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Budget Processes and Commitment to Fiscal Discipline*

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Abstract

We present a framework of investigation into the political economy of the budget process. Our model suggests that institutional rules governing the budget process can be found to limit the importance of fiscal illusion. Empirical evidence supports that proposition. The choice of rules depends on the political environment as well as the dominant source of uncertainty in the budget process.

Keywords: Budget systems; Government expenditures and deficits; Collective choice

JEL classification: H61, H62, D71, D73, H72

I. Introduction

High and rising levels of public debt and large and persistent government deficits are matters of concern in most OECD countries, casting doubt on the soundness of public finances and increasing debt service obligations that reduce the governments' ability to serve more pressing social needs. In Europe, they raise additional concerns as the EU member states have committed to avoiding 'excessive government deficits' in the upcoming Economic and Monetary Union.

Public spending, taxation, and borrowing are all results of the government budget process. Formally, the budget is a list of revenues and expenses during a certain time period. It conveys what the government expects and is authorized to do during the period considered. The budget process describes how decisions concerning public resources are made: It is the answer to the question, who does what, when, and how in the preparation and the implementation of the budget. The budget process is governed by formal and informal rules of behavior and

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interaction. Political economy views it as a mechanism through which political interest groups "bargain over conflicting goals, make side-payments, and try to motivate one another to accomplish their objectives" (Wildavsky, 1975, p. 4).

This paper lays out some basic elements of an investigation into the political economy of the budget process. Political economy emphasizes that institutional rules of conflict resolution can shape the decisions made under them. Existing literature applying this proposition to government budgeting focuses narrowly on particular elements of the budget process and reflects mainly US institutions and political culture.[1] In contrast, von Hagen (1992) and von Hagen and Harden (1994) develop a more comprehensive view of the interaction of institutions at the various stages of the budget process and look at budgeting in the EU member states. While those papers concentrate on the empirical analysis and proposals for reform, this paper outlines a framework of analysis focusing on fiscal illusion, an important type of conflict in the budget process.

The next section lays out a model showing how procedures of decision making affect a government's fiscal performance. It leads to the distinction between a target-oriented and a procedure-oriented approach in the design of the budget process. Section 2.2 presents some pertinent empirical evidence. In section 2.3, we argue that the choice between these two approaches depends on which type of uncertainty dominates in the budget process. Section 3 closes with some conclusions and directions for further research.

II. Budgeting with Fiscal Illusion

With few taxes earmarked for specific purposes, financing of public sector activities is almost always provided by the general taxpayer. In contrast, those who benefit from a specific public sector activity are generally some group within the tax-paying public. This incongruence implies that the net benefit of an increase in the activity is larger from the point of view of the beneficiaries than from the point of view of the general public. *Fiscal illusion* describes this overestimation of the marginal benefit of a public activity. A government's fiscal performance depends largely on the extent to the rules governing budgeting decisions allow fiscal illusion to manifest itself.

1. A Basic Model

Consider a government consisting of $i = 1, \ldots, n$ spending ministers (SMs). The budget allocates public funds z_i to each SM, who use their funds to produce public activities, x_i. Each SM has a production function turning funds into pub-

[1] See von Hagen (1992) for a review.

lic activities, $x_i = f_i\, z_i$ that characterizes administrative skills and procedures, choices between alternative ways to achieve a given policy goal etc. Each SM pursues a policy target, x_i^*, of her activity.

The collective interest of the government is described by the attempt to meet the policy targets of all activities and to keep the social excess burden of taxation small. This is summarized in the government's joint utility function

$$U = -\sum_{i=1}^{n} \frac{\alpha}{2}\left(f z_i - x_i^*\right)^2 - \frac{m}{2} B^2 . \tag{1}$$

where $B = \Sigma_i z_i$, B^2 represents the excess burden from taxation to society, and m, $0 < m \leq 1$, represents the share of that excess burden the government takes into its political considerations.[2] Note that we abstract from borrowing for now.

