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Election-Induced Fiscal Policy Cycles in Emerging Market and Developing Economies

Abstract

The widening of fiscal deficits during democratic elections is well established. We examine a broader set of fiscal outcomes around elections for a large set of emerging and developing economies (EMDEs), probe for differences between democracies and non-democracies, and estimate the degree to which fiscal deteriorations are unwound after elections. We show three patterns. First, primary deficits rise statistically significantly during elections, by 0.6 percentage point of GDP. Primary spending, especially on the government wage bill, also rises statistically significantly and indirect tax revenues fall. Second, these deteriorations occur in democracies and non-democracies alike. Third, the deterioration in primary deficits is not unwound after elections and the deterioration in primary spending is partially unwound after the election, mainly through cuts in capital spending. These patterns imply that deficits in EMDEs ratchet up over the course of several election cycles. Over time, this can threaten the sustainability of public finances. Finally, we find that better institutional quality (such as strong fiscal rules) and the presence of an IMF program partly mitigate the impact of elections on fiscal positions.

JEL-Codes: D720, E620, H620, O100.

Keywords: political budget cycles, emerging and developing countries, democracies, autocracies.

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1. Introduction

A well-established literature has documented election-induced fiscal policy cycles—dubbed "political budget cycles"—in democracies and, mostly, advanced economies. This paper explores political budget cycles in emerging market and developing economies (EMDEs). One-third of EMDEs do not have democratic political regimes and half of the elections in EMDEs during 1975-2022 have been held in countries or at times when the political regime was not democratic. Hence, this paper explicitly expands the analysis to include non-democratic regimes.

The theoretical literature has identified several reasons for political budget cycles. Incumbents in democracies may adopt expansionary fiscal policy to appeal to voters in an effort to maximize their chances of re-election (Nordhaus, 1975; Dubois, 2016). Lack of information about the incumbent's competence creates incentives to use policies to overstate the economy's strength and the incumbent's competence (Rogoff and Sibert, 1988; Shi and Svensson, 2006; Aidt et al., 2011) or, in the case of non-democratic regimes, the strength of the regime (Higashijima, 2022; Han, 2022).

Most empirical research on political budget cycles has focused on advanced economies or on large, pooled samples of advanced economies and EMDEs. Two recent meta-regression analyses of the literature, Philips (2016) and Mandon and Cazals (2019), conclude that the evidence points to statistically significant but economically small political budget cycles (see also section 2). A few studies examine political budget cycles solely in EMDEs. However, they typically use small, homogeneous samples—such as 44 Sub-Saharan African countries (Block 2002) or 68 low-income countries (Ebeke and Ölçer, 2017)—or data that is now several decades old—such as for current and capital spending in 42 EMDEs in 1975-2001 (Vergne 2009) or in 24 EMDEs in 19755-1992 (Schuknecht, 2000)—or examine a narrow subset of fiscal outcomes only—such as direct and indirect taxation (Ehrhart, 2013) or current and capital spending only (Vergne, 2009).

This paper focuses on political budget cycles in EMDEs for two reasons: EMDEs may be more susceptible to such cycles and the fiscal risks associated with such cycles may be more pressing in EMDEs. First, with weaker institutional capacity and poorer transparency in budgets, EMDEs are more susceptible to election-related fiscal measures.[1] For example, Shi and Svensson (2006) argue that in EMDEs the rents that politicians can enjoy by remaining in power are high and the share of informed voters in the electorate is low. As a consequence, governments in developing countries are more inclined to manipulate fiscal policy before elections to signal their own competence. Indeed, using large samples of countries Shi and Svensson (2006) and Streb et al. (2009) find larger political budget cycles in developing countries than in industrial countries. Based on a meta-regression analysis, Philips (2016) reaches the same conclusion.[2]

[1] For example, Veiga et al. (2017) find that greater media freedom weakens political budget cycles. In addition, irrespective of media freedom, Gootjes et al. (2021) report that fiscal rules constrain political budget cycles.

[2] In contrast, another meta-regression analysis that controls for publication bias does not point to any difference in political budget cycles by level of development (Mandon and Cazals, 2019).

Second, with fiscal positions already fragile in several EMDEs and government debt stocks at historic highs, fiscal deteriorations around elections would add to fiscal and macroeconomic vulnerabilities and reduce government's ability to respond to adverse shocks. Therefore, it is important to quantify political budget cycles in these countries and consider ways to mitigate the impact of elections on fiscal policy.

The analysis in this study goes beyond previous EMDE-focused studies by including data for a large sample of 104 EMDEs covering the years 1993-2022. The period since the mid-2000s has featured a shift in political regimes in EMDEs: Before 2005, most elections in EMDEs were held by non-democratic regimes; since 2005, most elections in EMDEs have been held in democratic regimes. In principle, this may be expected to change the nature of political budget cycles; we show in this paper that, in practice, it does not.

The contributions of the paper to the broader literature on political budget cycles are that it assesses a wide range of fiscal outcomes, examines the post-election period, and distinguishes between democracies and non-democracies.

First, the analysis goes beyond the impact of elections on aggregate spending or fiscal deficits in EMDEs, which have been the focus of most previous research.[3] We examine the effect of elections on the primary budget balance, government revenues (excluding natural resource rents), tax revenues and their subcategories, primary expenditures and their subcategories, in particular compensation of public employees (also known as wage bill), and government investment. While some of these categories were also considered in some contributions in Gaspar et al. (2017), our sample is considerably larger, and we show that this matters for the results. The analysis documents that one spending category—the government wage bill—is particularly susceptible to political budget cycles in EMDEs. This confirms the finding of Endegnanew et al. (2017) and Ebeke and Ölçer (2017). We go beyond these earlier studies, however, in showing that this is a ratcheting-up effect that is not offset by tax increases in the year after the election (as, for example, in the low-income country sample of Ebeke and Ölçer, 2017).

Second, although many studies provide insights into what happens to specific fiscal policy variables during elections, they do not typically focus on fiscal policy after the elections. An election-induced fiscal expansion may require post-election adjustment to preserve or restore fiscal sustainability (Ebeke and Ölçer, 2017). Our paper also investigates the behavior of a comprehensive set of fiscal variables in the year after national elections. It thereby sheds light on the magnitude and composition of the fiscal retrenchment (if any) in the post-election years. Our results suggest that small, but statistically significant, fiscal deteriorations around elections fail to be systematically unwound after elections. This contrasts with findings by Ebeke and Ölçer (2017) for a smaller sample of low-income countries. These authors report that low-income countries tend to cut government investment (but not consumption) and raise trade taxes two years after the elections.

[3] The exception is Gaspar et al. (2017) which contains contributions examining government consumption, investment, and various tax categories in low-income countries (Ebeke and Ölcer, 2017); public investment (Gupta et al., 2017) or the public wage bill (Endegnanew et al., 2017) in large and diverse samples of countries; and energy subsidies in large sample of EMDEs (Ebeke and Ngouana, 2017).

Third, the paper examines to what extent political budget cycles differ between democracies and non-democracies. Most previous work focuses on democracies, on the assumption that competitive elections are needed to create incentives for political budget cycles. As Brender and Drazen (2005: 1274) put it: "if the political budget cycle reflects the manipulation of fiscal policy to improve *an incumbent's re-election chances*, then it only makes sense in countries in which elections are competitive. If elections are not competitive, then the basic argument underlying the existence of a political business cycle loses much of its validity." However, some studies pose that pre-electoral fiscal manipulation should be less likely in more democratic countries (Akhmedov and Zhuravskaya, 2004 and Gonzalez, 2002). The manipulation decreases with democracy because more democratic regimes are associated with better institutional checks and balances that allow voters a more transparent assessment of politicians' competence (e.g., access to free media). Furthermore, autocrats may have incentives to manipulate fiscal policy during elections as well (Higashijima 2022; Han 2022). While much of the literature presents evidence of political budget cycles in democracies and Higashijima (2022) and Han (2022) do so for non-democracies, we explicitly test whether election effects on fiscal policy differ statistically significantly across the two groups. Our results do not lend support to the view that political budget cycles in democracies and non-democracies differ systematically.

Our findings confirm the presence of statistically significant fiscal deteriorations around elections in EMDEs. Primary deficit and primary spending rise statistically significantly during elections, by 0.6 and 0.5 percentage point of GDP, respectively. These deteriorations occur in democracies and non-democracies alike. The deterioration in primary deficits is not unwound after elections and the deterioration in primary spending is partially unwound after the election, mainly through cuts in capital spending. Finally, our results suggest that better institutional quality (such as strong fiscal rules) partly mitigates the impact of elections on fiscal positions, as does the presence of an IMF program.

The remainder of the paper is organized as follows. Section 2 provides a brief literature review, focusing on why and how elections may affect fiscal policy in democracies and non-democracies. Section 3 outlines the methodology and the data, while section 4 presents the main results. Section 5 offers a robustness analysis. Section 6 concludes and discusses the policy implications.

2. Election cycles: A literature review

2.1 Theoretical literature: Mechanisms of political budget cycles

Why may elections affect fiscal policies? Most of the academic literature focuses on the effect of elections in democracies. According to the political budget cycle literature, voters retrospectively assess politicians, prompting incumbents to pursue expansionary economic policies prior to elections (Nordhaus, 1975). Subsequent theoretical models incorporate rational expectations and show that politicians have an incentive to manipulate the economy during elections to signal competence even when facing rational voters who understand the incentives politicians face but cannot fully observe fiscal manipulation (Rogoff, 1990).

