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1 Budget Deficits and Budget Institutions

Alberto Alesina and Roberto Perotti

1.1 Introduction

In the last thirty years several OECD economies have accumulated large public debts. In fact, table 1.1 shows a very large variance in debt/GNP ratios in OECD countries, much larger today than twenty years ago. Several countries exhibit debt/GNP ratios close to or even greater than 100 percent, while others have ratios of about 30 percent. The increase in public debts has been accompanied by a marked transformation in the composition of government outlays. While twenty years ago purchases of goods and services were predominant in government budgets, in the last twenty years transfer programs have grown much more rapidly than government purchases of goods and services. Transfers are notoriously more difficult to cut; therefore this evolution of the composition of expenditures makes fiscal adjustments in the face of high debts particularly difficult.

In a previous paper (Alesina and Perotti 1995b) we asked two questions: (1) Why did certain countries accumulate large public debts while others did not? and (2) Why did these large debts appear in the last twenty years but not before?

In that paper we argued that economic variables alone cannot provide satisfactory answers to these questions, and we considered several politico-institutional explanations. In particular, we emphasized the role of electoral systems, party structure, government fragmentation, and political polarization. For instance, we agreed with those authors[1] who have argued that coalition

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1. See Roubini and Sachs 1989a, b; Grilli, Masciandaro, and Tabellini 1991; Alesina and Perotti 1995a; Perotti and Kontopoulos (chap. 4 in this volume); and Hallerberg and von Hagen (chap. 9

governments, typical of countries with proportional electoral systems, tend to delay fiscal adjustments, so that public debts accumulate more rapidly in these countries.

In this paper we focus more specifically on "budgetary institutions," defined as all the rules and regulations according to which budgets are prepared, approved, and carried out.

Our goal is to understand whether the budget procedures have significant macroeconomic effects on the size and composition of the budget and on the budget balance.[2] Specifically, we pose two related questions: (*a*) To what extent do budget institutions explain fiscal policy outcomes, and particularly, the budget balance? Can budget institutions explain why certain high-debt countries have more difficulties in adjusting than others? (*b*) What are the most effective budget procedures to insure "fiscal responsibility"? We conclude that fiscal institutions are important determinants of fiscal outcomes. In Poterba's (1996) words, "although the evidence is not conclusive, the preponderance of studies suggest that institutions are not simply veils . . . but are important constraints."[3]

This paper is organized as follows. Section 1.2 describes and summarizes our basic argument and provides an overview of the paper. This section briefly touches upon several issues that are then addressed in more detail in the following sections. Section 1.3 reviews the theoretical literature, and section 1.4 discusses the issues and problems left unsolved. Section 1.5 tackles a difficult but important issue, namely the transparency of the budget. Section 1.6 reviews the empirical literature that can shed light on our two questions.

1.2 Budgetary Institutions: An Overview

This section describes our basic argument and provides an overview of the entire paper.

1.2.1 Are Institutions Endogenous?

Budgetary institutions are all the rules and regulations according to which budgets are drafted, approved, and implemented. Since these institutions vary across countries, and, to a lesser extent, over time, they can be used as an explanation of cross-country differences in fiscal policy.

An obvious objection to this research strategy is that institutions are themselves endogenous. In particular, institutions may be changed as a result of unsatisfactory fiscal performance, and the choice of different institutions may

in this volume) for empirical work and Spolaore 1993 and Velasco (chap. 2 in this volume) for theoretical work.

2. For a more comprehensive discussion of legal, organizational, and economic aspects of budget procedures, see Wildasky 1986 and, in particular, Premchand 1983.

3. Poterba 1996 provides an excellent assessment of the literature on fiscal institutions that nicely complements the present one.

be a function of other socio-political-historical variables that may influence both the institutional choice and the fiscal outcome. If this is the case, institutions cannot be used as explanatory variables in regressions where fiscal outcomes are on the left-hand side of the equation, which is the procedure adopted in much of the empirical literature reviewed below.

Clearly, to some extent institutions are indeed endogenous, particularly to past fiscal outcomes. However, to the extent that institutions are reasonably difficult to change, and therefore are changed relatively infrequently, they can be considered predetermined, at least in the short-to-medium run. In other words, since it is costly and complex to change institutions, the existing ones have to be very unsatisfactory before it is worth changing them; as a result, there is a strong "status quo" bias in institutional reforms. Therefore, at least up to a point, one can use institutional features as explanatory variables. Nevertheless we believe that systematic research that tries to explain institutional building is overdue and is an excellent area of future work.

One can distinguish between two types of institutions: laws that prescribe numerical targets on the budget, and procedural rules.

1.2.2 Balanced-Budget Laws

The most typical example of a "numerical target" is a balanced-budget law. Two theoretical arguments suggest that a balanced-budget law would not be optimal. The first one is related to stabilization policies. Standard Keynesian anticyclical policies prescribe tax cuts, expenditure increases, and deficits in recessions and tax increases, expenditure cuts, and surplus in economic booms. Note, however, that the feasibility and opportunity of this kind of fine-tuning of fiscal policies have been questioned, starting with the famous argument on "long and variable lags" by Milton Friedman.[4]

A second theoretical argument that runs against the idea of balanced-budget laws is the tax-smoothing theory of budget deficits (Barro 1979; Lucas and Stokey 1983). According to this theory, budget deficits and surpluses should be used to "smooth" the distortionary cost of taxation, so that deficits should be permitted when spending is exceptionally and temporarily high, for instance during wars, natural calamities, and emergencies, or when revenues are temporarily low, for instance during recessions. Thus, a law that prescribes a balanced budget in every year would excessively constrain the use of budget deficits and surpluses as the "buffer" needed to implement the optimal tax policy.

Theoretically, one could think of a "contingent" budget balance law, with escape clauses to permit a certain amount of tax smoothing. However, a well-understood argument in the debate on rules versus discretion suggests that rules have to be simple.[5] Complicated rules can be circumvented and present

4. Even though Friedman was concerned about monetary policy, his argument applies also to fiscal policy.
5. See, for instance, Tanzi 1993.

monitoring problems, so that in the end they become almost useless. They may even be counterproductive if they create incentives to resort to "creative budgeting" and highly distorted policies chosen simply to circumvent the rules.

On the other hand, several arguments suggest that actual policies are not dictated by principles of optimal taxation, but are the result of various politically induced deficit bias (see the survey in Alesina and Perotti 1995b). In this case, a balanced-budget law may be a second-best solution. One would have to trade off the distortions of the balanced-budget law on the optimal tax policies, against the reduction of politically induced distortions on actual policies.

This paper argues that balanced-budget laws at the national level are neither necessary nor sufficient to insure fiscal discipline. We argue that *appropriate* procedures may not require numerical targets, so that one may maintain flexibility on the budget balance front (needed to implement tax-smoothing policies or stabilization policies) without giving up fiscal discipline. To evaluate this claim, we now turn to an overview of procedural issues.

