



IMF Working Paper

Top-Down Budgeting—An Instrument to Strengthen Budget Management

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Abstract

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This paper examines the rationale for a top-down approach to budget preparation and approval, and discusses some factors that have to be considered when reorienting the budget process along these lines. The paper argues that the sequence in which budgetary decisions are taken matters, and that a strong top-down approach strengthens fiscal discipline and improves policy prioritization and coordination. Top-down budgeting also alters the division of roles and responsibilities between the central budget authority and line ministries, and requires that the process of determining the total expenditure level, sectoral allocations and individual appropriations is clarified. Finally, the paper argues that strong top-down elements in the parliamentary budget voting process can be effective in addressing the risk of excessive and unsustainable amendments during budget approval.

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I. INTRODUCTION

Budgeting is essentially a process aimed at maximizing benefits from public spending given available resources. The budget process is not always able to meet these objectives, however; budget allocations may not fully reflect current priorities, and spending may not necessarily be contained at a sustainable level.

The importance of institutions in shaping budget outcomes has been extensively explored over the past decades.² These studies show that the organization of, and the division of fiscal powers in, preparing and approving the budget matter for how public finances develop over time. Among various institutional reforms, strengthening the *top-down* character of the budget process can be particularly effective in promoting sound and sustainable policies. In essence, this consists of ensuring that the total level, and overall allocation, of expenditure are determined *before* detailed items in the budget are negotiated.

In practice, all budget processes have to contain both top-down and bottom-up elements. Introducing top-down budgeting is, therefore, an issue of *shifting the balance* of the budget process with the aim of ensuring that budget decisions at all stages properly reflect aggregate fiscal policy priorities.

Top-down budgeting is not a tool for limiting the discretionary powers of democratic institutions to propose and approve any size or allocation of the budget. Neither does it eliminate the difficult and conflict-ridden process of choosing which programs and activities should receive additional funding, which should remain at previous year's level, and where cuts should be made. However, a top-down process highlights the trade-offs that have to be made, and brings clarity as to how the process of prioritization will be resolved.

Thus far, the discussion on the merits of top-down budgeting has primarily focused on advanced countries. This is unfortunate, as a structured process for preparing and approving the government's budget is essential, regardless of the income level or policies of a country. Strengthening the budget process should be high on the agenda in low-income countries, emerging economies and high income countries alike.

This paper examines the rationale for strengthening the top-down elements of budget preparation and approval, and discusses how this will affect the division of roles and responsibilities in the budget process. Section II outlines the concepts of top-down and bottom-up budgeting, and briefly discusses the expected outcome of the respective approach. Section III looks at the practical implications of adopting a top-down approach to budget

² See, for example, von Hagen (1992); Poterba (1993); de Haan and Sturm (1997); Alesina et al. (1999); Stein et al. (1999); Gleich (2003), and Debrun et al. (2008).

preparation. Section IV discusses how a top-down process of parliamentary budget approval can be organized. Section V summarizes and concludes.

II. TOP-DOWN VERSUS BOTTOM-UP

A top-down budget process means that a binding decision on budget aggregates is taken *before* allocating expenditure within that aggregate. In concrete terms this means that decisions are taken in a cascading manner: a total expenditure level is determined before the allocation between main policies or sectors is made, and sectoral ceilings are set before the detailed division of expenditure within each sector is discussed and decided. In each step of the budget process, the allocation of expenditure is subject to the constraints that have been set at the previous stage. The fact that the *sequence in which budgetary decisions are taken* matters for the outcome³ is perhaps best illustrated by a stylized description of two contrasting approaches to budget preparation: bottom-up and top-down.⁴

A. A Bottom-Up Process

In an *unconstrained*—or perhaps better described: *expenditure-driven*—budget process, the first stage consists of a collection of expenditure proposals from line-ministries and spending agencies. Such proposals will, inevitably, argue for increases on top of a continuation of current year's allocations. The ministry of finance then negotiates bilaterally with each main budget entity, with the objective of trying to contain expenditure growth to some reasonable level. Once the negotiations are concluded, total expenditure is consolidated and compared to projected revenue. If the deficit is considered excessive, the minister of finance will either be given the task of initiating a new round of negotiations, or required to produce proposals on how to increase revenue. Such a budget process can be characterized as *bottom-up*, indicating that total expenditure is determined residually in a process that, to a large extent, centers around discussing and establishing the details of the budget.

In a situation where there is no point of reference in terms of an expenditure limit for each sector, the focus of budget discussions will primarily be on the urgency of expanding government programs and activities, and the merits of the proposed measures. As the *individual* impact on aggregate expenditure from each new proposal may well be trivial—or

³ This is by no means a novel insight. As illustrated by Condorcet's paradox—where three parties voting on three items results in the majority shifting for every attempt to reach a decision—there may not be a stable equilibrium in a collective decision-making process. Choosing a voting method becomes necessary to ensure a decision, and this choice will affect the outcome.

⁴ An early use of terms *top-down* and *bottom-up* to describe the order of decision making in the budget process is found in Bozeman and Straussman (1982). Other studies use a different terminology to refer to the same concepts. Ferejohn and Krehbiel (1987) make a distinction between a *budget process* and an *appropriation process*, while Ellwood (1983) calls these approaches *comprehensive* and *fragmented*.

at least insignificant compared to the budget as a whole—those who advocate an expansion of government activities are at an advantage. Even if the ministry of finance has a well-developed capacity to scrutinize budget submissions from line ministries and quickly update the total expenditure level, it cannot refer to an agreed level of expenditure in the negotiations. The fact that aggregate expenditure concerns are brought in at the end of the process—and at a stage where numerous expenditure decisions have already been taken—can also reduce decision makers’ understanding and appreciation of fiscal sustainability issues.

