscal transparency with other conditioning factors. Thus, acknowledging the links between media freedom and different conditioning factors of PBCs, our results indicate that media freedom may be the fundamental component which makes those factors important.

Why is the election-year rise in budget deficits under low media freedom particularly driven by the rise in current spending? To shed light on this question, it is useful to refer to Rogoff (1990), who argues that capital expenditure, which often takes long to materialize, may not be as suitable to signal the incumbent policymaker's competence as immediately-observed current spending. Subsequently, our finding has an important policy implication. That is, if a country considers implementing fiscal rules to avoid fluctuations in discretionary fiscal policies, it would be critical to impose a rule on the current component of public spending.[34]

To conclude, as stated in the Freedom House's website, media freedom/independence "plays a key role in sustaining and monitoring a healthy democracy, as well as in contributing to greater accountability, good government, and economic development." (https://freedomhouse.org/report-

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[34] Although it would be ideal to disaggregate current spending further, to pinpoint which subcomponents of current spending (e.g., public wages, grants, and social benefit) drive the result, the limited availability of such highly disaggregated data made it difficult to explore this question without reducing the sample size substantially. The similar comments are applied to a possible investigation of the role of subcomponents of total taxes.

). This paper highlights the role of media freedom in the context of electoral opportunism. When media freedom is low, governments control the viewpoints that reach citizens, and the latter have fewer chances of being well informed of governments' fiscal behavior in election years. As our results show, it is under these circumstances that policymakers manipulate fiscal policies most actively, via current spending policies.

Acknowledgements

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Table 1. Electoral effects for all democracies and elections

	(1)	(2)	(3)	(4)	(5)	(6)
	Total Expenditure		Total Revenue		Deficit	
	Sys-GMM	FE	Sys-GMM	FE	Sys-GMM	FE
L.CG_gdp	0.961***	0.812***	0.852***	0.795***	0.943***	0.719***
	(4.878)	(18.138)	(5.585)	(27.861)	(3.879)	(9.729)
Election year	0.330*	0.338**	-0.203*	-0.216**	0.653***	0.529***
	(1.676)	(2.521)	(-1.733)	(-2.129)	(3.264)	(3.634)
Log(GDPpc 2005)	3.499	-0.235	0.645	0.338	9.491*	-0.681
	(0.826)	(-0.316)	(0.351)	(0.418)	(1.686)	(-0.627)
Trade (% GDP)	0.025	-0.004	0.001	-0.006	0.194*	0.001
	(0.903)	(-0.729)	(0.020)	(-1.472)	(1.668)	(0.129)
% Pop under 15	0.449	0.002	0.100	-0.024	1.124**	0.029
	(1.078)	(0.040)	(0.424)	(-0.460)	(2.028)	(0.496)
% Pop over 65	-0.042	0.086	0.232	0.132	-0.180	-0.023
	(-0.127)	(0.573)	(0.842)	(1.185)	(-0.348)	(-0.152)
Output gap	10.585	23.967***	4.685	4.272	-20.513	17.558***
	(0.614)	(4.623)	(0.665)	(1.421)	(-1.003)	(2.820)
1970s	-1.097	-0.568	-0.207	-0.116	0.568	-0.524
	(-0.483)	(-1.198)	(-0.360)	(-0.397)	(0.252)	(-0.976)
1980s	-0.587	-0.427	0.015	0.137	1.765	-0.475
	(-0.407)	(-1.015)	(0.032)	(0.576)	(0.889)	(-0.898)
1990s	-0.254	-0.624***	0.169	0.076	1.762	-0.596**
	(-0.355)	(-2.849)	(0.330)	(0.462)	(1.306)	(-2.083)
Number of observations	961	961	961	961	961	961
Number of countries	69	69	69	69	69	69
Number of instruments	16.00		15.00		15.00	
Arellano-Bond AR(1), p-value	0.00		0.00		0.00	
Arellano-Bond AR(2), p-value	0.26		0.28		0.42	
Hansen (p-value)	0.27		0.96		0.70	
Diff Hansen 1 (p-value)	0.18		0.96		0.70	
Diff Hansen 2, (p-value)	0.38		0.92		0.25	
Adjusted R^2		0.694		0.767		0.451