1.2.3 Procedural Rules

One can identify three phases in the budget process: (1) the formulation of a budget proposal within the executive; (2) the presentation and approval of the budget in the legislature; and (3) the implementation of the budget by the bureaucracy.

This paper focuses mostly on the first two aspects, although we will briefly touch upon the third one as well. An exhaustive treatment of the role and organization of a bureaucracy goes beyond the scope of this paper.[6]

Two issues are crucial in our view: the voting procedures leading to the formulation and approval of the budget, and the degree of transparency of the budget. Voting procedures are clearly important because they establish who has an influence on the final budget outcome, and when. The transparency is equally important since "creative accounting" can circumvent even the most stringent voting procedures. In fact, the two issues are strictly connected: voting procedures have an impact on the final outcome if the latter can be monitored because it is transparent. We begin with voting procedures.

We focus upon a key trade-off between two types of institutions. One type, which we label, for lack of a better word, *hierarchical,* has the property that it limits the democratic accountability of the budget process. The second type, which for lack of a better word we call *collegial,* has the opposite features. Hierarchical institutions are those that, for instance, attribute strong prerogatives to the prime minister (or the finance or Treasury minister) to overrule spending ministers within intragovernmental negotiations on the formulation of the budget. Hierarchical institutions also limit in a variety of ways the capacity of the legislature to amend the budget proposed by the government. Colle-

6. See Premchand 1983 on this point.

gial institutions emphasize the democratic rule in every stage, like the prerogatives of spending ministers within the government, the prerogatives of the legislature vis-à-vis the government, and the rights of the minority opposition in the legislature.

We argue that there is a trade-off between these two types of institutions: hierarchical institutions are more likely to enforce fiscal restraint, avoid large and persistent deficits, and implement fiscal adjustments more promptly. On the other hand, they are less respectful of the rights of the minority, and more likely to generate budgets heavily tilted in favor of the interests of the majority. Collegial institutions have the opposite features.

This trade-off can have important positive and normative implications. From a positive standpoint we will argue, using the available evidence, that indeed, hierarchical institutions promote fiscal restraints. From a normative point of view we discuss what considerations should lead to a choice over this trade-off and how to "optimize" over it. Generally speaking, institutional choices close to the extremes of this institutional trade-off are unlikely to be optimal. Also, this institutional choice depends upon the "initial conditions." For example, a country with a high debt/GDP ratio that is contemplating an institutional reform should look more favorably toward hierarchical institutions than, ceteris paribus, a country with a low debt/GDP ratio. The theoretical arguments underlying this trade-off are discussed in sections 1.3 and 1.4.

The second important set of issues concerns the transparency of the budget and the nature of those institutions that are supposed to "control" the budget process. Modern budgets of OECD countries are extremely complicated, sometimes unnecessarily so. One has to wonder whether the degree of complexity of a budget is unavoidable, or whether it is a way of creating opportunities for "creative budgeting." Typically, governments "hide" liabilities, by either shifting them to future budgets, or using funds that are "outside the budget." A related common practice is that of adopting overoptimistic projections of macroeconomic variables, so that revenues are overestimated and spending needs are underestimated. Then, at the end of the fiscal year, "bad luck" is held responsible for the "unexpected" additional deficit.

One can think of two ways of dealing with the problem of transparency. One is to set certain standards to be followed. The other is to have independent agencies that provide a "check" on the accuracy of the budget. We will conclude in favor of the second solution, in section 1.5, which specifically addresses the issue of transparency.

1.3 Institutions, Procedures, and the Budget: Theory

1.3.1 General Issues

Without any restrictions on procedures, without any "structure" and rules, Arrow's impossibility theorem (1951) implies that a legislature would never produce a budget but only legislative "chaos." Influential work by Shepsle (1979a,b) shows that the restrictions ("structure") imposed by procedural rules generally solve Arrow's problem and lead to predictable legislative outcomes.

A vast literature in formal political science has studied how different voting procedures in legislatures lead to different outcomes, and a good portion of this research focuses on the budget. Typically this literature is inspired by American institutions and focuses almost exclusively on the legislature, namely on the American Congress. However, if viewed *cum grano salis,* this line of research can shed light on institutions of other countries.

Much of this research is based, directly or indirectly, upon a view of the budget as the result of conflicting interests of representatives with geographically based constituencies. In particular, it addresses two problems: the determination of the size of the budget and the allocation of projects among different districts.

Weingast, Shepsle, and Johnsen (1981) provide one of the clearest discussions of these issues by arguing that representatives with geographically based constituencies ask for spending programs that benefit their district and are financed nationwide. Thus, representatives systematically do not internalize the "true" costs of financing such projects. The idea is that the voters of the ith district receive benefits for a certain public project in their district, but have to pay $1/N$ of the total costs of this project, if N is the number of districts and if taxes are equally distributed among districts. A geographically elected representative does not fully internalize the effects of spending in his district on the tax burden of the country. The aggregate effect of rational representatives facing these incentives is an excessive demand of public goods with geographically targeted benefits and diffuse financing costs.

While Weingast, Shepsle, and Johnsen do not address directly the question of how all of these demands for pork barrel projects lead to an aggregate budget, the critical feature of a voting equilibrium that leads to an oversupply of pork barrel projects is "reciprocity." Namely, a representative of the ith district votes in favor of a project for district j, expecting the same favor in return from the representative of district in the next vote.

The literature on procedures has addressed three related questions: what procedural rules mitigate or aggravate the problem of oversupply of pork barrel projects? What procedural rules make the choice of projects, given a certain total budget, more or less efficient? How do different procedural rules influence the final allocation of net benefits among districts? Two issues are particularly interesting for our purposes: (*a*) the sequence of voting on the budget, and (*b*) the type of admissible amendments on the proposed budget.

1.3.2 Timing of Voting on the Budget

One of the most important features of the Budget Act of 1974 in the United States, which substantially reformed budget procedures, was to change the sequence of congressional votes on the budget. Until then, Congress would vote on a series of appropriation bills, and the overall size of the budget was determined residually. After the Budget Act, Congress is required to vote at the beginning of the process on the overall size of the budget. The motivation of this reform was to enforce an ex ante discipline on the legislature, so as to fix an agreed-upon overall size of the budget, rather than letting it be determined by the accumulation of bills. The emergence of large budget deficits in the eighties raises some questions concerning the success of this reform.[7]

Motivated by this puzzle, Ferejohn and Krehbiel (1987) study theoretically the determination of the size of the budget under the two alternative voting procedures. They assume that the budget can be allocated to two projects and different legislators have different preferences for the relative benefits of these two projects. These authors reach a rather provocative conclusion: It is not always the case that the size of the budget is smaller when the legislatures vote first on the size and then on the composition, relative to the case in which the overall budget size is determined as a residual. While the size of the budget is in general *not* independent of the order of votes, the relative size of the budget with different orders of votes depends on the distribution of legislatures' preferences for budget composition. The same issue has been revisited recently by Hallerberg and von Hagen (1997).

