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# THE POLITICAL ECONOMY OF FISCAL POLICY: SURVEY

BY

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## Abstract<sup>1</sup>

This paper surveys the recent literature on the political economy of fiscal policy, in particular the accumulation of government debt. We examine three possible determinants of fiscal balances: opportunistic behavior by policymakers, heterogeneous fiscal preferences of either voters or politicians, and budget institutions. We focus on the contributions of the last 10 years and emphasize findings related to developing countries. We include a recent body of literature on the fiscal preferences of voters, which, interestingly, seems to suggest that voters do not favor high-spending governments. We also report some original empirical evidence. First, we test different hypotheses from the political economy literature in a simultaneous manner for a large set of both developed and developing countries. We find that less-fragmented governments and a greater ability of voters to monitor fiscal policy are related to lower deficits; the estimated effects are larger than when the two hypotheses are evaluated separately, as the existing literature does. Second, we suggest the role of the courts in the determination of fiscal policy as a promising new avenue of research, and present some suggestive novel evidence on the importance of this channel.

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## 1. Introduction

This paper reviews the literature on the political economy of fiscal policy, in particular debt accumulation. Since Alesina and Perotti (1995) very carefully summarized the contributions developed in the 1980s and early 1990s, we focus mainly on those of the last 10 years, both theoretical and empirical.<sup>2</sup> We thus refer to some theories and recent empirical findings, in particular findings for developing countries, not included in the earlier survey. Moreover, we present some original empirical evidence.

We classify the contributions to this literature into three lines of argumentation. First, we review theories where fiscal policy is decided by opportunistic policymakers whose choices are intended to maximize voters' support. A key insight from this literature is that the effect of political incentives on the government's balance depends on the fiscal preferences of voters and the macroeconomic effects of fiscal expansions and contractions. We emphasize recent findings that question the empirical validity of the traditional view that voters prefer high-spending governments, and that fiscal adjustments are contractionary. These findings also cast doubt on the idea that fiscal deficits are the result of policymakers' attempts to attract voters.

We then summarize a branch of the literature that explains fiscal deficits as the result of conflicts of interests: conflicts between different politicians with heterogeneous preferences, or conflicts between different social groups over the distribution of resources. Three main avenues of research are included here: policymakers' strategic use of deficits to tie the hands of successors with different preferences, delays in the adoption of fiscal adjustments with distributional consequences, and common pool problems where the fight of different groups over the distribution of government revenues leads to deficits. Theoretical contributions within this branch of the literature have key implications that link fiscal outcomes to the characteristics of the electoral system, the level of cohesion or fragmentation within the government, and the government's ideological stance. We review recent findings on the empirical validity of those ties and present some original evidence.

Finally, we discuss the literature that highlights the importance of budget institutions in determining fiscal choices. We review recent empirical evidence regarding the effect of different procedures for drafting, voting on, and implementing the budget. We also argue that the courts

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<sup>2</sup> We do, however, make references to earlier contributions, when we consider them necessary for understanding the current state of the literature.

frequently play an important role in the design of the budget, and we present some empirical evidence that suggests this is a key side of budget institutions to account for when trying to explain fiscal balances.

It is important to note that these three potential determinants of fiscal choices—opportunistic motives, distributional conflicts, and budget institutions—not only are not mutually exclusive, but may also reinforce each other. For instance, distributive conflicts between groups of voters affect fiscal choices partly because officials face opportunistic incentives to satisfy their constituencies.

The paper proceeds as follows. Section 2 reviews the theory and evidence on how the opportunistic incentives faced by policymakers determine fiscal policy. Section 3 presents the contributions related to conflicts between voters or politicians with heterogeneous preferences. The role of budget institutions is discussed in Section 4. Section 5 concludes.

## **2. The Fiscal Choices of Opportunistic Policymakers**

Early theories of fiscal choices based on political considerations highlight the manipulation of government expenditures by policymakers trying to get re-elected (for instance, Buchanan and Wagner, 1977). The basic argument is that voters value public spending but consistently underestimate its costs in terms of the tax burden, especially if those costs are postponed. Thus, voters support policymakers who provide high levels of deficit-financed expenditures, and oust incumbents who are fiscally conservative. This generates incentives for fiscal irresponsibility. It also generates asymmetric stabilization policies, as policymakers are willing to run deficits to fight a recession but are not willing to run surpluses in good times.

A closely related argument has been made by the literature on political business cycles (Nordhaus, 1975), where the opportunistic manipulation of economic policy is tied to election times. Individuals are assumed to vote on the basis of recent macroeconomic outcomes, and public spending increases and tax cuts are assumed to be expansionary. Policymakers then run deficits before elections to stimulate the economy. Elections are followed by expenditure cuts engineered to “cool down” the economy.

Three key elements are necessary for fiscal deficits to result from the opportunistic behavior of policymakers. First, policymakers must be interested in garnering votes for themselves or their parties, and must be willing to tilt economic policy to achieve that objective.

Opportunistic policymakers, as opposed to benevolent ones, are then pivotal to this approach.<sup>3</sup> Second, voters must value public spending, either because of the direct effect of government programs or because of expansionary consequences or spending hikes. Finally, voters must be characterized by “fiscal illusion,” in the sense of consistently underestimating the future costs of current spending programs.

This early literature has been criticized because of the assumption that voters make consistent mistakes (Alesina and Perotti, 1995; Drazen, 2000). The notion of fiscal illusion implies not only that voters cannot fully understand the government budget, but also that they are repeatedly fooled by politicians. The opportunistic political business cycles literature, for instance, exhibits the unsatisfactory feature that voters who have gone through one electoral cycle do not learn from previous experience that pre-election expansions will be followed by contractions. As a result, expansions repeatedly lead voters to support the incumbent, even though there is every reason to expect that they will be followed by a period of poor macroeconomic performance.

Over the last decade, the literature has found explanations as to why perfectly rational voters would be led by opportunistic deficits to vote for the incumbent. Rogoff (1990) and Rogoff and Sibert (1988) put forward the basic argument: the cost of government programs depends on how competent an official is, and voters have only imperfect information about the competence level of each politician. Voters then extract information about the competence of an incumbent running for reelection from his past fiscal choices. An incumbent who has provided more government programs is inferred to be more competent, and is thus supported by voters. This creates incentives for politicians to run deficits to finance larger expenditures.

One additional ingredient is necessary for this argument to explain the rational manipulation of fiscal deficits: voters must be unable to observe all the details of the budget. If they knew the cost of all projects undertaken by the government, they would perfectly infer from this knowledge the incumbent’s competence. Rogoff’s (1990) assumption is that voters observe only part of the projects undertaken by the government (“visible” expenditures), while Shi and Svensson (2006) show that opportunistic deficits may also arise if voters observe all government

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<sup>3</sup> By opportunistic policymakers, we mean those whose behavior is partly determined by an interest in influencing voters in their favor. By contrast, benevolent policymakers try to maximize welfare, which may be defined in a variety of ways. There may also be conflicts between policymakers who are benevolent but have different views on the “right” definition of welfare (as in models of partisan economic policy).

programs, but at least some individuals are not informed about the fiscal balance. In any of these scenarios, the accumulation of debt that arises from the opportunistic behavior of politicians depends on how transparent the budget is: less transparency (or, more “unobservability”) leads to larger opportunistic deficits (Alt and Lassen, 2006).<sup>4</sup> The ability of voters to understand the government’s budget depends on factors such as the government’s accounting practices, media development, and the sophistication of voters.

Two empirical implications arise from this literature. First, debt accumulation should be larger in contexts with less budget transparency. Second, electoral periods could be times of high public expenditures and deficits, but only in contexts where fiscal outcomes cannot be transparently observed by voters. Some empirical evidence seems to support these predictions, and we turn now to discussing that evidence.