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).
Notes:
- All elections in democracies (defined as in Cheibub et al. 2010). Sample period: 1975-2010.
- Estimated model (equation 1): $f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta ELY_{it} + X'_{it}\delta + \mu_i + \varepsilon_{it}$
- Two-step results using robust standard errors corrected for finite samples are reported in System-GMM (Sys-GMM). Robust standard errors are reported in Fixed Effects (FE) estimations.
- Log(GDPpc 2005), Trade (%GDP) and Output gap were treated as endogenous in the Sys-GMM estimations. Their lagged values two periods were used as instruments in the first-difference equations and their once lagged first-differences were used in the levels equation. The option collapse of the command xtabond2 for Stata was used in order to avoid a very high number of instruments. These variables were lagged one period in the FE estimations in order to avoid simultaneity/endogeneity problems.
- t-statistics in parenthesis. Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%, and *, 10%.

Table 2. Electoral effects on the deficit using sub samples

	Predetermined		Not predetermined	
	SysGMM	FE	SysGMM	FE
	(1)	(2)	(3)	(4)
Election_year	0.627***	0.695***	0.268	0.353*
	(3.241)	(3.434)	(0.447)	(1.786)
Observations	652	652	232	232
Number of countries	63	63	44	44
	Close Elections		Not Closed Elections	
	SysGMM	FE	SysGMM	FE
	(5)	(6)	(7)	(8)
Election_year	0.716***	0.462**	0.444*	0.331
	(2.853)	(2.271)	(1.856)	(1.463)
Observations	502	502	382	382
Number of countries	54	54	50	50
	Low Index of Media Diffusion		High Index of Media Diffusion	
	SysGMM	FE	SysGMM	FE
	(9)	(10)	(11)	(12)
Election_year	0.843***	0.880***	0.284*	0.183
	(3.148)	(3.730)	(1.661)	(1.143)
Observations	442	442	442	442
Number of countries	31	31	49	49
	New Democracies		Established Democracies	
	SysGMM	FE	SysGMM	FE
	(13)	(14)	(15)	(16)
Election_year	0.810**	0.708**	0.354	0.384**
	(2.403)	(2.202)	(1.374)	(2.279)
Observations	373	373	511	511
Number of countries	43	43	34	34
	Proportional		Majoritarian	
	SysGMM	FE	SysGMM	FE
	(17)	(18)	(19)	(20)
Election_year	0.566***	0.671***	-0.108	0.222
	(2.693)	(3.755)	(-0.219)	(0.922)
Observations	574	574	310	310
Number of countries	42	42	29	29

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).
Notes:

- See notes of Table 1.
- Estimated model (equation 1): $f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta ELY_{it} + X'_{it}\delta + \mu_i + \varepsilon_{it}$

