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Top-down Budgeting as a Tool for Central Resource Management

by

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Top-down budgeting emerged in the 1990s as a response to fiscal crisis. Previously, the traditional bottom-up approach to budget formulation had conferred centralised authority for resource allocation on the finance ministry. Then, in an attempt to control the growing fiscal deficits in the 1990s, the finance ministry only set the overall expenditure ceiling and sub-ceilings, and delegated detailed resource allocation decisions to line ministries. However, the level of delegation and the method of determining the expenditure ceilings vary across countries. This article describes country experiences with top-down budgeting and makes policy suggestions for its use as a tool for central resource management. The article also explores the relative advantages, disadvantages, and complementarities of the two approaches.

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1. Introduction

Traditionally, budgets have been formulated according to a bottom-up approach. Line ministries submitted their budget requests, which were usually in excess of what they realistically expected to obtain in the end, to the finance ministry at an early stage of the budget process. Based on the requests, negotiations would begin between the finance ministry and line ministries and would go through several rounds until they reached an agreement. Following further discussions on resource allocation issues in ministerial meetings, the government finalised its budget proposal in the cabinet meeting. This system conferred centralised authority for resource allocation on the finance ministry, which managed public finance by controlling individual appropriations and budget items of line ministries.

In the early 1990s, most OECD countries suffered from growing fiscal deficits which, in some countries, deteriorated into fiscal crisis. As an effective response to such fiscal crises, the newly devised top-down budgeting system attracted considerable public attention during that period. In this system, the budget was formulated in a different way from the bottom-up approach. The finance ministry set the overall expenditure ceiling based on macroeconomic assumptions and the medium-term fiscal management target. Sub-ceilings, such as sectoral expenditure ceilings, were set according to policy priorities. These expenditure ceilings were confirmed in the cabinet meeting at an early stage in the budget process. Detailed resource allocation decisions to individual appropriations were then made by line ministries within their expenditure ceilings. In other words, the authority over resource allocation which the finance ministry had retained in the bottom-up approach was delegated to line ministries.

A budget system reflects the power structure, history and socio-economic background of a state. As a result, each country's budget process has its own distinctive features. While Parliament in some countries enjoys a stronger influence on the budget process than that of the government, it is also true that Parliament in other countries plays a much smaller role in the budget process. Such differences between countries can also be found in top-down budgeting. Even among governments that employ the top-down budgeting system, detailed operation schemes such as the level of delegation and the method of determining the expenditure ceilings vary country by country. Therefore, there is reason to expect that a comparative analysis of top-down budgeting systems used in different countries can identify common features and policy implications that may not be readily apparent from a case study limited to an individual country. For this purpose, the OECD held a meeting in November 2005 to discuss issues in top-down budgeting; senior budget officials from eight countries participated, including Australia, Canada, Chile[1], Denmark, Korea, the Netherlands, Sweden, and the United Kingdom. Presentations were also made for Japan and Norway. The two-day meeting consisted of in-depth discussions about each country's experience of the top-down budgeting system, its background and its operation. The purpose of this article is to make policy suggestions based on the information presented at the meeting on top-down budgeting and other reference materials.

That top-down budgeting is the most efficient way of budget formulation is by no means a definite conclusion – the bottom-up approach still enjoys widespread use as the common budget formulation method in many countries. However, governments intending to improve their existing top-down budgeting systems or those that wish to replace their traditional bottom-up systems will find much useful information in this article.

2. Overview of the top-down budgeting process

2.1. Background of top-down budgeting

In the early 1990s, many OECD countries suffered huge fiscal deficits, brought on by shrinking tax revenues and sustained increases in public expenditures. As Table 1 shows, the average economic growth rate of OECD countries was only 1 to 2% during this period, with some countries (*e.g.* Sweden) even recording negative growth. The lacklustre economies pulled down tax revenues, which in turn caused growing fiscal deficits. Policy measures that had been implemented to counter the growing fiscal deficits of the 1980s by controlling public expenditure did not prove effective against the deteriorating fiscal situation.

As the public finances worsened and led countries into or up to the brink of fiscal crisis, governments decided to reform their existing budget formulation systems to achieve efficient management of government debt and fiscal consolidation. Such reforms emphasised tighter control of public expenditures and fundamental principles of fiscal discipline. Top-down budgeting, which had been used as a budget formulation approach in some countries like Denmark (since the 1960s) and Canada[2] (since the 1970s), lay at the core of these reforms.

As can be seen in Table 1, these reforms of budget formulation systems coincided with the period of increasing fiscal deficits. Canada introduced its Expenditure Management System (EMS) in 1994, the Netherlands implemented prudent economic assumptions in 1994, Sweden adopted top-down budgeting in 1996, the United Kingdom began enforcing two fiscal rules[3] in 1997, and Chile established a structural fiscal surplus target in 2000.

Table 1. General government financial balance (as a percentage of GDP) and real GDP

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Financial balance (percentage)										
Australia	–3.8	–6.0	–5.6	–4.6	–3.7	–2.2	–0.5	0.6	1.6	0.1
Canada	–8.3	–9.1	–8.7	–6.7	–5.3	–2.8	0.2	0.5	1.6	3.2
Chile	1.4	2.1	1.8	1.6	2.4	2.1	1.8	0.4	–1.4	0.1
Denmark	–2.4	–2.2	–2.9	–2.4	–2.3	–1.0	0.4	1.1	3.2	2.5
Korea	1.8	1.4	2.5	3.1	4.2	3.8	3.6	1.9	3.1	6.9
Netherlands	–3.2	–4.4	–3.6	–4.2	–4.2	–1.8	–1.1	–0.8	0.4	2.2
Sweden	–2.0	–7.8	–11.4	–10.8	–7.7	–3.1	–1.6	2.1	1.3	3.7
United Kingdom	–3.1	–6.4	–7.9	–6.7	–5.8	–4.4	–2.2	0.4	1.1	1.6
OECD	–3.7	–4.6	–5.0	–4.2	–3.9	–3.2	–1.8	–1.4	–0.9	0.0
Real GDP growth (percentage)										
Australia	–0.7	2.3	3.9	4.7	3.9	4.1	3.7	5.4	4.3	3.3
Canada	–2.1	0.9	2.4	4.7	2.8	1.6	4.3	3.9	5.1	4.4
Chile	8.0	12.3	7.0	5.7	10.6	7.4	7.4	3.9	–1.1	5.4
Denmark	1.1	0.6	0.0	5.5	2.8	2.5	3.0	2.5	2.3	3.0
Korea	9.2	5.4	5.5	8.3	8.9	6.8	5.0	–6.7	10.9	9.3
Netherlands	2.4	1.5	0.7	2.9	3.0	3.0	3.8	4.3	4.0	3.5
Sweden	–1.1	–1.3	–2.0	4.0	4.2	1.3	2.6	3.7	4.3	4.4
United Kingdom	–1.4	0.2	2.3	4.4	2.9	2.8	3.3	3.1	2.9	3.9
OECD	1.2	2.1	1.4	3.2	2.5	3.0	3.5	2.7	3.1	3.9

Source: OECD, *OECD Economic Outlook No. 71*, June 2002, Annex Table 1 and Annex Table 28.

The top-down budgeting system as a fiscal management reform initiative allows the government to manage fiscal deficits more efficiently than the bottom-up budgeting system. In the top-down system, the first priority of the finance ministry lies in setting the fiscal management target for fiscal sustainability and ensuring compliance with this target, in contrast to the emphasis on allocating financial resources to individual appropriations in the bottom-up system. Once the fiscal target is confirmed in the cabinet meeting in an early phase, it becomes a rule that is binding upon every cabinet member during the budget process and defended vigorously by the budget office staff. With the fiscal management target enforced as a rule and backed by an influential budget office, the government is able to regulate public expenditure and thereby control the fiscal balance efficiently.

In Sweden, for example, the government decided to introduce top-down budgeting in 1996 after it had undergone a series of huge fiscal deficits in the early 1990s which reached up to 11.4% of GDP in 1993. With tight control over public expenditure followed by the introduction of a top-down budgeting system, Sweden was able to overcome its fiscal deficits to record a surplus in 1998 for the first time since 1990.

Box 1. Introduction of top-down budgeting in Sweden

In the first half of the 1990s, Swedish public finances faced serious deterioration, and the deficit peaked at 11.4% of GDP in 1993. At the same time, greater attention was drawn to the relationship between the institutional structure of the budget process and the outcomes of public finance. In early December 1995, the Minister of Finance presented the intended reform plan of the budget process to Parliament. The plan consisted of two phases with the objective of restoring fiscal soundness.