In terms of the relationship between budget transparency and fiscal discipline, Alt and Lassen (2006) construct an index of fiscal transparency for 19 OECD countries during the 1990s, using survey responses from those countries’ budget directors. They study whether the transparency index is systematically related to the levels of deficit and debt in those countries. Their findings suggest that more transparency leads to lower deficits and debt levels, even after controlling for a variety of political and economic factors, and treating transparency as potentially endogenous to fiscal outcomes.

Other studies analyze the effect of budget institutions on debt accumulation.<sup>5</sup> Though not restricted to fiscal transparency, measures of the quality of budget institutions do account for the transparency of procedures relating to both the drafting and the implementation of the budget. For the case of Latin America, Alesina et al. (1999) and Stein et al. (1998) use an index of budget institutions that, besides measuring other important characteristics of the budgetary process, captures transparency by considering the ability of the government to acquire debt through decentralized agencies. They study the relationship between budget institutions and the government’s deficit for 20 Latin American countries during the 1980s and early 1990s, and find that better budget institutions have been related to lower deficits. Similar findings are reported by

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<sup>4</sup> Although Rogoff’s and Shi and Svensson’s models explain opportunistic deficits only during election times, this class of models can be used to explain opportunistic debt accumulation even outside electoral periods. In Alt and Lassen’s model, for instance, manipulation does not depend on the electoral cycle. Whether fiscal manipulation is present at all times or not will depend on the specific context, in particular on how far back voters look when deciding who to vote for.

<sup>5</sup> We review these studies more carefully in Section 4.



Von Hagen (1992) for eight European countries. His measure of the quality of institutions includes indicators of budget transparency, based on survey responses by budget officials, as well as on objective measures such as the existence of “special funds” in the budget.

A second body of relevant empirical literature relates to the opportunistic use of deficits during election times. This literature has examined the behavior of fiscal deficits and total expenditures prior to elections in large panels of countries. The main findings are not supportive of unconditional pre-electoral fiscal expansions. Persson and Tabellini (2003) find no pre-electoral change of government expenditure or surplus in a large sample of both developed and less developed economies, and a similar finding is reported by Brender and Drazen (2005a). However, electoral increases in spending and deficits are found for specific groups of countries. Schuknecht (1994) and Shi and Svensson (2006) find pre-electoral deteriorations of fiscal balances and increases of public expenditures in developing countries. Brender and Drazen (2005a) show that these findings reflect the experience of “new democracies” in the first few years after their transition to democratic regimes. They interpret this finding as an indication that political deficit cycles emerge only in contexts where voters and the media have not yet developed the ability to efficiently monitor fiscal policy. Shi and Svensson (2006) test a similar hypothesis by letting the effect of election years on fiscal outcomes vary with a measure of the share of voters who are well informed. They find the negative effect of election times on the deficit is weaker for higher shares of informed voters.<sup>6</sup>

In short, empirical evidence seems to support the main predictions of models based on opportunistic manipulation of fiscal policy. First, debt accumulation is related to the degree of transparency of the budget. Second, while there appear to be electoral increases in fiscal deficits and government expenditures, these are limited to countries where one could argue that voters are less successful in monitoring fiscal outcomes.

### ***2.1 Do Voters Like High-Spending Governments?***

While the empirical literature is supportive of the main predictions of models of fiscal policy based on opportunistic politicians as reviewed above, it is not so favorable toward the traditional assumption that voters prefer high-spending governments. The fiscal preferences of voters have been the subject of a recent body of research, which we now review.

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<sup>6</sup> Shi and Svensson (2006) also find that higher levels of corruption, which are related to higher rents from power to the incumbent, imply larger deficit increases in election years.

The most traditional view of the political effect of fiscal decisions has been that voters penalize fiscal adjustments, either because they are contractionary or because voters derive utility from high expected levels of government spending. Recent empirical findings suggest both that fiscal adjustments are not necessarily contractionary and that incumbents who have adopted loose fiscal policies do not receive greater voter support than fiscally conservative incumbents. If anything, the opposite seems true.

Alesina et al. (1998) examine the behavior of various macroeconomic indicators before, during, and after episodes of fiscal adjustment in 19 OECD countries during the 1960-1995 period. They find that whether or not tight fiscal policies are contractionary depends in turn on whether the adjustment is successful in achieving a persistent deficit reduction. Successful episodes of fiscal adjustment are not followed by deteriorations of the macroeconomic environment, whereas unsuccessful episodes frequently are. A related finding is reported by Gupta et al. (2003), who study a group of 39 low-income countries during the 1990s and show that strong fiscal balances are associated with high growth, even in the short run.

Interestingly, the success of an episode of fiscal adjustment depends on the composition of the adjustment, as well as on the initial level of debt. The effect of the composition has been studied by Alesina et al. (1998) for OECD countries, and by Gupta et al. (2004) for a group of 29 developing countries with IMF-supported programs during the 1990s. These studies find that adjustments based on expenditure contractions—mainly reductions of transfers and wage payments—are successful; those relying on tax increases are contractionary and fail to achieve persistent deficit reductions. Moreover, fiscal adjustments are more likely to succeed if the initial level of debt is high, a result that is consistent with the models of delayed adjustment we review below.

Findings regarding the fiscal preferences of voters are no less surprising. Based on election outcomes and opinion polls for 19 OECD countries, Alesina et al. (1998) find that governments that follow tight policies are no more likely to be replaced than others, nor do they lose popularity. If anything, the opposite holds: after sharp fiscal adjustments based mostly on current spending cuts, the probability that an incumbent remains in power increases. Similarly, various country studies for both developed and developing countries show that the share of votes received by the incumbent's party decreases with the level of government spending and/or the fiscal deficit observed before the election. Findings in this direction are reported by Eslava

(2006) and Drazen and Eslava (2005) for Colombia, Brender (2003) for Israel, and Peltzman (1992) for the United States.

Voters' fiscal conservatism, however, is not independent of the composition of government spending. Using data on the elections of mayors in Israel, Brender (2003) finds that, although voters penalize election-year increases in deficits, they reward high expenditure in development projects. Eslava (2006) and Drazen and Eslava (2005) show that the share of votes received by an incumbent party in Colombian local elections increases with capital expenditures (including development projects) observed before the election, even though it decreases with the fiscal deficit. Indirect evidence along the same lines is provided by several studies on pre-electoral changes in the composition of government spending, which are likely to reflect incumbents' beliefs about the political effects of their fiscal choices. Schuknecht (1994) finds that, prior to elections, capital expenditures rise as a share of both GDP and overall expenditure in his sample of 35 developing countries. Kneebone and McKenzie (2001) find no pre-electoral increases in aggregate spending for Canadian provinces, but do find that spending in social services, industrial development, and health actually increase before elections. Very similar findings are reported for Mexico by González (2002), who also finds that other categories of spending, such as current transfers, contract prior to elections. Drazen and Eslava (2005) for Colombia and Khemani (2004) for India, find that, local government expenditures shift from current categories of spending toward investment categories before the elections. Veiga (2004) reports that pre-electoral increases in government spending in Portuguese municipalities are concentrated among some specific categories of infrastructure development.

It is also the case that voters' opposition to deficits depends on factors that can be related to their ability to monitor fiscal choices. In Brender's (2003) study, the negative effect of deficits on incumbents' re-election probabilities became evident only in the latter part of his sample period, after the adoption of modern accounting practices and a greater media effort to monitor fiscal policy. Brender and Drazen (2005b), using a large panel of countries, find that deficits over the previous three years reduce an incumbent's re-election chances, but only in established democracies. Moreover, we have already reviewed evidence showing that electoral deficits arise only in the context of relatively young democracies, suggesting that politicians in more developed political environments realize increased deficits will not be rewarded.