Narrowly targeted actions around elections may result in changes not only in aggregate fiscal policy but also in the composition of revenues and spending. If voters punish politicians who

finance higher government spending by higher taxes or borrowing—as argued by Pelzman (1992)—upcoming elections give the incumbent an incentive to target some pivotal groups of voters at the expense of others. In other words, elections may not change total government spending, taxes, and the budget deficit, but instead shift the composition of spending and taxes (Vergne, 2009; Drazen and Eslava, 2010; Klomp and de Haan, 2013).

Elections also frequently occur in non-democracies. Several reasons have been put forward why autocrats hold elections (Gandhi and Lust-Okar, 2009; Egorov and Sonin, 2020; Higashijima, 2022). Elections could, for instance, serve as a means of decreasing the threat of a coup by transferring some power from the elites to the citizens (Acemoglu and Robinson, 2005). They could also function as an institutional tool that autocrats can use to co-opt groups within society (Gandhi and Przeworski, 2006; Strong 2023). By winning elections by large margins, autocrats may want to demonstrate that they are backed by public support and have political legitimacy (demonstration effect; Higashijima, 2022; Han, 2022). Such elections can weaken political opposition and lower the risk of civil strife, as has been argued in the context of Africa (Strong, 2016). In addition, elections provide autocrats information about the geographical distribution of popular support (information-gathering effect), while elections also force opposition parties to question whether to participate in elections, thereby providing the autocrat with the opportunity to create political divisions among the opposition (divide-and-rule effect; Higashijima, 2022). If elections are important to autocrats, they may use economic policies to rally support when elections are approaching (Shmuel, 2020). Such economic policies may be politically less costly than other means such as outright voting fraud (Pepinsky, 2007).

2.2 Empirical literature: Evidence for political budget cycles

Most research on political budget cycles focuses on democracies as the original political budget cycle theory assumes free and fair elections.[4] However, some studies have examined the existence of political budget cycles in samples that are not confined to democracies. For instance, for a sample of African countries, Block et al. (2003) report that competitive elections are associated with higher government consumption as a share of GDP than non-competitive elections. Shi and Svensson (2006), who examine the political budget cycle in 85 countries over a 21-year period (1975–1995), find that, on average, government deficits increase by almost 1 percentage point of GDP in election years. Ehrhart (2012) finds a significant and negative impact of elections on indirect taxes in a sample of 56 EMDEs during 1980–2006.

A few cross-country studies using samples consisting of democracies and autocracies report evidence that political budget cycles occur, but that their strength depends on conditioning factors. For instance, utilizing data for 42 developing countries for 1975–2001, Vergne (2009) reports that a larger share of informed voters reduces political budget cycles, consistent with the findings of Shi and Svensson (2006). Hyde and O'Mahony (2010) examine the effect of international scrutiny on political budget cycles in 94 developing countries over 1990-2004, some of which are non-democracies, and report that fiscal manipulation is most likely when elections are internationally monitored, such that direct interference becomes more difficult, and when countries' fiscal actions are not constrained by IMF programs. In a sample of low-income countries, the presence of an IMF program reduced the jump in government consumption in election years by almost two-thirds (Ebeke and Ölçer, 2017). According to

[4] See de Haan and Klomp (2013), Dubois (2016), and de Haan and Gootjes (2023) for reviews.

Brender and Drazen (2005), fiscal manipulation is more likely to work when voters lack experience with elections.

Only a few studies examine election effects in cross-country samples of non-democracies. Geddes et al. (2018) provide evidence that in election years authoritarian governments distribute to the grass roots and thus increase fiscal expenditures, irrespective of the presence of opposition participation in elections. They reason that, since even in non-competitive elections local candidates are judged regarding their competence by voter turnout in their constituencies, they have incentives to distribute favors to citizens prior to elections. For a sample of 63 non-democratic countries between 1972 and 2015, Han (2021) demonstrates that autocrats reallocate budgetary spending to redistributive policies—proxied by social protection spending in percent of total government expenditures—prior to elections to derive public support. Using data for 97 non-democratic countries around the world from 1950 to 2010, Higashijima (2022) reports that fiscal deficits are more likely to widen in election years if autocratic regimes allow opposition parties to participate in elections, refrain from blatant electoral fraud, and adopt proportional representation systems.

Shmuel (2020) argues that the magnitude of the political budget cycle depends both on the leaders' incentives to win the elections and on their ability to manipulate the economy. Therefore, the political budget cycle is expected to be the weakest in strongly autocratic and strongly democratic states and the strongest in weakly autocratic and weakly democratic states. Leaders of strongly autocratic states have little incentive to manipulate the economy as they face limited political competition, whereas leaders of strongly democratic states have an incentive to manipulate the economy but institutional constraints may prevent them from doing so. Using data for 119 countries over 1960–2015, Shmuel (2020) finds that the political budget cycle is the largest among weakly autocratic countries and new democracies and not statistically significant in strongly autocratic countries and in established democracies.

Finally, some scholars have looked for political budget cycles in specific (previously) non-democratic states. Specifically, they have found support for political budget cycles in Malaysia (Pepinsky, 2007), Mexico (Magaloni, 2006), and the Republic of Korea (Soh, 1988).

3. Model and methodology

Governments may use both the level and composition of public spending and taxes to manipulate the macroeconomy (Higashijima, 2022). We therefore use a range of fiscal outcomes as dependent variables, namely the primary budget balance, tax revenues (total, direct, and indirect tax revenues), primary expenditures, compensation of public employees (i.e., the government wage bill), and government investment, all scaled by GDP.

To examine the impact of elections, we use an election variable suggested by Franzese (2000) that takes the timing of an election in the course of a year into account. Compared to using a dummy that is one in election years and zero otherwise, which is common in this type of research, this proxy reduces measurement error. It is calculated as $M/12$ in an election year and $(12 - M)/12$ in a pre-election year, where M is the month of the election. In all other years its value is set to zero. Election dates are drawn from the *Database of Political Institutions (DPI)*

until 2020 (Cruz et al., 2021) and then assembled from individual news reports.[5] We consider executive elections in presidential systems and legislative elections in parliamentary systems.

Our baseline model is the following:

$$f_{i,t} = \beta_0 f_{i,t-1} + \beta_1 ELE_{i,t} + \beta_2 X_{i,t} + \mu_i + \tau_t + \varepsilon_{i,t} \quad (1)$$

where fi,t indicates some fiscal policy variable in country i in year t; $fi,t-1$ is the lagged dependent variable; $ELEi,t$ is our election variable; Xi,t is a vector of control variables; μ_i is a country fixed effect; τ_t is the year fixed effect; and $\varepsilon i,t$ is the error term.

To ensure a sufficiently large sample, we include a limited set of control variables in our baseline specification. Adding more controls reduces the number of observations. However, in the sensitivity analysis we check whether adding controls suggested in previous studies affects our results. In the baseline model, the logarithm of real GDP per capita is included to control for the level of economic development of a country, as this could influence voters' preferences for public goods as well as the size of the tax base. The growth rate of real GDP is included to capture the influence of the business cycle on government revenues and expenditures. Likewise, inflation may reduce government receipts through the so-called Olivera-Tanzi effect (Klomp and de Haan, 2016). Finally, we include the government debt-to-GDP ratio to control for the need for fiscal adjustments to ensure that fiscal policy is sustainable. The one-year lag of the dependent variable controls for path dependence since governments are often constrained by multi-year budgetary plans. Furthermore, when governments are faced with budgetary pressures, required fiscal adjustments are often spread over multiple years.

We start by estimating equation (1) using the fixed effects (FE) estimator. However, because the equations include the lagged endogenous variable, we prefer estimating equation (1) using the Generalized Method of Moments (GMM) estimator. Using FE models with variables that change little within countries may lead to highly inefficient estimation (Plümper and Troeger, 2007). The widely used GMM approach by Arellano-Bond (1991) and system GMM approach by Blundell and Bond (1998) assume mean stationarity of the variables. That assumption is unlikely to hold in our panel. Following Gootjes et al. (2021), we therefore run the GMM estimator as suggested by Ahn and Schmidt (1995), which does not require mean stationarity. Two specification tests check the validity of the instruments. The first is the standard Sargan/Hansen test of overidentifying restrictions, and the second is the Kleibergen-Paap test of under-identification. Similar to the FE estimator, the GMM estimator controls for the year fixed effect.

Our sample consists of all EMDEs with sufficient data (see Table A1 in the Appendix for details). This implies that our sample includes countries classified as democracies and non-democracies. Note that the classification of countries can change over time. We include a dummy variable DEMOC that is one if countries are a democracy and zero otherwise to test whether elections have a different impact across different regimes. Following Klomp and de Haan (2016), we classify countries as democracies if their Polity index is six or higher. This classification implies that about two-fifths of elections in the sample are conducted by non-

[5] See https://publications.iadb.org/en/database-political-institutions-2020-dpi2020

democratic regimes. As a robustness check (see section 5), we utilize the updated database of Bjørnskov and Roode (2020) to classify countries as democratic or non-democracies.

To examine whether the effect of elections differs between democratic and non-democratic countries, we estimate:

$$f_{i,t} = \beta_0 f_{i,t-1} + \beta_1 ELE_{i,t} + \beta_2 DEMOC_{i,t} + \beta_3 ELE_{i,t} * DEMOC_{i,t} + \beta_4 X_{i,t} + \mu_i + \tau_t + \varepsilon_{i,t} \quad (2)$$

where *DEMOCi,t* is a dummy indicating that the election is held by a democratic regime. The β_3 coefficient shows to what extent the impact of elections differs between democracies and non-democracies.