Table 3. Electoral effects on the deficit under alternative political attributes

	All elections		Sub-samples									
			Predetermined		Close Elections		IMD Low		New Democracies		Proportional	
	SysGMM	FE	SysGMM	SysGMM	SysGMM	SysGMM	FE	FE	FE	FE	SysGMM	FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Predetermined_Election* Election_year	0.819***	0.667***			0.662**	0.587**	1.056***	1.184***	0.968**	1.021**	0.795***	0.906***
	(3.224)	(3.262)			(2.468)	(2.357)	(2.708)	(3.673)	(2.428)	(2.671)	(3.009)	(3.943)
Not_Predetermin_Election* Election_year	0.327	0.180			1.006**	0.059	0.240	0.065	0.275	-0.372	-0.104	-0.148
	(0.961)	(0.773)			(2.443)	(0.174)	(0.724)	(0.320)	(0.431)	(-0.817)	(-0.168)	(-0.383)
Wald test, p-value	0.28	0.16			0.42	0.24	0.13	0.01	0.26	0.01	0.23	0.04
Close_election* Election_year	0.509	0.573***	0.745***	0.727***			1.079***	0.998***	1.004**	0.922**	0.152	0.636***
	(1.541)	(2.963)	(2.789)	(2.968)			(3.484)	(3.853)	(2.569)	(2.650)	(0.341)	(2.920)
Not_Close_election* Election_year	1.004**	0.501*	0.479	0.640**			0.496	0.748*	0.101	0.376	1.413*	0.706*
	(2.265)	(1.877)	(1.546)	(2.212)			(1.125)	(1.890)	(0.198)	(0.907)	(1.910)	(1.956)
Wald test, p-value	0.44	0.84	0.52	0.81			0.27	0.60	0.22	0.27	0.25	0.88
IMD_Low*Election_year	1.024***	0.973***	0.974**	1.230***	1.285***	1.053***			0.720*	0.887*	0.794**	1.256***
	(3.107)	(3.611)	(2.318)	(3.475)	(3.740)	(4.048)			(1.753)	(2.017)	(2.122)	(3.696)
IMD_High*Election_year	0.270*	0.149	0.156	0.233	0.305	-0.017			0.626	0.356	0.327	0.190
	(1.721)	(0.966)	(0.772)	(1.321)	(1.089)	(-0.065)			(1.018)	(0.940)	(1.642)	(0.932)
Wald, p-value	0.04	0.02	0.09	0.02	0.01	0.01			0.90	0.38	0.26	0.02
New_demmocracy* Election_year	1.306**	0.878**	1.484***	1.152***	1.077**	0.863**	0.819*	0.931**			1.437	1.066**
	(2.179)	(2.472)	(2.613)	(2.669)	(2.260)	(2.572)	(1.889)	(2.198)			(1.252)	(2.250)
Established_democracy* Election_year	0.270	0.350**	0.124	0.439**	0.493	0.269	0.857***	0.828***			-0.085	0.461**
	(0.938)	(2.255)	(0.445)	(2.337)	(1.132)	(1.056)	(2.709)	(3.542)			(-0.143)	(2.373)
Wald test, p-value	0.19	0.19	0.06	0.136	0.47	0.177	0.95	0.83			0.33	0.28
Proportional*Election_year	0.416	0.710***	0.937***	0.887***	0.962***	0.551**	1.028*	1.161***	0.931*	0.889**		
	(1.457)	(3.747)	(4.102)	(3.841)	(3.442)	(2.407)	(1.816)	(3.814)	(1.919)	(2.039)		
Majoritarian*Election_year	1.066	0.208	-0.111	0.230	0.052	0.191	0.525	0.479	0.776	0.491		
	(1.596)	(0.875)	(-0.255)	(0.668)	(0.113)	(0.435)	(0.605)	(1.404)	(1.072)	(1.117)		
Wald test, p-value	0.46	0.09	0.05	0.11	0.07	0.48	0.71	0.14	0.88	0.52		
Number of observations	884	884	652	652	502	502	442	442	373	373	574	574
Number of countries	69	69	63	63	54	54	49	49	43	43	42	42

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).

Notes: See notes of Table 1. Estimated model when using interaction dummies (equation 2):

$$f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta_1 (ELY_{it} * D_{it}) + \beta_2 \big(ELY_{it} * (1 - D_{it})\big) + \emptyset D_{it} + X'_{it}\delta + \mu_i + \varepsilon_{it}$$

Table 4. Electoral effects on the deficit when all conditions are included simultaneously

	(1)	(2)	(3)	(4)
	SysGMM	FE	SysGMM	FE
L.Deficit (% GDP)	0.985***	0.729***	1.054***	0.726***
	(4.987)	(8.980)	(5.505)	(9.027)
Election year	0.270*	0.149	0.120	-0.625
	(1.721)	(0.966)	(0.219)	(-1.390)
IMD_Low*Election_year	0.754**	0.824**	0.691*	0.837**
	(2.059)	(2.489)	(1.904)	(2.611)
IMD Low	4.232	0.287	2.164	0.235
	(1.344)	(0.757)	(0.966)	(0.626)
Predetermined_Election *Election_year			-0.116	0.435
			(-0.259)	(1.217)
Predetermined_Election			-0.922	-0.659**
			(-1.219)	(-2.141)
Close_election*Election_year			0.263	0.004
			(0.589)	(0.013)
Close election			0.481	0.002
			(0.550)	(0.008)
New_democracy*Election_year			-0.077	0.243
			(-0.198)	(0.686)
New democracy			0.320	0.188
			(0.233)	(0.385)
Proportional*Election_year			0.195	0.542*
			(0.432)	(1.943)
Proportional			-1.508	0.802***
			(-0.830)	(3.101)
Number of observations	884	884	884	884
Number of countries	69	69	69	69
Marginal effects of Election_year:				
Over IMD_Low	0.04	0.01	0.09	0.01
Over Predetermined_Election			0.72	0.24
Over Close election			0.58	0.82
Over New democracy			0.73	0.18
Over Proportional			0.73	0.08

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).