The critical intuition of these results is that rational legislators should be forward looking: for example, when voting on the first item of the budget, they will calculate how their first vote will affect the final outcome both in terms of size and of composition. Conversely, when voting on the size first, rational legislators can compute how a certain size will then lead to a certain composition in the following vote. These results are obtained with the assumption of perfect information—each legislator knows the distribution of preferences of the legislatures. Thus, at the moment of the first vote, the legislators can compute the final voting equilibrium. While this assumption is clearly not realistic, it is not obvious in which direction the results would change if one allowed for imperfect information.

An unfortunate feature of these results is that they cannot really illuminate the question of which of the two procedures one should choose to limit the spending bias of legislatures. In fact, it is hard to derive a simple link between certain observable characteristics of the distribution of legislatures' preferences and the policy outcomes under the two different procedures. Thus, one should read these papers as a very useful warning against oversimplifying the effect of certain procedures on final outcomes.

1.3.3 Amendment Rules

In an influential series of papers, Baron (1989, 1991) and Baron and Ferejohn (1989) study the question of how legislatures reach agreement on how to

7. Naturally, one may argue that fiscal discipline in the United States would have been even more relaxed without the Budget Act, but this is a difficult point to prove empirically.

choose pork barrel projects. Specifically, they study both how the legislature chooses the allocation of benefits of a certain budget among legislators representing different districts and how the legislature chooses among different budgets, more or less efficiently.

This line of research emphasizes a distinction between *closed rules* and *open rules* in amendments. A closed rule is one in which a proposal made by a member of the legislature has to be voted immediately up or down. If it is approved, the "game is over"; if it is rejected, a new member of the legislature can make another proposal, which again is voted up or down. An open rule is one in which the proposal made by the member selected is subject to amendments on the floor.

In actual legislatures the agenda setter in the budget process is the government. Thus, closed rules attribute more power to the government and less to the floor of the legislature. The result is that closed rules are more hierarchical. The implication is that with closed rules budgets are approved rapidly and typically reflect more closely the preference of the government. On the other hand, the preferences of various minority groups in the legislatures are taken into account less, precisely because the procedures are less collegial.

In practice, closed rules are those that make it impossible for the legislature to amend the size of the deficit; that is, if the legislature wants to increase spending, it also has to increase taxes. Even more stringent procedures make it impossible for the legislature to increase not only the deficit, but even total spending. In this case the legislature can only change the allocation of spending and revenues, but not their total.

The discussion about the possible amendments of the legislature highlights very clearly several aspects of the trade-off between hierarchical and collegial procedures. With a closed rule you achieve quick approval of a proposal, at the cost of implementing "unfair" budgets. Budgets are unfair in the sense that they are tilted in favor of those who make the first proposal, and always distribute benefits to the smallest possible majority.

Two implications on the choice of rules follow. First, a closed rule is preferable if avoiding delays is an important consideration. This is likely to be the case in high-debt countries and/or in periods of macroeconomic instability, when the rapid adoption of fiscal adjustments is critical. On the other hand, in countries and time periods of low debt and fiscal stability, considerations of allocative efficiency and fairness may be predominant, leading to the adoption of an open rule.

1.3.4 An Analogy with Electoral Laws

Before closing this section it is useful to highlight an analogy between the trade-off between collegial and hierarchical institutions and the trade-off between proportional and majoritarian electoral systems. Proportional electoral systems tend to produce multiparty systems with large coalition governments.

Majoritarian systems tend to produce biparty systems (or some approximation of them) and single-party governments. Coalition governments are the analogue of collegial procedures: they generate delays in policymaking but avoid extreme partisanship. In fact, coalition governments require approval of several parties to govern, and the veto power of each coalition member can delay the legislative process. Majoritarian systems have the opposite features, since they imply that, when in office, a party is unconstrained. Alesina and Drazen (1991) and Spolaore (1993) provide formalization of these ideas. Grilli, Masciandaro, and Tabellini (1991), Roubini and Sachs (1989a,b), Alesina and Perotti (1995a), Perotti and Kontopoulos (chap. 4 in this volume) and Hallerberg and von Hagen (chap. 9 in this volume) discuss empirical evidence on fiscal deadlocks and delayed fiscal adjustments in coalition governments in OECD countries. A related discussion refers to "divided government" in the United States, which occurs when the party of the president does not hold a majority in Congress. This situation can be a source of policy delays but also of policy moderation, as argued theoretically and empirically by Alesina and Rosenthal (1995).

In summary, the choice of an electoral law implies an institutional trade-off that is very similar to the one that we have highlighted for budget procedures.

1.4 Discussion

The formal literature discussed above has made important progress in analyzing legislatures in general and the U.S. Congress in particular. For those, like us, who are interested in the effects of procedures on budget deficits in a comparative perspective, this literature leaves several questions open.

1. First, this literature addresses specifically the size and the geographical composition of the budget, while it is silent on the budget balance. One needs a dynamic model in order to analyze deficits, while the models reviewed so far are static. The technical difficulty lies in the fact that in a dynamic model each legislative vote determines the state of the world (in particular the level of public debt) inherited by the following legislature, or the following vote by the same legislature. Thus, rational legislators should vote today taking into account the effects of their decision on future voting equilibria, with different levels of debt. This problem is hard to solve, except in very simple models where the complexity of procedural rules and of the composition of the legislature is vastly simplified.[8]

Chari and Cole (1993) make some progress in this direction, by considering together the insights of Weingast, Shepsle, and Johnsen (1981), reviewed above, and the point made by Alesina and Tabellini (1990). The latter suggest that public debt can be used "strategically" by today's policymaker to influence

8. For example, see Alesina and Tabellini 1990, Persson and Svensson 1989, and Tabellini and Alesina 1990.

the choice of tomorrow's policymaker if the two policymakers (today's and tomorrow's) have different spending priorities. Chari and Cole consider a legislature with the kind of bias emphasized by Weingast, Shepsle, and Johnsen and show how this legislature will choose to issue debt to spend as much as possible in the first period. The reason for the high-spending/high-debt policy is a combination of the "district bias" argument and the "strategic debt" argument.

Velasco (chap. 2 in this volume) uses a model based on the "tragedy of the commons" framework and studies a noncooperative game between multiple spending authorities drawing on a common amount of tax revenues. All of these spending authorities attempt to free ride on common public resources (tax revenues) to spend on the desired program.

In summary, one has to choose between models that are relatively rich in institutional details but are static and dynamic models that are poor in institutional realism. For the empirical and policy-oriented researcher this is a serious problem, since results on the size of spending do not necessarily translate into results on the size of deficits. In fact, one can point to examples of countries (e.g., France) with a large government sector, but a low level of public debt.

