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Formal Fiscal Restraints and Budget Processes As Solutions to a Deficit and Spending Bias in Public Finances - U.S. Experience and Possible Lessons for EMU

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FORMAL FISCAL RESTRAINTS AND BUDGET PROCESSES AS SOLUTIONS TO A DEFICIT AND SPENDING BIAS IN PUBLIC FINANCES –

US EXPERIENCE AND POSSIBLE LESSONS FOR EMU

Rolf Strauch and Jürgen von Hagen[1]

1. Introduction

The process of European integration that culminated in European monetary union was based on the belief that fiscal discipline is a necessary precondition for a functioning monetary union. This belief has been enshrined in the fiscal criteria of the Maastricht Treaty setting deficit and debt limits for EMU member states. The Stability and Growth Pact (SGP) is in keeping with the general thrust of the Treaty insofar as it attempts to establish an enduring regime that will circumscribe fiscal policy choices. The SGP specifies the deficit limit over the business-cycle, details monitoring procedures and names sanctions for incurring an excessive deficit. Policy-makers thus have clearly relied on formal fiscal restraints as mechanism to safeguard public discipline. Until now, they have largely refrained from incorporating regulations which try to preclude a unsustainable development of public finances through the allocation of decision-making authority and structuring of budgetary processes.

During the immediate run-up to EMU the Maastricht fiscal restraints apparently were quite effective in re-aligning public finances in Member states showing a large excessive deficit. However, there are some objections concerning this initial sign of institutional effectiveness. First, the restraining effect is much less apparent in the early stages of the post-1992 for some bigger countries, where the deficit actually increased rather than decreased. Second, most countries consolidated their public finances later on until 1997, but empirical evidence indicates that they probably would have done this even without the Maastricht fiscal criteria, given their debt level and the macro-economic environment at the time. Although

[1] We would like to thank participants of the III Bana d'Italia Workshop in Perugia for helpful comments and discussions. The opinion expressed are those of the authors and do not necessarily reflect views of the European Central Bank.

some countries, like Italy and Austria, certainly made an ‘extra’ effort to comply with the convergence criteria. Finally, the consolidation efforts are somewhat diminishing in the current juncture. The fiscal policy stance of some EMU member states is even temporarily becoming expansionary, although some of them have not yet achieved the medium term position close to balance or in surplus as envisaged by the SGP or still suffer from a high debt burden.

In most member states the consolidation achieved prior to 1997 was at least partly, or in Portugal and Greece almost exclusively, based on revenue increases. Conversely, the current expansionary tendency is largely caused by governments’ desire to finally reverse the steady enlargement of the fiscal burden characterising the 1970s and 1980s, by cutting taxes on income. These cuts, however, are not sufficiently matched by expenditure reductions to continue the consolidation process. Overall, there were only two EU countries, Ireland and Finland, where governments pursued a persistent consolidation strategy characterised by expenditure and tax reductions after the mid-1990s. These characteristics of consolidation experiences during the Maastricht convergence process suggests that there are still some important questions to be answered concerning the long-run impact of the deficit and debt limits: How effective can we expect this formal fiscal restraint to be in the long-run? Will the existence of a deficit limit lead to a larger public burden or can a sustainable position be achieved through expenditure reductions? Finally, are there other, complementary institutional arrangements which may underpin fiscal discipline and what is their effect on public revenues and spending?

Fortunately, there is a rich and relatively extensive literature on legal budget restraints in the US states, which offer an empirical testing ground for the effectiveness of institutional regulations. The political economy literature also provides theoretical models for the "spending and deficit biases" inherent in public finance decisions and points to institutional solutions. This literature indicates that the structure of the budget process is a major determinant of public deficits and expenditures. We will be treating the different strands in the literature in the following order: The next two two sections describe the deficit and spending bias originating in the common pool resource (CPR) property of public finance and reviews the institutional solutions that have been proposed in response to this problem. International empirical evidence on the impact of budget processes clearly indicates that the centralization of the budget process leads to lower public expenditures, deficits, and debt. The fourth section presents evidence on the effectiveness of balanced budget requirements, tax and expenditure limits and the impact on tax levels. The aim of our presentation is to identify the specific elements underpinning the effectiveness of these institutions and to compare these elements with the regulations of the Stability and Growth Pact. This section will show that fiscal rules are effective if they a) apply to actual instead of planned budgets and include clear target values, b) avoid loopholes and substitution effects, c) are enforced by external agents, and d) are difficult to amend. Moreover, empirical evidence indicates that even stringent budget rules do not systematically lead to higher tax levels. In the fifth section an analysis of the Maastricht Treaty and the Stability and Growth Pact in terms of these criteria shows that it performs well on the budget outcome and comprehensiveness criteria. However, the effectiveness of amendment and enforcement mechanisms will largely depend of the future development of regularities in their application.