The first phase consisted of taking concrete actions to reduce public expenditure and increase revenue to bring down the fiscal deficit to around 7% of GDP. The second phase consisted of institutional changes that would prevent a recurrence of similar budgetary problems. The core features of the new system in the second-phase changes were a medium-term expenditure ceiling and top-down budgeting, which still continue today. A reference was made to the expenditure ceiling and the surplus target in the annual government address presented to Parliament. The general assessment of top-down budgeting by the Swedish government is that it has served well for achieving fiscal soundness.

Furthermore, the top-down budgeting system helps to reduce the inefficient budget formulation practices that can usually be found in a bottom-up system. While top-down budgeting generally delegates the authority for allocating financial resources among individual appropriations to line ministries, the bottom-up approach is a centralised system in which the authority for resource allocation remains vested primarily in the finance ministry. Budget formulation in the bottom-up budgeting system begins when all agencies and ministries send their requests for funding to the finance ministry. These requests typically far exceed what the agencies or ministries realistically expect to get. Starting from these requests, the finance ministry and line ministries will go through iterative rounds of negotiation until some common point is found. This is time-consuming and essentially a game between the finance ministry and other line ministries. Therefore, there is no system for reallocation of resources within line ministries.

In contrast, in the top-down budgeting system, the finance ministry is able to concentrate on setting the expenditure ceilings and controlling additional requests by setting rules, while line ministries are able to devote themselves to allocating financial resources efficiently to individual programmes within their assigned spending ceilings. The roles of the finance ministry and line ministries are clearly differentiated. The finance ministry does not need to intervene in detailed resource allocations made by line ministries if they conduct them in line with the rules. Line ministries can make the best use of their expertise in allocating financial resources to their various programmes in order to achieve their policy objectives. Therefore, the budget process will not only be less time-consuming, but the secondary allocation within each line ministry can now take place because this system creates ownership in line ministries for the actions they take. For example, the Korean government introduced top-down budgeting in 2004 in place of the bottom-up approach which had been maintained for more than 50 years. In the bottom-up budgeting system, line ministries used to submit budget requests to the Ministry of Planning and Budget that were typically about 30% over the previous year's budget. However, starting from the 2005 budget, the practice of excessive requests has been drastically reduced with the introduction of the top-down budgeting system. The rate of budget requests by line ministries for the general account dropped significantly from 30.8% in the 2004 budget to 11.7% in 2005, and 7.0% in 2006. Moreover, autonomous restructuring of spending by line ministries increased sharply as shown in Table 2.

Table 2. Comparison of FY2004 and FY2005 budget requests in Korea

	2004 Budget	2005 Budget	Changes
Restructuring of multi-year programmes			
Programmes	308	442	134
Amount (trillion won)	–1.6	–2.7	–1.1
Introduction of new initiatives			
Programmes	351	459	108
Amount (trillion won)	1.5	3.0	1.5

Source: Korean Ministry of Planning and Budget.

In addition, the top-down budgeting system makes it easier to have the budget aligned appropriately with policy priorities. In the bottom-up budgeting system, the finance ministry reviews individual programmes based on the requests from line ministries and agencies, and financial resources are allocated to individual programmes according to the result of programme reviews. The aggregate and sectoral expenditure limits emerge at a latter stage of the budget process as the sum of all individual appropriations.[4] Therefore, it becomes very difficult in the course of budget formulation to allocate resources among the different policy sectors in accordance with the policy priorities. In contrast, the top-down budgeting system makes it possible to have policy priorities included as a key factor to consider in allocative decisions from the very first stage of budget formulation. If the government wants to put high priority on a certain sector, say social security, and low priority on another sector, say national defence, it can achieve the priority objectives easily just by allocating more financial resources to the social security sector and less to the defence sector.

In conclusion, the move toward top-down budgeting among OECD countries began as fiscal reforms for overcoming the fiscal crises in the early 1990s. The primary motivation for these reforms was to promote economic growth through more disciplined, sustainable public finances. It was believed that these goals could be accomplished through the delegation of authority in budgeting for lower-level decisions, while enforcing strict limits at the aggregate levels. In addition, it was believed that top-down budgeting could better reflect political priorities in resource allocation. The general assessment of the top-down budgeting system as a tool for achieving fiscal consolidation has been positive so far.

2.2. Relationship with bottom-up approach

What is the relationship between top-down budgeting and the bottom-up approach: are they incompatible systems that can only replace one another or are they more or less complementary systems that can work together? It appears that, to a great extent, the two systems are complementary. In Table 3, the budgeting systems of eight countries participating in the OECD meeting on top-down budgeting were reviewed to see which approach is used for setting the overall ceiling and sectoral ceilings and whether these countries conduct individual programme reviews, which is the distinction of a bottom-up approach. As shown in the table, most countries employ both methods in budget formulation. The overall expenditure ceiling is set through a top-down approach that takes into consideration various economic assumptions and the fiscal target. It is reported that even governments with typical bottom-up systems tend to set their aggregate expenditure limits through a top-down approach in order to control public expenditure. The actual method of setting sectoral ceilings and sub-ceilings differs from country to country, but the majority of cases consist of some mix of the two approaches. Programme reviews are used in all eight countries studied. Even Sweden, known for its strict adherence to the top-down philosophy, conducts programme reviews to monitor programme performance.

It appears that a top-down budgeting system necessarily has to incorporate elements of the bottom-up approach as a complementary method in the budget process for the following reasons. First, funding decisions for new policy initiatives should be determined through a programme-based review, since the finance ministry will often lack information on data pertinent to judging the fiscal implications of the proposed initiatives, such as performance data and total programme cost projections over the long term. Therefore, line ministries are usually required to submit detailed proposals to the finance ministry which are then reviewed by the finance ministry or a cabinet committee[5] composed of several ministers, after which a final decision is made by the prime minister or the president.

Table 3. Approaches to determining expenditure ceilings

	Top-down approach		**Bottom-up approach**		
	Overall ceiling	Sectoral ceiling	Overall ceiling	Sectoral ceiling	Programme review
Australia	O	–	–	O	O
Canada	O	–	–	O	O
Chile	O	–	–	O	O
Denmark	O	O	–	Δ	O
Korea	O	O	–	Δ	O
Netherlands	O	O	–	Δ	O
Sweden	O	O	–	–	Δ
United Kingdom	O	O	–	Δ	O

O = actively used; Δ = used as reference; – = not used.

Second, individual programmes need to be reviewed in order for the finance ministry to monitor whether they are consistent with the fiscal rules. This process, however, runs the risk of serious protests by line ministries, which may view the monitoring as inappropriate intervention by the finance ministry in their internal resource allocation decisions. Monitoring or intervening? In the top-down system, this is a delicate problem for which the finance ministry needs to find a solution. The answer lies partly in the finance ministry ensuring that its staff acquires greater expertise in analytical capacity and programme review techniques. Additionally, greater care must be taken to maintain good working relationships with line ministries than in a bottom-up system. Despite these additional burdens, in order for the finance ministry to accomplish its most important mission in the top-down budgeting environment – which is to uphold the fiscal rules – it needs to proactively embrace certain bottom-up methods, including programme reviews.

Box 2. Comparison of bottom-up with top-down

Bottom-up	**Top-down**
Ministry by ministry analysis that largely ignores economic forecasts.	Aggregate fiscal analysis that takes into account economic forecasts.
Annual.	Multi-year.
Time-consuming.	Delegated authority.
Ownership of proposals is more agency-specific.	Creates joint ownership of proposals.
Reactive.	Proactive.

2.3. Medium-term budget frameworks

The top-down budgeting system cannot work as expected without an effective medium-term budget framework (MTBF). Most countries that employ the top-down budgeting system have also adopted medium-term budget frameworks which facilitate fiscal consolidation. In an MTBF, the government must first state its major policy objectives clearly. These will be the medium-term fiscal objectives which are prioritised where appropriate, including levels of the aggregate expenditure and revenue, the fiscal target, and policy priorities among and within spending categories. This statement of objectives is necessary because of the key role they play in fiscal management and because fiscal objectives that reflect economic forecasts and policy directions over the medium term have greater credibility than those based on an annual framework. Once the MTBF objectives are set, these high-level targets are operationalised by establishing hard budget constraints for individual ministries and programmes over a span of multiple years. This helps to strengthen stability as well as the credibility of the government's fiscal objectives.