2. The second limitation of this literature lies in its emphasis on pork barrel projects, that is, on public projects with geographically concentrated benefits. While this emphasis was empirically grounded two decades ago, it has been less and less so in recent years. As argued above, the share of OECD budgets devoted to projects that can be considered pork barrel and geographically based is shrinking relative to transfer programs and entitlement, which are broadly based. Clearly, some transfer programs have a geographical base—for instance, Florida has a high concentration of pensioners; disability pensions have been used in Italy as an indirect transfer from the north to the south.[9] However, the emphasis placed by this formal literature on pork barrel projects is disproportionate relative to the current relevance of these projects in the budget. In fact, Alesina and Perotti (1995a) argue that the recent experience of fiscal adjustments in OECD countries shows that successful and long-lasting fiscal consolidations cannot avoid cuts in entitlement, broad-based transfer programs, and government wages and employment. Formal models of legislative votes on pork barrel projects cannot be directly applied to questions of spending allocation to transfer programs, social security, and entitlement in general.

3. A third problem is the almost exclusive emphasis of this literature on the legislature, with reasonably little attention to the executive.[10] One can argue that this emphasis is justified for the case of the United States, but, in our view, it is beyond doubt that one needs to focus more on the formulation of budget within the government in parliamentary democracies. Particularly in situations where the role of the legislature is limited in how it can amend the budget

9. See Emerson 1988 for data on this point.
10. An exception is Velasco (chap. 2 in this volume).

proposed by the executive, intragovernment negotiations can be very important for the final outcome.

Some of the literature on committees, procedural rules, order of voting, closed versus open rules, can be applied mutatis mutandis to the decision process within the government. For example, our previous discussion on the order of voting (on the overall size first and the composition later) could be well applied to voting within a cabinet of ministers.

However, several additional issues arise when we consider the budget formation within the executive in parliamentary democracies. For instance, one crucial factor is the relative position, de jure or de facto, of the spending ministers versus the Treasury minister and/or the prime minister. Specifically, the issue is whether the person who is ultimately responsible for presenting the budget to the legislature (typically the Treasury minister) has a higher standing in the intragovernment budget negotiations relative to the spending ministers. In some cases, more than one person is responsible for the preparation of the budget. In what follows, we indicate with *Treasury minister* the person(s) responsible for the overall budget. More hierarchical procedures grant to the Treasury minister higher standing relative to spending ministers, while more collegial procedures are more egalitarian, within the government. The constituencies of spending ministers are groups and industries who benefit from certain spending programs, while, at least in theory, the constituency of the Treasury minister is the "average" taxpayer. Thus the spending ministers do not internalize the aggregate costs of certain spending programs, while the Treasury has an incentive to internalize.

One can think of an analogy with the case of the United States. Spending ministers are like congressmen, whose constituencies favor specific spending programs. The president in the United States and the Treasury minister in parliamentary democracies, should be more sensitive to the broad-based interests of the average taxpayer. Chari, Jones, and Marimon (1997) provide an interesting formalization of this idea for the case of the United States. They argue that the American voters often prefer to elect a "big spender" (i.e., a Democrat) in their legislative district, but a "fiscal conservative" (i.e., a Republican) as president. By doing so, these voters maximize their chances of bringing spending to their districts while keeping the overall size of the budget, thus the level of taxes, low.[11] The analogy with parliamentary governments is that the voters should favor "generous" spending ministers and a conservative Treasury minister.

The incentives for "spending ministers" to increase the size of the budget are even stronger if we consider their role as heads of a bureaucracy. We know from the work by Niskanen (1971) and of the "public choice school" (see

11. A devil's advocate may note that Democratic presidents are sometimes elected and that the Republican administrations in the eighties were far from "fiscally conservative" in a traditional sense. The November 1994 midterm election produced a configuration of divided government that is opposite from the one predicted by Chari, Jones, and Mariman 1997.

Mueller 1978 for a review) that bureaucracies strive to maximize their budget allocation. In fact the status, salary, and influence of bureaucrats is often positively correlated with the size of the budget that they manage.[12]

In summary, any procedural arrangement that increases the relative power of the Treasury minister is likely to increase fiscal discipline.

4. A fourth set of issues that assumes somewhat different features in the American context and in parliamentary democracies is the relationship between executive and legislature in the budget process. Typically, both in the United States and in parliamentary democracies, legislators are viewed as big spenders, trying to undermine the attempt of governments to be more fiscally responsible. Thus, as argued above, procedures that limit the type of amendments that the legislature can propose should lead to fiscal restraint, at the cost of less collegiality. An important procedural aspect concerns the consequences of a rejection of the budget proposed by the executive. The consequences could be very "serious," implying de jure or de facto the resignation of the government and even new elections. On the opposite extreme, the consequences can be very "mild," simply requiring a new budget proposal from the executive.

Von Hagen (1992) argues that the more "serious" for the government are the consequences of a parliamentary defeat on the budget, "the more it is in government's interest to propose a budget that can be expected to find a solid majority in parliament" (von Hagen 1992, 35). On the other hand, the legislature and, in particular, the parties supporting the government may refrain from defeating a budget proposal for fear of creating an institutional crisis. Which of the two arguments prevails may depend on the circumstances. Generally, if the government can choose "what is at stake" in any given vote on the budget, it achieves a strategic advantage, turning a vote for or against the budget into a vote for or against the government. This choice may be helpful to "bring to order" parliamentary debates where members of the parties in government threaten to vote with the opposition on the budget. For instance, Huber (1992) discusses these types of procedures (the *guillotine* and the *package vote*) for the case of France. He argues that these procedures are used quite frequently in the Fifth Republic and were introduced as a response to the cabinet fragility of the Fourth Republic. He suggests that the use of these procedures significantly helped the executive to pass the desired legislation, and these procedures were often used within the budget approval process.

5. In section 1.3.3, we discussed the relative merits of closed and open rules, but several additional issues are left open. In particular, the open-rule regime can be of very different types. For instance, amendments can be permissible only if they do not increase the size of the deficit, or if they do not increase the size of spending. For instance, one can think of a closed rule on the size of the

12. Fiorina and Noll (1978) discuss the interaction of bureaucrats interested in increasing the size of the budget and legislators interested in increasing the size of pork barrel programs for their districts.

budget, and an open rule on its composition. This would strengthen the position of the executive when needed to implement fiscal adjustments, but preserve collegiality on purely allocative issues. Theoretical work on these points is not yet available.

1.5 Transparency of the Budget

The budgets of modern economies are very complex, sometimes unnecessarily so. This complexity, partly unavoidable, partly artificially created, helps in various practices that "hide" the real balance (current and future) of costs and benefits for the taxpayers. Politicians have incentives to hide taxes, overemphasize the benefits of spending, and hide government liabilities (the equivalent of future taxes). Politicians have little incentive to produce simple, clear, and transparent budgets.

At least two theoretical arguments support this claim. The first, the theory of "fiscal illusion," is illustrated particularly clearly by Buchanan and Wagner (1977). According to this view, the voters typically overestimate the benefits of public spending and underestimate the costs of taxation, current and future. Lack of transparency of the budget can increase the voters' confusion and reduce politicians' incentives to be fiscally responsible. Elsewhere (Alesina and Perotti 1995b) we have raised some doubts about the role of fiscal illusion as the main explanation of large and persistent deficits, such as those of countries with debt/GDP ratios of 100 percent or more. However, lack of transparency and voters' confusion can certainly interfere negatively with effective budget control, particularly when substantial fiscal adjustments are needed.