For simplicity, let $f = 1$ and $x_i^* = x^*$ for all i and assume that f and x^* are common knowledge. The collectively optimal budget is

$$B^o = \frac{n\alpha x^*}{nm + \alpha},\ x_i = \frac{\alpha x^*}{nm + \alpha}. \tag{2}$$

The individual incentives of the SMs are different. While each has an interest to reach the policy target of her activity, each SM also receives a private utility gain from the size of her allocation, reflecting the political support of her constituency in response to greater benefits and, possibly, the prestige from commanding over larger resources. Furthermore, each SM takes into account only the share m_i, $0 < m_i < m$, of the burden of taxation that falls on her constituency. The individual SM's utility function is

$$V_i = \gamma z_i - \frac{\alpha}{2}\left(f z_i - x_i^*\right)^2 - \frac{m_i}{2} B^2 . \tag{3}$$

We now show that the extent to which the individual interest of each SM can manifest itself in the budget depends critically on the decision making procedure applied. A first procedure would consist of collecting each minister's bid and taking a vote on the resulting budget. As each minister maximizes her utility taking the other bids as given, the resulting budget is

$$B = \frac{n\left(\alpha x^* + \gamma\right)}{m + \alpha} > B^o\ ,\ x_i = \frac{\alpha x^* + \gamma}{m + \alpha}, \tag{4}$$

[2] The share m will vary both with the distributional characteristics of the tax system and the political constituency of the government.

where m = $\Sigma_i m_i$ and $m_i = m_j$ are assumed. This budget exhibits a spending bias for $\gamma > 0$ and $n > 1$. It reflects each SM's extra utility (γ) from spending and the fact that each SM neglects the externality the budget constraint imposes on all others if her allocation is increased.

This spending bias can be reduced by strengthening the collective interest of the government. Consider a process starting with negotiations among all SMs over binding limits on their allocations. The Nash bargaining solution is

$$B = \frac{n(\alpha x^* + \gamma)}{nm + \alpha}. \tag{5}$$

Bargaining reduces the spending bias due to the externality problem. Formally, this is reflected in the larger denominator in (5) compared to (4). However, bargaining does not eliminate the bias due to the individual gains from spending.

In addition to SMs, governments typically comprise ministers without portfolio, including the prime minister and the finance minister.[3] Ministers without portfolio are not bound by the particular interests of a spending department and can be assumed to give more weight to the collective interest of the government. Another approach to strengthening the collective interest in the budget process is to vest these members with special strategic powers in the budget process, such as the power to veto proposals of the SMs, as in Germany, the power to set the agenda of budget negotiations in cabinet and to regulate the information flow among the SMs, as in Britain or the Netherlands, or the power to set binding limits for the departmental allocations, as in France.[4]

We model this approach by assuming that the ministers without portfolio can generate a solution that maximizes the joint utility function

$$W = (1 - \beta)\sum_{i=1}^{n} V_i + \beta U \tag{6}$$

where β is an indicator of their strategic power. The resulting budget is

$$B = \frac{n(\alpha x^* + (1 - \beta)\gamma)}{nm + \alpha},\ x_i = \frac{\alpha x^* + (1 - \beta)\gamma}{nm + \alpha}. \tag{7}$$

Even when the ministers without portfolio have little strategic power ($\beta = 0$), it overcomes the externality problem as these ministers present a more integrat-

[3] We use the term finance minister here to describe a function which, in some European countries is carried out by ministers with different titles.

[4] For details see van Hagen and Harden (1994).

ing view of the budget. In addition, raising their strategic power ($\beta > 0$) reduces the impact the individual gains from spending has on the budget.

Our discussion suggests that procedural rules for the budget process can be used as a commitment device for fiscal discipline. Such rules must be devised to strengthen the collective interest of the government over the individual incentives of the spending ministers. We distinguish two alternative approaches. Under a *target-oriented* approach, the government collectively negotiates a set of binding, numerical targets for the budget. Under a *procedure-oriented* approach, the budget process vests the ministers without portfolio with special strategic powers. Only the latter is able to address the spending bias arising from private utility gains from spending. A target-oriented approach is, therefore, adequate when the externality problem is large but the private gains from spending are relatively small, while a procedure-oriented approach is needed when the private gains form spending are large. In addition, we suggest that the choice between these two approaches depends on the political environment of the government under consideration. Specifically, multi-party coalition governments will find a target-oriented approach more adequate as it emphasizes collective decision making rather than dominance of one or a few leading cabinet members.