The inherent incremental nature of a bottom-up process also makes significant reallocations between or within sectors unlikely.⁵ Without a phase where the composition of the budget according to broad sectoral is defined, interpreting policy reprioritizations into budget lines becomes procedurally difficult. Within sectors, line ministries or spending agencies have virtually no incentive to identify and propose savings that can be used to finance new initiatives. From their perspective, budget negotiations is a one-sided exercise of trying to preserve existing levels of funding, and hopefully seize some additional resources.

B. Strengthening Fiscal Discipline Through a Top-Down Process

In order to escape the situation outlined above, where the dynamics of the budget process adversely affect the possibility to ensure sound and sustainable policies, budgeting can be organized as a *top-down process*. In this approach, the starting point of budget preparation is a decision on total expenditure. Rather than being the sum of a large number of individual spending decisions, aggregate expenditure is determined through an *autonomous* consideration of the size of the budget. Following this, total expenditure is allocated to a number of key sectors, a phase which culminates in the determination of *sector ceilings*. Only at a final stage are the details of the budget—in terms of individual appropriations—brought into the discussions, and then within the framework of the established sector ceilings. There is, consequently, an *institutionalized separation* between the decisions regarding aggregate expenditure and overall allocation, and the process of deciding on individual programs and activities, and their corresponding budget lines.

In a top-down approach to budget preparation, the role of the ministry of finance becomes focused on establishing and monitoring total expenditure levels, rather than negotiating the operational details of individual spending proposals.⁶ The division of available resources under each sector ceiling can be left open for discussion, and the responsible line minister be given substantial freedom to propose changes in the allocation within the sector, provided

⁵ See Wildavsky (1992) for a discussion of the effects of incrementalism.

⁶ As demonstrated by von Hagen (1992), a process which gives the prime minister or the finance minister *strategic dominance* over sector ministries is conducive to fiscal discipline.

that the sector ceiling is not exceeded. Although the introduction of hard sector ceilings changes the character of budget negotiations, there is still a need for the ministry of finance to scrutinize the credibility of expenditure projections. By underestimating expenditure, line ministries may try to circumvent *ex ante* budget restrictions and squeeze programs and activities under the ceiling that cannot be rescinded once the budget has been approved. As illustrated in Box 1, a relatively small change in the structure of the budget preparation process—such as the introduction of clear top-down elements—can have significant effects on negotiation tactics and the character of budget discussions.

Box 1. Budgeting as a Game

To a certain extent, the process of bidding for resources in the budget process can be viewed as a game, in which there are certain rules, known to all participants. In a bottom-up process, it will be rational for line ministries and spending agencies to exaggerate the need for resources, as they know that any proposal will be subject to a thorough scrutiny and eventual reduction by the ministry of finance. The incentives to provide inflated expenditure estimates are reinforced by the fact that the ministry of finance is well aware of the unrealistic demands put forward by line ministries and spending agencies. In order to receive adequate funding, it is necessary to apply for excessive amounts.

Prior to the budget reform in Korea, when the bias toward overbudgeting was reduced, it is estimated that the initial spending proposals on average overestimated resource requirements by some 30 percent. In the case of Finland, the tendency toward excessive resource requests as a tactic in the negotiations between line ministries and the ministry of finance is off-set by the publication of the initial budget submissions. According to the Finnish Freedom of Information Act, the final budget submissions sent to the ministry of finance are made publicly available. A large deviation between the requested figure and the actual outcome in the budget would indicate the line minister's fiscal irresponsibility or lack of political power. A high degree of transparency can create incentives for fiscal discipline.

Sources: Blöndal et al. (2002), Kim and Park (2006).

C. Are Top-Down or Bottom-Up Mutually Exclusive?

Although there is a clear conceptual contrast between a top-down and a bottom-up budget process, there is no distinct dividing line between these two approaches; *all budget processes involve both top-down and bottom-up elements*.⁷ No government can completely disregard the aggregate expenditure level when preparing the budget. Conversely, it is neither feasible to set a limit on total expenditure nor possible to determine sector ceilings, without having some assurance that fundamental government functions and the most urgent reforms receive

⁷ See, for example, Bozeman and Straussman (1982) for a discussion of the evolution of informal and nondisclosed top-down elements in budget formulation in the United States, and their relationship with the more thoroughly analyzed bottom-up approach.

sufficient funding. The challenge is to find the right balance between top-down and bottom-up, with the objective of establishing a firm control over the use of public resources. Budget preparation in the Netherlands (Box 2), follows a clear top-down procedure, with an overall expenditure ceiling determined at the outset of the government term, and sector ceilings set before the preparation of the details of the budget is initiated. At the same time, the sector allocation, given by the chapter ceilings in the Letter of Totals, is based on a thorough evaluation of the expected expenditure development following the government's policy priorities. The top-down approach is informed by a bottom-up analysis.

Box 2. Where Top-Down Meets Bottom-Up

In the Netherlands, the government determines a binding four-year ceiling for total central government expenditure expressed in real terms at the outset of the government term. At this time, the government also makes an indicative distribution of the ceiling to main sectors: (i) the core budget; (ii) health sector; and (iii) the labour and social sectors—and between the some 25 budget chapters under the sectors. This allocation is made as part of the coalition policy agreement. The ceiling is translated into a nominal ceiling at the early stages of the budget preparation process each year.