This evidence suggests that, contrary to conventional wisdom, voters do not prefer high-spending governments. They show preferences for high spending on specific items, such as development and infrastructure projects, but seem to be quite aware of the costs of overall high spending. In particular, they support governments that engage in successful and stringent fiscal adjustments when these are necessary, and penalize governments that run large deficits. When the government's fiscal choices are not transparent to the public, however, opportunistic incentives may lead to high deficits because highly valued spending on development projects may be paid for by acquiring debt that is not observed by voters.

Having reviewed the theory and evidence behind opportunistic explanations of fiscal deficits, we now turn to the possibility of distributional reasons explaining the behavior of budget balances. This alternative branch of literature has important implications for the relationship between the political environment—including the electoral system—and fiscal outcomes. We also summarize recently collected evidence on the empirical validity of these implications.

### **3. Distributional Conflicts, Electoral Systems, and Fiscal Policy**

In this section, we review theories regarding that explain high levels of fiscal deficits as the result of distributional conflicts between policymakers or between groups of voters. Two lines of research are considered. First, we discuss the strategic use of deficits by policymakers who fear being replaced by someone with different fiscal preferences. We then review explanations of budget deficits based on the fight of groups of voters with conflicting interests for a common pool of government revenues. We include in this discussion the argument that distributive conflicts may explain delays in undertaking necessary fiscal adjustments.

#### ***3.1 Strategic Deficits***

If different politicians have potentially different fiscal preferences—for instance, reflecting the heterogeneous preferences of voters in a citizen-candidate framework—incumbent officials may have incentives to run deficits to tie the hands of their successors. The argument is based on the fact that current budget deficits impose costs in terms of either lower future public spending or higher future tax collections.

Alesina and Tabellini (1990) present a model where politicians have heterogeneous preferences in terms of the composition of public spending. An incumbent who faces the risk of being replaced by someone of the opposing “party” has incentives to run a deficit and spend the

resources on the types of public goods he prefers. If the incumbent is in fact replaced by an opponent, the cost of the deficit (a future spending contraction) will fall disproportionately on the goods the current incumbent values less. The model has three basic implications: 1) officials from different parties, who are assumed to have heterogeneous preferences, spend on different types of public goods, 2) budget deficits increase with the probability that the government will be replaced, and 3) deficits increase with the level of polarization between the different parties, since greater polarization implies larger differences between the preferences of the incumbent and those of his potential replacement.

A related argument arises when politicians differ in their preferences regarding the optimal size of the government (Persson and Svensson, 1989). If faced with a large probability of being replaced in office, low-spending incumbents may run deficits (mainly by cutting taxes), thereby increasing government indebtedness in order to force their successors into low expenditure levels. High-spending incumbents would do the opposite. The model thus predicts that conservative incumbents will run deficits when they expect to be replaced, while liberal incumbents will run surpluses in similar circumstances. The differences between the choices of parties with diverging ideologies should be starker in more polarized contexts, where the preferences of opposing parties are further apart.

The last decade has witnessed several attempts to test the empirical relevance of the theoretical arguments outlined above. There are studies that examine large samples of countries and studies that examine U.S. states; neither has found consistent evidence in favor of either model of strategic use of deficits. Lambertini (2003), for instance, studies two large data panels: U.S. states between 1960 and 1995, and a sample of 16 OECD countries for the 1960-1992 period.<sup>7</sup> She does not find any significant effect of the probability of being re-elected on the budget surplus, nor differences between different parties in terms of either defense spending or budget surpluses. Similar findings are reported for samples of industrial countries by Grilli et al. (1991) and by Franzese (2000), and for U.S. states by Crain and Tollison (1993).

It has been recently argued, however, that the lack of evidence in support of strategic models of the deficit is due to the use of data on countries or states faced with widely different

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<sup>7</sup> For the case of U.S. states, the study uses data from opinion polls to measure the probability an incumbent assigns to being replaced. For OECD countries, only actual electoral outcomes are available. The author follows a two-step estimation procedure when using this sample, where the first stage fits a probit model for the probability of re-election.

political, legal, and economic environments (Sutter, 2003; Pettersson-Lidbom, 2001). As it is difficult to appropriately control for these sources of variability, attempts to discover strategic patterns in the deficit data may be affected by the presence of opposing effects not accounted for. Pettersson-Lidbom (2001) tries to overcome this difficulty by examining the patterns of debt accumulation by Swedish local governments between 1974 and 1994. The advantage of these data lies in the fact that Swedish localities are all subject to the same institutional and constitutional framework.<sup>8</sup> The study uses a two-stage procedure, where the first stage fits a probit model on the probability of being defeated in the next election, and introduces several controls. The author finds evidence that supports the Persson-Svensson theory of strategic debts: the amount of debt accumulated by a right-wing government increases with its probability of electoral defeat, while the opposite is true for left-wing governments.<sup>9</sup> His finding, in turn, contradicts the Alesina-Tabellini model, which predicts that debt accumulation by *any* government should increase with the probability of defeat.

An interesting experimental study also presents evidence that the strategic use of deficits may be masked when widely different subjects are studied. Sutter's (2003) experiment presents pairs of individuals with the decision to allocate a given budget over two time periods, and over two goods in each period. Choices are made by one of the two individuals, and each faces a positive probability in each period of being the one making the choices. The experiment assigns payoffs to each combination of the two goods, defining the preferences of the two agents over the allocation of the budget, as in Alesina and Tabellini (1990). Greater polarization can thus be defined as more heterogeneous preferences between the two individuals. The author presents each pair of individuals with the same experiment in several trials, varying the level of polarization and the probability of "re-electing" the first period decisionmaker in each trial. He finds that spending in the first period (and thus the "deficit") rises with a higher degree of polarization and a lower probability of re-election, supporting the Alesina-Tabellini model. However, when the experiment is conducted with different pairs of individuals and with only one trial for each pair, there is no systematic effect on the deficit of letting polarization and the probability of re-election vary across pairs. The author concludes that, while deficits are indeed

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<sup>8</sup> In contrast, budget institutions in the United States are largely state-specific.

<sup>9</sup> Pettersson-Lidbom uses a two-stage procedure, where the first stage fits a probit model on the probability of being defeated in the next election, and introduces several controls.

used strategically, this phenomenon is hard to identify in the data if other sources of heterogeneity are not appropriately controlled for.

### ***3.2 Distributive Conflicts between Groups of Voters***

Heterogeneous interests across groups of voters have been put forward as a reason for potentially pervasive deficits. The basic argument was first presented by Weingast et al. (1981) when explaining the fiscal consequences of having geographically disperse interests influence the budget. The problem arises if legislators making budget decisions represent geographic units interested in different government-funded projects, with government revenues being centralized. The benefits of a given government project are then concentrated geographically, while its costs are shared by all districts. The consequence is that each district internalizes the full benefit of specific projects, but only part of the cost, and this results in over-provision of government projects. The size of the budget, and thus the deficit, increases with the number of districts represented in the government, termed government “fragmentation.”

Similar common-pool problems have been captured by more recent theoretical developments, and have been used to explain the procyclicality of fiscal policy in less developed economies. Tornell and Lane (1998) and Talvi and Végh (1996, 2005) argue that the additional fiscal resources available during booms generate a more intense fight among the different groups for the common pool of resources (a “voracity effect”). As a result, government deficits grow in good times. Alesina and Tabellini (2005), meanwhile, relate procyclicality to voters’ efforts to avoid having the extra revenues generated by the boom be handed out to interest groups fighting for those resources (or appropriated by the government). A central assumption is that there are two fiscal outcomes voters cannot perfectly monitor: the amount of “rents” captured by the incumbent or the interest groups, and the amount of fiscal resources generated by the boom. When a boom is observed, therefore, voters demand more public spending on productive projects to restrain the incumbent’s ability to appropriate any extra resources. Voters’ demands create a deficit bias during good times.