The second argument does not rely on voters' irrationality and confusion. Several papers, although in different contexts (e.g., Cukierman and Meltzer 1986; Alesina and Cukierman 1990), highlight the benefit for policymakers of a certain amount of ambiguity even when they face a rational electorate. The idea is that by creating confusion and, in particular, by making it less clear how policies translate into outcomes, policymakers can retain a strategic advantage versus rational, but not fully informed, voters. This advantage would disappear with "transparent" procedures; therefore, the policymakers would often choose to adopt ambiguous procedures. In particular, at least up to a point, the less the electorate knows and understands about the budget process, the more the politicians can act strategically and use fiscal deficits and overspending to achieve opportunistic goals.

Rogoff and Sibert (1988) and Rogoff (1990) make a similar point in the context of political business cycle models. They show that if the voters cannot easily observe the composition of the budget (on the spending or on the financing side), then policymakers can follow loose fiscal policies before elections and increase their chances of reappointment.

The literature reviewed in this section makes interesting points. However, it is quite distant from the details of the budget process, much more so than the literature on voting procedures reviewed in section 1.3. Once the policymakers' incentives to be strategically ambiguous are well understood, one is left with the rather difficult task of understanding *how,* in reality, policymakers obfuscate the budget and what to do about it. The only paper that attempts to explicitly model the role of ambiguity and lack of transparency in the budget process is Milesi-Ferretti 1997. This author shows that politicians who want to run excessive deficits would choose nontransparent procedures, and the latter would help them achieve their (distorted) goals.

In practice a variety of tricks can serve the purpose of strategically influencing the beliefs and information of taxpayers/voters. For instance:

1. Overestimate the expected growth of the economy, so as to overestimate tax revenues, and underestimate the level of interest rates, so as to underestimate outlays. At the end of the fiscal year, the "unexpected" deficit can be attributed to unforeseen macroeconomic developments, for which the government can claim a lack of responsibility.

2. Project overly optimistic forecasts of the effect on the budget of various policies, so that, for instance, a small new tax is forecasted to have major revenue effects, thus postponing to the following budget the problem of a real adjustment.

3. Keep various items off budget, with a creative use of the budget of other public organizations not incorporated in the national budget.

4. Use budget projections strategically. For example, in all the discussions about future budgets, a key element is the "baseline." By inflating the baseline, politicians can claim to be fiscally conservative without having to create real costs for the constituencies. In this way, they create an illusion: they appear conservative in the eyes of the taxpayers, worried about the size of the budget, but they do not really hurt key constituencies with spending cuts. Clearly, this illusion cannot last forever, since adjustment rigorous only relative to inflated baseline in the end will not stop the growth of the debt. However, this procedure creates confusion and, at the very least, delays the electorate's realistic perception of the actual state of public finance.

5. Strategic use of multiyear budgeting. By announcing a, say, three-year adjustment plan in which all the hard policies occur in years two and three, politicians can look responsible and can buy time; then they can revise the next three-year budget policies to further postpone the hard choices.

Tanzi (1995) compares budget institutions in several OECD countries and emphasizes the role of transparency and how different countries show very different levels of it. This author relates the degree of transparency with the feasibility of expenditure control.[13]

13. Both Tanzi (1995) and Alesina, Mare, and Perotti (1996) argue that Italy has one of the least transparent procedures, if not the least transparent, in the OECD group of countries. These authors agree that lack of transparency has made expenditure control in Italy particularly difficult. In fact, Italy is an excellent test of Milesi-Ferretti's (1997) theoretical argument.

How to increase budget transparency is a difficult problem. We can think of three possibilities. The first and most commonly followed is a "legalistic" approach. That is, more and more rules and regulations are imposed on how the budget should be prepared, organized, and executed. This approach is unlikely to be successful: complicated rules and regulations provide fertile ground for nontransparent budget procedures. A second alternative is to create legislative bodies in charge of evaluating the transparency, accuracy, and projections of the government budget.[14] This approach is superior to the legalistic one, but it relies heavily on the political independence of this public body. This independence may be problematic, particularly in a parliamentary system where the government parties control a majority in the legislature. A third alternative, the most radical but the most effective, is to delegate to a respected private institution the task of verifying the accuracy and transparency of the budget process. In addition, the government budget should be based on an average of the economic forecasts of and projections derived by international organizations or private institutions, in order to avoid strategic manipulations of forecasts.

1.6 Budget Procedures and Fiscal Outcomes: Empirical Evidence

Von Hagen (1992) and von Hagen and Harden (1994) provide the first comprehensive empirical analysis of the effects of procedures on fiscal outcomes in European countries. They construct several indices, which are meant to rank fiscal procedures from the most hierarchical to the most collegial, using our terminology. Their sample is given by all the member countries of the European Community, and they focus on a wide range of information on budget procedures:

1. the government preparation of a budget
2. the legislative phase and the relationship between executive and legislature
3. the implementation phase
4. the degree of transparency of the budget
5. the existence of numerical targets (balanced-budget laws, etc.)
6. the existence of multiyear budgeting

They show that budget arrangements vary widely among EU countries, and this is encouraging for the theory, since debt/GNP ratios also are very different across these countries.

As for the government phase of budget preparation, they identify three types of procedures, which using our terminology we can call hierarchical, intermediate, and collegial. The key variable on which they focus is the relative position of the Treasury minister[15] vis-à-vis the spending ministers. Interestingly,

14. An example could be something like the Congressional Budget Office in the United States.
15. Or of the minister(s) responsible for the preparation of the budget.

Table 1.1 Public Debt in OECD Countries

	1965	1975	1990	1994
Australia	n.a.	n.a.	23.5	36.1
Austria	19.4	23.9	58.3	65.7
Belgium	67.5	61.1	128.5	135.0
Canada	58.8	43.1	73.1	95.6
Denmark	11.3	11.9	68.0	81.1
Finland	17.7	8.6	16.8	62.3
France	53.1[a]	41.1	43.4	54.7
Germany	17.3	25.1	43.4	51.5
Greece	14.1	22.4	77.7	119.0
Ireland	n.a.	64.4	97.4	92.3
Italy	35.4	60.4	106.4	123.9
Japan	0.0	22.4	66.0	75.6
Netherlands	52.2	41.4	78.8	79.1
Norway	47.0[a]	44.7	32.5	43.5
Portugal	n.a.	n.a.	68.6	70.5
Spain	n.a.	n.a.	50.3	68.2
Sweden	30.5	29.5	44.3	79.5
United Kingdom	81.8[a]	63.7	39.3	54.5
United States	52.1	42.7	55.7	63.0

Source: OECD.
Note: Debt is gross as a share of GNP.
[a]1970.

they argue that France and the United Kingdom are the clearest examples of the hierarchical procedural type. The "superiority" of the prime minister and the finance minister in France is formally established. In the case of the United Kingdom, the "superiority" of the Treasury is more de facto, and is based on seniority and accepted practice. Von Hagen and Harden (1994) write that "In France the strong position of the Prime Minister in budgetary matters is grounded in the constitution. . . . [T]he British Chancellor of the Exchequer . . . derives most of his power from seniority and historical convention, the British equivalent of constitutions law" (340). It is interesting to note that neither of these countries has a debt problem despite a very large public sector (France), and relatively low rate of economic growth in the last two decades (England). At the opposite extreme we find countries where the Treasury minister has no special status, including Ireland, Italy, Belgium, Greece, Luxembourg, and Portugal. The reader will recognize in the first three countries those that, at least until the early nineties, have had the highest debt/GNP ratios in the OECD, and in the other three countries cases of rapidly rising debt/GNP ratios (see table 1.1).