In the beginning of the annual budget process, line ministries submit *Policy Letters* to the ministry of finance. These letters contain an updated base-line assessment of expenditure for a continuation of existing policies, a qualitative and quantitative presentation of priorities for the upcoming year, and any requests for additional funding for new policy initiatives. The base-line assessment and policy proposals presented by the line ministries, together with an updated evaluation of expenditure impact of the macroeconomic development, enable the ministry of finance to produce an overall expenditure scenario, which can be compared with the expenditure ceiling and the indicative sector and chapter allocations in the coalition agreement. The ministry of finance evaluates to what extent there is any room under the ceiling to expand policies, if expenditure cuts are necessary to comply with the overall ceiling, and what reallocations between sectors and chapters may be necessary.

In the first half of April, the minister of finance submits to the cabinet his budget policy proposal in the shape of a *Framework Letter*. The framework letter provides the starting point for the cabinet deliberations that take place over a couple of days in April, where the government's main policy priorities are discussed, and the overall allocation of resources in the budget is determined. The cabinet budget meeting culminates in a decision on expenditure ceilings for each of the approximately 25 chapters in the budget. In early-May, a *Letter of Totals* is sent to each line ministry providing the government's priorities for the respective sector, and the chapter ceiling with which the draft budget should comply. Line ministries are allowed to make reallocations within their respective chapter, provided that the ceiling is not exceeded. The draft budget for the respective chapter is submitted to the ministry of finance in the middle of June.

Source: Ministry of Finance of the Netherlands.

D. Does a Top-Down Approach Reduce Aggregate Expenditure?

One of the main arguments in favor of a top-down approach is that it brings fiscal sustainability considerations to the forefront in the budget process, which can promote more informed decisions on aggregate expenditure levels given projected revenue. By internalizing aggregate fiscal considerations in sector prioritizations, the top-down approach also addresses the common resource pool problem of public decision making.⁸ Top-down budgeting is sometimes accused of introducing a bias toward a smaller government sector, and is seen as a way for fiscal conservatives to permanently alter public policy. Although it is true that a top-down sequence of decision making is likely to change the outcome of the budget process,⁹ it does not *in itself* necessarily lead to lower total expenditure levels.¹⁰

To illustrate this, consider a simple example of a government with three equally strong ministers or coalitions partners—or a parliament with three equally sized parties—A, B, and C, and a budget with two expenditure items (X,Y). Assume that the expenditure priorities of A, B, and C are (4,6), (6,4), and (4,4), respectively. A bottom-up approach to negotiating the budget will generate a majority for 4 units in the first dimension—supported by A and C—and 4 units in the second dimension—supported by B and C (i.e., total spending of 8 units). A top-down approach, on the other hand, will lead to a total expenditure level of 10 units, supported by a majority of A and B. In this case the expenditure profile, under reasonable assumptions, becomes (5,5). If, by contrast, the preferred profile of C is (6,6) a top-down approach will generate lower total expenditure levels of 10 units, while a bottom-up process will lead to 12 units (i.e., the outcome depends on preferences).

The case for top-down budgeting as an instrument to improve fiscal sustainability is more subtle, and has to do with the inherent bias in public decision making toward excessive deficits.¹¹ This tendency is aggravated by the fact that there are *many actors* in the budget

⁸ The common resource pool problem arises because the *benefits* of government programs are generally limited to a narrow group, while the *cost* is distributed across all taxpayers. Since the full cost is not borne by the beneficiaries of a particular government program, it is rational to advocate higher expenditure than what would be implied by the trade-off between collective costs and collective benefits. See, for example, Weingast et al. (1981) for a discussion of the common pool problem.

⁹ According to Arrows Impossibility Theorem, there is no single decision-making process that satisfies all reasonable democratic criteria: (i) collective rationality; (ii) non-impact of irrelevant alternatives; (iii) Pareto-optimality; and (iv) nondictatorship. The choice of a democratic decision-making model, therefore, has to involve a compromise between competing values.

¹⁰ As demonstrated by McCubbins and Schwartz (1985), Ferejohn and Krehbiel (1987), and Helland and Rasch (1996), although the order of decisions in the budget process clearly matters for the outcome, it does not introduce a bias towards lower spending levels. Depending on preferences, a top-down process can lead to either larger or smaller budgets.

¹¹ Molander (1999) points out that neither a *fiscal illusion* nor a *deficit bias* is inconsistent with an assumption of benevolent and well informed decision makers.

process whose preference have to be taken into account, that information is *asymmetric* and *imperfect*, and that decisions are taken under a *time constraint*. Although there may be a collective preference for an aggregate expenditure level that is well calibrated to projected revenue, the coordination of a large number of individual decisions does not allow for a simultaneous consolidation of all possible alternatives. Since the cabinet and parliament cannot engage in unlimited rounds of negotiations, they may end up with a sub-optimal alternative simply because the aggregate effect was not known when binding decisions were made. Top-down budgeting can enforce sustainability by reducing the dimensions of the initial budget decision, and by providing a structure that facilitates coordination of various alternatives.

A second way in which a top-down approach can enhance fiscal sustainability is by *altering the preference* of individual ministers or parliamentarians. In a process where the total expenditure level is determined through one explicit decision—rather than by the sum of a large number of individual decisions—the question of the sustainability of fiscal policy gains a more prominent place in budget discussions. Top-down budgeting can, therefore, create a broader understanding and support of aggregate fiscal policy issues among decision makers.