Why would these models be particularly appropriate for less-developed economies (which are the ones exhibiting procyclical fiscal policy)? Two reasons are put forward. First, the greater volatility of the macroeconomic environment exhibited by those economies implies that booms are associated with particularly large and short-lived extra revenues. These characteristics imply large incentives to fight for those extra resources (Talvi and Vegh, 1996). Second, the

model in Alesina and Tabellini (2005) suggests that the procyclicality of the deficit is negatively associated with the budget's transparency, and is positively associated with the level of corruption. In a sample of 87 countries between 1960 and 1999, the authors show that procyclicality and corruption are indeed positively correlated, but only for democracies. These findings are consistent with their theoretical arguments. It remains to be shown that less developed economies have less transparent budget institutions, or that developing economies only exhibit procyclical fiscal policy when voters face great difficulties understanding the budget.

Distributional conflicts have also been used to explain why fiscal adjustments are not adopted as soon as they are recognized as being necessary. Alesina and Drazen (1991) have argued that, when the costs of fiscal adjustments are unevenly distributed across interest groups, a "war of attrition" may emerge. Each group has incentives to reject assuming the costs of the reform, expecting that some other group will concede first. The costs of further delay increase over time, because delay leads to greater debt accumulation and thus higher distortionary taxation in the future. Adjustment is finally undertaken when, for one group, those additional costs of further delaying exceed the benefits of waiting for someone else to concede.

Velasco (2000) explains delayed adjustment from a common-pool problem similar to the arguments discussed above (Weingast et al., 1981; Tornell and Lane, 1998). The argument is that the distortionary costs of taxation increase with the level of debt. The fight of different groups for the common pool of resources thus generates expenditures in excess of revenues only when debt is low. Debt accumulates up to the point where each group perceives that a new deficit will imply higher costs than benefits, even if the tax burden is shared by all groups. Adjustment is thus delayed until that moment.

As with the other arguments reviewed above, these models of delayed adjustment imply that the probability of an adjustment at a given point in time decreases with the level of fragmentation, and increases with the degree of political cohesion. The reason is that greater fragmentation implies more distributional conflicts. These models also imply that adjustment is more likely the higher the initial level of debt, as higher indebtedness moves the costs of further delay closer to the critical point where interest groups are not willing to wait any longer.

### ***3.3 Empirical Evidence***



The literature that explains fiscal deficits based on distributional conflicts has several testable implications. First, the probability of a fiscal adjustment should increase with the initial level of debt. Second, debt accumulation should be positively related with the number of groups or districts that are effectively represented in the process of choosing the budget. Government fragmentation should thus generate higher deficits. It should also lead to more procyclical fiscal policy, to the extent that distributional conflicts have been suggested as an explanation of procyclical fiscal outcomes. Furthermore, greater fragmentation should also lead to a fiscal adjustment being less likely.

On the other hand, models of the strategic use of deficits suggest that more polarization and greater government turnover should generate larger deficits, possibly contingent upon the ideological orientation of the government. An additional implication is that the accumulation of debt may be related to the ideology of the party in power.

A large body of empirical evidence has emerged recently to test these implications. But, how can one measure the related concepts of fragmentation and polarization? Fragmentation has been suggested to be positively related to the number of seats representing each district in the legislature, the effective number of parties participating in the government, and the lack of power of the government over the legislature (Stein et al., 1998). Coalition governments and proportional representation systems are also related to more fragmentation. Polarization, on the other hand, is usually measured in terms of the frequency of change of the party in power, and parliamentary systems are considered more polarized than presidential ones. It is not clear, however, that measures of “fragmentation” are not also capturing “polarization,” and vice versa. Both concepts refer to the process of fiscal policymaking being more subject to distributive conflicts.

To summarize, the findings seem to generally confirm that electoral systems that result in more political cohesion and stability generate more fiscal discipline. The results are less supportive of a systematic relationship between left-wing or right-wing parties and greater debt accumulation.

For instance, Stein et al. (1998) examine the relationship between different electoral systems and fiscal performance in a sample of 26 Latin American countries for 1990-1995. The degree of fragmentation of electoral systems is measured using district magnitude (the number of seats each district holds in the legislature) and the number of effective parties in the legislature

(number of parties weighted by their vote share). The authors also measure the power of the government over the legislature by the number of legislative seats held by the government's party. Results suggest that electoral systems with more proportionality and a larger number of parties, as well as those with less government power over the legislature, produce larger governments, larger deficits, and more procyclical fiscal policies.

Amorim and Borsani (2004), in turn, examine the influence of various political characteristics on public spending and the fiscal balance in a sample of 10 Latin American countries for 1980-1998. As independent variables, they include the ideology of the government (a weighted mean of the ideology of the different parties in the cabinet), an election-time dummy, the proportion of seats held by the president's party in the legislature, a measure of average ministerial tenure, and the degree of centralization of budget institutions. Controlling for various economic outcomes, the authors find that presidents with strong legislative support and stable ministers, and those leaning to the right, have a negative impact on public spending and a positive impact on the fiscal balance. Results also indicate that the proximity of elections deteriorates the fiscal balance but does not increase spending.

Mulas-Granados (2003) studies the political and economic determinants of the composition of fiscal consolidations in the European Union between 1970 and 2001. He concentrates on episodes of fiscal adjustment and analyzes how fiscal outcomes relate to the percentage of cabinet seats held by left-wing parties, the number of parties in the legislature, the number of spending ministers, months before the next election, initial debt, unemployment, and inflation. The findings indicate that more fragmented governments spend more, especially on transfers, and if forced to adjust, follow revenue-based strategies. Left-wing governments choose larger levels of spending and revenues, and they spend more on transfers, public investment, and the wage bill. However, left-wing governments do not necessarily generate larger deficits.

In terms of the importance of the initial level of debt, which according to models of delayed stabilization should increase the probability of an adjustment, the evidence does not seem conclusive. Stein et al. (1998) find that debt accumulation in a given period actually increases with the initial level of debt. Of course, the predictions of models of delayed adjustment relate to the probability of an adjustment being undertaken, not to the level of deficit.<sup>10</sup> However, Mulas-Granados (2003) also finds that deficits increase with the initial level

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<sup>10</sup> The effect on the deficit could be positive or negative. To the extent that larger debt increases the probability of an

of debt, even though his sample is restricted to episodes of fiscal consolidation. More favorable results for the implications of delayed stabilization models are found in Alesina et al. (1998) and Gupta (2004). They find that, conditional on a fiscal stabilization being under way, the probability that the adjustment is successful increases with the initial level of debt.<sup>11</sup> It is hard to come to definite conclusions, not only because the studies reach apparently contradicting results, but also because they ask different questions. Furthermore, none of these studies directly examines the relationship between the probability of an adjustment and the initial level of debt. This is clearly an open avenue for research; below we report some exercises in which we study the relationship between the probability of a fiscal adjustment being undertaken and the initial level of debt, and find suggestive evidence backing the claims of models of delayed stabilization.

In short, the studies reviewed above seem to support the hypotheses that more fragmented governments and electoral systems lead to more debt accumulation. They do not send, however, a clear message regarding the role of the government's ideology and initial conditions.