2. Empirical Evidence

While the analysis above concentrates on the preparation of the budget bill by the government, this is only the first stage of the budget process. The remaining phases are the passage of the budget proposal through parliament, and the implementation of the budget act.[5]

The parliamentary stage can be regarded as a bargaining process between the government and the parliament. Members of parliament, like SMs, overestimate the net benefit of increased spending as they see only that part of the increasing tax burden that falls on their constituencies. Party discipline mitigates their fiscal illusion (Olson, 1965), but most likely does not do so completely. Procedural rules governing the parliamentary stage can contain the importance of fiscal illusion by determining the balance of power between the government and parliament and by limiting the scope of universalism in parliament.[6]

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[5] In addition, there is commonly an ex-post control phase in which the budget is scrutinized by a public auditing body.

[6] Universalism describes the tendency of budget bills to 'contain something for everyone'. For an analysis of universalism in parliamentary budgeting decisions, see Baron (1991). In bi-camera1 systems, the relationship between the upper and the lower houses of parliament adds another dimension. For details of the parliamentary stage, see van Hagen and Harden (1994).

During the implementation stage, new opportunities arise for the SMs to deviate from the budget law and serve demands for additional spending. Two conflicting forces become important: the degree to which the budget law binds government's actions during the fiscal year, and the degree of flexibility to respond to unforeseen events. The binding force of the law depends on the ability to enact supplementary budgets during the fiscal year, on the relative importance of open-ended appropriations in the budget, and on the power of the finance minister to enforce the original budget.[7]

The fiscal performance of a government depends on the combination of the procedural rules prevalent at all three stages of the process. Where rules reducing the effect of fiscal illusion in the government stage are combined with unlimited amendment power in parliament or with a large degree of latitude to deviate from the budget act in the implementation stage, fiscal illusion will still be rampant. Similarly, giving the government a strong position relative to parliament will not reduce fiscal illusion unless stage-one institutions are adequate for that purpose. Therefore, an empirical assessment of the importance of decision making rules in the budget process must consider the interaction of such rules at all three stages.

For this purpose, we consider four characteristics of the budget processes in the 12 EU countries: the structure of negotiations within government, the rules of the parliamentary process, the flexibility of the budget execution, and the informativeness of the budget draft. The latter is critical because, with a low degree of informativeness, the budget does not commit the government to a specific set of actions.

Our empirical hypothesis says that the following features of a budget process reduce the spending bias due to fiscal illusion: A strong position of the prime minister or finance minister in government, or government negotiations producing a set of binding targets early in the process; a parliamentary process with strong limits on amendments, votes proceeding item-by-item on expenditures and a global vote on the total size of the budget preceding the parliamentary debate; a large degree of transparency of the budget; an execution process with limited flexibility for the SMs and a strong position of the finance minister vis-a-vis the SMs. Von Hagen (1992) constructs an index characterizing the institutional provisions of the national budget processes. A high score on this *structural index* signals that a country's budget process conforms strongly to the characteristics listed above. For lack of degrees of freedom, we do not distinguish between the target and the procedure-oriented approach, here.

We use three measures of fiscal performance of the 12 EU countries: General government expenditures, government deficits and government debt. While the

[7] See van Hagen and Harden (1994) for details.

model outlined above focuses on expenditures, it is straightforward to show that a spending bias translates directly into an excessive deficit and excessive debt. All three variables are measured as ratios of GDP. Our hypothesis then says that countries with high scores on the structural index should have smaller expenditure, deficit and debt ratios than countries with low scores.

Table 1

Average Fiscal Performance (Percent)

Indicator	3 highest ranked	3 lowest ranked
Expenditure Ratio 1981–85	48.0	49.7
Expenditure Ratio 1986–90	45.5	51.6
Deficit Ratio 1981–85	2.7	10.7
Deficit Ratio 1986–90	1.2	11.2
Debt Ratio 1981–85	42.5	74.6
Debt Ratio 1986–90	43.2	100.1

Source: von Hagen (1992).

Table 1 compares the average performance during the 1980s of the three countries ranked highest and the three ranked lowest on our index. The evidence supports our hypothesis. Countries which rank high on the structural index have lower expenditure ratios, lower deficit ratios and lower debt ratios than countries which rank low on the index. a more stringent statistical test, Table 2 reports the results of a regression of the deficit and debt ratios on the our index. These regressions confirm that countries scoring high on the structural index have significantly lower deficit and debt ratios than countries scoring low on this index.