The authors also look at the structure of negotiations, ranking as more collegial countries where the negotiations are not bilateral between Treasury and each spending minister, but cabinet-wide. According to this indicator the most collegial countries are Greece, Ireland, and Spain, and the most hierarchical are France, the Netherlands, Portugal, and the United Kingdom.

As a matter of fact, it is not clear a priori which of the two procedures is more conducive to fiscal discipline. On the one hand, Alt and Chrystal (1981) argue, with an eye on the British case, that bilateral negotiations give an opportunity to individual spending ministers to "strike deals" with the Treasury so that, in the end, the budget is inflated by the accumulation of these bilateral deals since no spending minister has the opportunity or the desire to "attack" another spending minister's deal. On the other hand, multilateral negotiations create an opportunity for the spending ministers to form a coalition "against" the Treasury. Also, as von Hagen (1992) emphasizes, multilateral bargaining creates an opportunity for reciprocity between spending ministers, namely incentive to favor each other's spending programs. On balance, we agree with von Hagen (1993) that bilateral negotiations are more likely to encourage fiscal discipline than multilateral ones. However, Perotti and Kontopoulos (chap. 4 in this volume) reach inconclusive empirical results on a sample of OECD countries.

As for the legislative phase, these authors look at the restrictions on amendments, and at the agenda-setting power of the executive, that is, what the government can do to influence voting in the legislature. For example, they focus on what types of amendments are possible from the floor of the legislature and what the restrictions are (if any) on amendments that increase the deficit or the size of spending proposed by the government. Classifying countries along these dimensions is not always straightforward. For instance, France is a clear example of an authoritarian procedure. According to the authors, Italy, Greece, and Denmark "have procedures which are characterized by comparable degrees of openness."[16]

As for the implementation phase, they consider the degree of control that the Treasury minister has on spending, how easy it is to increase actual spending over the planned level, and how flexible are transfers of spending from one chapter to another. Interestingly, France appears, once again, as the country with the most restrictive procedures.

The transparency of the budget is measured by a variety of indicators, from responses to interviews (see von Hagen 1992, 71) to the existence of "special funds" in the budget, to the presentation of the budget in a single document, and so forth. Interestingly, Italy and Ireland, current and former high-debt countries, respectively, have the least transparent budgets.

Von Hagen (1992) finds support for what he calls the "structural hypothesis," namely that budgetary procedures that are more hierarchical (in our terminology) lead to greater fiscal discipline. This result is based on correlations

16. Actually, our reading of the Italian case is a bit different. Using their own criteria, we would have classified Italy at the very least in the intermediate group, if not in the hierarchical one. See Alesina, Mare, and Perotti 1996 for more discussion.

between various aggregate indices of budget procedures and fiscal policy measures in his sample of European countries. These indices summarize in numerical scale all the information discussed above, and they turn out to be strongly correlated with cross-country differences in debt/GNP ratios and budget deficits in the eighties. Von Hagen and Harden (1994) also consider other fiscal indicators of fiscal policy, such as debt sustainability, the growth of open-ended programs, and the role of fiscal policy in macroeconomic stabilization. Interestingly, concerning the last issue, they find that countries with more hierarchical institutions do not show worse performance in terms of output stabilization, despite their more fiscally conservative policies.[17]

These aggregate indices squeeze into a single number several different features of the budget process. Thus, different countries may receive similar aggregate values of the indices for very different reasons. For instance, in von Hagen's work, France and Germany have high indexes (high meaning more hierarchical procedures) for different reasons. In France the high value of the index is due mostly to the strong role of the prime minister and its voting rules; in Germany it is mostly due to the transparency of the budget and the inflexibility of implementation. On the other hand, Italy receives a low score mostly for the weak role of the Treasury minister and the lack of transparency of the budget; Belgium receives a low score because of its voting procedures.

De Haan, Moessen, and Volkerink (chap. 11 in this volume) make progress in disentangling the effects of different components of these indices in a sample of European countries. They conclude that the position of the minister of finance is especially important. Case studies can also shed light on which aspects of budget procedures are more important. Examples of research in this vein include Alesina, Mare, and Perotti 1996 on Italy; Campos and Pradhan (chap. 10 in this volume) on Australia and New Zealand; Courchene (chap. 12 in this volume) on Canada and Australia; Feld and Kirchgässner (chap. 7 in this volume) on Switzerland; and Wright 1997 on Japan, the United Kingdom, and Canada.

Several authors have also investigated the role of fiscal institutions in Latin America. Alesina et al. (1996) consider a sample of almost all the Latin American countries and construct an index of budget procedures on a hierarchical-collegial dimension, and on a transparent-nontransparent one. They use both the written legislation and a survey conducted by means of questionnaires answered by the budget director's office of each country. The index is related but far from identical to the one constructed by von Hagen for OECD countries. The index by Alesina et al. focuses on several critical aspects: (*a*) whether or not the budget is approved in the context of a binding macroeconomic program; (*b*) the role of the Treasury minister, de jure or de facto, as the agenda

17. This result is reminiscent of findings concerning central bank independence. Alesina and Summers (1993) show that in OECD countries more independent central banks show lower inflation without an increase in output variability.

setter in the budget process; (*c*) the relationship between the government and the legislature in the budget process; (*d*) the voting procedure in the legislature; and (*e*) various proxies for the degree of transparency of the budget. These authors find that for a sample from 1980 to 1993, more hierarchical/transparent procedures are associated with lower primary deficits in Latin America, after controlling for several economic determinants of the government budget. They also attempt to disentangle which aspects of the budget procedures are more important than others. For a variety of reasons, their results are not conclusive on this point; however, it would seem that a particularly important aspect is the fact that the budget outcomes (particularly the deficit) are discussed and decided in the context of a binding macroeconomic program for the year.

Gavin and Perotti (1997) and Stein, Talvi, and Grisanti (chap. 5 in this volume) provide vast and comprehensive assessments of several aspects of Latin America's fiscal performance in the last few decades. Among others, they emphasize issues of procyclicality of fiscal policy, composition of spending, relationship between central and local governments, and transparency of the budget. They conclude that institutions are important determinants of fiscal outcomes in this region. Jones, Sanguinetti, and Tommasi (chap. 6 in this volume) focus on Argentina and discuss the institutional relationship between central and provincial governments. This is indeed a critical factor for the maintenance of fiscal discipline in this country.