The pieces of empirical evidence on the importance of the political channels reviewed in this section and the previous one refer to different sub-samples of countries and time periods, use different controls and estimation techniques, and, most importantly, test different hypotheses. It is thus difficult to judge whether diverging results arise from heterogeneous behavior across different types of countries, or as a consequence of different methodological approaches. This problem suggests the need for simultaneously incorporating the various economic and political determinants of debt accumulation suggested by the theory, and covering a more comprehensive set of countries. Such a strategy has its own limitations and, at the end of the day, may result in even less definite answers. It faces, at the very least, the difficulty of appropriately controlling for the additional sources of variability that arise when putting together a more heterogeneous sample, the difficulty of collecting the data, and the difficulty of devising the most appropriate estimation technique to address problems such as the potential endogeneity of some characteristics of political systems. However, the discussion above suggests that such an effort could contribute to our understanding of the role of electoral and political institutions in shaping fiscal policy. We offer here some new evidence suggesting that one may obtain interesting

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adjustment, it should lead to lower deficits. However, conditional on the adjustment not being undertaken, there may be a positive correlation between initial debt and deficit, simply reflecting the persistence of deficits or the effect of interest payments (if the dependent variable is total deficit, as opposed to primary deficit).

<sup>11</sup> "Success" is defined in terms of the fiscal adjustment being sustained over a sufficiently large period of time.

insights by simultaneously examining different hypotheses from the political economy literature, and from using data from a more comprehensive set of countries.

The different hypotheses reviewed to this point suggest that deficits should be positively correlated with the degree of fragmentation and/or polarization in the government, and negatively correlated with the extent to which the public is able to monitor fiscal policy. We analyze the empirical relevance of these two channels by estimating a linear equation where the government's deficit depends on measures of fragmentation and accountability, as well as a series of controls suggested by the different empirical contributions mentioned above. The equation to estimate can be written as:

$$def_{it} = \alpha + \beta * fragm_{it} + \gamma * account_{it} + \delta * x_{it} + \varepsilon_{it} \quad (1)$$

where  $def_{it}$  refers to country's  $i$  fiscal deficit as a percentage of GDP in year  $t$ ,  $fragm_{it}$  is a measure of the level of fragmentation or polarization in the fiscal policymaking process for that country and year,  $account_{it}$  is an indicator of the degree to which the public is able to monitor the government's fiscal choices (we discuss both  $fragm$  and  $account$  at more length below),  $x_{it}$  is a vector of controls, and  $\varepsilon_{it}$  is a random error. Our controls include GDP growth, the fraction of the population below 15 years of age or above 64, and exports plus imports as a fraction of GDP. The initial level of the government's debt is also included as a control for the persistence of deficits and for interest payments, since our dependent variable is the total, rather than the primary deficit; it is important to remember that the theory reviewed does not make predictions about the relationship between initial debt and the *deficit*. We estimate this equation for a large set of 132 countries, for which we have annual data between 1996 and 2003.<sup>12</sup> We cannot estimate fixed effects, as our measures of fragmentation and accountability, explained below, have very limited or no variation over time. We run simple OLS specifications, with robust standard errors. We refer the reader to the Appendix for more detailed information on the data used.

We use, alternatively, two different indicators of fragmentation. The first is a Herfindahl-type index for the fraction of seats held by the different parties represented in the legislature; the

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<sup>12</sup> Our sample covers countries from all regions. Approximately 20 percent of our observations correspond to OECD countries, 20 percent to Latin America, 30 percent to Africa, 15 percent to Asia, and the rest to Eastern Europe. The sample is not balanced, as we have missing values for some countries, but for most we have observations for every year.

index varies between 0 and 1, and it increases with the level of concentration of seats (it decreases with the level of fragmentation). According to the theories reviewed above, thus, this measure should be negatively correlated with our dependent variable. Our second measure of fragmentation is a dummy variable taking the value of 1 if the political system is parliamentary, or if the president is elected by an assembly, and 0 if there is a president elected by the public. As mentioned above, parliamentary systems should result in higher deficits because responsibility for fiscal choices is less concentrated.

Our measure of the ability of voters to monitor policy is the “Voice and accountability” variable from the World Bank’s Governance Indicators. This is an index measuring, among other elements, political rights, press freedom and press development. We have re-scaled the index to vary between 0 and 1, with larger values representing better accountability.

Table 1 presents summary statistics for our regression variables, including the means and standard deviations of variables that are continuous, and the frequency of ones for dummy variables. Sources and descriptions of all variables can be found in the Appendix.

Our results from estimating Equation (1) are presented in Table 2.<sup>13</sup> We first show the results of including separately our measures of fragmentation and accountability—Columns (1)-(3)—as a benchmark for comparison of the results from our joint specification. Consistent with the hypotheses reviewed above, we find that the accountability index has a negative impact on the deficit while the effect of the parliamentary system dummy is positive. There is no significant effect of the Congress Herfindahl index. We will see that the magnitude and significance of these effects show interesting differences with what we obtain when considering accountability and fragmentation in a simultaneous manner.

Results from estimating Equation (1) with fragmentation and accountability considered simultaneously are reported in Columns (4) and (5). Both appear as statistically significant determinants of the deficit, independently of whether the Congress Herfindahl Index or the Parliamentary System dummy is used to measure fragmentation. All regressors show the expected signs. An increase of one standard deviation in the Congress Herfindahl index leads to a decrease in the deficit of approximately 0.35 percent of GDP, an increase of one standard

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<sup>13</sup> All the results reported in tables (2), (3), and (4) are robust to controlling for an electoral effect dummy, which takes the value of 1 in election years. We include the electoral dummy both as an individual effect and interacted with the accountability index. We do not find significant effects of the electoral dummy in any specification. Those results are available from the author upon request.

deviation in the accountability index reduces deficits by more than 1 percent of GDP, and parliamentary systems exhibit deficits that are 2.4 percent of GDP larger than those in presidential systems. All of these are economically significant effects; to appreciate their size, note that the mean value of the deficit in our sample is 3.15 percent of GDP. Note also that the size of all of these effects is much larger than we estimated separately in the regressions reported in Columns (1)-(3), and we are now able to identify a statistically significant effect of the Congress Herfindahl Index.

Two important lessons may be drawn from these simple estimations for future empirical work. First, our results corroborate the importance of some of the political determinants of fiscal policy suggested by the theories reviewed. We would conclude, on the one hand, that common-pool effects indeed imply that greater political fragmentation may lead to a deterioration of fiscal balances. Our findings are also consistent with the idea that voters are “fiscal conservatives” and that this generates pressure for the government to refrain from running large deficits in contexts where voters are well-informed enough to follow fiscal policy.

Second, our results highlight the importance of simultaneously considering the different political mechanisms that may affect fiscal policy. In particular, we find that because of a positive correlation between fragmentation and accountability,<sup>14</sup> which are expected to affect the deficit with opposite signs, estimations focusing solely on one or the other channel may lead to downward-biased coefficients due to an omitted variable bias.

We also estimate a model of the probability of a fiscal adjustment as a function of the same political and institutional features examined above, and the initial level of debt.<sup>15</sup> The latter is included because models of delayed adjustment suggest that the delay is smaller when initial debt, and thus the distortionary costs it generates, are high. We measure adjustment through a dummy variable,  $adj_{it}$ , taking the value of 1 if the central government’s surplus in country  $i$  increases in year  $t$  at least 1.5 points as a percentage of GDP. The model can be written as:

$$\text{Prob}(adj_{it}=1) = \alpha + \chi * \text{debt}_{i,t-1} + \beta * \text{fragm}_{it} + \gamma * \text{account}_{it} + \delta * \mathbf{x}_{it} + \varepsilon_{it} \quad (2)$$

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<sup>14</sup> The correlation coefficient with the Accountability index is 0.53 for the Parliamentary System dummy and -0.27 for the Congress Herfindahl index (which is negatively related with fragmentation). This is consistent with what we would have expected: the greater importance of the opposition in more fragmented political systems implies greater accountability of the government.