The regression analysis draws on a dataset of up to 104 EMDEs for 1993-2022. It combines data on fiscal outcomes and country characteristics from the IMF's *World Economic Outlook* and *Government Finance Statistics* databases, and the World Bank's *World Development Indicators*. Table A2 in the Appendix provides a description of the variables used and their sources, and Table A3 shows the summary statistics.

4. Baseline results

4.1 Fiscal outcomes during election years

Our baseline results confirm the findings of previous studies that EMDEs undergo significant political budget cycles. Table 1 shows the results for our baseline FE model, while Table 2 presents the outcomes using the GMM estimator of Ahn and Schmidt (1995). Neither table includes the dummy for democratic regimes yet.

[Insert Tables 1 and 2 here]

Regardless of the methodology, elections are associated with lower primary balances and indirect tax revenues as well as higher primary spending, in particular on the government wage bill. The election effects on these specific individual revenues and spending categories are statistically significant but economically small. For example, primary spending in EMDEs has averaged 23 percent of GDP since 1993; in elections, it rose by 0.5 percentage point of GDP. The government wage bill has averaged 6.1 percent of GDP since 1993 and rose by 0.1 percentage point of GDP in election years. And indirect tax revenues have averaged 11 percent of GDP in EMDEs since 1993 and declined by 0.3 percentage point of GDP during elections.

While the effects on individual spending and revenue categories are small, they cumulate to a sizable overall effect on the fiscal deficit: in election years, the primary deficit widened statistically significantly by 0.6 percentage point of GDP—equivalent to the average primary deficit in EMDEs since 1993 (0.6 percent of GDP). The coefficients on elections in the regressions for other revenue and spending categories are not statistically significant.

The other coefficients for the control variables in Tables 1 and 2, when they are statistically significant, have the expected signs. Except for income per capita, the coefficients of the control variables are mostly significant. For the GMM estimations in Table 2, almost all regressions

pass the set of instrumental variable tests.[6] In the remainder of the paper, we report the GMM estimates in the main text, while the online Appendix presents the FE estimation results.

4.2 Differences between election effects in democracies and non-democracies

Table 3 (GMM) and Table A4 in the online Appendix (FE) add the dummy variable for a democratic regime as well as an interaction between the dummy and the election variable, as specified in equation (2).

[Insert Table 3 here]

Both FE and GMM estimates suggest that democratic and non-democratic regimes differ systematically in some of their fiscal outcomes. Tax revenues, in particular, are significantly higher in democratic regimes and so is the government wage bill. The differences are economically small, about 0.2-0.3 percentage points of GDP, compared with average tax revenues of 15 percent of GDP and an average government wage bill of 7 percent of GDP in EMDEs.

The response of all fiscal outcomes to elections, however, does not differ significantly between democratic and non-democratic regimes. All the coefficient estimates on the interaction between democratic regime and elections are statistically insignificant, regardless of methodology or fiscal policy variable. Once we control for the democracy dummy and its interaction with elections, the coefficient of the election variable turns insignificant in the regressions for indirect tax revenues and the government wage bill. This suggests that our election variable may be capturing some of the features of democracies.

4.3 Fiscal policy outcomes before and after election years

Next, we turn to fiscal policy before and after the elections. Table 4 (GMM) and Table A5 in the Appendix (FE) present the coefficient estimates for leads and lags of the election variable.

[Insert Table 4 here]

The fiscal deteriorations appear to be mostly confined to the 12 months before the election takes place rather than starting earlier: all the coefficients on leads of the election variable are statistically insignificant, regardless of the type of fiscal outcome or methodology.[7]

But most of the election-related fiscal deteriorations are not unwound in the 12 months after the election. In terms of indirect tax revenues or primary balances, there is no statistically significant reversal of declines in the 12 months after the election. Nor is there a significant post-election decline in the wage bill to reverse their increase during the election. In contrast, election-induced increases in primary spending are almost fully unwound, but about half of this unwinding is achieved through significant cuts in public investment.

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[6] The only exception is public investment, which does not pass the AR(2) test. It suggests that maybe more lags of the dependent variable should be added. Our results do not change when an extra lag is added.

[7] Note that our election variable takes the timing of the election into account, which implies that the electoral manipulation of fiscal policy may occur earlier than in the election year.

5. Robustness checks

We have performed an array of robustness checks. First, we have added several additional control variables which previous studies suggest being related to the electoral manipulation of fiscal policy. Second, we address concerns about potential endogeneity of elections. Third, we experiment with alternative definitions of democracies.

5.1 Additional controls (and conditioning) variables

Table 5 reports the GMM-based estimation results for the effect of elections on the budget deficit once more control variables are added to the baseline model (FE-based results are shown in Table A6). Table 5 summarizes whether results change with the additional controls and whether the coefficient of the control variable is significant. Adding more controls implies losing observations. Hence, we add each additional control variable to the baseline model sequentially. As adding a control variable changes the number of observations, Table 5 also shows the estimated election coefficient if the baseline model is estimated for the same observations as used in the model with the newly added control variable.

[Insert Table 5 here]

Aid per capita. Following Strong (2023), we control for development aid inflows. To proxy this, we employ net official development assistance received (per capita, in 2020 U.S. dollar terms), taken from the World Bank's *World Development Indicators* (WDI). As Strong (2023) points out, by providing another source of funding, aid can increase the incumbents' ability to generate political budget cycles. However, it can also tie the hands of politicians, particularly when donors require fiscal discipline as a condition of assistance.

Capital account openness. Following Higashijima (2022), we control for capital account openness using the Chinn-Ito (2008) index. A higher value of this index indicates a higher level of capital account openness. Greater capital mobility may constrain the room of maneuver for the incumbent and may blunt the effectiveness of fiscal policy (Hallerberg and Clark, 2000). Hence, it can be expected to dampen the political budget cycle.

Checks and balances. Several studies suggest that the more checks and balances exist in the political system, the more difficult it will be for the incumbent to use fiscal policy for reelection purposes (see de Haan and Klomp, 2013 for a further discussion). Political budget cycles should therefore be less pronounced in countries with greater checks and balances. Our measure for checks and balances comes from the Database of Political Institutions. A higher value of this index indicates more checks and balances.

Fiscal rules. Several studies report that fiscal rules affect fiscal policy outcomes (see Gootjes et al., 2021 for a discussion). Following Gootjes et al. (2021), we proxy the presence and strength of fiscal rules using the index provided by the IMF's database of fiscal rules (Schaechter et al., 2012). A stronger fiscal rule is one that has a higher legal basis, covers a larger part of government, has more formal enforcement mechanisms, has supporting procedures in place, and whose flexibility is clearly defined.

Control of corruption. If politicians can extract more rents from their tenure in government, they are likely to use fiscal policy more aggressively for electoral purposes (Shi and Svensson,

2006 and Vergne, 2009). Following these studies, we use the International Country Risk Guide's index of corruption to proxy rent seeking opportunities. A higher number of this index means better control of corruption.

Share of informed voters. More informed voters may be more likely to "see through" temporary fiscal perks during elections, as argued in Shi and Svensson (2006). Informed voters are those that receive reliable information—for example, because of reporting by free media—and those that have the education to interpret this information. To capture both the information transition and receiver's ability to process the information, we use the product of secondary school attainment (as reported in the World Development Indicators) and media freedom from Freedom House (cf. Janků and Libich, 2019).

Presence of an IMF program. Hyde and O'Mahony (2010) report that pre-electoral fiscal manipulation is less likely when governments are subject to international economic scrutiny resulting from an IMF agreement. We used the dataset created by Dreher (2006) to create a dummy variable that equals 1 if a country has an IMF program for at least five months in a year.

Dependency ratio. A higher share of elderly people or people below working age will reduce average income and hence tax revenues but raise government spending for social security and public health (Brender and Drazen, 2005). To capture the influence of demographics, we follow Klomp and de Haan (2016) and include the age-dependency ratio, i.e., the ratio of the number of people aged below 15 or above 65 to the number of people of working age.

As Table 5 shows, adding these additional control variables has no impact on the significance of the election variable in the model for the budget balance. Only three of the added controls have a significant coefficient (the fiscal rules index, the proxy for informed voters, and the presence of an IMF program). Using FE instead of GMM leads to the same results (see Table A6 in the Appendix). In addition, as the last columns in Tables 5 and A6 show, the sample change due to the inclusion of additional controls has no impact on the significance of the election variable. The outcomes for the other fiscal policy variables considered also hardly change (results are available on request).