An important point that should receive further attention is the interaction of budget institutions with other political variables. One problem in pursuing this research is the number of degrees of freedom. Since this empirical work is almost exclusively cross-sectional in nature, one needs several countries in the sample to investigate several institutional characteristics, and their interaction together. Perotti and Kontopoulos (chap. 4 in this volume), Hallerberg and von Hagen (1997 and chap. 9 in this volume), and de Haan and Sturm (1994, 1997) have made some progress along this line, focusing on OECD country samples.

A vast related literature that can also shed light on the effect of budget procedures on outcome focuses on American states, which provide a sample with a large variance in institutional arrangement and fiscal performance. Several recent papers by Poterba (1994), Alt and Lowry (1994), Bayoumi and Eichengreen (1995), Bohn and Inman (1995), Inman (1996), Kiewiet and Szakaly (1996), and Alesina and Bayoumi (1996), among others, are particularly relevant for our discussion.[18]

For instance, Poterba (1994) focuses on fiscal shocks, namely the difference between planned and actual spending and revenues, due to a variety of unexpected random events. While many states cannot plan to run deficits, unexpected deficits as a result of fiscal shocks can and do materialize. American states have rather different provisions concerning state balance, that is, differ-

18. See also earlier work by von Hagen (1991).

ent budget laws. The Advisory Council on Intergovernmental Relations (1987) scales them from 1 to 10 in terms of how restrictive they are for the state budget balance. Poterba studies whether the different degrees of stringency of budget balance provisions affect the reaction of states to fiscal shocks. He finds that states with weak antideficit rules adjust spending less in response to positive deficit shocks than their counterparts with strict antideficit laws. More generally he concludes that "fiscal institutions affect the short-run patterns of taxes and expenditures" (801). Interestingly, Poterba also finds that adjustments to adverse fiscal shocks are less vigorous and prompt in states with divided government, where the governor does not belong to the party that holds a majority in the legislature. Alt and Lowry (1994), using a somewhat different approach and sample, reach very similar conclusions. They find that adjustments to fiscal imbalances are low in states with divided government and weak antideficit rules. Alesina and Bayoumi (1996) show that while restrictions on budget deficits enforce fiscal balance, they do not have observable costs on state product variability, for lack of fiscal stabilization.

Bayoumi and Eichengreen (1995) find that the response of deficits to income fluctuations is stronger in states with less stringent budget rules. These authors find that in states with tough rules, most of the budget adjustments occur on the spending side, suggesting that stringent rules are effective at containing spending. These authors make a distinction between those balanced-budget rules that require only a prospective or beginning-of-the-year balance and those that require an end-of-the-year balance. They find that soft, beginning-of-the-year constraints are much less effective than the tougher end-of-the-year ones at controlling deficits. These results are quite intriguing, and they relate to the issue of transparency discussed above. Clearly, beginning-of-the-year requirements leave open the possibility of strategic use of projections and accounting to make a budget look balanced in theory but not with realistic forecasts of revenues and spending needs.

Several other authors have studied the effects on state budgets of gubernatorial line-item veto. The latter does not impose caps on state spending or deficits but, at least theoretically, tilts the relative power in favor of the governor against the legislature in the budget process. As a result, in principle, the line-item veto should promote fiscal discipline. American states differ: many have the line-item veto, several do not. They also differ on what majority is required in the legislature to overcome a gubernatorial veto. Clearly, the higher the majority required, the stronger the governor's relative power. As pointed out in the survey by Carter and Schap (1990), the empirical effects of the line-item veto on state budgets are unclear. Holtz-Eakin (1988), for instance, finds that in the long run the presence of the line-item veto does not reduce spending or deficits. However, in the short run it has some effect, depending on the political context and, in particular, the party affiliation of the governor and the composition of the legislature. Alm and Evers (1991) describe similar findings and conclude that the line-item veto has a small negative effect on the level of spending in the case of divided state government. Similar results are reached by Bohn and Inman (1995).[19]

Broadly speaking, one is struck by the similarity of some of the results between American states and OECD countries. First, in both cases, budget deficits seem to be the result of delayed fiscal adjustments of fragmented governments (coalition governments in OECD countries, divided government in American states). Second, budget institutions influence budget outcomes in the expected direction. Third, perhaps more hierarchical institutions are particularly necessary and useful in situations of government fragmentation.

Also, one may note an analogy between the effect of budget institutions and government structure. Collegial institutions and fragmented governments do not cause budget deficits per se, but delay adjustments to fiscal imbalances that appear, for any reason. Thus, questions concerning both the timing of deficits and the cross-country differences can be answered by the interaction between, on the one hand, the shocks in the seventies, lower growth, and demographic factors that posed a heavy burden on social security systems and, on the other hand, certain budget procedures and fragmented government.

References

Advisory Council on Intergovernmental Relations. 1987. *Fiscal discipline in the federal system: National reform and the experience of the states.* Washington, D.C.: Advisory Council on Intergovernmental Relations.

Alesina, A., and T. Bayoumi. 1996. The costs and benefits of fiscal rules: Evidence from the U.S. states. NBER Working Paper no. 5614. Cambridge, Mass.: National Bureau of Economic Research.

Alesina, A., and A. Cukierman. 1990. The politics of ambiguity. *Quarterly Journal of Economics* 107:829–50.

Alesina, A., and A. Drazen. 1991. Why are stabilizations delayed? *American Economic Review* 81:1170–88.

Alesina, A., R. Hommes, R. Hausmann, and E. Stein. 1996. Budget deficits and budget procedures in Latin America. NBER Working Paper no. 5586. Cambridge, Mass.: National Bureau of Economic Research.

Alesina, A., M. Mare, and R. Perotti. 1996. The Italian budget procedures—analysis and proposals. Columbia University Working Paper.

Alesina, A., and R. Perotti. 1995a. Fiscal expansions and fiscal adjustments in OECD countries. *Economic Policy* 21 (October): 207–48.

———. 1995b. The political economy of budget deficits. *IMF Staff Papers* 42 (March): 1–31.

Alesina, A., and H. Rosenthal. 1995. *Partisan politics, divided government, and the economy.* Cambridge: Cambridge University Press.

19. An interesting closely related literature studies the effects of bond rating, and, more generally, of municipal bond market behavior on state balance sheets. See, in particular, Poterba and Rueben (chap. 8 in this volume) and the references cited there.

Alesina, A., and L. Summers. 1993. Central bank independence and macroeconomic performance: Some comparative evidence. *Journal of Money, Credit, and Banking* 25 (May): 151–62.

Alesina, A., and G. Tabellini. 1990. A positive theory of budget deficits and government debt. *Review of Economic Studies* 57:403–14.

Alm, J., and M. Evers. 1991. The line-item veto and state government expenditures. *Public Choice* 68:1–15.

Alt, J., and A. Chrystal. 1981. Electoral cycle, budget controls, and public expenditure. *Journal of Public Policy* 1:32–59.