<sup>15</sup> Initial debt was also included in specifications (1) and (2), but as a control for interest payments rather than as a variable of direct interest.

Table 3 reports our results from estimating equation (2), reporting marginal effects evaluated at the means of independent variables. Our results clearly indicate that the initial level of debt is a key determinant of the probability of fiscal adjustment. We find that the higher the initial debt, the higher the probability that a fiscal adjustment is undertaken. This result is consistent across all specifications. A one standard deviation increase in initial debt from its mean leads to an increase of approximately 5 percent in the probability of an adjustment. The results also seem to suggest that none of the other political or institutional variables under consideration have significant effects on the probability of an adjustment.

## **4. Budget Institutions**

The literature reviewed so far highlights the motivations behind fiscal choices. The way those motivations end up shaping debt accumulation will depend on the constraints policymakers face when deciding on the budget. Some of those constraints relate to the rules that govern the drafting, approval, and implementation of the budget. In recent years there has been a surge of research devoted to budget institutions and their effect on fiscal discipline, which we now discuss.

Budgetary institutions have been defined as the set of rules, procedures, and practices according to which budgets are crafted (as in Alesina et al., 1999). Two sets of such rules are generally considered: numerical targets for the budget and procedural rules. Among the latter, rules referring to the three different stages of the budgetary process (drafting, approval, and implementation) need to be considered.

### **4.1 Numerical Targets**

Numerical targets for the budget may take different forms, with balanced budget constraints being the most stringent type of such rules.<sup>16</sup> The discussion over the optimality of balanced-budget rules is far from settled. If effectively enforced, these rules should certainly lead to more fiscal discipline. However, they have the cost of impeding tax-smoothing and counter-cyclical fiscal activism, and they are frequently hard to enforce.

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<sup>16</sup> Actual numerical target rules differ substantially, even across states within the same country. For the United States, for instance, Poterba (1994, 1996) reports that in 44 states the governor must submit a balanced budget, but only in 37 must the budget enacted by the state legislature also be balanced. Moreover, only 24 states have explicit prohibitions to carry forward deficits from one year to the next, so that in the remaining states there may be some borrowing to finance an unexpected deficit. In some states, the deficit must be eliminated in the following fiscal year.

Poterba (1996) reviews empirical evidence on the effectiveness of alternative numerical targets and other deficit constraints in the U.S. states. Findings of different studies seem to indicate that stringent balanced-budget requirements may significantly reduce government spending. For instance, Poterba (1994) studies tax and spending responses to fiscal shocks in the U.S. states, taking into account differences in budget rules across the states. The author classifies the states into those with “weak” and those with “strong” anti-deficit rules, depending on whether they have no-deficit-carryover rules and on the strength of expenditure and tax limitations. His results suggest that the spending adjustment generated by a given deficit shock in a state with strong anti-deficit rules more than doubles the response observed in a state with weak rules.

#### ***4.2 Procedural Rules***

The second important set of budgetary institutions, and the one that has been most studied for countries other than the United States, involves the procedural rules that govern the design, voting, and implementation of the budget. Alesina and Perotti (1999) and later studies classify such rules on a “hierarchical” versus “collegial” scale. More collegial rules are those that allow more representation of different interests in the budgetary process. The advantage of greater representation is expected to come at the cost of overspending problems that, as discussed above, emerge in the process of aggregating different interests about the distribution of the budget.

Institutions can be more or less hierarchical at different stages of the budget process. In the drafting of the budget, most studies consider as hierarchical institutions that limit the power of spending ministers and centralize drafting power on the treasury minister. The idea is that each spending minister is interested in specific types of government programs; because of the same common-pool problems already discussed, the “fight” for resources between spending ministers is likely to lead to overspending. At the voting stage, meanwhile, more hierarchical institutions are those that limit the legislature’s abilities to modify the budget size proposed by the government. Similar to restrictions on the role of spending ministers at the drafting stage, these limits are expected to ameliorate the common-pool problem, since legislators represent disperse interests. Finally, at the implementation stage, more hierarchical institutions impose limits on Congress’ ability to impose ex-post amendments to the size of the budget and/or allow the government to cut (but not to expand) the budget after it has been approved by Congress.



More hierarchical procedural rules are likely to increase fiscal discipline, but their effectiveness depends on how transparent the budget is. Rules can frequently be circumvented by “creative accounting” (see, for instance, studies reviewed by Poterba, 1994), so the ability of the public and Congress to monitor and understand the budget is key to avoiding fiscal excesses. This is clearly linked to our previous discussion on voters’ fiscal preferences: while electoral control may restrict the incentives of the government and Congress to run large deficits, this is only possible if the public is able to monitor the budget. Budget transparency is usually measured by a variety of indicators capturing whether the budget is contained in a single document, whether there are independent audits, whether standard accounting practices govern the language used in the presentation of the budget, and whether there are requirements to justify and/or verify ex post the projections upon which the budget is based.

### ***4.3 Empirical Evidence***

Von Hagen (1992) studies the effect of procedural rules and transparency on fiscal outcomes for eight European countries. He constructs a comprehensive index of budget institutions based on both survey responses and formal budget rules. His findings suggest that more hierarchical and transparent institutions are indeed conducive to greater fiscal discipline. Alt and Lassen’s (2006) study, which analyses a more comprehensive set of OECD economies, also finds that greater transparency leads to lower deficits and debt.

Similar results have been found for Latin America and the Caribbean. Alesina et al. (1999) study the importance of budget institutions for 20 countries in Latin America and the Caribbean in the 1980s and early 1990s. They construct an index of budgetary institutions that accounts for the existence of numerical budget targets, the location of procedural rules on a hierarchical-collegial scale, and the abilities of governments to acquire debt through decentralized agencies (intended to capture lack of transparency). Countries with more stringent numerical targets, more hierarchical institutions, and more transparency exhibit higher values on the “budget institutions index.” The authors use the index to analyze the relationship between debt accumulation and budget institutions, controlling for a variety of economic indicators. Their findings indicate that countries that rank higher in terms of the index of budget institutions have also lower deficits. Stein et al. (1998) corroborate this finding, after controlling for the fragmentation of the electoral system. Their results indicate that both electoral systems and budget institutions have significant effects on fiscal performance.

#### ***4.4 The Role of the Courts***

After the budget is approved by Congress it is frequently subject, like any other law, to judicial review. The judiciary is thus also a potentially important player in the determination of fiscal policy. Although this institutional feature has received virtually no attention in the formal literature on the political economy of fiscal policy, it has become a key issue in many countries.<sup>17</sup> In Colombia, for instance, some authors have been depicting the Constitutional Court's decisions regarding laws on government spending and tax collection as a main obstacle to fiscal adjustment since the mid 1990s (for instance, Clavijo, 2001, 2004). We thus dedicate this section to reviewing some evidence on the role of courts in the determination of fiscal policy. We first illustrate the point by very briefly discussing the Colombian case, and then present some novel empirical evidence on how the involvement of the courts influences fiscal balances in Latin America. The purpose of this section is simply to call the reader's attention to the importance of this issue, and suggest it as a promising avenue for future research.