5.2 Conditioning variables

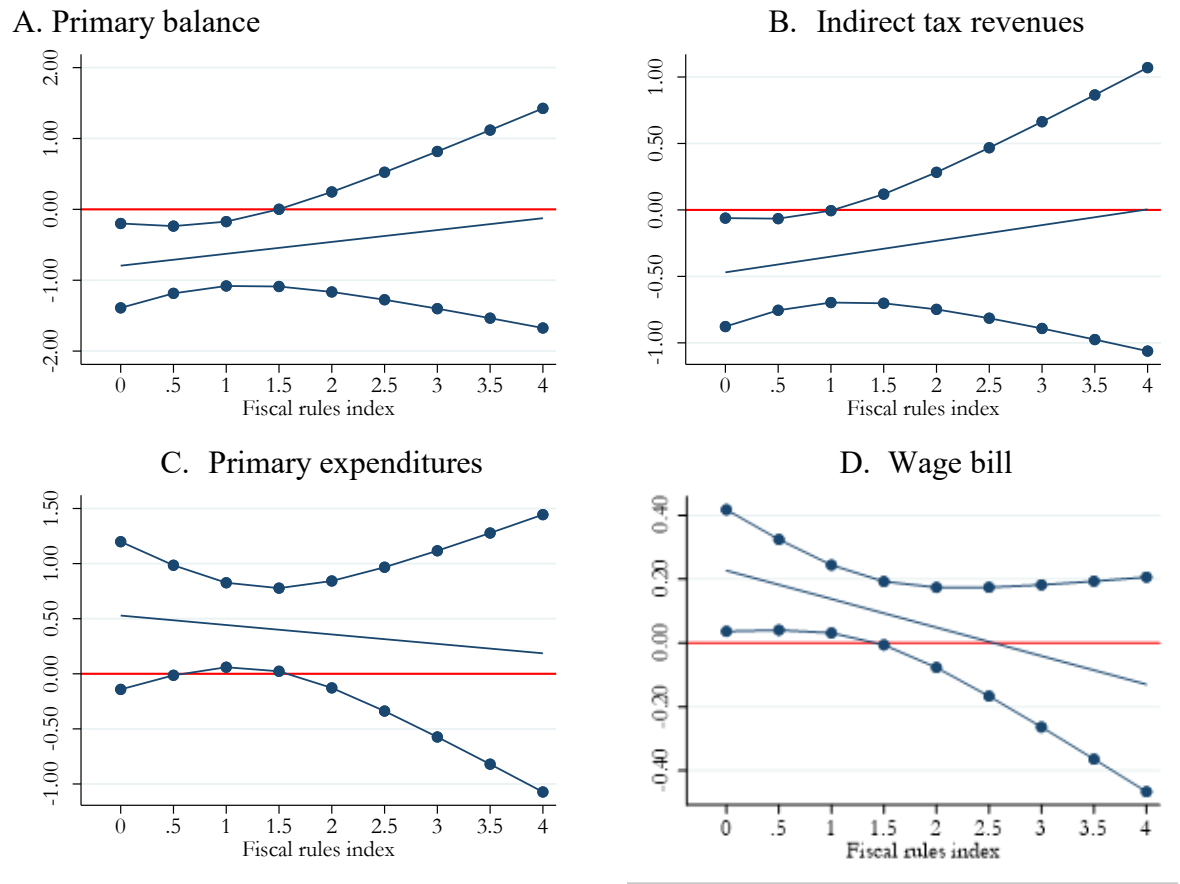
The literature has shown that several of the control variables considered above may condition the effect of elections of fiscal policy, that is, the impact of elections of fiscal policy depends on the level of the control variable (see de Haan and Klomp, 2013 and de Haan and Gootjes, 2023). We therefore have re-estimated the models using the additional control variables (where relevant) and their interactions with our election variable.

To interpret the conditional impact of these variables on the effect of election on fiscal policy outcomes, we have made marginal effect plots. Most of these plots did not provide strong evidence for a conditional impact. However, for some of these variables we confirm findings of previous studies. For instance, we find some evidence that only with weak fiscal rules, election effects occur. This is in line with the results of Gootjes et al. (2021) who report that strong fiscal rules constrain governments' ability to engineer political budget cycles.

To illustrate: Figure 1 shows the marginal effect of elections on the fiscal policy variables conditional on the level of the fiscal rules index. The figure shows that elections only have an effect when fiscal rules are weak, as captured by a low fiscal rules index. If the fiscal rules index

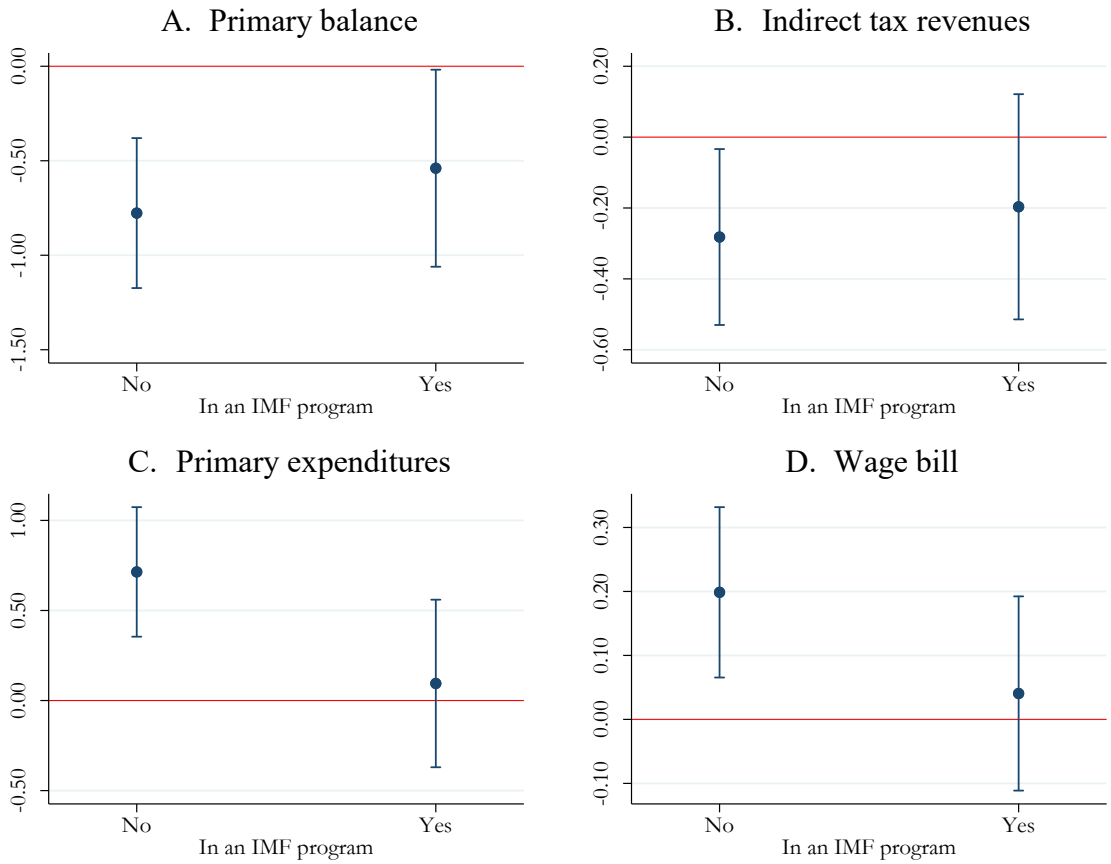
is above 1.5, elections do not affect fiscal policy variables significantly. Furthermore, a higher share of informed voters makes the effect of elections on the fiscal deficit insignificant (results available on request). We therefore conclude that better institutional quality in general reduces the impact of elections on fiscal policy outcomes.[8] An IMF program can partly compensate for weak institutions: in the presence of IMF programs, the deterioration of indirect tax revenues, the wages bill, and primary spending around elections turns insignificant, as shown in Figure 2. However, the deterioration of primary deficits around elections remains slightly significant even in IMF programs, although the effect is weakened.

Figure 1. Marginal effect of elections on fiscal outcomes conditional on fiscal rules index



[8] To examine whether election effects in young democracies are different compared to established democracies as argued by Brender and Drazen (2005), we test (for the sample of democracies) whether there is a different effect on fiscal policy variables of the first four elections after a country became a democracy compared to later elections. Our results (available on request) do not suggest that both types of elections have different impacts.

Figure 2. Marginal effect of elections on fiscal outcomes conditional on the presence of an IMF program



5.3 Endogeneity of elections

The timing of elections might be endogenous, i.e., incumbents may decide to call for early elections or delay elections to enhance their chances of winning. This could lead to biased coefficient estimates. For instance, if the incumbent is doing well in the polls, an early election may be called for without fiscal policy measures to enhance chances for reelection. We therefore remove irregular elections from our sample and retain only elections that are pre-determined as per established procedure. For this purpose, we follow Ebeke (2017) and use the National Elections Across Democracy and Autocracy (NELDA) dataset which provides information on whether elections were early or late relative to the date they were supposed to be held per established procedure. If so, the election is not pre-determined and has been dropped. Due to data availability, the sample shrinks from 104 to 85 EMDEs.

Table 6 shows the GMM-based estimation results (see online Appendix Table A7 for FE-based results). The coefficient estimates of the election variable remain statistically significant for the regressions for the primary balance, indirect tax revenues, and primary spending. The coefficient estimates are similar to those in the baseline specification in Table 2.

In contrast, in the sample of elections that are not pre-determined, the government wage bill no longer rises significantly during elections. These changes probably reflect the smaller country coverage: in the sample of 68 EMDEs for which NELDA data is available, the coefficient estimate for the government wage bill is insignificant even when all elections are included (see

Table A8 in the online Appendix).[9] This suggests that endogeneity does not play a major role in our results: the fact that the effect of elections on wage bills tend to be insignificant is largely due to the sample change.

[Insert Table 6 here]

5.4 Alternative definition of democracy

Finally, as the way we construct our democracy dummy may affect our outcomes, we have replaced it by a dummy variable which is taken from updates of the database of Bjørnskov and Roode (2020).[10] These authors define a democracy as a set of political institutions in which properly contested, repeated, and repeatable elections are free and fair and create ex ante uncertainty for the incumbent government and de facto ex post irreversibility of election results.