2. The Common Pool Problem as a Source of Spending and Deficit Biases in Public Finance

Public spending is a story of some people spending other people's money. On this score, a fundamental aspect of public finance is in the distinction between general public goods, such as defense or home justice, which benefit all citizens (tax payers) alike, and targeted public policies, such as local public goods, sectoral policies or transfers targeted at subgroups of citizens (taxpayers) in society. The largest part of public budgets produce rather targeted than general benefits. As a consequence of this incongruence between spending and taxation, each policy-maker misperceives the costs of spending and demands an "excessive" amount, since he takes into account all the benefits while paying only attenion to that share of the taxes which falls on his constituency. This is most obvious when policy-makers represent specific geographical constituencies as is the case with members of the US Congress and of state legislatures. It also applies, however, to political systems in which representation is based on functional groups or on social strata rather than on geographical areas. If this tendency prevails in the budget process, the incomplete internalization of social costs leads to an aggregate level of government expenditures that exceeds the socially optimal amount. Moreover, if governments are allowed to finance these expenditures through public debt, this problem, also known in the context of natural resource usage as the Common Pool Resource (CPR) problem, will apply straightforwardly to the budget balance; policy-makers will tend to approve fiscal measures implying a higher than optimal deficit.[2]

3. Budget Processes as Institutional Solutions to the Fiscal Biases - Theory and Evidence

Budget institutions are a set of formal or informal rules which shape the decision-making process and which lead to a budget's formulation, its approval and implementation.[3] The principal constitutional function of the budget process is to resolve the conflict between competing social and political claims on public finances and to ensure that resource flows correspond to the approved budget. Thus budget processes provide a solution to the problem of allocating spending and revenues and, at the same time, determine the main fiscal aggregates - such as total expenditures, revenues, and budget balance.

3.1 Models of Budget Processes

Earlier formal treatments of budget processes using the CPR approach were strongly influenced by the US Congress and state legislatures. Weingast *et al.* (1981) were among the first to formalize the CPR idea using this setting. They assumed a rather "collegial" approach, where a group of legislators bargains and votes on the distribution of benefits. For the authors, the seriousness of a particular CPR problem depends solely on the number of decision-makers involved since this determines the share of taxes which his or her constituency will have to bear. Since decision-making in legislatures perpetuates a rule of "reciprocity", where everyone gets what he wants, the individual demands add up to an excessive budget. This bottom-up approach to aggregation, where the sum of total expenditures is determined as a residual, has been contrasted with a top-down approach, where policy-makers first decide on the total budget and then allocate shares of the budget. Ferejohn and Krebiel (1987), however, show that under a top-down approach the budget is smaller only when the agents are assigned certain preference constellations.

In a series of papers, Baron (1989, 1991) and Baron and Ferejohn (1989) model a more elaborate institutional structure. They consider the

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[2] See, for example, von Hagen & Harden (1996) and Velasco (1997) for two- or multi-period models of fiscal decision-making.

[3] The following paragraph relies heavily on von Hagen (1998).

effect that different amendment rules have on the legislators' choice of how benefits are allocated and on the efficiency of fiscal policies.[4] In a closed rule procedure, a proposal made by a legislator is immediately approved or voted down. If the proposal fails, a new legislator is called upon in the next session to submit a proposal. An open rule procedure allows members to call for a vote on the original proposal or to put forward an amendment. In the latter case, the proposal and the amendment are put up to a vote, and the winner becomes the new proposal on the floor in the next session. The main results of their model are that a closed rule generally leads to the approval of more inefficient budgets, to the allocation of benefits to a minimum winning coalition, and to a strong "first-mover" advantage to the legislator who proposed the budget. An open rule yields a more egalitarian distribution of resources and may result in delayed approval of the budget. The driving force behind these findings is that policy-makers have to take subsequent steps of the budget process into account when making a proposal.

Baron and Ferejohn continue to model budget processes assuming a collegial environment and concentrate on the proposal power of legislators. Strauch (1999) extends their framework to a bargaining process between leaders, such as the governor and the legislative leadership, and members. The two types of agent bargain about the size of the budget because the leaders take the social costs of the entire budget into account while the members focus on special constituencies and, therefore, demand higher spending. In addition, Strauch (1999) considers the *ex post* veto power of the executive. The distinction between two types of agent has been proposed by von Hagen (1992) and von Hagen and Harden (1996) for the European context. The model yields two main results: first, endowing the leadership with strong proposal and particularly *ex post* veto authority offers a powerful tool for curtailing the budget. Second, the constellation of rules matters. While the open rule procedure with veto authority of the leader produces lower budgets than would a simple open rule without the executive veto option, a closed procedure may yield lower expenditures than an open procedure with veto authority. In other words, the entire constellation of institutional rules is important when explaining the final budget decision.