Notes:

- All elections in democracies (defined as in Cheibub et al. 2010). Sample period: 1975-2010.

- Estimated model (equation 3): $f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta ELY_{it} + \sum_{k=1}^{5} \left[\gamma_k \left(ELY_{it} * D_{kit} \right) + \emptyset_k D_{kit} \right] + X'_{it} \delta + \mu_i + \varepsilon_{it}$

- Two-step results using robust standard errors corrected for finite samples are reported in System-GMM (Sys-GMM). Robust standard errors are reported in Fixed Effects (FE) estimations.

- Log(GDPpc 2005), Trade (%GDP) and Output gap were treated as endogenous in the Sys-GMM estimations. Their lagged values two periods were used as instruments in the first-difference equations and their once lagged first-differences were used in the levels equation. The option collapse of the command xtabond2 for Stata was used in order to avoid a very high number of instruments. These variables were lagged one period in the FE estimations in order to avoid simultaneity/endogeneity problems.

- t-statistics in parenthesis. Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%, and *, 10%.

Table 5. Electoral effects on the deficit and media freedom

	All elections		Sub-samples							
			Predetermined		Close elections		New Democracies		Proportional	
	SysGMM	FE	SysGMM	FE	SysGMM	FE	SysGMM	FE	SysGMM	FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Radios_pc_Low*Election_year	0.981***	0.890***	0.882**	1.151***	1.280***	0.938***	0.794**	0.945**	0.579	1.107***
	(2.759)	(3.267)	(2.168)	(3.222)	(3.826)	(3.607)	(2.127)	(2.255)	(1.054)	(3.238)
Radios_pc_High*Election_year	0.417*	0.220	0.331	0.292	0.368	0.060	0.381	0.116	0.480	0.299
	(1.855)	(1.239)	(1.285)	(1.431)	(1.194)	(0.216)	(0.723)	(0.321)	(1.194)	(1.218)
Wald, p-value	0.17	0.06	0.28	0.05	0.02	0.03	0.52	0.18	0.90	0.11
Radio&TV&Newspaper_Low*	0.956***	0.755***	0.874**	1.047***	1.163***	0.912***	0.617*	0.724*	0.630*	0.959**
Election_year	(3.005)	(2.696)	(2.212)	(2.989)	(3.446)	(3.465)	(1.691)	(1.826)	(1.668)	(2.680)
Radio&TV&Newspaper_High*	0.427**	0.344*	0.296	0.378*	0.422	0.120	0.799	0.524	0.579**	0.414*
Election_year	(2.148)	(1.935)	(1.140)	(1.696)	(1.411)	(0.421)	(1.338)	(0.877)	(2.362)	(1.685)
Wald test, p-value	0.15	0.26	0.26	0.138	0.08	0.06	0.77	0.79	0.91	0.29
Media_freedom _Low*	1.085***	0.960***	1.191***	1.378***	1.419***	1.023***	1.138***	1.051**	1.122***	1.619***
Election_year	(3.539)	(3.349)	(2.805)	(3.627)	(4.502)	(3.181)	(2.964)	(2.450)	(2.793)	(4.295)
Media_freedom_High*	0.351*	0.227	0.156	0.255	0.230	0.142	-0.049	0.161	0.321*	0.195
Election_year	(1.896)	(1.482)	(0.882)	(1.479)	(1.000)	(0.538)	(-0.122)	(0.422)	(1.786)	(1.184)
Wald test, p-value	0.03	0.03	0.03	0.008	0.00	0.04	0.04	0.14	0.07	0.004
Number of observations	884	884	652	652	502	502	373	373	574	574
Number of countries	69	69	63	63	54	54	43	43	42	42

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).