The MTBF is also a system that is effective for redressing the problems stemming from the short time limit of the annual budget process. The budget in most countries is formulated annually because a democracy needs a process in which Parliament authorises any government spending periodically, most commonly every year. The short time limit inherent in the democratic process of budgeting has several drawbacks. The most frequently cited criticism is that fiscal policy is likely to be myopic, which undermines economic stability in the medium term and results in *ad hoc* allocation of resources. Introducing an MTBF that properly reflects medium-term forecasts of the macroeconomic variables often alleviates such problems stemming from annual budget formulation.

Box 3. Medium-term budget frameworks in the United Kingdom and Denmark

The United Kingdom, a pioneer of multi-year budget forecasts, has run a distinctive MTBF for effective fiscal management. In 1998 it introduced the Comprehensive Spending Review (CSR) which estimated the subsequent three years' expenditures and revenues. In the CSR, all expenditure items are classified into either the departmental expenditure limits (DELs) or the annually managed expenditures (AMEs).

AMEs generally include programmes such as social security benefits and debt interest payments that are subject to volatility, making them difficult to budget sensibly over a three-year timeframe. AMEs represent half of the total expenditure. On the other hand, DELs include discretionary spending for both the current and capital accounts. Complying with the overall spending totals set to meet the fiscal rules, the United Kingdom government sets limitations so that DELs are guaranteed their level of funding for three years rather than just one. This may give public services the stability to plan their operations according to a sensible timetable. The third-year spending of DELs is revised and rolled over to the next Spending Review, as the Spending Review is revised every two years. In other words, the British system can be taken practically as the biennial budget, which fixes the two-year spending of DELs.

Denmark has a widely supported medium-term economic and fiscal programme called *Denmark 2010* which aims to foster fiscal prudence in preparation for the onset of major demographic changes. The *Denmark 2010* programme is the anchor for budgetary policy which applies to all levels of government, not just the central level. It enjoys broad political support in Denmark and has been upheld by successive governments. The overall objective of the programme is to ensure that fiscal policy is sustainable in the long term. In essence, this means running budget surpluses until 2010 in order to reduce the amount of the debt and the associated cost of borrowing. According to projections, sustainability requires an average government surplus of 1.5 to 2.5% of GDP until 2010.

The MTBF cycle can either be rolling or periodical. Rolling frameworks are drawn up during budget preparation every year or every two years.[6] Year 1 in the previous year's framework becomes the basis for the budget and a new year 3 is added (in case of three-year frameworks). Thus an MTBF cycle in a rolling framework will necessarily overlap with the previous and subsequent cycles by one or two years, by design. In contrast, a periodical framework has cycles that run in sequence one after another.

Specifically, a periodical MTBF is drawn up at the beginning of the period to which it applies and stays effective until that period has lapsed. Both rolling and periodical frameworks may be revised in the middle of their lifetime.

The period, or time span, of an MTBF may run for two, three, four, or five years, including the upcoming fiscal year. The most commonly used period is three years, as shown in Table 4.

Table 4. Period of medium-term budget frameworks

Two years	Three years	Four years	More than four years
Italy	Chile*	Australia	Canada (five years)
United Kingdom	France	Netherlands	Denmark *(Denmark 2010)*
	Germany	United States	Korea (five years)
	Spain		
	Sweden		

* In 2000, the Ministry of Finance in Chile started maintaining baseline projections of government revenue and expenditures for the next three years. However, this is an internal document of the ministry and is only released to the public at a very aggregate level. The document is not used as a tool for resource allocation. The Ministry of Finance uses it to evaluate the overall trend in public revenue and expenditure.

Even though the MTBF as a major instrument for fiscal management has spread to many countries, it is reported to contain several significant problems. The OECD summarised the problems into three typical types as follows:

- "First, there was a tendency to overestimate the growth potential of the economy when making the multi-year budget forecast. This made excessive resources available in the forecast period and created an upward pressure on public expenditure.
- Second, ministries and departments viewed their resource allocations in the forecast period as an entitlement. This made subsequent downward revisions in expenditures difficult, even when it became clear that the basis on which the allocations were made was not correct.
- Third, the multi-year budget forecasts were made in real terms rather than in nominal terms. In the 1970s, when economic growth subsided and inflation accelerated rapidly, the expenditure forecasts were adjusted automatically for increases in prices while revenue suffered. This created further pressure on public finances."

(Blöndal, 2003, p. 12)

The third problem is quite simple in that the solution only requires a change from real to nominal terms, and medium-term budget frameworks are now invariably made in nominal terms. In order to overcome the first and second problems, "prudent" economic assumptions are essential to avoid having excessive resources made available. This will be discussed in section 3.

3. Determining expenditure ceilings

3.1. Economic assumptions

A cautious macroeconomic forecast is a key requirement for achieving fiscal consolidation. Even should the government adopt both top-down budgeting and an MTBF in response to an increasing fiscal deficit, the effort for fiscal consolidation can be undermined by an overall expenditure ceiling grounded in an optimistic economic forecast. Moreover, if the actual economic performance should deviate beyond a reasonably allowable range from the economic assumptions underlying the MTBF's expenditure limit and revenue forecasts, the government's fiscal policy will suffer a drastic drop in credibility. In this vein, governments need to bear in mind that an MTBF by its nature is susceptible to the incentive to overestimate potential economic growth, as discussed in the previous section. Given that an economic forecast with 100% accuracy is impossible, deliberately erring on the side of caution rather than optimism in making forecasts helps to guard against the problems of overestimating in an MTBF and thereby improve fiscal soundness.

Cautious economic assumptions also enable the government to occasionally gain "windfalls" which can be used according to its policy priorities. Thanks to the built-in caution, the economy is more likely to operate better than the economic assumptions. As a result, the government can benefit from some unexpected surpluses, or windfalls.

The tone of economic forecasts, whether they are prudent or optimistic, may be influenced to a great degree by who does the forecasting[7]. Therefore, the government may need to push for institutional reforms to ensure that the use of cautious assumptions is built into the forecasting process. Properly devised, such institutionalised features can act as safeguards against arbitrary assumptions of the person in charge of forecasting. One method adopted by most countries is sensitivity analysis, which is a technical approach for examining the impact that variations in the key economic assumptions would have on the budget. Additionally, some countries have introduced a new institutional feature in which the initial aggregate targets in the budget process are based on independent, private sector economic forecasts. Further along this direction, there are cases where an independent body has been appointed for recommending the economic assumptions to be used in the budget formulation. The following describes three cases of institutional reform for cautious economic assumptions.

Canada is an example where the private sector's economic forecast is used in the budget process. Before the introduction of this practice, the perception that "optimistic" economic assumptions were used in the budget had significantly downgraded the credibility of government-generated economic forecasts. Rather than relying on internally generated economic projections for use in budgeting, the government now begins with the average of forecasts made by private sector economic forecasters. The Department of Finance gathers economic forecasts from about 20 private research organisations and convenes an economic advisory group consisting of the central bank and four major research organisations, in which an agreement on economic assumptions for the next five years is reached. This is done in order to ensure credibility. On top of this, the Department of Finance systematically revises the private sector forecasts downward as a further measure of prudence. This takes the form of the government adding 50 to 100 basis points (equivalent to 0.5 to 1.0 percentage points) to the average private sector economic forecasts for interest rates and then feeding these through its entire econometric model, thus producing lower projections of economic activity. This provides a buffer for safeguarding the government's fiscal objectives.

The Netherlands and Chile are cases where an independent body was established for politically neutral and prudent economic forecasts. In the Netherlands, economic forecasts are made by the Central Planning Bureau (CPB), which is a government institution but is nevertheless completely independent. Charged with responsibility not only for economic forecasts but also for economic policy analysis, the CPB's macroeconomic forecast serves as a basis for the budget forecast. As the CPB enjoys the confidence of all political parties and the public at large, its economic forecasts are taken as given. The CPB produces two economic scenarios; the first one gives the most likely economic growth rate, while the second one is a cautious growth rate for use in budgetary policy. The political parties have agreed that the cautious scenario would be used because they would rather be faced with "good" surprises than with "bad" surprises. Windfalls resulting from the cautious scenario have been used for both deficit reduction and expenditure increases.