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[4] The overall efficiency of the budget, according to Baron (1991), can be defined as the benefit to tax ratio for all programs. In principle this decision can be translated into a decision about the total size of the budget, provided one make some assumptions concerning the available set of programs. However, since the approach does not offer any theoretically guided assumption about these factors, any empirical validation of the argument is extremely difficult.

Hallerberg and von Hagen (1999), and Hallerberg (1999), presenting a richer model of European government systems, arrive at similar results. They identify two centralization mechanisms at the government stage: delegation and commitment to a fiscal contract. Under the delegation approach, governments transfer or “delegate” authority to a "fiscal entrepreneur" who has an encompassing interest in the budget and whose function is to ensure the continuing cooperation of the other policy-makers throughout the process. To be effective, this entrepreneur must be able to monitor others, have selective incentives at his disposal, and be willing to bear the costs of monitoring. In European governments, the entrepreneur is typically the finance minister. He has the power to shape the final budget outcome, provided he effectively sets the agenda in cabinet negotiations and is authorised to constrain amendments. Under the contract approach, the government agrees to a set of fiscal targets negotiated on a collective basis at the start of the budget process. Here the emphasis is on the multilateral negotiations involved in the bargaining process, on identifying the externalities involved in budget decisions, and on the binding nature of the fiscal targets.

The authors show that there are several reasons why the two models should be closely linked to the electoral system. First, the delegation approach is easier to implement in the case of one-party governments because members of the same political party are more likely to have similar political preferences with regard to basic spending priorities than are members of different political parties. In a one-party government, the different ministers responsible for expenditures can be fairly sure that the finance minister shares more or less the same spending priorities and will use the power delegated to him solely to solve the CPR problem. By contrast, cabinet members in a multi-party coalition government may have substantially different views on basic spending needs. In this case the delegation of power to the finance minister entails the risk of not being able to get some of these priorities on the agenda, and thus a fiscal contract including all parties is the proper approach. Second, the punishment mechanism is important. In a one-party government, it is easy to punish a spending minister for defection by dismissal. A fiscal contract, however, would not be credible in the case of a one-party government since the government could easily change its original goal at any point in time without incurring punishment. In a coalition government, a defecting minister cannot simply be removed from office by the prime minister if the coalition partner supports its ministers. The most important punishment mechanism here is the threat to break up the coalition if a minister reneges on the budget agreement. Thus, punishment leads to the fall of the government rather than to the dismissal of a single individual.

The authors elaborate on the adequacy of different institutional solutions only insofar as they bear on the structure of the budget process in its relation to the electoral system. However, this kind of consideration also applies to other fundamental organizational principles governing state and state-society relations, such as federalism or corporatist interaction. In addition, international actors may arrive on the scene and can in principle assume the same function as national budgetary institutions. Thus, although the framework may appear to be rather specific, it is open to a series of empirical amplifications.

3.2 Empirical Evidence

This part will review the available empirical evidence on the disciplining effect of budget institutions. The first problem posed by the empirical validation of these theories is how the centralization of the budget process is to be conceptualized, i.e. whether in terms of a delegation or a contract regime. For a variety of methodological reasons, [5] von Hagen (1992) and von Hagen and Harden (1996) began by using an aggregate institutional index to measure the degree of centralization. This empirical approach was adopted in subsequent studies.

The budget process, as conceptualized by von Hagen (1992) and von Hagen and Harden (1996) with respect to European countries, consists of a series of elements corresponding to different stages. The budget preparation stage may be termed "fragmented" or "decentralized", if there are no broad budget targets, i.e. if the finance minister only collects bids, and distributional conflicts are eventually resolved by the entire cabinet. It is "centralized" if the finance minister sets fiscal targets, coordinates and approves bids, and helps to resolve final conflicts. Alternatively, under the contract approach, targets are negotiated *ex ante*, bids are monitored by the finance minister, and conflicts resolved by senior cabinet ministers or party leaders. The legislative approval stage is "decentralized" if the legislature is essentially unrestricted in its decisions and committees have weak monitoring power. It is centralized if the scope of amendments is at least moderately restricted, the government can determine voting procedures, committees have strong monitoring power under the contract approach, and

[5] See von Hagen and Harden (1996) and Strauch (1999) for these reasons and related considerations on the aggregation method.

the upper chamber has no budget authority which would enable it to avoid the kind of lengthy and pain-staking debates that might result in an expansion of the budget. Finally, in a centralized budget process, as mentioned above, a deviation from set targets may lead to the government’s downfall. The implementation stage can be termed “centralized” if the finance minister has strong control over spending flows, the transfer of appropriations is under the control of the finance minister or otherwise restricted, and supplementary budgets are rare. The opposite holds for decentralized processes. In addition, von Hagen and Harden include informational elements in order to assess the transparency of the budget process.