Notes: See notes of Table 1. Estimated model when using interaction dummies (equation 2):

$$f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta_1 (ELY_{it} * D_{it}) + \beta_2 (ELY_{it} * (1 - D_{it})) + \emptyset D_{it} + X'_{it} \delta + \mu_i + \varepsilon_{it}$$

Table 6. Electoral effects on the deficit and media freedom – all conditions included simultaneously

	(1)	(2)	(3)	(4)
	SysGMM	**FE**	**SysGMM**	**FE**
L.Deficit (% GDP)	0.960***	0.729***	0.961***	0.732***
	(4.663)	(9.081)	(4.706)	(9.050)
Election year	-0.016	-0.805	0.190	-0.761
	(-0.024)	(-1.667)	(0.266)	(-1.586)
Media_freedom_Low*Election_year	0.779*	0.927**	0.771*	0.842**
	(1.703)	(2.560)	(1.723)	(2.411)
Media_freedom_Low	3.355	0.232	2.772	0.245
	(1.381)	(0.839)	(1.250)	(0.944)
Radios_pc_Low*Election_year			0.118	0.493
			(0.224)	(1.200)
Radios_pc _Low			2.814	0.939*
			(0.927)	(1.675)
TVs_pc _Low*Election_year			-0.392	-0.359
			(-0.881)	(-0.979)
TVs_pc _Low			-2.523	-0.025
			(-0.946)	(-0.084)
Newspapers_pc_Low*Election_year			2.973	-0.307
			(1.170)	(-0.721)
Newspapers_pc_Low			2.740	-0.303
			(1.159)	(-0.715)
Predetermined_Election *Election_year	0.002	0.458	-0.045	0.431
	(0.003)	(1.310)	(-0.093)	(1.226)
Predetermined_Election	-1.343	-0.647**	-1.221	-0.639**
	(-1.529)	(-2.102)	(-1.346)	(-2.099)
Close_election*Election_year	0.341	0.052	0.257	0.017
	(0.784)	(0.143)	(0.562)	(0.051)
Close election	0.906	0.036	1.012	0.038
	(0.874)	(0.149)	(0.864)	(0.154)
New_democracy*Election_year	0.158	0.241	0.146	0.235
	(0.316)	(0.667)	(0.306)	(0.584)
New democracy	0.432	0.236	0.364	0.272
	(0.197)	(0.440)	(0.206)	(0.486)
Proportional*Election_year	0.232	0.748**	0.121	0.707**
	(0.439)	(2.337)	(0.200)	(2.218)
Proportional	-1.692	0.686**	-1.954	0.624**
	(-0.881)	(2.540)	(-0.985)	(2.040)
Number of observations	884	884	884	884
Number of countries	69	69	69	69
Marginal effects of Election_year:				
Over Media_freedom_Low	0.06	0.03	0.06	0.01
Over Radios_pc_Low			0.32	0.03
Over TVs_pc_Low			0.79	0.43
Over Newspapers_pc_Low			0.39	0.31
Over Predetermined_Election	0.93	0.21	0.81	0.26
Over Close election	0.37	0.59	0.51	0.62
Over New democracy	0.38	0.14	0.38	0.14
Over Proportional	0.90	0.06	0.93	0.06

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).

Notes: See notes of Table 4.

- Estimated model (equation 3): $f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta ELY_{it} + \sum_{k=1}^{5}\left[\gamma_k\left(ELY_{it} * D_{it}^k\right) + \emptyset_k D_{it}^k\right] + \boldsymbol{X'}_{it}\boldsymbol{\delta} + \mu_i + \varepsilon_{it}$

Table 7. Media freedom and electoral effects on the composition of expenditure and revenue