The logic of the Colombian debate surrounding the involvement of the Constitutional Court on fiscal choices is quite simple and, we would argue, enlightening for the discussion of the issue in a more general context. We have reviewed evidence showing that successful fiscal adjustments usually require spending cuts, especially on items such as transfers, social security contributions, and wage payments. As a result, the burden of fiscal adjustments frequently falls on the specific recipients of those transfers and payments. In Colombia, the Constitutional Court has often interpreted such spending cuts as violating the "acquired rights" of those groups of the population and has thus ruled many of the fiscal reforms approved by Congress as unconstitutional. A very important fraction of the laws passed by Congress with the purpose of alleviating the growing fiscal deficit has thus not made it through the constitutional revision.<sup>18</sup> Moreover, the Court's rulings have imposed important and detailed limitations on future reforms.<sup>19</sup>

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<sup>17</sup> The IDB's 2005 IPES, for instance, shows the important role the judiciary plays in the determination of economic policy. In the specific arena of fiscal choices, it is clear that the high courts have been an active veto player for many decisions on tax reform. See for instance, the studies conducted by Cárdenas, Lora, and Mercer-Blackman (2005) and Sousa (2005) as background for that IPES.

<sup>18</sup> In recent years, for instance, the Constitutional Court has ruled as unconstitutional parts of a variety of laws relating tax collection and government spending. These include a 2002 law imposing a 2-percent Value Added Tax on items previously exempted, a 2002 law reducing pensions, the wage raises for public employees included in the budget laws of 1999, 2000, and 2002.

<sup>19</sup> For instance, the Court has required a minimum annual increase of public wages no smaller than the previous year's CPI inflation rate. For a careful revision of several rulings of the Court regarding fiscal laws, see for instance

This specific debate reflects a much more general problem. As fiscal adjustments impose costs that fall disproportionately on specific groups of the population, they may be interpreted as violating the legal rights of those groups. Affected agents thus have incentives to organize and take legal action to impede the actual adoption of those measures. Although necessary fiscal adjustment is expected to generate larger benefits than costs, those benefits are widespread throughout society and the share received by each agent is both hard to quantify and relatively small; as a result, agents who gain from the adjustment rarely organize to defend it. Since the role of the courts is limited to ruling on legal challenges raised by organized groups, this collective action problem leads to an asymmetry that tends to block necessary fiscal adjustment. One may thus expect that a greater power of the courts regarding the final approval of the budget and fiscal laws may lead to larger deficits and/or delayed reform.

We now use information on 23 Latin American and Caribbean countries for the 1996-2003 period to test this hypothesis. The model we test is an extension of equation (1), estimated above for a much larger sample of countries, where we also control for the role of budget institutions.<sup>20</sup> We restrict the sample to Latin American countries to take advantage of data on the strength of the courts and on the quality of fiscal institutions, which we only have for this region. The downside is that we end up with a relatively small sample, so we view these results as only exploratory. Our model takes the form:

$$def_{it} = \alpha + \beta * fragm_{it} + \gamma * account_{it} + \rho * fisc\_rules_{it} + \sigma * courts_{it} + \delta * x_{it} + \varepsilon_{it} \quad (3)$$

As above,  $i$  is an index for the country and  $t$  an index for the year,  $def_{it}$  measures the deficit,  $fragm_{it}$  measures the level of fragmentation or polarization in fiscal policymaking, and  $account_{it}$  indicates the degree to which the public is able to monitor fiscal choices. As measures of fragmentation we continue using the Congress Herfindahl index used for the overall sample. The Parliamentary Index Dummy used above as an alternative measure of fragmentation does not exhibit variation over our sample, so we cannot include it. On the other hand, for the Latin American sample we have an indicator of whether states have authority over taxing, spending, or fiscal legislation, which we also use as a measure of fragmentation in fiscal choices (we call this

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Cuellar (2004) and Clavijo (2001, 2004).

<sup>20</sup> Our sample contains countries from South and Central America as well as the Caribbean. The sample is not balanced, due to the presence of missing values for some variables, but for most countries we either have information for all years or have at most two years missing.

measure the “Fiscal Federalism index”). Fiscal federalism is likely to lead to overspending to the extent that spending by the states is usually financed through transfers of tax revenues collected by the central government.

We also include in this model  $fisc\_rules_{it}$ , and  $courts_{it}$ . The former is an index that grows with the strength of quantitative limits on spending, revenues, or borrowing; it is a measure created by Filc and Scartascini (2005).<sup>21</sup> Meanwhile,  $courts_{it}$  measures the extent of judicial activism in the determination of fiscal policy. For definitions and sources, see the Appendix. Summary statistics of these variables for the sample of Latin American countries are presented in Table 4.

Table 5 presents the results of estimating equation (3) by OLS, with robust standard errors reported in parentheses. One note of caution is important here: the small number of observations may limit our ability to identify the effects of some regressors, and may also affect the robustness of some of our results (although the results we report are robust to a large set of alternative specifications within the same sample). The reader is thus warned to take these findings only as suggestive evidence.

Our focus in this section is on the effect of the involvement of the courts and of the quality of fiscal institutions. For both specifications reported, our results strongly support the hypotheses that the larger the role of the courts in the determination of fiscal policy, the larger the level of deficit. A one-standard-deviation increase in the index of judicial activism leads to an increase in the deficit of around 1.1 percent. We also find that numerical targets for the deficit play an important role: a one-standard-deviation increase in the index of quantitative limits to the budget is associated with a 1.1 percent contraction of the deficit. Our results on the Fiscal Rules index are consistent with results reported by Filc and Scartascini (2006), who find that higher values of the Fiscal Rules Index improve the government’s budget, both in a sample of Latin American countries and a more comprehensive sample of developing countries.

Consistent with the literature reviewed and with the results we report above, Table 5 reports a negative effect of the accountability index on the deficit. The effects of fragmentation, however, are less clear-cut than those obtained for the overall sample. The Herfindahl index does not show a significant effect, but the fiscal federalism measure affects the deficit significantly

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<sup>21</sup> Although the authors also construct measures of how hierarchical and transparent are budget institutions, we do not include them because we do not believe those effects can be meaningfully separated from the effects of cohesion and transparency already included in our main specification.

and with the expected sign: countries where states have authority over fiscal policy end up with deficits that are approximately 1 percent of GDP larger than those of centralized fiscal systems. The inconsistency between our two measures of fiscal federalism may simply reflect difficulties in identifying effects due to the small sample size and the consequent little variability of the Herfindahl index (compare, for instance the variability of this indicator in Table 4 with the much larger one reported for the overall sample); it could also be an actual indication that Congress fragmentation in Latin America is not an important determinant of fiscal results, but we tend to favor the former explanation, partly based on the findings by Stein et al. (1998) indicating that Congress fragmentation indeed leads to higher deficits in Latin America.

Consistent with our results for the overall sample, a model of the probability of adjustment rather than the level of deficit shows that in Latin America, adjustments are more likely when the initial debt is larger, but none of the other potential determinants included in our specification turn out to be significant.<sup>22</sup>

In sum, our results suggest that the degree of involvement of the courts in the design of fiscal policy is a key determinant of the level of deficit. Consistent with a scenario in which the courts rule that spending increases are necessary to guarantee a series of constitutional rights, we find that the larger the role of the courts in determining fiscal policy, the larger the level of deficits. Due to data limitations, we view our results as exploratory, but we do interpret them as suggesting that the role of the judiciary on the determination of fiscal policy is a potentially fruitful avenue for future research. We also find evidence that budget institutions, in particular quantitative limits to the budget, are key determinants of the level of deficit.

## **5. Concluding Remarks**

This paper has reviewed the recent literature on the political economy of fiscal policy. Three lines of argumentation and their empirical implications have been considered: political opportunism in fiscal decisionmaking, distributive conflicts, and budget institutions. One could very briefly summarize this literature as indicating that a series of political and institutional features are key determinants of the fiscal balance. First, voters tend to be fiscal conservatives, but they frequently face difficulties in monitoring the government's spending and taxing choices; voters' conservatism therefore only translates into fiscal prudence in more transparent systems.