With the help of this conceptualization, they analyze the fiscal impact of budget institutions on national debt and deficits for the period 1981-1994. More specifically, they use five or ten year averages to assess the long-term fiscal impact. Non-parametric as well as parametric tests confirm a disciplining impact of centralization. In later studies, they vary the initial conceptualization by multiplying the indicators for the different budget stages. This conceptualization closely reflects the interaction of institutions. Bivariate regressions indicate that not only the additive but also the multiplicative index is significantly associated with lower debt levels and deficits. Moreover, de Haan (1994) and von Hagen (1998) report a similar result for the additive index relating to the growth rate of debt, when they control for a number of economic and political variables, such as economic growth, party constellation in government, or party ideology. Finally, von Hagen (1998) presents evidence that the delegation regime is associated with a stronger anti-cyclical reaction during economic downturns than either a fragmented, decentralized budget process or the contract regime.

In a study on budget processes in the US states, Strauch (1999) constructs a centralization index to analyze the impact of decision-making structures on public deficits and spending. During the budget preparation stage, the governor is endowed with strong agenda-setting power if he directly appoints the department and agency heads in the most relevant spending areas, unilaterally determines the revenue estimate guiding budget negotiations, and imposes tough budget targets on spending departments. Conversely, the budget proposal may be said to reflect the governors' preferences to a lesser extent, if department and agency heads dominate the process and are able to push their ideal budget proposals through the legislature.

In the legislature, the legislative leadership effectively sets the agenda, if leaders can present their own proposals, if referral and debate in the committee system is rather centralized and if party discipline can be invoked. The distributive thrust varies with the majority requirements for legislative approval and with the opportunities for arranging package deals. Here, the leadership has a stronger position if it does not have to distribute resources to everyone and it can preclude package deals. Time preferences are conducive to budget discipline if the consequences of non-decision at the beginning of the new fiscal year are severe, such as a shut-down of the government apparatus. The leadership is not likely to prevail, if it cannot present its own budget draft, if the committee system is extensive and decentralized, if there are large majority requirements, and if non-decision automatically places last year’s budget in default. The governor's most important direct instrument for influencing and restricting legislative decision-making is his veto authority. The stronger the governor’s veto authority and the stronger the majority requirement needed to override the governor's decision, the more he can do to indicate which expenditures he wants to see reduced.

Finally, the leverage which the governor has over expenditures during the implementation stage and the flexibility of budget execution is determined, first, by the governors' authority to cut the budget, which may be restricted to maximum amounts or across-the-board cuts. Second, unrestricted opportunities for agency heads to transfer funds between departments and programs may provide opportunities to spend a surplus in one item for another purpose; it may also induce agency heads to overspend their appropriations in the expectation of an *ex post* augmentation of their means.

In addition to the budget process, Strauch (1999) includes measures for the stringency of BBRs and takes into account the existence of tax and expenditure limits. The time-invariant structure of the variables, however, only allows one to use the structural index and the stringency index as independent institutional sets.[6] Based on fiscal data from 1982 to 1992 for 47 US states, the empirical evidence presented indicates that centralized budget processes are significantly related to lower deficits as

[6] In fact, an analysis of their interaction does not yield any sensible results, probably due to the high degree of multi-collinearity resulting from the interactive term.

well as to lower spending and taxation.[7] This result holds for different expenditure and deficit concepts, i.e. primary expenditures and deficits as well as per capita figures and the ratio of spending or deficits to gross state income. For revenues, the effect can be found for revenues per capita but not for the share of the state in the economy. This result holds even if we control for the impact of balanced budget requirements and for tax and expenditure limits.

Additional evidence on the impact of centralization exists for Latin America and Asia. Alesina *et al.* (1995) as well as Stein *et al.* (1999) analyze the fiscal policy of twenty Latin American countries and Loa-Araya (1997) for eleven Asian countries. These studies use a combined aggregated index for the centralization and transparency of the budget process as well as for the stringency of budget rules. The studies on Latin America show that countries with centralized, transparent budget processes and strict formal or informal constraints have lower deficits and debt levels. Loa-Araya (1997) corroborates this finding because parametric and non-parametric tests produce a similar result for fiscal deficits, her main dependent variable. Unfortunately, the high level of aggregation does not allow the above mentioned authors to unravel the individual effects of the budget process structure and the budget constraint and to specify the extent of their potential interaction. This may partly explain the Latin American study's finding that governments with a centralized budget process tend to engage in a pro-cyclical fiscal policy. Finally, Jones *et al.* (1999) consider the development of public expenditures in the Argentinean provinces. Analyzing per capita expenditures during the second half of the 80s, they find that centralized budget processes, hard legal constraints for provinces and local authorities, the system of tax distribution, independent auditors and constitutional rules for subsidies lead to fewer expenditures. In short, there is considerable evidence that adequate budget processes help to solve the "deficit bias" as well as the "spending bias" in fiscal policy-making in Europe and overseas.