	(1)	(2)	(3)	(4)	(5)	(6)
	Expenditure			Revenue		Budget
	Total	Current	Capital	Total	Taxes	Deficit
All elections - System GMM						
Media_freedom_Low*Election_year	0.732***	0.851***	-0.022	-0.470*	-0.105	1.085***
	(2.991)	(3.380)	(-0.312)	(-1.785)	(-0.602)	(3.539)
Media_freedom_High*Election_year	0.177	0.304**	-0.084**	-0.110	-0.0904	0.351*
	(1.049)	(2.074)	(-1.976)	(-1.237)	(-1.244)	(1.896)
Wald, p-value	0.05	0.06	0.45	0.20	0.94	0.03
Number of observations	884	884	884	884	874	884
Number of countries	69	69	69	69	69	69
All elections - Fixed Effects						
Media_freedom_Low*Election_year	0.647**	0.748***	-0.0760	-0.353	-0.219	0.960***
	(2.569)	(3.063)	(-1.182)	(-1.479)	(-1.302)	(3.349)
Media_freedom_High*Election_year	0.156	0.256	-0.0959**	-0.085	-0.0637	0.227
	(0.990)	(1.578)	(-2.149)	(-1.094)	(-0.791)	(1.482)
Wald, p-value	0.12	0.12	0.80	0.30	0.39	0.04
Number of observations	884	884	884	884	874	874
Number of countries	69	69	69	69	69	69
Predetermined elections - System GMM						
Media_freedom_Low*Election_year	1.010**	1.118***	-0.007	-0.105	0.121	1.191***
	(2.516)	(3.191)	(-0.073)	(-0.382)	(0.527)	(2.805)
Media_freedom_High*Election_year	0.044	0.197	-0.104**	-0.093	-0.126	0.156
	(0.250)	(1.244)	(-2.234)	(-0.732)	(-1.171)	(0.882)
Wald, p-value	0.03	0.02	0.35	0.97	0.33	0.03
Number of observations	652	652	652	652	649	652
Number of countries	63	63	63	63	63	63
Predetermined elections - Fixed Effects						
Media_freedom_Low*Election_year	0.956***	1.119***	-0.131	-0.432	-0.206	1.378***
	(2.736)	(3.489)	(-1.494)	(-1.468)	(-0.980)	(3.627)
Media_freedom_High*Election_year	0.204	0.314*	-0.101*	-0.065	-0.0285	0.255
	(1.199)	(1.857)	(-1.978)	(-0.664)	(-0.278)	(1.479)
Wald, p-value	0.06	0.03	0.77	0.24	0.43	0.01
Number of observations	652	652	652	652	649	652
Number of countries	63	63	63	63	63	63

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).

Notes: All elections in democracies (defined as in Cheibub et al. 2010). Sample period: 1975-2010.

- Estimated model: $f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta_1(ELY_{it} * MedFreeH_{it}) + \beta_2(ELY_{it} * MedFreeL_{it}) + \emptyset ImdH_{it} + X'_{it}\delta + \mu_i + \varepsilon_{it}$

- Two-step results using robust standard errors corrected for finite samples are reported in System-GMM (Sys-GMM). Robust standard errors are reported in Fixed Effects (FE) estimations.

- Log(GDPpc 2005), Trade (%GDP) and Output gap were treated as endogenous in the Sys-GMM estimations. Their lagged values two periods were used as instruments in the first-difference equations and their once lagged first-differences were used in the levels equation. The option collapse of the command xtabond2 for Stata was used in order to avoid a very high number of instruments. These variables were lagged one period in the FE estimations in order to avoid simultaneity/endogeneity problems.

- t-statistics in parenthesis. Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%, and *, 10%.

Table 8. Composition of expenditure and revenue – sample of Low Media Freedom

	(1)	(2)	(3)	(4)	(5)	(6)
	Expenditure			Revenue		Budget
	Total	Current	Capital	Total	Taxes	Deficit
All elections- System GMM						
Election_year	0.638***	0.743***	-0.032	-0.237	-0.209	0.904***
	(2.781)	(3.288)	(-0.603)	(-1.398)	(-0.866)	(3.097)
Number of observations	418	418	418	418	418	418
Number of countries	54	54	54	54	54	54
All elections - Fixed Effects						
Election_year	0.581**	0.663***	-0.0771	-0.357	-0.257*	0.841***
	(2.520)	(2.934)	(-1.191)	(-1.661)	(-1.708)	(3.289)
Number of observations	418	418	418	418	418	418
Number of countries	54	54	54	54	54	54
Predetermined elections - System GMM						
Election_year	0.866**	0.963***	-0.036	-0.138	0.0256	0.846*
	(2.035)	(3.049)	(-0.321)	(-0.580)	(0.0900)	(1.693)
Number of observations	287	287	287	287	287	287
Number of countries	47	47	47	47	47	47
Predetermined elections - Fixed Effects						
Election_year	0.812**	0.937***	-0.121	-0.509*	-0.213	1.317***
	(2.594)	(3.221)	(-1.351)	(-1.730)	(-1.005)	(3.664)
Number of observations	287	287	287	287	287	287
Number of countries	47	47	47	47	47	47