E. Improving Sectoral Efficiency

A top-down process also has the potential of promoting clarity when setting priorities for main government sectors, and of ensuring budget allocations consistent with those priorities. In preparing the detailed items that make up the budget, there is a risk of losing sight of the larger picture.¹² A certain level of aggregation in the initial stage of preparing the budget, through the allocation of total expenditure to some key sectors, can help detaching policy issues from decisions that are more of a technical or operative character.¹³ A top-down process can reduce some of the information overload in the budget process that runs the risk of obstructing policy formulation.

As the sum of sector ceilings cannot exceed the total limit on expenditures, and the sum of appropriated expenditure for each sector cannot exceed the respective ceiling, the necessity of making trade-offs between various objectives also becomes immediately obvious when weighing various policy alternatives. Subjected to a hard sector ceiling, line ministries and government agencies are encouraged to detect any inefficiencies, redundancies, or obsolete

¹² Although relevant for all budget structures, this problem is more acute with a detailed line-item budget with a heavy focus on the composition of inputs.

¹³ As emphasized by Hendirek (1992), a top-down procedure instructs the budget preparation of lower levels—departments or agencies—by providing quantitative guidelines on the priorities of the government. “Moreover, these systems [top-down systems] should establish an upper-to-lower level flow of information and instructions that operationalizes macro-level directives as relative policy priorities and constraints within lower-level administrative units.”

programs that can be used to finance new policy proposals within the same sector. A top-down approach to budget preparation, therefore, puts a premium on improving the efficiency of the public sector. This stands in contrast to a bottom-up process where there are virtually no incentives to propose any changes that result in a reduction of the current level of activity, since it will not free up any resources for the concerned ministry or agency.

F. Empirical Evidence of the Benefits of Top-Down Budgeting

The empirical studies of the relationship between institutions and fiscal performance provide support for the assumption that a top-down process is associated with lower deficits and debts. In his pioneering study of budget procedures of 12 EU-member countries, von Hagen (1992) tests the hypothesis that a top-down process in the preparatory phase of the budget, and a top-down decision-making order in parliamentary approval is more conducive to fiscal discipline than bottom-up procedures. These two aspects are included in structural indices characterizing the budget process, which are found to have a significant relationship with deficit and debt levels. De Haan and Sturm (1994) extend the study to control for the composition and stability of government, and confirm that certain budget institutions, including top-down budgeting, are correlated with a more robust fiscal position. Woo (2003) takes a similar approach and constructs an index that broadly corresponds to a top-down budget preparation process. When expanding von Hagen's study to include nine East Asian countries, Woo confirms a strong relationship between these institutional arrangements and fiscal outcomes. Concentrating on Central and Eastern European countries, Gleich (2003) includes indices for the top-down character of both the preparation of the draft budget and the parliamentary approval process. He concludes that the positive impact of more stringent budget institutions on deficit and debt hold for these countries as well. Yläoutinen (2004), also studying Central and Eastern European countries, includes criteria on the decision-making sequence in budget preparation and the order of the approval procedure in parliament, thus confirming earlier results.

Against these studies stands Perotti and Kontopoulos (2002) who construct an index of the procedural fragmentation of the budget process, broadly corresponding to a top-down and a bottom-up preparation process. Although they demonstrate that a lower level of fragmentation (i.e., a more top-down oriented process) is associated with a lower deficit, lower expenditure and lower revenue, the relationship is found to be weak.

While supportive of the hypothesis that top-down budgeting is conducive to aggregate fiscal discipline, there are some limitations to these studies, however. First, the studies construct composite indices, consisting of several institutional aspects, and test their relationship with fiscal performance to arrive at these results. It is, therefore, not possible to separate out the contribution of the top-down procedure. Second, as discussed above, it is in practice a matter of interpretation of defining a budget process as being predominantly top-down or bottom-up. The dividing line may be drawn differently by different studies. Third, these studies have

to rely on formal institutions, while the budget process in reality may well be governed by a multitude of informal practices.

Ehrhart et al. (2006) take a different approach when testing the impact that the sequence of decisions have on the outcome of a budget process. In a series of controlled laboratory trials, they demonstrate that the size of the budget is indeed affected by changing from a bottom-up to a top-down decision-making procedure, but that there is no general tendency for a top-down procedure to produce a smaller budget. Strictly speaking, the objective of the budget process is to avoid excessive deficits and ensure a sustainable fiscal position, rather than minimize spending levels. The result is, therefore, neither an argument for, nor an argument against, top-down budgeting. However, a second result of the study is that complexity is costly, and that an increase of the number of spending dimensions (i.e., more budget items)—and less information, require more voting rounds to reach an equilibrium. As argued above, with a budget consisting of a large number of appropriations, a process where information gathering has an opportunity cost, and where there is a set deadline for submitting and passing the budget, a top-down approach has a higher chance of leading to a fiscally sustainable budget.

III. TOP-DOWN BUDGETING IN PRACTICE

A top-down approach to the preparation of the budget requires procedures for establishing the aggregate expenditure level and the sectoral allocation of the budget. It also changes the focus and dynamics of the negotiations between the ministry of finance and line ministries.