4. The Effectiveness of Legal Restraints

The benefits of legal restraints in maintaining fiscal discipline are obvious. If enforced, legal restraints eliminate "excessive" deficits and

[7] Using data drawn from the gubernatorial budget drafts, the appropriation acts, and the final budget at the end of the fiscal year, he was able to trace budget decisions throughout the budget process. The findings are in line with predictions for a prospective agenda-setting strategy of agents.

spending.[8] However, strict fiscal rules are not necessarily optimal for two reasons. First, they prevent the budget from reacting to the business cycle or exogenous shocks in an anti-cyclical manner, a reaction which would be adequate according to Keynesian considerations as well as the classical "tax-smoothing" hypothesis. In an inter-temporal setting, the latter argument more properly applies to the budget balance because the crucial aspect here is the convex costs of tax changes. Unlike a spending limit, a balanced-budget requirement might result in a sub-optimal volatility of tax rates. Second, legal restraints provide incentives for avoidance strategies. Such strategies include reducing the transparency of the budget, which in turn, gives rise to accounting gimmickry. Even worse, the restraint may have allocative effects if decision-makers decide to shift resources to unrestricted funds. The following paragraph will briefly discuss the existing empirical evidence on the effectiveness and potential negative side-effects of legal restraints in order to derive some conclusions concerning an "optimal" institutional design.[9]

The appeal to empirical evidence presupposes, first, that the data relating to the fiscal rule of interest exhibit sufficient variation. This presupposes either a long time series with numerous changes in the fiscal rule or a large cross-section of diverse institutions. Second, the fiscal rule must be exogenous to the fiscal decision. If large deficits were one of the reasons for the adoption of a budget rule, then the analysis would underestimate the true effect of rules on deficit constraints. Third, all potentially important independent variables likely to determine the path of deficit behavior must be controlled for to avoid an omitted variables bias, i.e. an overestimation of the effect. This can be done either by explicitly including economic and social control variables or by selecting cases with a common macro-economic environment. In the light of these considerations, it seems particularly advantageous to examine the experience of the US states, since the deficits of all states, with the exception of Vermont, are subject to size constraints and the public debt of several states are subject to constraints as well. These legal restraints are characterized by varying degrees of strictness and enforceability, which

[8] This paragraph follows the arguments presented in Alesina and Perotti’s overview (1996:401-402).

[9] The criteria mentioned in the following (except for that governing the comprehensiveness of the fiscal rule) as well as the introductory methodological remarks are taken from Inman's (1997) analysis of BBRs.

allow us to consider the US states as a natural laboratory for different institutional regulations.

A detailed description of the balanced-budget requirements (BBRs) can be found elsewhere (ACIR 1987, Bohn and Inman 1996, Strauch 1999). Roughly speaking, they vary, first, depending on the stage of the budget process to which they apply. Some states require only that the governor submit a balanced budget proposal; others prescribe that the appropriation bill be balanced at the time of approval. Finally, several state governments are required to balance the budget at the end of the year, whereas others may roll over a deficit into the next fiscal year. By contrast, states with a no-carry-over provision have to accommodate fiscal shocks within the current fiscal year. Second, BBRs vary depending on the type of funds to which they apply. In most cases, they apply to general funds, but the actual law - or at least the letter of the law as interpreted by budget officers - may also cover other funds, such as capital as well as special revenue funds (see Strauch 1999). Third, four US states allow the legislature to override the state's BBR for general funds under special circumstances or to suspend the BBR temporarily by vote of a simple majority. Moreover, states may permit either statutory or constitutional amendments to the BBR, depending on the legal character of the rule. Statutory amendments usually require only the approval of a legislative majority. Constitutional amendments typically require a majority of 2/3 in a state-wide referendum. Amendments may be placed on the ballot either by the state legislature or upon citizen petition (Bohn & Inman 1996:10, 11, 15). Fourth, Bohn and Inman (1996) stress the role of external enforcement. Ultimately, state supreme courts serve as supervisory institutions because every taxpayer can bring the government to court for violating the law. Therefore, the mechanism for selecting judges may be of importance in distinguishing among different types of BBR. Judges are either appointed by the government or the legislature or they are independently elected, in which case they are able to adopt a more autonomous stance.