3. Budgeting Decisions with Asymmetric Information

In section *2.1*, we assumed that the policy targets for all government activities and the SMs' administrative technologies are common knowledge. However, SMs, who specialize in the politics of their individual domains and the management of their administrations, are likely to be better informed about the public's demand for the activities they deliver as well as their administrative technologies than their colleagues and the ministers without portfolio. Asymmetric information creates incentives to misrepresent targets and technologies to gain more funds in the budget process. This incentive could be eliminated by giving the prime minister the authority to dictate the budget appropriations for all

Table 2

Regression Estimates

Dependent variable	Constant (*t*-ratio)	Index (*t*-ratio)	R^2	RMSE
Deficit/GDP				
Def_i	– 12.72 (– 5.64**)	0.19 (3.39**)	0.34	3.94
Gross Debt/GDP				
B_i	98.97 (6.50**)	– 0.93 (– 2.60**)	0.24	26.6

* and ** indicate significance at the five and one-percent levels, respectively. RMSE is the root mean squared error. Source: von Hagen (1992).

SMs. However, if the uncertainty surrounding targets and technologies is large and the information asymmetry is sufficiently strong, this would put the government's political fate at the risk of making poorly informed choices. The SMs must be left some leeway in order to make use of their superior information.[8]

With asymmetric information, budget negotiations now have the additional function of revealing information about policy targets and administrative technologies.[9] Typically, budget negotiations either involve the entire cabinet under the chairmanship of the prime minister, or they are conducted bilaterally between each SM and the finance minister. We assume that the latter can extract information about the SM's administrative technology, but much less so about the true policy targets. The basis for this assumption is that finance ministers typically challenge the consistency of the bids, lack of value for money, or wastefulness, but not political priorities. In contrast, negotiations in cabinet typically focus on political choices rather than administrative procedure. This suggests that negotiations with the finance minister and negotiations in cabinet serve to resolve different kinds of uncertainty.

Asymmetric information thus points to another dimension in the choice between a target-oriented and a procedure-oriented design of the budget process: If uncertainty about policy targets is the dominant source of uncertainty, a target-oriented approach seems appropriate; if uncertainty about administrative technologies dominates, a procedure-oriented approach should be used.

A closer look at the EU member states (von Hagen and Harden, 1994) reveals a remarkable pattern: The budget processes of all governments of large states

[8] For a formal analysis of this proposition in the context of congressional committees, see Banks (1991).

[9] See Myerson for a discussion of negotiation under uncertainty.

that successfully limited spending and deficits in the 1970s and 1980s (France, Britain, and Germany) are based on a procedure-oriented approach. In contrast, the budget processes of all governments of smaller countries (Denmark, the Netherlands and Luxembourg) that successfully limited spending and deficits are based on a target-oriented one. This suggests a systematic link between a country's size and the successful choice of a budget process. One plausible explanation is that uncertainty about administrative technology is a more pressing concern in large countries: Size correlates with complexity of administrations which makes it more difficult to monitor compliance with numerical budget targets. For larger administrations, creating a strong player constantly negotiating with and monitoring the other participants is, therefore, a more effective tool to contain fiscal illusion than the setting of numerical targets. US experience with deficit control in the 1980s and early 1990s fits the same pattern. In the mid-1980s, the target-oriented approach of the Gramm-Rudman-Hollings Act failed to achieve its purpose. The Budget Enforcement Act passed under the Bush administration, which relies more on a procedure-oriented approach seems to enjoy greater success.

III. Conclusions

Empirical evidence suggests that institutional rules governing the budget process affect fiscal performance. We have presented a basic model showing how rules of procedure in the budget process can be used to contain fiscal illusion and the resulting spending bias. Thus, the budget process can be used as a commitment device for fiscal discipline. We suggest that the appropriate choice of a budget process for that purpose depends on the political environment and on the dominant source of uncertainty in the budget process. More detailed modeling of European budget processes, in particular, modeling the budget process as a mechanism to resolve both political conflict and uncertainty are necessary to improve our understanding of how designing process can be used to improve fiscal performance.

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