A. Introducing a Top-Down Process

A stylized characterization of the budget process is valuable for analyzing factors that are relevant for how government finances evolve over time. The use of such abstractions of reality should not lose sight of the fact that budgets are shaped in a highly political environment, where there is often pressure to deviate from what is optimal from a collective point of view. Therefore, when designing the institutional framework it becomes necessary to find a pragmatic balance between a theoretically stringent model and pragmatic compromises needed for the framework to survive.

A central feature of the budget process is that decisions are the result of negotiations between numerous players—the president, prime minister, the minister of finance, individual line ministers, agency executives, civil servants, and parliamentarians—and that the balance of fiscal authority has an impact on the outcome. Any alteration of the existing order will be acceptable only if a player's loss of influence in one area is compensated by increased influence in some other area. Strengthening the top-down character of the budget process—which, to a large extent, is intended to address a fragmentation of fiscal powers and the sub-optimal collective equilibria this generates—has to take into account the redistribution of

roles and responsibilities. From the point of view of the ministry of finance—or in parliament, the finance or budget committee—influence over the details of the budget is relinquished in return for greater power over aggregate parameters. From the perspective of the line ministries—or the sectoral committees—a top-down process introduces rigidities and constraints on total expenditure and sectoral allocations, which reduces the scope for expanding sector interests. This may only be acceptable if countervailed by increased flexibility within the respective sector, and if the reform is credible in the sense that the new procedure is binding for all ministries.

B. Establishing the Overall Expenditure Limit

The single most important decision for the government is to determine the size of government. In a top-down process, this issue is formalized by setting a limit on total expenditure at the very early stage of budget preparation. As discussed by Ljungman (2008), there are arguments for establishing such limits well in advance of the start of the budget process through binding medium-term aggregate expenditure ceilings.¹⁴ Although not derived directly from a top-down concept, a medium-term approach to fiscal policy formulation and budgeting is important to ensure that aggregate expenditure limits serve the intended purpose.

From one perspective, the overall expenditure limit can be viewed as a highly ideological decision. The size of the budget is a reflection of a commitment to provide goods, services, and social protection, and provides the amount of resources that are to be consumed, invested, or transferred. Such a fundamental decision has to be made by political assemblies (i.e., the cabinet of ministers and parliament).

From another angle, the determination of the expenditure limit is a technical issue, which requires the expertise of professionals in the ministry of finance. A qualified assessment of the room for expenditure has to be based on a projection of available resources—in terms of expected revenue—and an analysis of the adequate fiscal policy given prevailing economic conditions.

Parallel to these two perspectives is the risk of insufficient accuracy of macroeconomic and fiscal forecasts.¹⁵ A bias can, in some cases, be explained by inadequate forecasting techniques. Another possibility is the existence of political pressure to paint a positive

¹⁴ See also Public Finances in EMU 2006 for empirical support for the role of medium-term aggregate expenditure limits in fostering fiscal discipline.

¹⁵ See, for example, Larch and Salto (2005) for an analysis of the bias of macroeconomic forecasts for European countries.

development. Such a tendency does not have to come as direct interference with the forecasts, but could be the result of civil servants' unwillingness to present bad news.¹⁶

An implicit assumption in a top-down approach is that the budget process is *comprehensive*, in the sense that all—or at least a significant part of—expenditure is covered by the government budget. The existence of separate budgets through extrabudgetary funds or significant use of revenue budgeted and accounted for on a net basis, diminishes the disciplining effect of an aggregate expenditure limit.

The expenditure limit is also affected by the government's assessment of the need for countercyclical fiscal policy. Recognizing that in certain circumstances it may be necessary to accelerate the return to equilibrium GDP-levels through expansionary or contractionary fiscal policies, arguments for temporary deviations from the long-term budget balance position have to be taken into account when determining the level of total expenditure.¹⁷ Primarily this involves estimating the effect of the automatic stabilizers on the expenditure side of the budget. Box 3 describes the approach that is taken in Switzerland to calibrate the expenditure level to deviations from full output and employment. In a particularly severe downturn, it may also be necessary to complement the automatic stabilizers with *discretionary fiscal policy*.

C. The Process of Sector Allocations

A policy stage where the government discusses and establishes sector allocations—preferably in a medium-term context—provides structure and stability to the budget process. Considering the heterogeneity of constitutional arrangements, public sector management traditions and political conditions, it is difficult to generalize procedures that are appropriate in all circumstances. Some elements of an allocative phase appear to be important, however.

The allocation of the budget to key sectors is essentially an expression of political priorities. The amount of resources allocated to various objectives such as education, defense, regional development, infrastructure, unemployment support, or social welfare, is the characterizing difference between political parties or factions within parties. Determining the allocation of the budget to overall sectors is, from this perspective, a stage that should attract significant

¹⁶ Various countries have addressed the problem of a positive bias in forecast in different manners. In Canada, private sector forecasts are used as the basis for the government's macroeconomic framework. Up until 2007, the Netherlands used a combination of independent macroeconomic forecasts provided by the Bureau of Economic Planning and an institutionalized contingency factor introducing a downward bias to the projected surplus. Chile uses an independent panel of economists to provide input to the macroeconomic framework. See Jonung and Larch (2006), and Debrun et al. (2009) for a more general discussion of the role of independent scrutiny of economic and fiscal projections.

¹⁷ See, for example, Hemming (2002), Andersen (2005), Blinder (2006), IMF (2008), Spilimbergo et al. (2008), or IMF (2009) for a discussion on the role of fiscal stabilization policy.

attention, as it is at this time that policies are set. However, a new round of budget preparation does not give unlimited freedom to reassess government policies.