Much evidence exists indicating that the stringency of the rule affects its disciplining impact. Bohn and Inman (1996) find that no-carry-over rules lead to higher surpluses, while *ex ante* requirements, which oblige the governor or the legislature to submit a balanced budget, are not effective. The higher surplus is primarily the result of lower public expenditures and not of higher taxes. This is in keeping with Poterba's (1994) results. Looking at within-year adjustment of the budget to unexpected fiscal shocks, the latter finds that governments in states with a strict BBR cut expenditures by more than twice the amount of states restrained by weak BBRs. Both studies, however, do not control properly for the structure of the budget process. The ACIR (1987) and Strauch's (1999) study on state institutions use institutional indices and come to the conclusion that the impact of the BBR increases with the degree of stringency. In the latter study the index relates only to the stage of the budget to which the requirement applies, thus indicating that end-of-fiscal year constraints are more effective for the budget balance. Controlling for the structure of the budget process, no significant impact of the BBRs on public expenditures could be found. The ACIR index also includes an indicator for the legal status of the BBR and thus raises the suspension or amendment issue. The ACIR's result, which demonstrates the importance of constitutional rules, is consistent with that of Crain and Muris (1995), who find constitutional no-carry-over rules to be more disciplining than statutory ones. In addition, Bohn and Inman (*op. cit.*) argue that the independence of the monitoring entity contributes to the stringency of the rule. Accordingly, states with strict BBRs and independently elected supreme courts have higher surpluses in their sample than do states with supreme courts appointed by the governor or legislature. However, this study also presents a qualification to this finding, because it looks at different deficit measures. The results reveal that BBRs are effective for deficits, which is the budgetary measure they regulate, but not for primary deficits. Although no substitution effect among different funds could be found owing to the nature of these concepts, the finding gives a first hint that legal restraints may not lead to fiscal discipline in general, but only regulate the resource flow for which they have been formulated.

The substitution effect as well as the role of amendment options has been explored in more depth by authors focusing on debt limits. The ACIR (1987) study finds that debt limits reduce fully guaranteed and long-term debt, but no statistically robust effect is evident for non-guaranteed debt. Von Hagen (1991) reports a somewhat stronger result. He argues that the difference between states with and without a formal debt limit is simply a higher share of non-guaranteed debt. An analysis of frequency distributions, however, confirms that debt limits are associated with a greater likelihood of having low debt levels and large shares of non-guaranteed debt. This result does not hold for absolute values on account of some extreme observations. Kiewiet and Szakaly (1996) distinguish debt limits along two dimensions: first, whether a public referendum or only a legislative supermajority is necessary to issue fully guaranteed public debt;

second, whether the debt limit regulates the absolute value or includes a revenue-based formula. Descriptive statistics and econometric tests suggest that legal restraints prohibiting guaranteed debt above a certain value or requiring a referendum for approval of issuance are associated with less guaranteed debt than are those requiring only a supermajority or those with a revenue-based limitation. In fact, states with a supermajority requirement tend to issue more debt than others, indicating that the majority requirements provide an incentive to encompass log-rolls. While Kiewiet and Szakaly (*ibid.*) cannot find any evidence that states circumvent debt limits by issuing non-guaranteed debt, their findings confirm the thesis that restrictive provisions at the state level result in the devolution of debt issuance to the local level.

In addition to deficit and debt restraints, several US states implemented tax and expenditure limits from the late 70s onwards. In some of the better known cases, these legal restraints were the result of public referenda, but state legislatures actually initiated and approved most tax and expenditure restraints. The assumption of exogeneity is not warranted for these rules, as it is for BBRs, on account of their relatively brief time span. Therefore, thorough empirical studies which attempt to unravel the fiscal impact of these institutions must address the endogeneity problem. Indeed, the empirical evidence is mixed in the case of those studies that do not take account of the potential endogeneity of tax and expenditure limitations, some finding a disciplining impact and others not (see Knight and Levinson 1999 for an overview). Rueben (1995), on the other hand, recognizing the endogeneity problem, uses tow measures of voter power, direct legislation and recall, as instruments for measuring legal restraint. Direct legislation, or public referenda, allow voters to bypass the legislature and to enact constitutional or statutory amendments directly. Recall procedures allow voters to remove elected officials from office. Reuben's estimation using instrumental variables indicates that tax and expenditure limitations reduce states' general expenditures as a percent of personal income by two percentage points. In addition, she finds that this reduction is partially offset by higher local expenditures, again providing evidence of a substitution effect.

Knight (1998) pursues a similar strategy with regard to supermajority requirements for the approval of tax increases or new taxes. He uses the access of voters to direct legislation, the supermajority requirement for state constitutional amendments and the number of legislative sessions required to amend the state constitution as instruments, because these institutions facilitate or hinder the promulgation of a supermajority requirement for taxation legislation. Using these instruments, he finds that supermajority requirements have a large, negative impact on state taxes. Knight also examines the interaction between supermajority requirements and BBRs. One might expect states with taxes subject to strict BBRs and supermajority requirements to experience stronger reductions in expenditures. He finds little evidence for such an interactive effect, although the small number of observations in the two samples of states with and without strict balanced-budget rules may have contributed to this result.

5. Implications for the EMU fiscal regime

The Stability and Growth Pact generally elaborates on the regulations of the Maastricht Treaty, as confirmed in the Amsterdam Treaty. If not otherwise specified, procedures apply, as a rule, to all EU member states, with the exception of those pecuniary sanctions to be imposed when a country has an "excessive deficit" and fails to take corrective action. A synopsis of the regulations in the Maastricht Treaty and the Stability and Growth Pact is presented in Table 1.