In Chile, there is an institution called the "output gap" panel which independently produces the macroeconomic forecasts for budgeting (Blöndal and Curristine, 2004, p. 13).[8] The panel consists of 14 economists appointed by the Minister of Finance. The members of the "output gap" panel are most often well-known economists from academia and research organisations, split between economists identified with the opposition and with the ruling political parties. At the first meeting, the panel discusses methodological aspects of the model used. At the second meeting, each member of the panel submits a forecast for the various inputs that go into the model. All of the 14 estimates are published anonymously so that each forecaster can verify his/her own. The two extremes on either end are discarded and then a simple average of the remaining 12 forecasts is used.

3.2. Composition of expenditure ceilings

3.2.1. Overall expenditure ceiling

After the economic assumptions for budgeting are made by the finance ministry or independent bodies, the government begins the process of formulating the coming year's budget by setting the overall expenditure ceiling.[9] This is a very important phase in budget formulation under the top-down approach, as it sets the overall policy tone for fiscal consolidation and fiscal discipline. In its decision as to the appropriate level of the overall expenditure ceiling, the government will take into account both the economic forecasts and the fiscal target. Once these two factors have been determined, it becomes a matter of relatively simple calculation to derive the overall expenditure ceiling.

Box 4. Legislation of the spending limit

In 1991, the Canadian government legislated a spending limit in the Spending Control Act for the period from 1991/92 to 1995/96. The limit was based on the total spending target announced in February 1991 for the next five years. Excluded from the limits were public debt charges, programmes that were financed through "dedicated" revenues/charges, and expenditures related to events that occurred prior to 1991. As this was a five-year programme, under-spending in one year could be carried forward to offset over-spending in some future year. If the aggregate spending limit was exceeded after the five-year period, the government had to indicate in the following budget how it intended to make up any shortfall. Over the period from 1991/92 to 1995/96, the limit was not exceeded and the act was not subsequently extended.

Of the two key determinants of the overall ceiling, economic forecasts are more or less a technical exercise involving analytical tools from macroeconomics and econometrics. The other key factor, the fiscal target, in contrast primarily reflects the government's will as to how rapidly it wants to achieve fiscal consolidation. If the government's agenda calls for a rapid reversal of a fiscal deficit, it will impose a tight balance target, and vice versa. In practice, many OECD country governments in the early 1990s emphasised tight control on public expenditure. This was possible because the fiscal target, usually expressed as the percentage of the fiscal deficit relative to GDP, was accorded the highest priority in achieving fiscal discipline after having run large consecutive fiscal deficits in the previous years. For example, in Sweden, strict fiscal discipline reduced the fiscal deficit from 11% of GDP in 1993 to 7% in 1995. In Canada, the target was to lower the deficit to 3% of GDP by fiscal year 1996/97.

Box 5. Recent fiscal disciplines on aggregate expenditure of major countries

Canada	Balanced budget or better.
Chile	Structural budget surplus of 1% of GDP.
Denmark	Fiscal surplus of 1.5 to 2.5% of GDP.
Sweden	Structural fiscal surplus of 2% of GDP (overall expenditure ceiling: 4% of GDP).
United Kingdom	Golden Rule: balance current budget over economic cycle. Sustainable Investment Rule: keep net debt at sustainable level (40% of GDP).

However, as the fiscal situation improved enough to realise fiscal surpluses by the late 1990s, there has been a tendency to slacken fiscal discipline since 2000. In Sweden, during 1997-99 the overall expenditure ceiling was enforced as an instrument for reducing public expenditure, while since 2000 its purpose has been to maintain a more or less constant ratio of expenditure to GDP. In Canada, tight control was exercised over expenditures by imposing two-year ceilings from 1994 to 2004; this was loosened to five-year ceilings in 2005.

The overall expenditure ceiling is seldom legislated, but is submitted to Parliament together with, or as part of, the budget proposal. Even strong measures for fiscal discipline such as Chile's "structural budget surplus of 1% of GDP" (Blöndal and Curristine, 2004, p. 10) are not formally legislated, but are rather understood to be the political commitment of the government.

3.2.2. Sub-ceilings

After the overall expenditure ceiling has been set, the next step in top-down budgeting is to determine the sub-ceilings. The sub-ceiling is the smallest unit of resource allocation that can be determined by the finance ministry in the top-down budgeting system. Resource allocation below the sub-ceiling level, such as for individual appropriations, is done by line ministries. This dichotomy of responsibilities allows the finance ministry to ensure that resource allocation among sub-ceilings is determined solely in consideration of the government's policy priorities and efficiency of implementation, free from pressures from line ministries.

The management of sub-ceilings differs somewhat among countries. In Sweden, there are only the overall and 27 sectoral expenditure ceilings, with hardly any restrictions among wages, transfers, and investments within sectoral ceilings.[10] In Denmark and the United Kingdom, operating expenditures are subject to a separate ceiling from capital investment and transfers. In Canada, the current expenditure ceiling applies only to the aggregate level. However, since entitlement expenditure programmes have largely been exempt from any ceiling in recent years, the ceiling principally relates to non-entitlement spending.

Sectoral ceilings

Sectoral ceilings are the expenditure limits for major policy areas, examples of which would typically include agriculture, social security, national defence, etc. They are therefore determined by allocating resources out of the overall expenditure ceiling to each of these policy areas according to the government's policy priorities. This top-down decision making on sectoral ceilings is supplemented by bottom-up measures such as programme reviews.[11] By reviewing individual programmes, the finance ministry can reduce the decision-making errors that may result from inadequate information, which is a consequence of delegating some budgetary decisions to line ministries.

Of utmost importance in making decisions on sectoral ceilings is that they should not affect the overall expenditure ceiling, which is already determined. Having the sectoral ceilings set within the overall expenditure ceiling, without any possibility of allowing them to push up the latter, is a fundamental requirement for top-down budgeting to function successfully. Moreover, in some countries, the finance ministry requires that line ministries propose savings that can be used to finance reforms when they submit their budget requests. This requires a system to give line ministries adequate motivation for such savings, which can absorb additional expenditures generated by policy reforms in a budgetary sector.

Box 6. Canada's expenditure setting procedure

Each autumn, departments and agencies submit their requests to the Treasury Board, seeking approval of their budgets through the annual reference level update (ARLU) process. This is primarily a technical exercise that updates departmental funding levels for the next fiscal year as well as the two years afterwards. The ARLU process is not generally a mechanism for departments to seek new funding approvals but rather an exercise that recognises incremental approvals given since the previous year. These incremental approvals primarily relate to new policy initiatives announced in the previous budget.

The Treasury Board Secretariat reviews the individual departmental submissions and makes recommendations to the Treasury Board. It then compiles the approvals and submits them to the Department of Finance. If the totals fit within the overall expenditure ceiling provided, no further action is taken. If the totals exceed the ceiling, reductions would be required.

The major adjustments to the expenditure ceilings result from the introduction of new policy initiatives or enhancements to existing programmes. In some years, incremental adjustments have been made to the departmental reference levels based on assessments by the Treasury Board Secretariat on health and safety issues. In all cases, since 1994/95 these adjustments have been accommodated without jeopardising the annual budgetary balance target.

The sectoral ceiling usually overlaps with a ministerial ceiling because each ministry covers a major policy area, for example the ministry of defence is in charge of the national defence policy area. In some countries like Korea, two or three ministries cover one policy area in common, requiring a more detailed sub-hierarchy of sub-ceilings. In contrast, the Netherlands has only three sectoral ceilings, among which the "core" sector is the joint responsibility of several ministers.

Operational and capital ceilings

Operational expenditure and capital expenditure are designated as separate sub-ceilings in some countries because the finance ministry prohibits improper budget transfers from capital investment to operational spending.

In Denmark, the Ministry of Finance establishes the expenditure ceiling for each line ministry within which that ministry then has the responsibility for final allocation of funds. The expenditure ceiling for each ministry is divided into two parts: a maximum for operating expenditures and a maximum for non-mandatory transfer expenditure. Shifting money from transfers to operating expenditures is not permitted. A sub-ceiling is also set for wages within the operational expenditure ceiling. Money may be transferred from wages to other expenses, but not from other expenses to wages. Mandatory transfers such as social pensions, unemployment benefits and capital expenditures are not included in the system of expenditure ceilings.