For a given year, most expenditure is fixed by legally binding contracts, civil service employment legislation and annual agreements on salary increases, explicit commitments to specific areas or entitlement legislation. Radical changes are rarely possible from one year to

Box 3. Establishing the Total Expenditure Level in Switzerland

In accordance with the debt containment rule adopted in 2001, the federal budget in Switzerland aims at balancing revenue and expenditure over the business cycle. To achieve this, a maximum level of total expenditure is established annually, which takes into account the cyclical position of the economy, and consequently allows for the automatic stabilizers on the expenditure side of the budget to operate.

The formula for calculating the maximum expenditure level in Switzerland is given by:

$$\hat{E}_f = R_f \times \frac{GDP_{potential}}{GDP_f} + \alpha$$

where:

\hat{E}_f is the maximum total expenditure level for the fiscal year f,

R_f is total tax and nontax revenue for the year f,

$\frac{GDP_{potential}}{GDP_f}$ is the output gap for the year f,

and α is a factor that adjusts for a difference between the ex ante expenditure limit—calculated on the basis of *forecasted* revenue and GDP—an ex post calculation of the maximum expenditure level based on *actual* revenue and GDP, and an updated assessment of potential GDP. If expenditure exceeds the ex post calculation of the expenditure limit by more than 6 percent, the expenditure levels for the upcoming three-year period have to be reduced by a corresponding amount.

The Swiss case highlights some of the complexities that have to be resolved when establishing an expenditure ceiling. The fact that the total expenditure level should be consistent with revenue, emphasizes the importance of the quality of forecasts. The volatility of some tax items—such as tax on capital income and corporate income—may lead to forecasting errors that lead to deviations from the intended outcome. In addition, the adjustment relies on an estimation of potential GDP—which is unobservable both ex ante and ex post. Uncertainties about the potential GDP level is a serious obstacle for making structural adjustments of expenditure ceilings, and may introduce variations in the expenditure ceiling that do not have a cyclical justification.

another. Budget policy can be redirected, but noticeable results may take longer than one year.¹⁸ When taking into account the inertia of current policies, a significant part of setting sector allocations becomes a politically uneventful process of correctly estimating expenditure for policy decisions that are already being implemented.

The contentious issue is, therefore, to determine how to distribute any additional room for expenditure—or if so demanded, where to make expenditure cuts—which is a significantly more manageable undertaking than making a full reassessment of government policies. In addition, the discretion wielded by the government is often limited by policy commitments made earlier through coalition agreements, party manifestos, political programs, or by statements by the president, prime minister or other representatives of the government. The allocative phase is therefore, to some extent, a process of consolidating policy commitments, and translating them into a coherent expenditure plan.

This view of the process highlights the importance of having a capacity to make accurate expenditure projections. Unless the allocation to sectors is based on a qualified assessment of the cost of continuing current policies and the cost of new initiatives, its usefulness becomes highly questionable. Insufficient understanding of the expenditure dynamics of government policies is a widespread obstacle for budget management.

A stringent top-down procedure presupposes that decisions made earlier in the budget process are respected and adhered to. This implies that the overall ceiling and the sector allocations are *politically realistic*. A minimum accepted level of funding for the various sectors must be made available in the budget, and this allocation must be supported by a sufficient number of members in the decision-making body. Some kind of endorsement of the sectoral allocations, which can be referred to at later stages in the budget process, is necessary, although the exact format of this decision is determined by country-specific circumstances. Except for the very special circumstance where the policy agenda is completely dictated by only one or a few individuals in the executive, the allocative phase will have to involve the entire cabinet of ministers. The cabinet budget meeting presented in Box 4 illustrates how this process is organized in Sweden.

In order for sector ceilings to be effective in the process of preparing the budget, it is vital that they are *operational*. For this reason, they have to be defined in a dimension that can be easily translated to the classification of the budget and the organizational structure of the government administration. Sector ceilings stretching over several ministries necessitate a

¹⁸ The fact that the degrees of freedom for making policy changes in the short term are limited is another strong argument for adopting a medium-term framework in budgeting, through which fiscal effects beyond the upcoming year are exposed. By expanding the horizon to a period of three to five years beyond the current year, the government has a framework in which deferred effects of reforms can be analyzed, and measures outside the annual budget cycle can be presented.

Box 4. Cabinet Budget Meetings in Sweden

Sweden operates a multi-annual ceiling on central government nominal expenditure. This means that a binding overall ceiling is established three years before the start of the budget year, and that the government's budget proposal must conform with a pre-determined total limit. The state budget is structured into 27 expenditure areas, under which there are around 500 appropriations.

The main directions of budget policy are discussed and decided at a *cabinet budget retreat*, which takes place during two days in mid-March every year. At this time, an overall ceiling for the third additional year in the rolling multi-annual framework is presented to the cabinet. At the cabinet budget retreat, ceilings for each expenditure area are also established, based on a proposal from the minister of finance. The decision on ceilings for the expenditure areas is collective, and there have been no negotiations or deals between the minister of finance and the prime minister, on the one hand, and sector ministers, on the other hand, prior to the cabinet meeting. Any minister who wishes to increase the amount allocated to an expenditure area in the minister of finance's proposal must convince all other ministers to make a corresponding cut in other expenditure areas in order to ensure compliance with the overall expenditure ceiling. The government's main policies for the medium to the long term, together with the ceilings for the 27 expenditure areas, are presented to parliament in the *Spring Fiscal Policy Bill* on April 15.