What can be said about the effectiveness of the Maastricht Treaty and the Stability and Growth Pact in the light of these empirical findings? The prospects of arriving at a definitive conclusion concerning the strictness of the fiscal criteria are rather mixed. On the one hand, the fiscal reference values are comprehensive and strict insofar as they relate to the general government’s end-of-year balance. Although the accounting principles used to determine the size of the deficit may contain some loopholes, the application of the rule to the entire government sector precludes the existence of broad-based substitution effects between different layers of government or between types of funds, such as those found in the US states. On the other hand, the relatively clear-cut reference values mentioned in the Treaty have been diluted by qualifying conditions. The weakening of the disciplining effect that was brought about by qualifications in the Treaty became obvious during the decisions governing accession to EMU, when it was felt that the debt criterion could be largely neglected owing to a reduction of the debt level in recent years.[10]

[10] Note that Germany actually breached the 60 % limit and was witness to a persistent rise in its debt level until 1997. In this case, it not only violated the reference value but also violated the Treaty even with its qualifying conditions.

Table 1: Institutional characteristics of the Maastricht Treaty and the SGP

	Maastricht Treaty	**Stability and Growth Pact**
Fiscal criteria	3 percent general government deficit to GDP ratio; 60 percent general government gross debt to GDP ratio. An exceptional violation of the 3 percent deficit limit is possible, if the deficit remains close to the threshold, is due to exceptional circumstances and promptly drops below the reference value as soon as the causes vanish; downward-sloping trajectory is required if the debt level is above the 60 percent limit.	General government deficit "close to balance or in surplus" in the medium term to ensure that the 3 percent reference value will not be breached. 3 percent reference value may be breached if the annual fall of GDP exceeds 2 percent or if the downturn is less than 2 percent (but at least 0.75 percent) and further supporting evidence exists (in particular, if evidence for the abruptness of the downturn or for deviation from trend output is provided).
Enforce-ment	Monitoring by the Council and the European Commission. Council decision on the existence of an excessive deficit, including recommen-dations for corrective action. Publication of Council recommendations if no corrective action is taken. If the government still does not follow the recommendations, the Council may declare a delay and set a deadline for adequate fiscal adjustments; as long as	Monitoring by Council and the European Commission based on annual national stability programs. Council decides on excessive deficit based on Commission report and makes recommendations for corrective action. The Council can decide to impose sanctions on EMU member states if the deadline for taking effective action to adjust the deficit, as recommended by the Council is

	the state does not change ist budget policy, the Council may decide to impose one or several of the following sanctions: bond issuance must be published; request that the EIB reassess its borrowing policy toward that country; demand a non-interest-paying deposit; demand a fine.	breached. Sanctions take the following form: government is required to maintain a non-interest-bearing deficit of 0.2 percent of GDP plus one-tenth of the excess deficit; in each subsequent year only the variable component will be paid; the maximum deposit is 0.5% of GDP; the deposit is converted into a fine if the excessive deficit persists two years after the deposit has been made.
Amend-ment condi-tion	Approval of all EU member states in accordance with national law.	The Council regulation on surveillance of the budgetary position may be modified by the Council but a qualified majority is needed for amendment approval. The regulation on the excessive deficit procedure, where most of the above mentioned rules are specified, can be modified by a Council decision but amendment requires unanimous approval.

The medium-term BBR mentioned in the Stability and Growth Pact is even more susceptible to diverse interpretation. The most telling indication of the difficulties associated with this fiscal rule may be found in the literature devoted to settling the issue of how the adequate fiscal position is to be defined and the exact surplus values pinpointed (see, among others, Buti *et al.* 1998, Banca d'Italia 1999).

The escape clauses in the event of an economic downturn of less than two percent further undermine the clarity of the legal restraint. Although the future will have to show how strictly the Council intends to interpret the Pact – at which time it will have to decide whether an excessive deficit exists.

The enforcement mechanism is also quite different from US institutions. In the US states, enforcement is closely linked to the existence of independent outside agents who are able to monitor public finances and overturn fiscal decisions or sanction policy-makers. None of the agents mentioned in these studies, such as the court or the public, are included in the formal procedures specified by the Treaty or the Pact. Indeed, the Treaty explicitly rules out the possibility of appealing to the European Court, although this does not preclude the possibility that national institutions, such as the German Constitutional Court[11], may define and enforce standards for public finance.

Since external enforcement agents do not exist at the international level, the proper functioning of the Stability and Growth Pact will depend crucially on the "evolution" of the Council's decision-making rules. Here, the experience of US state legislatures with supermajority requirements for issuing public debt presents a strong warning signal concerning the undesirable effects of a cooperative stance, in which a “reciprocity of favors” prevails. Still, if each of the participating members views himself as an independent, outside monitor of fiscal developments in other countries, the Council may prove to be very effective in reinforcing the disciplining thrust of formal fiscal restraints. The "track record" of the pre-1997 period indicates that the Commission and the Council were willing, under normal circumstances, to declare a deficit excessive, if there was a sustained impression of a misalignment in public finances.