Box 7. Sectoral ceilings in the Netherlands

In the Netherlands, there are three sub-ceilings: the core sector, the social security sector, and the health care sector. The separation of the latter two sectors from the "core" sector is in part due to the fact that they have their own dedicated financing sources. The latter two sectors are each the responsibility of a single minister, respectively. The core sector, however, is the responsibility of a number of ministers. In principle, shifting money between each sector is prohibited. In practice, however, money is often shifted. For example, the social security sector is currently in strong surplus due to a more favourable economic situation than assumed. This surplus is being used to finance additional expenditures in other sectors, mainly the health care sector. Surpluses in one area, however, can only be used to fund existing policies that are experiencing higher costs than projected.

In the United Kingdom, the government has been setting separate current expenditure and capital expenditure sub-ceilings since 1998 in order to correct a natural bias against capital expenditure and to ensure consistency with fiscal rules. Current expenditure is consistent with the Golden Rule and capital expenditure with the Sustainable Investment Rule, respectively. Moreover, this prevents the tendency to cut capital expenditure to fund current pressure, the benefits of which may only be seen in the medium or long term.

Regarding operational costs, Sweden has a unique formula-based system. For example, wages (60% of total operational cost) are determined by applying a productivity index to previous spending levels, and accommodation costs (15% of total operational cost) are determined by applying a price index.

Number of sub-ceilings

The number of sub-ceilings also varies by country: Korea has more than 200 sub-ceilings; Sweden has only 27; and some other countries have less than 10 sub-ceilings. The reason Korea has so many sub-ceilings compared to other countries is because of the complexity of its budget system. There are 23 separate budget accounts, consisting of one general account and 22 special accounts, and an additional 47 public funds, most of which are financed heavily from the general account. With sub-ceilings that are set for 30 spending areas, in each of which the individual budget accounts and public funds must be separately accounted for, such a huge number of spending limits may appear to be unavoidable.

It should be borne in mind, however, that the advantages of top-down budgeting diminish rapidly as the number of sub-ceilings increases. Resource allocation among sectoral ceilings becomes a much more difficult decision politically with a large number of ceilings. Additionally, having the finance ministry involved in such detailed decisions deprives the line ministries of the opportunity to utilise their expertise in their respective areas to make allocative decisions within their individual ceilings, which is one of the key rationales for top-down budgeting. Therefore, it is advisable to keep the number of sub-ceilings small, optimally around 30 as a rule of thumb.

3.2.3. Budget margins

The budget margin functions as a buffer against increases in expenditure ceiling arising from economic forecast errors or unpredictable events. Once the overall expenditure ceiling has been confirmed, the government is better off spending money within that limit because frequent changes in the ceiling can hurt its credibility as well as impair fiscal soundness. Therefore, most countries designate some portion of financial resources from the overall expenditure ceiling as a budget margin, which acts as a buffer to be used for unforeseen situations.

A different kind of policy buffer for fiscal soundness is prudent economic assumptions, which were discussed in section 3.1. Therefore, even when a large amount of money is required to compensate for a forecast error or a natural disaster, the government can finance them without increasing the overall expenditure ceiling by using the budget margin and realised windfalls from prudent economic assumptions. The following illustrates how budget margins operate in some countries.

In Canada, a budget margin called the "contingency reserve fund" exists officially. The government allocates CAD 2.5 billion to 3.0 billion each year to this fund, which can only be used to compensate for forecasting errors and unpredictable events. It cannot be used for any new policy initiatives. This fund is held centrally, its use to be determined at the discretion of the Prime Minister and the Minister of Finance. Recourse has never had to be made to the contingency reserve funds, and they have been applied to deficit reduction in their entirety each year. However, as the accumulated fiscal surplus increased recently, the government enacted the Unanticipated Surplus Act by which the fiscal surplus is allowed to be used for expenditure increment.

In Sweden, there is a budget margin that is approximately 2% of the total expenditure.[12] It also exists officially, requiring approval by Parliament, and can be used only to offset expenses attributable to economic forecasting errors. Besides the margin, some ministries hold their own contingency reserves as a separate appropriation in preparation for emergencies such as fires and damages from natural disasters. If a huge natural disaster occurs and the government cannot cover the emergency expense with the contingency reserve, the extra funding is found by reallocation within the existing expenditure ceilings and by tax reductions for the affected people. The reallocations between expenditure areas and appropriations in the budget are submitted to Parliament in a supplementary budget, which has been regularly approved twice a year.

The United Kingdom also has a small centrally held reserve for departmental expenditure limits. It is available only for genuinely unforeseeable contingencies which departments cannot be expected to manage within their DEL.[13] For annually managed expenditures, cautious estimates and an AME reserve are built in when forecasting AMEs in order to reduce the risk of overspending on AMEs. In Chile and Korea, a central contingency fund of around 2% of the overall expenditure ceiling is available for unpredictable events.

3.2.4. Entitlements and discretionary programmes

In general, discretionary programmes are included in the expenditure ceiling. However, this is not always the case for entitlement programmes and interest payments on national debt. Including entitlement programmes in the expenditure ceiling may tempt ministries to reallocate in favour of these programmes, especially when there is a need to find room for large additional requirements that follow institutional reforms of entitlements. Several countries exclude interest payments from the expenditure ceiling, out of concern that foreign investors – who may regard the inclusion of interest payments in the expenditure ceiling as an intention to restrict interest payments – may demand a higher interest rate.

In Sweden, entitlement programmes are naturally included in the expenditure ceiling because the portion of entitlement programmes in the overall expenditure ceiling exceeds 60%. On the other hand, interest payments are excluded from the expenditure ceiling. The reasoning behind this arrangement is that the interest rate is beyond the government’s control, while entitlement expenditure such as social pensions and unemployment allowances can be managed by the government. In Canada, entitlement programmes have largely been exempted from the expenditure ceilings. As a result, the expenditure ceiling primarily applies to discretionary programmes. As a notable exception, a compensation reserve is set up within the overall expenditure ceiling to manage upcoming negotiated wage and salary increases. In Denmark, mandatory transfer programmes and interest payments are excluded from the expenditure ceiling. Chile, Korea, and the Netherlands[14] all include both entitlement programmes and interest payments in the expenditure ceiling.

3.2.5. Policy initiatives

Decisions on policy initiatives, in general, are made through a programme review process in the cabinet. Since the government in general has less information on policy initiatives than the proposing line ministry, prudence requires that a formal process be in place for reviewing individual programmes in order to reduce decision-making errors. The review process begins with line ministries submitting proposals to the finance ministry. After an internal process of review, the finance ministry brings the proposals for discussion at the cabinet meeting. The final decisions are usually made by the prime minister or the president.

In some countries where the overall expenditure ceiling is fixed over the period of the MTBF, such as Sweden, funding for new policy initiatives is absorbed within the expenditure ceiling. On the other hand, in most countries, the overall expenditure ceiling is adjusted to finance new policy initiatives at the latter stage of the budget process. The decision-making process for policy initiatives varies among countries. In Australia and Canada, a special cabinet committee reviews individual policy initiatives. In Denmark and the Netherlands, since the coalition agreement at a new government’s inauguration sets the political priority for the MTBF, the decision-making process simply checks whether new policy initiatives are in line with the existing coalition agreement. Chile provides yet another example, operating a special fund for policy initiatives. The following describes the cases of Canada and Chile.

In Canada, two cabinet committees called the Economic Union Committee and the Social Union Committee take charge of reviewing the policy initiatives. New policy initiatives are presented directly by ministers to the committees, which meet every week during the budget process. The committees discuss the merits of the policy proposals presented by ministers and in the end rank them for possible funding. The two committees may have joint meetings to discuss such proposals. The Treasury Board Secretariat has also instituted a separate programme integrity process. This is designed to correct any critical shortfalls in funding of current programmes. Late in the year, the Finance Minister and the Prime Minister will decide how much money to allocate for the policy initiatives, taking into account the rankings established by the committees and the results of the programme integrity process. The Prime Minister and the Finance Minister make the final decisions on resource allocation after consultation with ministers. The expenditure ceiling is adjusted by new policy initiatives which it is decided to fund.

In Chile, the government operated a fund called the Bidding Fund[15] from 2000 to 2004 for new policy initiatives. The Fund was financed by savings from existing programmes that did not pass critical assessment and by the added resources from a growing economy. Line ministries submitted the funding requests to the Ministry of Finance, which analysed the various bids and drew up a short list of new initiatives to be funded. The Minister of Finance, after a meeting with line ministers to discuss the proposals, reported to the President, who made a final decision. As the government moved closer to the end of its term, the Bidding Fund was discontinued in 2005 in order to concentrate on existing reforms rather than launch new initiatives.