Sources: IMF (GFS and WEO); World Bank (DPI and WDI), and Cheibub et al. (2010).
Notes:
- All elections in democracies (defined as in Cheibub et al. 2010) with low IMD. Sample period: 1975-2010.
- Estimated model (equation 1): $f_{it} = \sum_{j=1}^{p} \alpha_j f_{i,t-j} + \beta ELY_{it} + X'_{it}\delta + \mu_i + \varepsilon_{it}$
- Two-step results using robust standard errors corrected for finite samples are reported in System-GMM (Sys-GMM). Robust standard errors are reported in Fixed Effects (FE) estimations.
- Log(GDPpc 2005), Trade (%GDP) and Output gap were treated as endogenous in the Sys-GMM estimations. Their lagged values two periods were used as instruments in the first-difference equations and their once lagged first-differences were used in the levels equation. The option collapse of the command xtabond2 for Stata was used in order to avoid a very high number of instruments. These variables were lagged one period in the FE estimations in order to avoid simultaneity/endogeneity problems.
- t-statistics in parenthesis. Significance level at which the null hypothesis is rejected: ***, 1%; **, 5%, and *, 10%.

Appendix

Construction of the public finance dataset

In order to construct our public finance dataset at the central government level, we retrieved all historical spending and revenue data available for all countries that have reported data to the IMF's Government Finance Statistics (GFS) yearbook for the 1975-2010 period, and then assembled comparable data series of expenditure and revenue, referring to Wickens (2002), who details the methodological differences between the two manuals.[35]

We here describe some of the key differences across the two methodologies and how we have attempted to deal with them. First, the way total expenditure and revenue are classified is different, particularly for the expenditure. For example, while we disaggregate expenditure following economic classifications, the exact definition of `current' and `capital' concepts are different between the manuals. Specifically, the capital expenditure concept under GFSM2001, denoted as `net acquisition of non-financial assets' deducts the sales of fixed capital assets from the acquisition of such assets, while the concept under GFSM1986 does not. Further, while capital transfers are part of capital expenditure under GFSM1986, they are included as a current expenditure, denoted as `expense', under GFSM2001. Acknowledging such differences in classifications (as clarified in Wickens (2002)), we have converted all of the available items under GFSM1986 into the concepts defined by GFSM2001, for not only the expenditure, but for revenue series as well.

Second, the two methodologies differ in terms of the way statistics are reported. In particular, while under GFSM1986, reporting is on a cash basis, under GFSM2001, it is, in principle, on an accrual

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[35] Disaggregated public spending and revenue datasets were assembled along the same lines by, respectively, Acosta-Ormaechea and Morozumi (2013, *IMF Working Paper* 13/162) and Acosta-Ormaechea and Yoo (2012, *IMF Working Paper* 12/257). The former focuses on the effects of the composition of spending on economic growth, while the latter studies the effects of tax composition. Our dataset combines spending and revenue components, including also budget deficits and a wide set of political, economic and institutional variables.

basis.[36] This also presents some challenges. For example, the accrual concept of `consumption of fixed capital', a subcomponent in `expense' under GFSM2001, representing a decline in the value of government's fixed assets due to physical deterioration, obsolescence, or accidental damages, does not exist in the GFSM1986 cash system. This implies that capital spending concepts under GFSM1986 and GFSM2001 are still not consistent, with the former not deducting `depreciation' of capital. To deal with this, for the data originally retrieved from GFSM2001, we move (i.e., add) consumption of fixed capital to the capital spending component, so that the modified capital spending component becomes comparable to the one from GFSM1986, i.e., without depreciation subtracted. However, in general, fundamental differences between the cash and accrual systems prevail, including the fact that the timing of reporting also differs.[37] Thus, it is important to acknowledge that the unification of the data series is not exact, but approximate, although the use of time dummies in our estimations partially help address issues due to the differences.