Alt, J., and R. Lowry. 1994. Divided government, fiscal institutions, and budget deficits: Evidence from the states. *American Political Science Review* 88:811–28.

Arrow, K. 1951. *Social choice and individual values.* New Haven, Conn.: Yale University Press.

Baron, D. 1989. A non-cooperative theory of legislative coalitions. *American Journal of Political Science* 33:1048–84.

———. 1991. Majoritarian incentives, pork barrel programs, and procedural control. *American Journal of Political Science* 35:57–90.

Baron, D., and J. Ferejohn. 1989. Bargaining in legislatures. *American Political Science Review* 83:1181–1206.

Barro, R. 1979. On the determination of the public debt. *Journal of Political Economy* 87:940–71.

Bayoumi, Tamim, and Barry Eichengreen. 1995. Restraining yourself: The implications of fiscal rules for economic stabilizations. *IMF Staff Papers* 42 (March): 32–67.

Bohn, H., and R. Inman. 1995. Constitutional limitations and public deficits: Evidence from the US states. *Carnegie-Rochester Conference Series on Public Policy* 45: 13–76.

Buchanan, J., and R. Wagner. 1977. *Democracy in deficit.* New York: Academic Press.

Carter, J., and D. Schap. 1990. Line item veto: Where is thy sting? *Journal of Economic Perspectives* 4:103–19.

Chari, V. V., and H. Cole. 1993. A contribution to the theory of pork barrel spending. Federal Reserve Bank of Minneapolis Staff Report no. 156.

Chari, V. V., L. Jones, and R. Marimon. 1997. On the economics of split voting in representative democracies. *American Economic Review* 87:957–77.

Cukierman, A., and A. Meltzer. 1986. A theory of ambiguity, credibility, and inflation under discretion and rules. *Econometrica* 53:1099–1128.

de Haan, J., and E. Sturm. 1994. Political and institutional determinants of fiscal policy in the European Community. *Public Choice* 80:157–72.

———. 1997. Political and economic determinants of OECD budget deficits and government expenditures: A reexamination. *European Journal of Political Economy* 13: 322–36.

Emerson, M. 1988. *What model for Europe?* Cambridge, Mass.: MIT Press.

Ferejohn, J., and K. Krehbiel. 1987. The budget process and the size of the budget. *American Journal of Political Science* 31:296–320.

Fiorina, M., and R. Noll. 1978. Voters, bureaucrats, and legislators: A rational choice perspective on the growth of bureaucracy. *Journal of Public Economics* 9:239–54.

Gavin, M., and R. Perotti. 1997. Fiscal policy in Latin America. In *NBER macroeconomics annual*, ed. B. Bernanke and J. Rothemberg, 11–70. Cambridge, Mass.: MIT Press.

Grilli, V., D. Masciandaro, and G. Tabellini. 1991. Political and monetary institutions and public finance policies in the industrial democracies. *Economic Policy* 13: 341–92.

Hallerberg, M., and J. von Hagen. 1997. The budgetary process and the size of the

budget: A reexamination. CEPR Working Paper. London: Centre for Economic Policy Research.
Holtz-Eakin, D. 1988. The line item veto and public sector budget. *Journal of Public Economics* 37:263–92.
Huber, J. 1992. Restrictive legislative procedures in France and in the United States. *American Political Science Review* 86:67–82.
Inman, R. P. 1996. Do balanced budget rules work? U.S. experience and possible lessons for the EMU. NBER Working Paper no. 5838. Cambridge, Mass.: National Bureau of Economic Research.
Kiewiet, R., and K. Szakaly. 1996. The efficacy of constitutional restrictions on borrowing, taxing, and spending: An analysis of state bonded indebtedness, 1961–1990. *Journal of Law, Economics, and Organization* 12:62–97.
Lucas, R., and N. Stokey. 1983. Optimal fiscal and monetary policy in an economy without capital. *Journal of Monetary Economics* 12:55–94.
Milesi-Ferretti, G. 1997. The good, the bad, and the ugly. Unpublished.
Mueller, D. 1978. *Public choice.* Cambridge: Cambridge University Press.
Niskanen, W. 1971. *Bureaucracy and representative government.* Chicago: Aldine Atherton.
Persson, T., and L. Svensson. 1989. Why a stubborn conservative would run a deficit: Policy with time in consistent preferences. *Quarterly Journal of Economics* 104: 325–45.
Poterba, J. 1994. State responses to fiscal crises: "Natural experiments" for studying the effects of budgetary institutions. *Journal of Political Economy* 102:799–821.
———. 1996. Do budget rules work? NBER Working Paper no. 5550. Cambridge, Mass.: National Bureau of Economic Research.
Premchand, A. 1983. *Government budgeting and expenditure control.* Washington, D.C.: International Monetary Fund.
Rogoff, K. 1990. Political budget cycles. *American Economic Review* 80:1–16.
Rogoff, K., and A. Sibert. 1988. Elections and macroeconomic policy cycles. *Review of Economic Studies* 55:1–16.
Roubini, N., and J. Sachs. 1989a. Government spending and budget deficits in the industrialized countries. *Economic Policy* 8:99–132.
———. 1989b. Political and economic determinants of budget deficits in the industrial democracies. *European Economic Review* 33 (May): 903–33.
Shepsle, K. 1979a. Institutional arrangements and equilibrium in multidimensional voting models. *American Journal of Political Science* 23:26–59.
———. 1979b. The role of institutional structure in the creation of policy equilibrium. In *Public policy and public choice,* ed. D. Rae and T. J. Eisinuier. Beverly Hills, Calif.: Sage.
Spolaore, E. 1993. Macroeconomic policy, institutions, and efficiency. Ph.D. diss., Harvard University.
Tabellini, G., and A. Alesina. 1990. Voting on the budget deficit. *American Economic Review* 80:37–49.
Tanzi, V., ed. 1991. *Fiscal policies in economies in transition.* Washington, D.C.: International Monetary Fund.
———. 1993. The political economy of fiscal deficit reduction. In World Bank, *Macroeconomics of public sector deficits.* Forthcoming.
———. 1995. International systems of public expenditures: Lessons from Italy. Paper presented to the Bank of Italy conference Public Expenditure Controls.
von Hagen, J. 1991. A note on the empirical effectiveness of formal fiscal restraints. *Journal of Public Economics* 44:99–110.
———. 1992. Budgeting procedures and fiscal performance in the European Com-

munities. Economic Paper no. 96, Commission of the European Communities. October.

von Hagen, J., and I. J. Harden. 1994. National budget processes and fiscal performance. *European Economy: Reports and Studies* 3:311–418.

Weingast, B., K. Shepsle, and C. Johnsen. 1981. The political economy of benefits and costs: A neoclassical approach to distributive politics. *Journal of Political Economy* 89:642–64.

Wildasky, A. 1986. *Budget: A comparative theory of budgetary processes.* New Brunswick, N.J.: Transaction Books.

Wright, M. 1997. Illusion and reality in central government budgeting in Japan, the UK, and Canada, 1975–1997. Photocopy.