3.3. Role of the prime minister/president and the finance minister

3.3.1. Setting political priorities

Setting political priorities is the first step of budget formulation in top-down budgeting. The government is responsible for soliciting the diverse opinions and demands from all levels of society and incorporating them into government policy according to its political priorities. Policy measures thus determined are carried out in order to provide the nation with goods and services of good quality, financed by the national budget. Therefore, the government needs to establish its political priorities before the budget formulation process begins. These priorities, in general, are stipulated in the MTBF as high-level objectives of the government. In countries where a minority government has been in power for a long period, a coalition agreement among the allied political parties incorporates the political priorities to be followed during the term of office.

Political priorities in the top-down budgeting system influence the overall expenditure ceiling as well as sectoral expenditure ceilings. Determining the overall expenditure level in the top-down budgeting system is related, to some extent, to the government's political philosophy. This means that the overall ceiling should be determined by what kind of society the government is aiming for in the future. In the end, this is a choice between whether it is aiming for a large public sector (say, with public expenditures over 60% of GDP) or a small public sector (say, less than 30%). Such decisions are by nature far beyond the scope of routine decision processes within the administration and require a social consensus through political channels. In the top-down system, such political decisions should be made prior to any other budgeting procedure. Once that question has been settled, the government needs to decide its fiscal management target. The decision as to whether the government will tighten fiscal control to move quickly from deficit to surplus, or instead take a gradual approach that balances the budget over the long term, is one that should also be made politically. Finally, the government will consider priorities among policy sectors and accordingly allocate financial resources to individual policy sectors.

While the prime minister (or the president) and the cabinet members all participate routinely in various decision-making processes, needless to say the prime minister/president and the finance minister play the most significant role. The prime minister/president, in most countries, makes the final decision on major fiscal policy issues, often in consultation with the finance minister. Therefore, their political leadership and expertise are required for the success of the top-down budgeting system. It is worth emphasising that whether the rules of a top-down system can be successfully upheld often depends more on the capacity and influence of these key players, rather than on specific institutional or legal features.

3.3.2. Role of the rule keeper

Once the government's objectives are confirmed, the finance minister bears responsibility for achieving those objectives through efficient use of fiscal policy measures. As the fiscal rule keeper, the finance minister has to play a more active role in the top-down budgeting system than in the bottom-up system. One consequence of partially delegating authority in budgeting to line ministries is that the latter may fail to observe fiscal rules, *e.g.* by submitting a budget request in excess of the approved expenditure ceiling or by effecting a prohibited transfer of expenses between budget accounts or expenditure ceilings. Such actions would seriously impair fiscal consolidation, which is the most important mission of the finance minister.

Therefore, in most countries the finance minister and his/her staff make every effort to protect the fiscal rules throughout the budget process. Part of this effort is to review individual programmes to verify that they are in line with the fiscal rules. Enforcing the expenditure ceiling requires not only dealing firmly with a violating ministry, but also trying to persuade it. For example, the finance minister typically needs to spend a lot of time in advance with line ministers to discuss issues and persuade them before reaching an agreement on sectoral expenditure ceilings. In the United Kingdom, if there is a disagreement on the departmental expenditure limit, the Chancellor of the Exchequer acts as a mediator in the Public Service Expenditure Committee (PSX), which he also chairs.[16] Once the expenditure ceiling is confirmed in the cabinet meeting, however, the Chancellor of the Exchequer and his staff will exert themselves to defend it, firmly refusing violations by line ministries. Similarly in Chile and in Sweden, the Ministry of Finance takes a very firm stance on such violations: "send them back if line ministries submit budget proposals in excess of the allocated ceilings."[17]

Additionally, in most countries, the finance ministry issues guidelines that help line ministries observe the fiscal rules. In Sweden, the Ministry of Finance lays down the "financing rule" which describes what kind of reallocations are allowed or not allowed, *e.g.* money may not be transferred from an entitlement appropriation to a discretionary investment appropriation, or new permanent expenditure may not be financed from temporary savings. In Australia, the Department of Finance and Administration issues the budget rule which applies to the entire budget process from beginning to end, and enforces it as a strict guideline.

To perform his/her duty as rule keeper successfully, the finance minister needs the support of the prime minister/president. This most often takes the form of publicly expressing confidence in the finance minister and according first priority to the latter's advice in any important decision. Since the prime minister/president and the finance minister will have frequent opportunities in the budget process to discuss fiscal issues, including the fiscal target and new policy initiatives, it would not be unusual for them to have built strong mutual confidence in each other.

3.3.3. Programme review

In most countries employing the top-down budgeting system, the finance ministry conducts programme reviews of individual programmes for several purposes: to monitor whether programmes are consistent with the fiscal rule; to support the decision process for setting expenditure ceilings; and to facilitate decisions on new policy initiatives. Beyond these purposes, there are distinctive programme review systems for budget savings in

Canada and Denmark. These systems are judged to have been very effective for securing available resources under the unfavourable fiscal situation of the 1990s. On the other hand, in Australia there is a powerful program review committee which is responsible for major decisions on fiscal management.

In Canada, the "Program Review" was announced in 1994. It was a comprehensive assessment of the proper role of the government in the economy and as such included reviews of the various programmes in which the government was involved. The Program Review exercise was headed by a special Minister Responsible for Public Service Renewal. A special Cabinet Committee on Program Review was established, which was composed of the Minister of Finance, the President of the Treasury Board, and several senior ministers. In the first instance, six criteria for carrying out the Program Review were enunciated, and departments and agencies were given the mandate to self-review their programmes according to the six criteria. This process did not yield significant savings. As a result, each department and agency was given a target for expenditure reductions. The targets were proposed by the Department of Finance and the Treasury Board Secretariat and approved by ministers. Each minister was given the responsibility for developing programme changes to meet the assigned targets.[18] Departments and agencies had to submit formal business plans that showed in detail how they would change their activities in order to achieve the reductions. The plans were reviewed in the Committee and confirmed in the cabinet meeting. This system contributed to a quick escape from a fiscal crisis in the late 1990s. In recent years, however, with the fiscal situation improved to surplus, its key role has changed from budget reduction to efficient resource allocation.

In Denmark, the government runs a particular system called "Special Study". It is normally associated with specific cuts in expenditure programmes. The programmes for review are decided by the cabinet committee and generally excluded from the total expenditure ceilings. Special studies are carried out by teams of civil servants representing the Ministry of Finance and the relevant line ministry. Depending on their terms of reference, these teams will either present specific proposals or a menu of possible proposals for savings. There is a very short period of time for these teams to operate, as they will generally only have about 1.5 months to carry out their studies. Despite this, it is estimated that the special studies have produced significant savings.

In Australia, there is a very important committee called the Expenditure Review Committee (ERC) as a sub-committee of the cabinet. It is responsible for examining all expenditure proposals in light of the government's overall fiscal strategy, advising the cabinet on budget spending priorities, and initiating reviews of individual ongoing programme expenses. Moreover, it considers the various new policy initiatives and saving proposals. The Committee consists of the Prime Minister, the Finance Minister and two senior ministers. When making its decision on budgetary issues, the ERC uses information from the Portfolio Budget Submission and briefs prepared by the Department of Finance and Administration.

Box 8. Six criteria for "Program Review" (Canada)

1. Does the programme area or activity continue to serve a public interest?
2. Is there a legitimate and necessary role for government in this programme area or activity?
3. Is the current role of the federal government appropriate, or is the programme a candidate for realignment with the provinces?
4. What activities or programmes should or could be transferred in whole or in part to the private or voluntary sector?
5. If the programme or activity continues, how could its efficiency be improved?
6. Is the resultant package of programmes and activities affordable within the fiscal restraint? If not, what programmes or activities should be abandoned?

Source: OECD, *Reallocation: The Role of Budget Institutions*, 2005, p. 14-15.

3.3.4. Cabinet meeting/final decision

The expenditure ceilings and the budget proposal are usually confirmed by the approval of the full cabinet meeting, the former in an early stage of budget formulation, the latter in the final stage of budget formulation within the government. In Denmark, Korea, and Sweden, the cabinet meeting for determining expenditure ceilings is held for two consecutive days with all cabinet members and senior budget officials participating. All the major issues related to the expenditure ceilings and fiscal rules are put on the table, and in-depth discussions are held among participants. With this meeting, cabinet members have an opportunity to understand current fiscal circumstances more precisely and thereby reach a consensus on complicated budgetary issues. Both the expenditure ceilings and the budget proposal are made public after confirmation in the cabinet meeting, except for Korea and Sweden where the results of the cabinet meeting for expenditure ceilings are announced only in abbreviated form. The budget proposal, upon confirmation by the cabinet meeting, is submitted to Parliament.