Last, a few comments on the institutional coverage of the government are in order. While this paper's focus is fiscal policy conduct at the central government (CG) level, it is possible to create subsectors at this level of government, based on how the units are financed, i.e., by the legislative budgets or by extrabudgetary sources. In an attempt to maximize our sample size, we supplement consolidated CG data with budgetary CG (i.e., the CG unit based only on the legislative budget) data.[38]

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[36] This is `in principle', because under GFSM2001, some reporting is still done following a cash basis.

[37] In the accrual system, flows are recorded at the time economic value is created, transferred, or extinguished, while with the cash basis, flows are recorded when cash is received or paid.

[38] Specifically, while we primarily use data at the consolidated CG level, we use budgetary CG data only when no single observation for the budget deficit is available for a country at the consolidated level for the entire 1975-2010 period. Importantly, being aware that differences between consolidated and budgetary CG data can be not trivial, we never mix these data over time.

Table A.1. Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.	Description and Source
Central Government fiscal variables (source: GFS – IMF)						
CG1_gdp	961	29.72	9.07	11.03	50.97	Total revenue (%GDP)
CG11_gdp	954	18.87	5.58	7.09	32.84	Taxes (%GDP)
CGexpenditure_gdp	961	31.76	9.59	11.50	63.84	Total expenditure (%GDP)
CG2_gdp	961	30.03	9.82	10.66	62.52	Expense (%GDP) (without consumption of fixed capital. CG23)
CG31_gdp	961	1.73	1.20	0.32	10.98	Net acquisition of nonfinancial assets (%GDP) (with consumption of fixed capital)
CGdeficit_gdp	961	2.04	3.89	-18.55	31.33	Budget deficit (%GDP)
Democracy (sources: Polity IV and Cheibub, et al. 2010)						
Democracy_CGV	961	1.00	0.00	1.00	1.00	Democracy dummy (Cheibub et al. 2010)
New democ_CGV	961	0.41	0.49	0.00	1.00	New democracy (Cheibub et al. 2010)
Estab. Democ._CGV	961	0.59	0.49	0.00	1.00	Established democracy (Cheibub et al. 2010)
Democracy	886	1.00	0.06	0.00	1.00	Democracy dummy (Polity IV))
Media freedom and diffusion (sources: Freedom House, CNTS)						
IMD	884	1.29	0.87	0.00	4.21	Radios_pc*Free_Broadcast status
Media freedom	884	77.18	12.00	12.00	95.00	Freedom Of the Press Score (Freedom House)
IMD2	884	34.72	21.16	0.29	93.89	FOTP_score* Radio&TV&Newspaper
Radios_pc	961	0.67	0.41	0.03	2.10	Radios per capita (CNTS)
Radio&TV&Newspaper	961	0.42	0.23	0.02	1.08	Mean of radios, TVs and newspaper circulation per capita (CNTS)
Elections and type of system (source: DPI-World Bank)						
Election_year	961	0.23	0.42	0.00	1.00	Election year for the government leader (President or Prime Minister)
Proportional	954	0.76	0.43	0.00	1.00	Proportional Representation dummy
Close election	961	0.57	0.50	0.00	1.00	Dummy for close elections (equals 1 if margin of victory smaller than 10 percentage points)
Predetermined_Election	961	0.74	0.44	0.00	1.00	Equals 1 when the election takes place in the last years of the constitutionally fixed term
Macroeconomic and demographic variables (sources: WEO-IMF and WDI-World Bank)						
Log(GDPpc 2005)	961	9.34	1.30	5.16	11.38	Log of GDP per capita (constant 2005 USD) WDI
Trade (% GDP)	961	80.33	44.42	12.01	333.53	Trade (% of GDP)
% Pop under 15	961	24.06	8.29	13.56	49.38	Population ages 0-14 (% of total) – WDI
% Pop above 65	961	11.38	4.61	2.12	20.55	Population ages 65 and above (% total) – WDI
Output gap	961	0.00	0.02	-0.09	0.09	Log(NGDP_R)-log(HPtrend of NGDP_R) - WEO

Note: The sample considered covers the 961 observations used in the estimations of Table 1.