The cabinet budget retreat enables the government to lay down its main budget policies in a coordinated manner at an early stage of the budget preparation process. The fact that the decision is collective promotes discipline and creates peer-pressure on individual ministers to justify their sector policies. The expenditure area allocation provides the continued preparation of the budget with a firm structure, and gives a widely accepted point of reference in the negotiations between the ministry of finance and line ministries.

coordination that may be difficult to achieve in practice. In order to ensure adherence to the ceilings, it is, furthermore, important to have a clear accountability for the respective ceiling in the budget preparation process. This is difficult to enforce if the ceiling is shared between several ministers.

D. The Mandate of Sector Ministers

Once the main directions of budget policy have been established, the process of preparing the details of the budget starts. The broad indications of policy priorities reflected in the sector ceilings have to be translated into concrete activities, with corresponding budget allocations. This is, to a large extent, a task for professional civil servants in line ministries and spending agencies. Operational issues of how best to achieve the objectives spelled out by the political leadership is, in the majority of cases, of limited interest to members of the cabinet. It is not possible to draw a clear line between the political significance of an item in the budget and its fiscal impact, however. Sometimes small and detailed issues—especially when there is a distributional or regional perspective—become politically important. A certain degree of involvement by the political leadership in this phase of the preparation process is to be expected.

The fact that there are ceilings that restrict the extent of expenditure within each sector, means that line ministries and spending agencies can be given a substantial mandate to determine the best possible manner of allocating resources in order to achieve the overall policy objective for the respective sector. Line ministries and agencies generally have superior knowledge of the operational aspects of the administration. The ministry of finance should have strong arguments to oppose a proposal for reallocation of resources within a sector ceiling. The added flexibility given in a top-down procedure has the potential of enhancing efficiency, while preserving a relevant control of expenditure.¹⁹

There may, however, be reasons to put certain restrictions on the possibility to reallocate expenditure within the sector ceiling. Most important is that any changes in the composition of the sector budget do not contain *hidden expenditure increases*—including over a time horizon longer than the upcoming year. Temporary variations in expenditure are natural for a number of items in the budget, for example, in entitlement programs and interest payments on the government debt. Using a temporary decline in expenditure to finance new policy initiatives of a permanent nature is likely to put future strains on public finances. In addition, there may be reasons for restricting the possibilities to transfer between certain expenditure categories in the budget. An unrestricted mandate to reallocate budget funds to wages may, in the absence of any effective mechanism to control the staff expenditure, crowd out other items. Other instances where it may be justified to restrict budget reallocations is between program expenditure and the administration of programs or between current and capital expenditure.

IV. TOP-DOWN VOTING PROCEDURES IN PARLIAMENT

A top-down sequence of decision making is intended to promote collective rationality in an environment characterized by a large number of potential budget outcomes and numerous decision makers with conflicting interests. Such a situation is found not only during the preparation of the government's budget proposal, but also, *mutatis mutandis*, in process of voting the budget through parliament.²⁰

¹⁹ As demonstrated by Hendrick (1992), the impact of a top-down process on reallocations depends on the nature, size, and the political profile of the sector. The degree of flexibility of expenditure varies significantly between various areas, and the ability of achieving a more rational and efficient policy implementation by devolving operational planning will only emerge to the extent that line ministers or agency executives have actual discretion over their sectors. This discretion is diminished where exogenous factors determine expenditure to a large extent, in high profile areas, or where the size of the sector is small.

²⁰ For a discussion on the significance of the voting system for fiscal outcomes, see Grilli et al. (1991) or Lijphart (1999).

A. The Role and Risk of Parliamentary Approval of the Budget

Formally, parliament has the supreme authority over the size and the composition of the budget. Generally, it does not put forth an independent comprehensive budget alternative, however.²¹ A complete rejection of the proposed budget would indicate a lack of support for the government's policies, and consequently the government itself. The prerogative of parliament is rather to approve or reject the government's budget, subject to reallocations or additional measures introduced during the voting process.

The possibility that parliament, through amendments to the budget, raises expenditure above the level proposed by the government creates an additional risk to fiscal sustainability. Although each appropriation may not be subject to revision, individual parliamentarians often have an interest in promoting special interests, which could undo the fiscal rectitude in the preparation of the budget. The actual expenditure increases may not necessarily be large, but there is a dormant effect in the sense that the government must take into account the possibility of amendments, and formulate a budget proposal that is acceptable to parliament.

Parliament may be restricted in the changes that can be made to the budget. There may, for example, be requirements that any proposal increasing expenditure must be accompanied by a corresponding proposal to decrease another item in the budget by the same amount, or to increase revenue in order to leave the budget balance unchanged. Such restrictions are aimed at maintaining fiscal discipline during the approval of the budget. The argument in favor of revising voting procedures to ensure fiscal sustainability consequently depends on the effectiveness of existing parliamentary procedures.