Table 7 presents the GMM-based regression results (FE-based results are in online Appendix Table A9) and matches the results in the specification using our preferred democracy variable in Table 3. In particular, the primary balance deteriorates, and primary spending rises significantly. And the interaction between the elections and democracy variables remains statistically insignificant in all specifications, thus confirming our previous finding that there is no systematic difference between the effect of elections on fiscal policy across democratic and non-democracies countries. The coefficient estimate of the election variable on the wage bill is again insignificant once the type of regime is controlled for, as it is in the baseline regression.

[Insert Table 7 here]

6. Conclusions and policy implications

Our main findings are as follows. First, primary deficits rise statistically significantly during elections, on average by 0.6 percentage point of GDP. Primary spending, especially on the government wage bill, also rises statistically significantly and indirect tax revenues fall. Second, these deteriorations occur in democracies and non-democracies alike. Third, the deterioration in primary deficits is not unwound after elections and the deterioration in primary spending is partially unwound after the election, mainly through cuts in capital spending. Finally, better institutional quality (such as strong fiscal rules) dampens the impact of elections on fiscal policy. Our findings survive a battery of robustness tests.

These patterns imply that deficits in EMDEs ratchet up over the course of several election cycles. Over time, this can threaten the sustainability of public finances. The literature offers some measures that countries can take to constrain fiscal policy choices during elections. The results from our robustness tests are equally promising. Once effective fiscal rules are in place,

[9] All other estimation results for the EMDEs for which NELDA data is available are very similar to the outcomes of our baseline model (results available on request).
[10] We thank Christian Bjørnskov for providing the data.

elections have less impact, or the election effect even becomes insignificant. The presence of an IMF program has a similar effect.

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Tables

Table 1. Baseline model: The impact of elections on fiscal policy (FE)

Dep var=	[1] Primary balance	[2] Tax revenues	[3] Direct tax revenues	[4] Indirect tax revenues	[5] Primary expenditures	[6] Wage bill	[7] Public investment
Elections	-0.635***	-0.170	-0.035	-0.268**	0.477***	0.112*	0.116
	(0.180)	(0.111)	(0.071)	(0.129)	(0.167)	(0.062)	(0.090)
GDP growth	0.074***	0.055***	0.019*	0.039***	0.015	-0.025***	0.045***
	(0.022)	(0.015)	(0.011)	(0.015)	(0.037)	(0.009)	(0.017)
Lagged gov. debt	0.010**	0.000	-0.001	-0.001	-0.014***	-0.001	-0.004***
	(0.004)	(0.001)	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)
Inflation	-0.000***	-0.006**	-0.003*	-0.005*	0.000***	-0.002	0.000***
	(0.000)	(0.003)	(0.002)	(0.003)	(0.000)	(0.008)	(0.000)
Real GDP pc	0.541	0.229	0.019	-0.472	1.195	-0.231	0.716**
(in logs)	(0.412)	(0.344)	(0.227)	(0.367)	(0.741)	(0.241)	(0.341)
Lagged dep. var.	0.441***	0.755***	0.730***	0.672***	0.737***	0.732***	0.734***
	(0.041)	(0.027)	(0.022)	(0.028)	(0.025)	(0.036)	(0.042)
Constant	-6.310*	2.297	1.515	10.705***	-3.251	3.845*	-5.292*
	(3.739)	(3.027)	(2.053)	(3.597)	(6.467)	(2.307)	(3.049)
Observations	2511	2299	1789	2229	2511	1327	2087
Nr of countries	104	104	96	103	104	84	99
R-squared	0.378	0.651	0.659	0.490	0.667	0.600	0.610
Adj R-sq	0.370	0.646	0.653	0.482	0.662	0.589	0.604

Notes: This table shows FE estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for the period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.

Table 2. Baseline model: The impact of elections on fiscal policy (GMM)

Dep var=	[1] Primary balance	[2] Tax revenues	[3] Direct tax revenues	[4] Indirect tax revenues	[5] Primary expenditures	[6] Wage bill	[7] Public investment
Elections	-0.634***	-0.175	-0.033	-0.284**	0.483***	0.117*	0.116
	(0.179)	(0.114)	(0.070)	(0.138)	(0.168)	(0.060)	(0.089)
GDP growth	0.073***	0.052***	0.018*	0.035**	0.019	-0.034***	0.047***
	(0.022)	(0.016)	(0.010)	(0.016)	(0.037)	(0.010)	(0.017)
Lagged gov. debt	0.010**	-0.000	-0.001	-0.001	-0.014***	-0.000	-0.003***
	(0.004)	(0.001)	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)
Inflation	-0.000***	-0.006**	-0.003*	-0.005*	0.000***	-0.003	0.000***
	(0.000)	(0.003)	(0.002)	(0.003)	(0.000)	(0.008)	(0.000)
Real GDP pc	0.485	0.347	0.219	-0.249	0.926	-0.031	0.368
(in logs)	(0.337)	(0.390)	(0.334)	(0.460)	(0.731)	(0.407)	(0.237)
Lagged dep. var.	0.468***	0.806***	0.740***	0.732***	0.713***	0.697***	0.762***
	(0.064)	(0.030)	(0.045)	(0.062)	(0.033)	(0.073)	(0.035)
Constant	-4.810	-0.507	-0.872	5.393	-2.057	2.740	-2.065
	(3.061)	(3.087)	(2.628)	(3.732)	(6.005)	(3.004)	(2.025)
Observations	2511	2299	1789	2229	2511	1327	2087
Number of countries	104	104	96	103	104	84	99
AR(1) p-val	0.000	0.006	0.000	0.024	0.000	0.000	0.000
AR(2) p-val	0.614	0.348	0.700	0.821	0.099	0.486	0.042
Sargan-Hansen p-val	0.196	0.183	0.164	0.904	0.573	0.332	0.277
Kleibergen-Paap p-val	0.000	0.000	0.001	0.000	0.000	0.000	0.000

Notes: This table shows GMM estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for the period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.

Table 3. The impact of elections: democracies versus autocracies (GMM)

Dep var=	[1] Primary balance	[2] Tax revenues	[3] Direct tax revenues	[4] Indirect tax revenues	[5] Primary expenditures	[6] Wage bill	[7] Public investment
Elections	-0.863***	-0.143	0.136	-0.357	0.629**	0.131	0.246
	(0.293)	(0.191)	(0.152)	(0.232)	(0.290)	(0.135)	(0.175)
Democracy	0.395	0.252*	0.268***	0.062	0.067	0.167	-0.154
	(0.249)	(0.139)	(0.100)	(0.142)	(0.249)	(0.105)	(0.137)
Elections	0.419	-0.052	-0.260	0.133	-0.263	-0.016	-0.248
×Democracy	(0.409)	(0.214)	(0.164)	(0.273)	(0.358)	(0.155)	(0.208)
GDP growth	0.073***	0.052***	0.018*	0.035**	0.019	-0.034***	0.047***
	(0.022)	(0.015)	(0.010)	(0.016)	(0.037)	(0.010)	(0.017)
Lagged gov. debt	0.011**	0.000	-0.001	-0.001	-0.014***	-0.000	-0.004***
	(0.004)	(0.001)	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)
Inflation	-0.000***	-0.006**	-0.003*	-0.006*	0.000***	-0.003	0.000***
	(0.000)	(0.003)	(0.002)	(0.003)	(0.000)	(0.008)	(0.000)
Real GDP pc	0.441	0.339	0.183	-0.260	0.925	-0.030	0.379
(in logs)	(0.348)	(0.389)	(0.334)	(0.457)	(0.730)	(0.416)	(0.239)
Lagged dep. var.	0.469***	0.805***	0.735***	0.731***	0.713***	0.693***	0.758***
	(0.065)	(0.030)	(0.044)	(0.062)	(0.033)	(0.073)	(0.034)
Constant	-4.603	-0.522	-0.680	5.461	-2.073	2.711	-2.076
	(3.141)	(3.085)	(2.625)	(3.697)	(6.008)	(3.074)	(2.031)
Observations	2511	2299	1789	2229	2511	1327	2087
Nr of countries	104	104	96	103	104	84	99
AR(1) p-val	0.000	0.006	0.000	0.024	0.000	0.000	0.000
AR(2) p-val	0.627	0.340	0.712	0.814	0.100	0.486	0.039
Sargan-Hansen p-val	0.164	0.177	0.186	0.922	0.565	0.321	0.252
Kleibergen-Paap p-val	0.000	0.000	0.001	0.000	0.000	0.000	0.000

Notes: This table shows GMM estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.