3.4. Flexibility

3.4.1. Economic and fiscal circumstances

Economic and fiscal circumstances affect how the budget system functions. In societies where social demands for budgetary spending keep growing even as available resources decrease, the government will need to reform the budget system to achieve fiscal consolidation. Top-down budgeting began as such a reform of budget formulation in order to overcome the fiscal crises of the early 1990s. However, as the economy and the fiscal situation change with time, the system needs to adjust flexibly in order for the government to continue to obtain satisfactory results in the new environment. For example, a favourable fiscal circumstance will allow the government to alleviate constraints on public expenditure, whereas an unfavourable circumstance will demand tightened control over spending. The necessity of reserving such flexibility in fiscal policy and budgetary systems means that, in most countries, the government does not enact the fiscal rules as a law but maintains them as a political commitment. This allows the budget system to adjust and evolve with changes in a country's economic and fiscal circumstances. Canada's experience offers a good case in point.

In Canada, the government decided in 1980 to introduce the Policy and Expenditure Management System (PEMS) to control the aggregate expenditure in response to the growing fiscal deficit. PEMS followed the typical top-down budgeting approach in that the government created a five-year medium-term budget framework of expenditure ceilings, with ten sub-ceilings set within the overall ceiling. However, as the fiscal deficit continued to grow in the early 1990s to alarming levels, the government replaced PEMS with EMS (the Expenditure Management System) in 1994 – a system which emphasised even stricter control on expenditure. With the introduction of EMS, the government established a tight fiscal target that would lower the deficit to 3% of GDP by fiscal year 1996/97.[19] The period of the MTBF was adjusted from five years to two years because the government wanted to be confident that it could deliver what it had promised and be held accountable for meeting its promises. The "prudent economic assumption" and "contingency reserve fund" were also introduced under EMS. These reforms of the budget system contributed to improving the fiscal situation in Canada, turning the deficit into a surplus by the late

1990s. As the surplus continued, the government started to alleviate control and in 2004 changed the period of the MTBF back to five years.

Flexibility is an important factor in the budget process, and this is evidenced by the evolution of fiscal systems in various countries. In many countries the number of sub-ceilings has tended to diminish. In particular, Sweden has abolished most controls on transfers among budgetary categories such as wages, transfers and investment in order to enhance flexibility. Another example of flexibility in top-down budgeting can be found in the budget margins designed as reserves against economic forecast errors and unpredictable events. Additionally, in some countries, the government formulates one or more supplementary budgets regularly during the fiscal year in order to adjust expenditures and revenues in view of changes in economic circumstances and newly introduced policy initiatives.[20] The following gives more specific examples of flexibility in top-down budgeting.

In the Netherlands, thanks to its cautious economic assumption rule, the government usually reaps windfalls at the end of the year. How to spend the windfalls depends on the macroeconomic and fiscal situation. If the budgetary situation turns out to be more favourable than the government expected, *e.g.* as a result of higher economic growth, then the following rule applies: if the deficit is greater than 0.75% of GDP, 75% of the windfall goes to reducing the deficit and 25% to tax cuts; if the deficit is less than 0.75% of GDP, then 50% of the windfall goes to reducing the deficit and 50% to tax cuts.[21]

In the United Kingdom, end-year flexibility (EYF) is guaranteed for all departments and executive agencies. While departmental expenditure limit plans are set firmly for departments for three years, carrying forward unspent DEL provision from one year to the next is allowed to encourage them to plan over the medium term and avoid wasteful end-year surges. Three-year budgets and end-year flexibility give the public services the stability to plan their operations on a sensible timescale without the fear that resources may be cut back in the following year. EYF also removes the perverse incentive for departments to use up their provision as the year end approaches without regard to value for money.

3.4.2. Pro- vs. counter-cyclical spending

Fixed vs. flexible overall expenditure ceilings

MTBFs can be classified into two different types according to flexibility of adjustment. One is a flexible framework which allows the overall expenditure limit to adjust to shifting economic and budgetary circumstances from year to year. The other is a fixed framework which does not permit such adjustments. In a fixed framework the frames can be rolled over, but once determined, even the caps for future years cannot be adjusted. The Netherlands, Sweden and the United Kingdom operate MTBFs as a fixed framework, while other countries in this study have a flexible framework. For example, in Sweden's three-year rolling MTBF, the government hardly adjusts the overall expenditure ceilings of years t+1 and t+2, which are determined in previous MTBF cycles, but only adds a ceiling for year t+3 when confirming the new MTBF every year.[22]

Under a fixed framework, the general budget fund functions as an automatic stabiliser for macroeconomic purposes. In such a framework, tax revenues fluctuate according to the economic cycle and bear the full load of acting as a stabiliser. In a business upturn, tax revenues increase, thereby limiting private sector consumption and investment, which helps to prevent overheating of the economy. In a business downturn, the opposite happens: tax revenues decrease to allow private spending increases, thus countering the business cycle. Some government spending such as unemployment benefits or subsidies for low-income families also can function as automatic stabilisers if they are not under a fixed expenditure limit. It should also be noted that a fixed framework functions to stabilise the fiscal balance automatically over the long term. Since the expenditure limit is fixed in the medium term regardless of economic fluctuations, a fiscal surplus (or lower deficit) may be expected in an economic upturn while a fiscal deficit (or lower surplus) is likely in a downturn. As the surplus in economic upturns offsets the deficit in downturns, the fiscal situation can be maintained at balance over the long term.[23] This means that the effect of the fixed framework on the economy is pro-cyclical rather than counter-cyclical (for the latter, expenditures would need to be increased if tax revenues fell behind the trend).

In contrast, under a flexible framework, the government adjusts the expenditure limit discretionally according to the economic cycle. However, it should be borne in mind that the government has to adjust the expenditure limit based on an accurate forecast of the cycle in order to get better results from adjustment. Making such forecasts with an accuracy that is useful for fiscal policies has proven to be a near impossible task. Even worse, if an adjustment is based on a poor economic forecast, it could exacerbate the fiscal situation. Therefore, in top-down budgeting, a government aiming for fiscal consolidation would do well to seriously consider the potential costs of using a flexible framework.

Tax expenditures

What fiscal policy instruments are available to a government with a fixed framework? Is it even possible for a government to take any actions in a serious economic situation like a sharp increase in unemployment? The solution often adopted by governments under strict spending restrictions is to use tax expenditures. In many countries, tax expenditures tend to increase as the governments take advantage of them to work around spending limits. Recently in Sweden, in response to a much reduced budget margin, tax expenditures have increased up to 0.6% of GDP.

Structural fiscal target

The purpose of a structural fiscal target is to eliminate the effects of cyclical fluctuations of economic activity from the fiscal target. When the economy is performing above its long-term potential, the budget balance should record a nominal surplus. With a sub-potential economy, the balance should return to a nominal deficit. Over the cycle, these should balance each other out. Therefore, the merit of a structural fiscal target is that it functions as an automatic stabiliser similarly to a fixed medium-term framework. However, one must keep in mind that the rationale for the structural fiscal target rests on the premise that that medium-term economic forecasts can be made very accurately. The following examines the case of Chile, which maintains a tight structural fiscal target.

The Chilean government adopted its fiscal target of operating each year with a structural budget surplus of 1%[24] of GDP from 2001, which has served to set a hard budget constraint for the overall expenditure ceiling. Additionally, the government established two independent panels composed of private sector specialists in order to enhance the accuracy and objectivity of forecasts. As the overall expenditure ceiling is defined by the structural parameters, changes in revenue forecasts reflecting cyclical factors do not affect the expenditure ceiling. Only when revenues fall short of the original estimation for reasons not associated with the cycle is it necessary to adjust the expenditure ceiling. In such circumstances, it is common to ask line ministries to accept proportional adjustments in their current expenditures. In the case of excess revenues not attributable to cyclical factors, there is room for extra expenditure. The President, after consulting the Minister of Finance, will decide how to use the additional resources in ways which do not build expenditure pressure for subsequent years.