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<sup>22</sup> Results available from the author upon request

Second, the presence of distributive conflicts generates a fight for resources across groups with heterogeneous preferences, which in turn leads to overspending. As a result, systems in which the fiscal decisionmaking process is more centralized and/or political contexts are characterized by less fragmentation of the fiscal authorities are conducive to greater discipline. Finally, budget institutions are also important in determining fiscal outcomes; besides transparency and centralization of the decisionmaking process, fiscal discipline should also be enhanced by numerical limits to the deficit and by limits to judicial involvement in fiscal choices.

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**Table 1. First Moments of Fiscal Choices and Determinants**

	Obs.	Mean	Std. Dev.	Freq. 1
Deficit (% of GDP)	864	3.074	5.021	-
Fiscal Adjustment Dummy	862	-	-	170
Debt t-1 (% of GDP)	864	65.249	48.229	-
Accountability	864	0.584	0.243	-
Congress Herfindahl Index	804	0.406	0.224	-
Parliamentary System Dummy	864	-	-	400

*Notes:* This table presents summary statistics for the variables used in the estimation of equation (1). Definitions and sources of these variables are presented in the Appendix. Sample restricted to observations with information on the Parliamentary System Dummy, the Accountability index and all controls.

**Table 2. Determinants of Deficits as a Percentage of GDP**

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Congress Herfindahl Index	-1.087 (0.715)	-	-	-1.591 (0.733) *	-
Parliamentary System Dummy	-	1.528 (0.455) **	-	-	2.379 (0.544) **
Accountability	-	-	-4.113 (0.937) **	-5.558 (1.13) **	-6.031 (1.194) **
Controls	yes	yes	yes	yes	yes
Observations	804	864	864	804	864
R-squared	0.07	0.09	0.09	0.11	0.13

*Notes:* This table reports results of estimating equation (1). Robust standard errors in parentheses. \* significant at 5 percent; \*\* significant at 1 percent. The dependent variable is deficit as a percentage of GDP. Controls are GDP growth, exports plus imports as a percentage of GDP, population under 15 and above 64 as a percentage of total population, and lagged central government debt as a percentage of GDP. Sample restricted to observations with information on the Parliamentary System Dummy, the Accountability index and all controls.

**Table 3. Determinants of Fiscal Adjustment**

	1	2	3	4	5
Debt t-1 (%GDP)	0.0011 (0.0003) **	0.0011 (0.0003) **	0.0011 (0.0003) **	0.0011 (0.0003) **	0.0011 (0.0003) **
Congress Herfindahl Index	-0.027659 (0.0635)	-	-	-0.027108 (0.0643)	-
Parliamentary System Dummy	-	-0.0016 (0.0313)	-	-	-0.0042 (0.0317)
Accountability	-	-	0.0173 (0.0757)	0.0079 (0.0866)	0.0205 (0.0765)
Election Year Dummy	-	-	-	-	-
Election Year*Accountability	-	-	-	-	-
Controls	yes	yes	yes	yes	yes
Observations	802	862	862	802	862

*Notes:* This table presents results of estimating equation (2). Marginal effects are being reported. Robust standard errors are in parentheses. \* significant at 5 percent; \*\* significant at 1percent. The dependent variable is a Fiscal Adjustment Dummy, taking the value of 1 if the government's surplus grows at least 1.5% of GDP. Controls are GDP growth, exports plus imports as a percentage of GDP, and population under 15 and above 64 as a percentage of total population. Sample restricted to observations that have information on the Parliamentary System Dummy, the Accountability index and all controls.

**Table 4. First Moments of Fiscal Choices and Determinants - LAC Countries**

Variable	Obs	Mean	Std. Dev.	Freq. 1
Deficit (%of GDP)	64	2.757	2.401	-
Debt t-1 (%GDP)	64	32.396	19.394	-
Accountability	64	0.617	0.147	-
Congress Herfindahl Index	62	0.314	0.108	-
State Authority over Taxing, Spending or Legislating	64	-	-	40
Judicial Activism	64	2.250	0.471	-
Fiscal Rules Index	64	4.961	1.876	-

*Notes:* This table presents summary statistics of the variables used to estimate equation (3). Definitions and sources of these variables are presented in the Appendix. Sample restricted to observations that have information on the Judicial Activism Index, the Fiscal Rules Index, the index of state authority over the budget, and all controls.

**Table 5. Determinants of Deficits as a Percentage of GDP, LAC Countries**

	<u>1</u>	<u>2</u>
Congress Herfindahl Index	2.188 (1.895)	-
Accountability	-7.980 (1.651) **	-5.726 (2.138) **
Fiscal Federalism Dummy	-	1.031 (0.499) *
Judicial Activism	2.203 (0.746) **	2.197 (0.684) **
Fiscal Rules Index	-0.574 (0.259) **	-0.669 (0.228) **
Controls	yes	yes
Observations	62	64
R-squared	0.69	0.70

*Notes:* This table presents results of estimating equation (3) by OLS. Robust standard errors are in parentheses. \* significant at 5percent; \*\* significant at 1percent. The dependent variable is deficit as a percentage of GDP. Controls are GDP growth, exports plus imports as a percentage of GDP, population under 15 and above 64 as a percentage of total population, and lagged central government debt as a percentage of GDP. Sample restricted to observations that have information on the Judicial Activism Index, the Fiscal Rules index, the index of state authority over the budget, and all controls.



### Appendix: Variables Definitions and Sources

Name	Definition	Source
Deficit (%of GDP)	Central government deficit %GDP.	Inter-American Development Bank taken from World Economic Outlook (2004)
Debt t-1 (%GDP)	Lag of central government debt %GDP.	Jaimovich and Panizza (2006) database
Fiscal Adjustment Dummy	The variable takes a value of 1 if the central government surplus (%GDP) increases in that year by at least 1.5 points.	Inter-American Development Bank taken from World Economic Outlook (2004) and author's calculations
Accountability	Measure of political and civil rights rescaled to [0,1]. Some of its components are: accountability of public officials, freedom of press, effectiveness of national parliament as a lawmaking and oversight institution, institutional permanence, budget transparency, and media sustainability index, among others.	Kauffmann, Kraay, and Mastruzzi (2005) database
Congress Herfindahl Index	The sum of the squared seat shares of all parties in congress.	Keefer (2005) database
Parliamentary System Dummy	The variable takes a value of 1 if parliamentary system or there is an assembly-elected president.	Keefer (2005) database

**Appendix, continued**

Name	Definition	Source
Judicial Activism	Average of: agenda setting, generation and selection of alternatives, decisionmaking, implementation, evaluation, and control. These are different categories that define the importance of the judiciary and control entities as key players in different stages in the tax policymaking process of nine selected countries in Latin America. The variable range goes from 1 to 3, with 3 being the maximum level of influence of a particular player in that aspect of the policymaking process. The value for each component is decided based on a country analysis found in Cárdenas et al. (2005), pp. 18-49.	Cárdenas et al. (2005)
Fiscal Federalism Dummy	If the state/provinces have authority over taxing, spending, or legislating, the variable takes a value of 1.	Keefer (2005) database
Fiscal Rules Index	Laws which establish ex ante constraints on deficits. Its components are: Fiscal Limits, Medium Term Fiscal Frameworks, Borrowing Limits, and Reserve Funds. The data comes from a database on budget practices and procedures created by the OECD and the World Bank with the collaboration of the Inter-American Development Bank. It includes data for 12 Latin American countries. The definition of each component is found in Filc and Scartascini (2004) pp. 31-34.	Filc and Scartascini (2005) database

*Note:* This table presents the definitions of the variables used in the estimations of equations (1)-(3).