Table 4. Fiscal policy 12 months before and after the election (GMM)

	[1]			[2]			[3]			[4]		
Dep var=	Primary balance			Tax revenues			Direct tax revenues			Indirect tax revenues		
Before election	-0.205			-0.064			0.058			0.060		
	(0.156)			(0.124)			(0.079)			(0.126)		
Election		-0.634***			-0.175			-0.033			-0.284**	
		(0.179)			(0.114)			(0.070)			(0.138)	
After election			0.151			0.010			0.027			0.055
			(0.154)			(0.083)			(0.059)			(0.107)
GDP growth	0.065***	0.073***	0.072***	0.052***	0.052***	0.052***	0.018*	0.018*	0.018*	0.035**	0.035**	0.035**
	(0.022)	(0.022)	(0.022)	(0.016)	(0.016)	(0.016)	(0.010)	(0.010)	(0.010)	(0.016)	(0.016)	(0.016)
Lagged gov. debt	0.010**	0.010**	0.010**	-0.000	-0.000	-0.000	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.004)	(0.004)	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Inflation	-0.000***	-0.000***	-0.000***	-0.006**	-0.006**	-0.006**	-0.003*	-0.003*	-0.003*	-0.005**	-0.005*	-0.005*
	(0.000)	(0.000)	(0.000)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Real GDP pc	0.363	0.485	0.474	0.349	0.347	0.349	0.222	0.219	0.221	-0.248	-0.249	-0.247
(in logs)	(0.387)	(0.337)	(0.340)	(0.390)	(0.390)	(0.389)	(0.335)	(0.334)	(0.335)	(0.457)	(0.460)	(0.458)
Lagged dep. var.	0.477***	0.468***	0.462***	0.806***	0.806***	0.806***	0.740***	0.740***	0.740***	0.731***	0.732***	0.731***
	(0.066)	(0.064)	(0.065)	(0.030)	(0.030)	(0.030)	(0.044)	(0.045)	(0.045)	(0.062)	(0.062)	(0.062)
Constant	-3.873	-4.810	-4.937	-0.563	-0.507	-0.576	-0.914	-0.872	-0.899	5.287	5.393	5.283
	(3.511)	(3.061)	(3.097)	(3.080)	(3.087)	(3.078)	(2.645)	(2.628)	(2.639)	(3.714)	(3.732)	(3.722)
Observations	2409	2511	2511	2299	2299	2299	1789	1789	1789	2229	2229	2229
Nr of countries	104	104	104	104	104	104	96	96	96	103	103	103
AR(1) p-val	0.000	0.000	0.000	0.006	0.006	0.006	0.000	0.000	0.000	0.024	0.024	0.024
AR(2) p-val	0.679	0.614	0.706	0.320	0.348	0.322	0.713	0.700	0.699	0.849	0.821	0.845
SH test p-val	0.288	0.196	0.190	0.167	0.183	0.163	0.154	0.164	0.161	0.993	0.904	0.997
KP test p-val	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000
	[5]			[6]			[7]					
Dep var=	Primary expenditures			Wage bill			Public investment					
Before election	0.191			-0.039			0.036					
	(0.172)			(0.065)			(0.075)					
Election		0.483***			0.117*			0.116				
		(0.168)			(0.060)			(0.089)				
After election			-0.418***			0.054			-0.202*			
			(0.162)			(0.071)			(0.110)			
GDP growth	0.046	0.019	0.020	-0.033***	-0.034***	-0.033***	0.047***	0.047***	0.047***			
	(0.030)	(0.037)	(0.037)	(0.010)	(0.010)	(0.010)	(0.017)	(0.017)	(0.017)			
Lagged gov. debt	-0.014***	-0.014***	-0.014***	-0.000	-0.000	-0.000	-0.003***	-0.003***	-0.003***			
	(0.003)	(0.003)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)			
Inflation	0.000***	0.000***	0.000***	-0.003	-0.003	-0.004	0.000***	0.000***	0.000***			
	(0.000)	(0.000)	(0.000)	(0.008)	(0.008)	(0.008)	(0.000)	(0.000)	(0.000)			
Real GDP pc	1.155	0.926	0.961	-0.031	-0.031	-0.031	0.369	0.368	0.370			
(in logs)	(0.760)	(0.731)	(0.737)	(0.401)	(0.407)	(0.402)	(0.237)	(0.237)	(0.240)			

Lagged dep. var.	0.711***	0.713***	0.712***	0.702***	0.697***	0.701***	0.761***	0.762***	0.761***	
	(0.034)	(0.033)	(0.033)	(0.072)	(0.073)	(0.073)	(0.035)	(0.035)	(0.035)	
Constant	-3.951	-2.057	-2.104	2.762	2.740	2.760	-2.035	-2.065	-2.008	
	(6.298)	(6.005)	(6.058)	(2.965)	(3.004)	(2.971)	(2.025)	(2.025)	(2.047)	
Observations	2409	2511	2511	1327	1327	1327	2087	2087	2087	
Nr of countries	104	104	104	84	84	84	99	99	99	
AR(1) p-val	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
AR(2) p-val	0.059	0.099	0.087	0.496	0.486	0.485	0.041	0.042	0.041	
SH test p-val	0.551	0.573	0.622	0.347	0.332	0.351	0.277	0.277	0.259	
KP test p-val	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Notes: This table shows GMM estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for the period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP. “SH” stands for “Sargan-Hansen”, and “KP” stand for “Kleibergen-Paap”.

Table 5. Additional controls in the model for the primary budget balance (GMM)

Added control variable:	Coefficient of election variable:	Control variable significant (Yes / No):	Number of observations:	Coefficient in base model with the same set of observations:
Aid per capita	-0.648*** (0.189)	No	2307	-0.650*** (0.190)
Capital account openness	-0.675*** (0.190)	No	2181	-0.675*** (0.190)
Checks and balances	-0.651*** (0.184)	No	2241	-0.651*** (0.184)
Fiscal rules	-0.653** (0.272)	Yes	1287	-0.656** (0.273)
Control of corruption	-0.614*** (0.207)	No	2006	-0.613*** (0.207)
Share of informed voters	-0.637** (0.282)	Yes	971	-0.639** (0.284)
IMF program	-0.684*** (0.189)	Yes	2204	-0.664*** (0.190)
Dependency ratio	-0.632*** (0.180)	No	2511	-0.634*** (0.179)

Notes: This table shows GMM estimates of equation (1) using primary budget balance (in percent of GDP) as dependent variable for a sample of max. 104 EMDEs for the sample period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 6. The impact of elections without irregular elections (GMM)

	[1]	[2]	[3]	[4]
Dep var=	Primary balance	Indirect tax revenues	Primary expenditures	Wage bill
Elections	-0.612***	-0.409***	0.492**	0.054
	(0.220)	(0.159)	(0.195)	(0.073)
GDP growth	0.064***	0.036**	0.016	-0.029***
	(0.020)	(0.017)	(0.041)	(0.011)
Lagged gov. debt	0.009**	-0.001	-0.014***	-0.000
	(0.004)	(0.002)	(0.003)	(0.002)
Inflation	0.000***	-0.005*	-0.001***	-0.003
	(0.000)	(0.003)	(0.000)	(0.008)
Real GDP pc	0.464	-0.395	1.011	0.048
(in logs)	(0.365)	(0.505)	(0.809)	(0.329)
Lagged dep. var.	0.477***	0.787***	0.687***	0.630***
	(0.078)	(0.057)	(0.036)	(0.095)
Constant	-5.062	5.937	-2.547	2.226
	(3.255)	(4.105)	(6.929)	(2.701)
Observations	1947	1732	1947	977
Number of countries	85	84	85	68
AR(1) p-val	0.000	0.067	0.000	0.007
AR(2) p-val	0.351	0.402	0.023	0.637
Sargan-Hansen test p-val	0.116	0.452	0.577	0.569
Kleibergen-Paap test p-val	0.000	0.001	0.000	0.000

Notes: This table shows GMM estimates of equation (1) using several fiscal variables as dependent variable for a sample of 85 EMDEs for the sample period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP. In Column (1), the lagged dep. variable was instrumented by four lags.

Table 7. Alternative proxy for democracy (GMM)

Dep var=	[1] Primary balance	[2] Indirect tax revenues	[3] Primary expenditures	[4] Wage bill
Elections	-0.501*	-0.162	0.561**	0.048
	(0.302)	(0.281)	(0.285)	(0.129)
Democracy (alt.)	0.144	0.254*	0.633***	0.206**
	(0.208)	(0.146)	(0.244)	(0.098)
Elections*Democracy (alt.)	-0.225	-0.195	-0.101	0.112
	(0.358)	(0.288)	(0.338)	(0.142)
GDP growth	0.073***	0.035**	0.018	-0.034***
	(0.022)	(0.016)	(0.037)	(0.010)
Lagged gov. debt	0.010**	-0.001	-0.014***	-0.000
	(0.004)	(0.002)	(0.003)	(0.002)
Inflation	-0.000***	-0.005*	0.000***	-0.003
	(0.000)	(0.003)	(0.000)	(0.008)
Real GDP pc	0.462	-0.279	0.825	-0.045
(in logs)	(0.342)	(0.460)	(0.743)	(0.428)
Lagged dep. var.	0.470***	0.732***	0.708***	0.689***
	(0.064)	(0.062)	(0.034)	(0.074)
Constant	-4.699	5.464	-1.483	2.798
	(3.081)	(3.721)	(6.126)	(3.144)
Observations	2511	2229	2511	1327
Nr of countries	104	103	104	84
AR(1) p-val	0.000	0.025	0.000	0.000
AR(2) p-val	0.608	0.825	0.104	0.517
Sargan-Hansen test p-val	0.188	0.880	0.586	0.334
Kleibergen-Paap test p-val	0.000	0.000	0.000	0.000

Notes: This table shows GMM estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for the period 1993-2021. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.