B. A Top-Down Approval

A parliamentary approval procedure that starts with a debate and vote on various subcategories of expenditure, and only at the concluding stage votes on the global budget (i.e., where the budget is approved bottom-up) gives rise to the same issues as those discussed above. Alternatively, approval can be organized top-down, by initiating the parliamentary debate with a vote on overall fiscal parameters such as total expenditure, estimated revenue and the resulting budget balance, and borrowing requirements. Once these aggregate aspects have been determined, parliament votes on the main policy directions—in terms of sectoral allocations—with the restriction that the sum of sector ceilings cannot exceed the aggregate expenditure limit voted on in the first stage. Only at a third stage are the details of the budget brought to the sector committees for scrutiny. Again, the possibility to make changes to the sectoral budget is subject to the restriction that the previously

²¹ Although this possibility formally exists in some countries (e.g., Germany and Luxemburg), it is typically of no practical relevance for the budget process, with one notable exception: the United States, where Congress can adopt a budget which does not originate from the government.

determined sector ceiling is respected. This means that parliamentarians can raise expenditure only if they can mobilize sufficient support for an off-setting decrease of another expenditure item *within the same sector*. The top-down voting procedures in the Norwegian parliament is described in Box 5.

A top-down voting procedure does not prohibit, or even limit the scope for, parliament to amend the government's budget proposal. It only requires that the *aggregate effects* of proposed changes are explicitly recognized and supported by a sufficient number of parliamentarians, or that changes in the composition of the budget are off-setting. As discussed above, a top-down process could potentially alter the awareness of macroeconomic and fiscal sustainability issues by treating the total expenditure level as an independent decision, rather than the residual of a number of individual votes.

Box 5. Top-Down Parliamentary Approval in Norway

The Norwegian Parliament (Stortinget) has unlimited powers to introduce amendments to the government's budget proposal through a simple majority vote. In the past, the budget balance was routinely worsened during the course of parliamentary adoption, as new expenditure items were added without corresponding expenditure cuts or revenue-increasing measures being introduced.

Following a budget reform in 1997, parliamentary approval of the budget follows a top-down approach, through which the fiscal discipline has been strengthened.

- When the budget bill is submitted to parliament, it is remitted to the Standing Committee on Finance and Economic Affairs, which makes a thorough scrutiny of overall fiscal policy and budget aggregates.
- Following a debate in this committee, a recommendation on total expenditure, 22-sector spending ceilings, and estimated revenue is presented to parliament for adoption.

The decision on sectoral allocation, which is made in a single resolution, is binding for the continued procedure of processing the details of the budget in the 12 permanent sector committees. Sector committees may propose changes to the allocation of expenditure in the government's proposal, but must comply with the sector ceiling determined through the earlier vote in parliament. This means that if the committee presents an increase in one appropriation, it must, at the same time, propose a corresponding reduction in another appropriation *under the same sector spending ceiling*. The recommendations of the standing committees are presented for parliamentary approval by December 15 at the latest. The appropriations under the sector spending ceilings are adopted collectively through one single resolution.

V. SUMMARY AND CONCLUSION

The organization of the budget process, and more specifically the order in which decisions about the size and the composition of the budget are taken, has an impact on government's ability to pursue sound fiscal policies. By ensuring that a decision on the total expenditure level is taken before the budget is allocated to main sectors, and that sectoral ceilings are set before the details of the budget are negotiated (i.e., by preparing and approving the budget top-down), it is possible to strengthen aggregate fiscal control and better align the budget with policy priorities.

The rationale behind top-down budgeting becomes clear when viewing the budget process as a coordination problem. The central government budget consists of hundreds—or in many cases thousands—of individual resource allocations, involving numerous decision makers, each with a different preference. Furthermore, the decision-making process is characterized by imperfect and asymmetric information and limited time for preparation and negotiations. A top-down process reduces the dimensions of early budget decisions to a more manageable level, allowing for more informed decisions on aggregate policy. By subjecting lower level expenditure decisions to the restrictions decided at the earlier stage of the process, issues of fiscal sustainability become internalized in the preparation of detailed sector policies, and reduces the risk that expenditure in excess of the government's aggregate fiscal policy priorities is accommodated during the course of preparing and approving the budget. However, a top-down approach will not *in itself* introduce a bias toward a higher or lower aggregate expenditure level, nor will it favor a particular composition of the budget.

Although conceptually distinguishable from one another, elements of top-down and bottom-up budgeting are present in all budgeting. Introducing top-down budgeting is, therefore, a matter of shifting the balance, rather than a complete upheaval and reorganization of existing budget practice. However, to reap the benefits of a top-down approach, some issues need to be resolved.

First, a process for determining the aggregate expenditure level should be institutionalized. Effective top-down budgeting requires that the decision on total expenditure is respected throughout the budget process—and only revised in the most extreme crisis situations. In addition, to promote fiscal sustainability, the aggregate expenditure level should be set at a level consistent with both the government's aggregate fiscal policy objectives and prevailing economic conditions.

Second, the sectoral allocation has to take into account the inertia of existing policies, prior policy commitments made by the government, and any new policies that the government wants to launch. This highlights the importance of a good technical understanding of how various expenditures in the budget develop over time, and a capacity to make accurate expenditure projections. Only if the sectoral allocations are credible and realistic will it be rational to enforce them in the continued preparation of the budget.

Third, in a top-down process, it is possible to devolve significant authority to prepare budget details to the individual line ministers, provided that the sectoral ceilings set earlier in the process are respected. By allowing savings generated within the ceiling to be used for new initiatives, reallocations and efficiency gains are promoted. However, it is necessary to establish some principles for the types of redistributions that can be made within a sector to ensure fiscal discipline and the observance of key policy priorities.

A top-down approach to budgeting can also be applied to the process of approving the budget in parliament, to give structure and stability to a process which otherwise runs the risk of being trapped by sector interests or strategic gaming. The benefits of a top-down budget approval will depend on existing voting procedures, and on the possibilities to introduce amendments or block the budget from being passed.

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