Furthermore, it will depend on how sensitive states are to soft and hard sanctions imposed in response to a violation of the rule. The initial years of the post-Maastricht convergence process leave some doubt as to whether the soft reputational or political incentives associated with the declaration of an excessive deficit will always work. Many governments, particularly in "big states", widened their deficits and concomitantly

[11]The Federal Constitutional Court issued several rulings on the constitutional limits of public finance. One example is the Court ruling on the Golden rule and the requirement that the economy of April 1989 be stabilized (see Andel 1992). For the role of the German Constitutional Court as an "enforcement agent" of the Maastricht Treaty, see Daniel Gros' comment on Inman's (1997) paper.

incurred higher debt levels until the mid-1990s. At the same time, one may assume that public policy-makers abroad as well as international capital market participants will be more attentive to such political signals and react more forcefully in a monetary union, which certainly would raise the costs of defection.[12] Some academics[13] have maintained that "hard" sanctions are unlikely to be invoked. However, if the Council works effectively and that sanctions are imposed, nothing speaks against the assumption that the deposits or the fine specified in the Pact will provide a sufficiently strong incentive to induce the respective government to take corrective action.

Different conclusions concerning the amendment condition can be derived for the Treaty and the Pact. Any amendment to the Maastricht Treaty and its Protocols which would establish the legal basis for the excessive deficit procedure and the reference values must be approved by all member states in accordance with national laws regulating the ratification of international treaties. Usually, the approval of parliament is needed to convert international into national law. This procedure tends to make any re-negotiation of the Treaty quite protracted, difficult, and rather unlikely. In comparison, the Stability and Growth Pact is certainly easier to modify. The Council regulation embodying the "close to balance or in surplus" standard can be changed by a decision of the Council, assuming it has the support of a qualified majority. The regulation on "speeding up and clarifying the implementation of the excessive deficit procedure", where most of the deficit criteria and sanctions are specified, requires a unanimous decision on the part of the Council. These majority requirements are obviously easier to fulfil than are the requirements for an amendment of the Treaty. Like the enforcement mechanism itself, the obstacles they present to an easing of the fiscal constraint will strongly depend on the fiscal stance of the Council.

6. Conclusion

The first major result emerging from the preceding sections is that formal fiscal restraints may yield an effective instrument for avoiding excessive deficits and spending, provided they incorporate certain

[12] Note in this context that the effectiveness of budget restraints in US states evidently hinges on the costs of bringing fiscal policy issues to the attention of the public and letting people decide on these issues. This phenomenon cannot be attributed entirely to fiscal conservatism, which Peltzman (1992) ascribes to US states, since comparable institutions characteristic of direct democracy yield a similar result for Switzerland (Feld and Kirchgässner 1999)

[13] See, in particular, Eichengreen and Wyplosz (1998).

institutional features: the fiscal target must be clear-cut and comprehensive, enforcement should rely on independent agents, and the formal restraints involved should be difficult to amend. If the Maastricht Treaty and the Stability and Growth Pact are examined with respect to these institutional characteristics, some weaknesses become apparent insofar as the effectiveness of these formal restraints are seen to depend strongly on the future evolution of “behavioural” decision-making and sanctioning rule. As for the interaction and macroeconomic effects of fiscal restraints, studies on US institutions suggest that no conflict exists between the need to reduce the overall tax burden and a strict balanced budget requirement since no evidence for an systematic increase of tax rates could be found. If anything, budget adjustments tend to be made on the expenditure side.

The second major result is that budget processes are effective instruments for solving the problem posed by a “deficit and spending bias” in public finance. This result holds even if strict fiscal rules already exist. Unfortunately, the available empirical evidence does not suffice to define the interaction between budget processes and fiscal rules more precisely, i.e. in a manner that would go beyond the above statement, which implies a substitutive relationship. If budget rules prove to be ineffective in maintaining fiscal discipline, this relationship suggests that appropriate budget processes may be needed to yield the desired effect. Given the above assessment of the Maastricht reference values and of the Stability and Growth Pact, more attention should clearly be paid to the budgeting institutions in EMU member states. If countries are characterized by weak budget institutions, adequate solutions will, of course, have to be adapted to national requirements. The adequacy of the delegation vis-à-vis the contract approach for different electoral systems is one important aspect currently being analyzed. A federal system may, however, require a different solution, such as an 'internal stability pact', which ensure that all general government entities contribute to the joint budget target as stated in convergence and stability programmes.[14]

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[14] The Belgian High Council of Finance represents, in this respect, an important paradigm case for European states. See Stienlet (1999) and Hallerberg (1999) for an account of how the Council functions.

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