Online Appendix

Table A1. Countries in the sample

Country	ISO-code	Country	ISO-code	Country	ISO-code	Country	ISO-code
Afghanistan	AFG	Costa Rica	CRI	Kyrgyz Republic	KGZ	Poland	POL
Albania	ALB	Côte d'Ivoire	CIV	Lao PDR	LAO	Romania	ROU
Algeria	DZA	Djibouti	DJI	Lesotho	LSO	Russian Federation	RUS
Angola	AGO	Dominican Republic	DOM	Liberia	LBR	Rwanda	RWA
Argentina	ARG	Ecuador	ECU	Madagascar	MDG	Senegal	SEN
Armenia	ARM	Egypt, Arab Rep.	EGY	Malawi	MWI	Sierra Leone	SLE
Azerbaijan	AZE	El Salvador	SLV	Malaysia	MYS	Solomon Islands	SLB
Bangladesh	BGD	Ethiopia	ETH	Mali	MLI	Sri Lanka	LKA
Belarus	BLR	Fiji	FJI	Mauritania	MRT	Sudan	SDN
Benin	BEN	Gabon	GAB	Mauritius	MUS	Suriname	SUR
Bolivia	BOL	Gambia, The	GMB	Mexico	MEX	Tajikistan	TJK
Botswana	BWA	Georgia	GEO	Moldova	MDA	Tanzania	TZA
Brazil	BRA	Ghana	GHA	Mongolia	MNG	Thailand	THA
Bulgaria	BGR	Guatemala	GTM	Mozambique	MOZ	Togo	TGO
Burkina Faso	BFA	Guinea	GIN	Namibia	NAM	Trinidad and Tobago	TTO
Burundi	BDI	Guinea-Bissau	GNB	Nepal	NPL	Tunisia	TUN
Cabo Verde	CPV	Haiti	HTI	Nicaragua	NIC	Turkey	TUR
Cambodia	KHM	Honduras	HND	Niger	NER	Uganda	UGA
Cameroon	CMR	Hungary	HUN	Nigeria	NGA	Ukraine	UKR
Central African Republic	CAF	India	IND	North Macedonia	MKD	Uruguay	URY
Chad	TCD	Indonesia	IDN	Pakistan	PAK	Uzbekistan	UZB
Chile	CHL	Iran, Islamic Rep.	IRN	Panama	PAN	Venezuela, RB	VEN
Colombia	COL	Iraq	IRQ	Papua New Guinea	PNG	Vietnam	VNM
Comoros	COM	Jamaica	JAM	Paraguay	PRY	Yemen, Rep.	YEM
Congo, Dem. Rep.	COD	Kazakhstan	KAZ	Peru	PER	Zambia	ZMB
Congo, Rep.	COG	Kenya	KEN	Philippines	PHL	Zimbabwe	ZWE

Table A2. Description of variables

Variable	Definition	Source
Primary balance	Primary balance (in % GDP)	IMF World Economic Outlook (WEO) and Government Finance Statistics (GFS)
Tax revenues	Tax revenues (in % GDP)	IMF WEO and GFS
Direct tax revenues	Revenues from taxes on income, profits, capital gains, and property (in % GDP)	IMF WEO and GFS
Indirect tax revenues	Indirect tax (such as taxes on goods and services, trade, payrolls) revenues (in % GDP)	IMF WEO and GFS
Primary expenditures	Primary expenditures (in % GDP)	IMF WEO and GFS
Wage bill	compensation of public employees (in % GDP)	IMF WEO and GFS
Public investment	Public investment (in % GDP)	IMF Investment and Capital Stock Dataset
Elections	A numerical variable that is calculated as M/12 in an election year and (12 - M)/12 in a pre-election year, where M is the month of the election. In all other years its value is set to zero.	Database of Political Institutions (DPI)
GDP growth	Real GDP growth rate	IMF WEO
Government debt	Gov. debt (in % GDP)	IMF WEO
Inflation	Annual CPI rate.	Ha et al. (2022)
Real GDP pc (in logs)	Real GDP per capita (Purchasing power parity; 2017 international dollar), in logs	IMF WEO
Democracy	A dummy that equals 1 if Polity2 score is six or higher.	Polity IV dataset
Aid per capita	Net official development assistance and official aid received per capita (constant 2020 US$)	WDI
Capital account openness	The Chin-It0 index is normalized to range from 0 to 1 with a higher value indicating a higher level of capital openness.	Chinn and Ito (2006)
Checks and Balances	The index captures whether elections are held competitively and whether there are checks on the executive, with a higher index indicating more checks and balances in the country.	Database of Political Institutions (DPI)
Fiscal rules index	An index that captures the effectiveness of fiscal rules with a higher value indicating the presence of more effective fiscal rules. The index is constructed using the IMF fiscal rules database using the method detailed in Schaechter et al. (2012)	Gootjes et al. (2021)
Control of corruption	The index ranges from 0 to 6 with a higher score indicating a better control of corruption.	International Country Risk Guide (ICRG)
Informed voters	The product of secondary school enrollment and media freedom index from Freedom House	WDI and Freedom House
IMF program	A dummy that equals 1 if an IMF program is effective for at least 5 months in a country and 0 otherwise.	Dreher (2006; updated in 2021)
Age dependency ratio	The ratio of the number of people aged below 15 or above 65 to the number of people of working age.	WDI
Democracy (alt.)	A dummy that equals 1 if it is a democracy and 0 otherwise.	Bjørnskov and Rode (2020)

Table A3. Descriptive statistics

Variable:	Number of observations	Mean	Standard deviation	Minimum	Maximum
Primary balance	2850	-0.61	4.15	-34.91	31.24
Direct tax revenues	2159	5.44	3.60	0.03	76.06
Indirect tax revenues	2690	10.80	5.39	0.30	63.67
Primary expenditures	2850	22.90	9.44	1.49	90.96
Wage bill	1586	6.08	3.26	0.62	18.25
Public investment	2634	4.38	3.53	0.00	31.56
GDP growth	3086	3.68	5.40	-41.89	81.79
Government debt	2657	52.54	41.96	0.00	600.12
Inflation	3075	65.80	1321.45	-72.73	65374.08
Democracy	3088	0.49	0.50	0.00	1.00
Real GDP pc (in logs)	3086	8.58	0.95	6.14	10.51
Aid per capita	2914	55.60	67.48	-46.36	916.87
Capital account openness	2706	0.41	0.33	0.00	1.00
Checks and balances	2806	2.84	1.56	1.00	18.00
Fiscal rules	1595	0.71	0.81	0.00	3.62
Control of corruption	2432	2.27	0.84	0.00	5.00
Share of informed voters	895	7.43	4.89	0.00	22.72
IMF program	2808	0.39	0.49	0.00	1.00
Democracy (alt.)	3120	0.54	0.50	0.00	1.00
Primary balance	2850	-0.61	4.15	-34.91	31.24
Tax revenues	2747	15.00	7.68	0.30	138.87
Direct tax revenues	2159	5.44	3.60	0.03	76.06

Table A4. The impact of elections: democracies versus autocracies (FE)

Dep var=	[1] Primary balance	[2] Tax revenues	[3] Direct tax revenues	[4] Indirect tax revenues	[5] Primary expenditures	[6] Wage bill	[7] Public investment
Elections	-0.869***	-0.132	0.133	-0.331	0.616**	0.126	0.245
	(0.295)	(0.185)	(0.153)	(0.211)	(0.288)	(0.138)	(0.177)
Democracy	0.399	0.267*	0.262***	0.041	0.079	0.142*	-0.158
	(0.263)	(0.149)	(0.094)	(0.157)	(0.245)	(0.083)	(0.145)
Elections	0.429	-0.062	-0.256	0.115	-0.251	-0.018	-0.247
×Democracy	(0.413)	(0.207)	(0.166)	(0.255)	(0.359)	(0.157)	(0.210)
GDP growth	0.074***	0.054***	0.019*	0.039***	0.015	-0.025***	0.045***
	(0.022)	(0.015)	(0.011)	(0.015)	(0.037)	(0.009)	(0.017)
Lagged gov. debt	0.010**	0.000	-0.001	-0.001	-0.014***	-0.001	-0.004***
	(0.004)	(0.001)	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)
Inflation	-0.000***	-0.006*	-0.003*	-0.005*	0.000***	-0.002	0.000***
	(0.000)	(0.003)	(0.002)	(0.003)	(0.000)	(0.008)	(0.000)
Real GDP pc	0.543	0.234	0.026	-0.474	1.196	-0.234	0.722**
(in logs)	(0.416)	(0.342)	(0.225)	(0.367)	(0.741)	(0.244)	(0.345)
Lagged dep. var.	0.440***	0.754***	0.727***	0.672***	0.737***	0.729***	0.731***
	(0.041)	(0.027)	(0.021)	(0.028)	(0.025)	(0.036)	(0.041)
Constant	-6.586*	2.122	1.315	10.689***	-3.292	3.793	-5.231*
	(3.779)	(3.025)	(2.044)	(3.594)	(6.482)	(2.334)	(3.069)
Observations	2511	2299	1789	2229	2511	1327	2087
Nr of countries	104	104	96	103	104	84	99
R-squared	0.380	0.651	0.661	0.490	0.667	0.601	0.611
Adj R-sq	0.371	0.646	0.654	0.482	0.662	0.589	0.604

Notes: This table shows FE estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for the period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.

Table A5. Fiscal policy 12 months before and after the election (FE)

	[1]			[2]			[3]			[4]		
Dep var=	Primary balance			Tax revenues			Direct tax revenues			Indirect tax revenues		
Before election	-0.186			-0.053			0.054			0.068		
	(0.155)			(0.125)			(0.080)			(0.130)		
Election		-0.635***			-0.170			-0.035			-0.268**	
		(0.180)			(0.111)			(0.071)			(0.129)	
After election			0.139			0.007			0.033			0.048
			(0.164)			(0.083)			(0.058)			(0.107)
GDP growth	0.067***	0.074***	0.073***	0.055***	0.055***	0.055***	0.019*	0.019*	0.019*	0.039**	0.039***	0.039**
	(0.022)	(0.022)	(0.022)	(0.015)	(0.015)	(0.015)	(0.011)	(0.011)	(0.011)	(0.015)	(0.015)	(0.015)
Lagged gov. debt	0.009**	0.010**	0.010**	0.000	0.000	0.000	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.004)	(0.004)	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Inflation	-0.000***	-0.000***	-0.000***	-0.006**	-0.006**	-0.006**	-0.003*	-0.003*	-0.003	-0.005*	-0.005*	-0.005*
	(0.000)	(0.000)	(0.000)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Real GDP pc	0.422	0.541	0.506	0.226	0.229	0.226	0.020	0.019	0.020	-0.480	-0.472	-0.479
(in logs)	(0.475)	(0.412)	(0.415)	(0.343)	(0.344)	(0.343)	(0.227)	(0.227)	(0.227)	(0.365)	(0.367)	(0.365)
Lagged dep. var.	0.439***	0.441***	0.442***	0.756***	0.755***	0.755***	0.730***	0.730***	0.730***	0.670***	0.672***	0.671***
	(0.043)	(0.041)	(0.041)	(0.027)	(0.027)	(0.027)	(0.022)	(0.022)	(0.022)	(0.027)	(0.028)	(0.028)
Constant	-5.274	-6.310*	-6.070	2.294	2.297	2.292	1.493	1.515	1.495	10.743***	10.705***	10.719***
	(4.335)	(3.739)	(3.760)	(3.022)	(3.027)	(3.019)	(2.057)	(2.053)	(2.055)	(3.578)	(3.597)	(3.577)
Obs	2409	2511	2511	2299	2299	2299	1789	1789	1789	2229	2229	2229
Nr of ctrys	104	104	104	104	104	104	96	96	96	103	103	103
R-squared	0.374	0.378	0.376	0.650	0.651	0.650	0.659	0.659	0.659	0.489	0.490	0.489
Adj R-sq	0.366	0.370	0.367	0.645	0.646	0.645	0.653	0.653	0.653	0.481	0.482	0.481
	[5]			[6]			[7]					
Dep var=	Primary expenditures			Wage bill			Public investment					
Before election	0.183			-0.043			0.031					
	(0.174)			(0.065)			(0.075)					
Election		0.477***			0.112*			0.116				
		(0.167)			(0.062)			(0.090)				
After election			-0.429**			0.057			-0.199*			
			(0.167)			(0.072)			(0.109)			
GDP growth	0.041	0.015	0.015	-0.025***	-0.025***	-0.025***	0.045***	0.045***	0.045***			
	(0.029)	(0.037)	(0.037)	(0.009)	(0.009)	(0.009)	(0.017)	(0.017)	(0.017)			
Lagged gov. debt	-0.013***	-0.014***	-0.014***	-0.001	-0.001	-0.001	-0.004***	-0.004***	-0.004***			
	(0.003)	(0.003)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)			
Inflation	0.000***	0.000***	0.000***	-0.002	-0.002	-0.002	0.000***	0.000***	0.000***			
	(0.000)	(0.000)	(0.000)	(0.008)	(0.008)	(0.008)	(0.000)	(0.000)	(0.000)			
Real GDP pc	1.489*	1.195	1.239*	-0.234	-0.231	-0.235	0.716**	0.716**	0.718**			
(in logs)	(0.788)	(0.741)	(0.742)	(0.241)	(0.241)	(0.241)	(0.341)	(0.341)	(0.343)			
Lagged dep. var.	0.737***	0.737***	0.738***	0.730***	0.732***	0.730***	0.734***	0.734***	0.734***			
	(0.026)	(0.025)	(0.025)	(0.036)	(0.036)	(0.036)	(0.042)	(0.042)	(0.042)			

Constant	-6.904	-3.251	-3.555	3.909*	3.845*	3.897*	-5.281*	-5.292*	-5.237*	
	(6.954)	(6.467)	(6.478)	(2.302)	(2.307)	(2.305)	(3.047)	(3.049)	(3.072)	
Obs	2409	2511	2511	1327	1327	1327	2087	2087	2087	
Nr of ctrys	104	104	104	84	84	84	99	99	99	
R-squared	0.674	0.667	0.667	0.599	0.600	0.599	0.610	0.610	0.610	
Adj R-sq	0.669	0.662	0.662	0.588	0.589	0.588	0.603	0.604	0.604	

Notes: This table shows FE estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for the period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.

Table A6. Additional controls (FE)

Added control variable:	Coefficient of election variable:	Control variable significant (Yes / No):	Number of observations:	Coefficient in base model with same observations:
Aid per capita	-0.647***	No	2307	-0.648***
	(0.190)			(0.191)
Capital account openness	-0.676***	No	2181	-0.676***
	(0.191)			(0.191)
Checks and balances	-0.650***	No	2241	-0.650***
	(0.186)			(0.186)
Fiscal rules	-0.657**	Yes	1287	-0.659**
	(0.274)			(0.275)
Control of corruption	-0.617***	No	2006	-0.616***
	(0.210)			(0.210)
Share of informed voters	-0.551*	Yes	871	-0.562*
	(0.289)			(0.290)
IMF program	-0.685***	Yes	2204	-0.664***
	(0.190)			(0.191)
Dependency ratio	-0.633***	Yes	2511	-0.635***
	(0.180)			(0.180)

Notes: This table shows FE estimates of equation (1) using primary balance (in percent of GDP) as dependent variable for a sample of max 104 EMDEs for the sample period 1993-2022. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A7. The impact of elections without irregular elections (FE)

Dep var=	[1] Primary balance	[2] Indirect tax revenue	[3] Primary expenditure	[4] Wage bill
Elections	-0.601***	-0.381***	0.465**	0.045
	(0.220)	(0.137)	(0.195)	(0.077)
GDP growth	0.065***	0.042***	0.009	-0.015
	(0.021)	(0.016)	(0.040)	(0.011)
Lagged gov. debt	0.009**	-0.001	-0.013***	-0.002
	(0.004)	(0.002)	(0.003)	(0.002)
Inflation	0.000***	-0.004	-0.001***	-0.001
	(0.000)	(0.003)	(0.000)	(0.008)
Real GDP pc	0.390	-0.443	1.579**	-0.465
(in logs)	(0.472)	(0.431)	(0.683)	(0.320)
Lagged dep. var.	0.424***	0.703***	0.736***	0.697***
	(0.051)	(0.028)	(0.027)	(0.048)
Constant	-4.867	9.717**	-6.511	6.142**
	(4.159)	(4.144)	(5.957)	(3.029)
Observations	1947	1732	1947	977
Nr of countries	85	84	85	68
R-squared	0.347	0.527	0.679	0.550
Adj R-sq	0.336	0.517	0.673	0.534

Notes: This table shows FE estimates of equation (1) using several fiscal variables as dependent variable for a sample of 85 EMDEs for the sample period. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.

Table A8. The impact of using the NELDA sample on the election effect on the wage bils

Dep var= wage bill	[6] Fixed effects (FE)	[7] GMM
Elections	0.061	0.074
	(0.074)	(0.070)
GDP growth	-0.014	-0.030***
	(0.010)	(0.011)
Lagged gov. debt	-0.002	-0.000
	(0.001)	(0.002)
Inflation	-0.001	-0.003
	(0.008)	(0.008)
Real GDP pc	-0.490	0.039
(in logs)	(0.308)	(0.325)
Lagged dep. var.	0.697***	0.627***
	(0.046)	(0.095)
Constant	6.354**	2.302
	(2.916)	(2.666)
Observations	1008	1008
Nr of countries	68	68
R-squared	0.554	
Adj R-sq	0.539	
AR(1) p-val		0.006
AR(2) p-val		0.661
Sargan-Hansen test p-val		0.587
Kleibergen-Paap test p-val		0.000

Notes: This table shows FE (in col 1; GMM in col 2) estimates of equation (1) using the wage bill (in percent of GDP) as dependent variable for a sample of 68 EMDEs where data are available. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A9. Alternative definitions of democracies (FE)

	[1]	[2]	[3]	[4]
Dep var=	Primary balance	Indirect tax revenues	Primary expenditures	Wage bill
Elections	-0.512*	-0.142	0.541*	0.033
	(0.304)	(0.267)	(0.285)	(0.139)
Democracy (alt.)	0.134	0.250	0.570**	0.212**
(Bjornskov and Rode 2020)	(0.219)	(0.157)	(0.235)	(0.083)
Elections*Democracy (alt.)	-0.208	-0.201	-0.080	0.127
	(0.365)	(0.280)	(0.345)	(0.154)
GDP growth	0.074***	0.039**	0.014	-0.025***
	(0.022)	(0.015)	(0.036)	(0.009)
Lagged gov. debt	0.010**	-0.001	-0.014***	-0.001
	(0.004)	(0.002)	(0.003)	(0.001)
Inflation	-0.000***	-0.005*	0.000***	-0.002
	(0.000)	(0.003)	(0.000)	(0.008)
Real GDP pc	0.529	-0.481	1.153	-0.256
(in logs)	(0.417)	(0.361)	(0.738)	(0.246)
Lagged dep. var.	0.442***	0.672***	0.733***	0.725***
	(0.041)	(0.027)	(0.026)	(0.037)
Constant	-6.271*	10.667***	-3.075	3.998*
	(3.766)	(3.541)	(6.470)	(2.361)
Observations	2511	2229	2511	1327
Nr of countries	104	103	104	84
R-squared	0.379	0.490	0.668	0.602
Adj R-sq	0.369	0.482	0.663	0.591

Notes: This table shows GMM estimates of equation (1) using several fiscal variables as dependent variable for a sample of 104 EMDEs for the period 1993-2021. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All dependent variables are in percent of GDP.