4. Changing behaviour

4.1. Inertia in behavioural change

From a behavioural point of view, the key feature of top-down budgeting is the delegation of authority to line ministries. Considering the magnitude of the transfer of authority from the finance ministry to line ministries upon switching to a top-down system, behavioural changes on the part of all participants in the budget process are required for the new system to fulfil its intended purpose. In actual budget processes, however, it seems to be very difficult to change existing practices that were established under the bottom-up approach. As the role of the finance ministry changes to setting the expenditure ceilings in a medium-term perspective, it will still tend to maintain its influence over line ministries by intervening in the latter's internal money allocation to individual appropriations. As for line ministries, whose role is now redefined as responsibly allocating money to their appropriations within sectoral expenditure ceilings, it may be difficult to break away from the old practice of submitting excessive budget requests (above the expenditure ceilings) in order to have a larger budget approved by the finance ministry. Even after the budget system has changed to top-down budgeting for fiscal consolidation, Members of Parliament will often continue to push up the expenditure ceiling, rather than control it, in an attempt to please their electorate.

This tendency to retain old patterns of behaviour can sometimes prevent the new top-down system from taking root. In the 1990s, the United States government introduced a top-down budgeting system to replace the existing bottom-up approach. However, hardly any changes in behaviour for participants in the budget process followed the new system's introduction. As a result, budget formulation ended up reverting to the former bottom-up approach in 2000.

The budget-saving mechanism in Canada's Policy and Expenditure Management System also provides an example of a system that ultimately failed because of unchanged behaviour. The overall expenditure limit in PEMS was divided into several spending envelopes[25] each of which included all spending in a particular policy area. For example, a single envelope for economic development included all spending for agriculture, fisheries, tourism, industry, commerce, transportation and regional development. Since a spending envelope included the expenditures of several ministries, it was administered by a cabinet committee of all ministers whose spending belonged to the envelope. This arrangement was intended to foster resource reallocation by having all government programmes in a given field judged side by side, so that funding for one programme could be reduced to finance an increase for another. Therefore, for this system to be able to work efficiently, ministers first had to propose savings available in the expenditures of their own policy fields. In reality, however, no minister suggested savings initiatives because those savings would go to the envelope "pool" directly without any guarantee of being reallocated to another spending programme of his/her own ministry. As a result, no reallocation took place, nor did any voluntary savings. The system did not succeed because the requisite new behaviour in the form of ministerial partnership never materialised.

4.2. Delegation and accountability

As noted previously, the introduction of the top-down budgeting system mandates that the division of roles between the finance ministry and the line ministries be reorganised. The finance ministry has to concentrate on establishing management strategies for fiscal consolidation from a broader perspective. Greater accountability is required from line ministries than in the bottom-up budgeting system as they are now responsible for allocating money to their individual appropriations. Parliament also needs to redefine an appropriate role for itself that allows it to contribute to the efficient operation of the new system. Thus, all participants in the budget process will need to embrace changes in their behaviour in order to reap the originally intended benefits from the new top-down environment.

4.2.1. Finance ministry

The finance ministry needs to restrain itself from intervening in the internal resource allocation of line ministries. This rule is firmly settled in countries where the top-down budgeting system plays a substantial role. In Sweden, once the overall and 27 sectoral ceilings are set in the cabinet meeting, line ministers are responsible for allocating money to the 500 appropriations within the expenditure ceilings. The Ministry of Finance hardly intervenes in this internal allocation process, but still monitors whether the ministries' decisions conform to its "financing rules". In the United Kingdom, HM Treasury does not involve itself in departments' internal allocations once a DEL is allocated to each department, but still scrutinises whether departments observe the DEL envelope and the objectives of the public service agreement[26] (PSA). If the budget request of each department meets these two requirements, it is incorporated into the government budget proposal without any adjustment.

With little room for direct intervention in the top-down system, finance ministry staff must augment their capacity for fiscal management. They have to improve their performance in producing economic assumptions and forecasts, setting the fiscal management target, and defending fiscal rules. Although in theory the delegation of many budgeting decisions to line ministries ought to free up considerable time for finance ministry staff, in reality top-down budgeting requires a greater workload and more diligence because of the increased need for up-to-date information and for acquiring strategic skills for efficient fiscal management. Thus an important point is that the top-down budgeting system should not be used for the purpose of reducing staff. Even in Sweden, where the Ministry of Finance delegates most authority to line ministries, there have been no staff reductions since the introduction of top-down budgeting. Instead, finance ministry staff should be provided with the opportunity for re-educating themselves to adapt to the new system, bearing in mind that in any case such efforts at self-innovation are inevitable.

Finally, the finance ministry needs to establish better relationships with line ministries than in the bottom-up budgeting system. Finance ministry staff, armed with enhanced information and skills for fiscal management, should be ready to provide advice on any issues brought up by the line ministries in a co-operative approach to finding solutions together. The finance ministry and line ministries are not game players in the budget process any longer, but have to establish a co-operative partnership with each other.

4.2.2. Line ministries

First, all line ministries must observe the expenditure ceilings, which is the *sine qua non* of an effective top-down budgeting system. Line ministry budget requests that exceed the expenditure ceilings approved in the cabinet meeting directly undermine fiscal soundness, which is usually the main reason for adopting top-down budgeting in the first place. Moreover, such violations may result in serious distrust of government policy by the public. Therefore the budget office in most countries with a top-down system maintains that budget requests exceeding the approved expenditure ceiling will not be accepted and will simply be sent back. In budget execution, as opposed to budget formulation, the Financial Administration Act of Canada obliges departments to observe the expenditure limits. If a department spends in excess of the expenditure limit, the expenditure limit of the department will automatically decrease in the subsequent year by the amount of excess spending in the current year.

Second, line ministries need to take on greater responsibility in allocating resources to individual programmes. Under the bottom-up approach, line ministries tend to increase the budget for every programme with little effort at achieving a better reallocation of resources among programmes, because funding for the programmes is decided through negotiations with the finance ministry. In the top-down budgeting system, in contrast, line ministries need to show responsible ownership in their actions. Restructuring of individual programmes would be necessary so that programmes with low priority or poor outcomes should be decreased in funding or eliminated altogether, while programmes with high priority or excellent outcomes should gain more money. Delegation should go hand in hand with enforced accountability. In the top-down budgeting system, "each minister is his own finance minister."

4.2.3. Parliament

Since the relationship between the government and Parliament takes various forms that reflect each country's political structure and history, it is hard to find a general answer as to how the legislature ought to change its behaviour in the top-down budgeting system. However, it is clear that Parliament should try to improve its review process of the government's budget proposal either institutionally or practically as top-down budgeting sets root in the government sector. The case of Sweden gives a good example of how the legislature adapted its budget review process for top-down budgeting.

In Sweden, the reform efforts were well co-ordinated. Following enquiries by a parliamentary working party in the beginning of the 1990s, Parliament decided in 1993 to introduce a separate procedure for the preparation and approval of the budget bill in Parliament. The process has all the characteristics of a top-down procedure; first there is a vote on the frames for all 27 expenditure areas and on the estimate of the revenues, and then a vote on the appropriations within each expenditure area. First the aggregate is approved, then the details. During the second stage, Parliament is allowed to reallocate funds between appropriations within an expenditure area, providing the frame for the area is not violated. The procedure was first used in Parliament in 1996 for the preparation and approval of the 1997 budget. The government also used its new top-down procedure in 1996 for preparing the 1997 budget.

4.3. Leadership

The objective of top-down budgeting is to achieve fiscal consolidation. To this end, the finance ministry focuses its energy on setting the expenditure ceilings and upholding fiscal discipline, delegating the details of resource allocation to line ministries. Therefore, this system can produce positive results only when the manager at the centre of the system, *viz*. the finance minister, runs the system with sufficient skill and leadership. Moreover, if he/she is backed sufficiently by the prime minister or the president, top-down budgeting will successfully take root as the new budget formulation system.

5. Conclusion

The top-down budgeting system was introduced as an institutional reform for overcoming the serious fiscal situations faced by many OECD countries during the early 1990s. This system enables the finance ministry to manage public finances efficiently from a medium-term perspective and is judged to have contributed significantly to achieving fiscal consolidation, particularly in Sweden and the United Kingdom. However, top-down budgeting does not always guarantee successful fiscal management, as evidenced by the Policy and Expenditure Management System of Canada in the 1980s. When designing a top-down budgeting system, a government should give serious consideration to the following key points drawn from this study.

First, there needs to be greater effort to uphold fiscal discipline. Since top-down budgeting's purpose is to achieve fiscal consolidation by having the finance ministry control aggregate expenditure, fiscal discipline must be established and enforced thoroughly. If the fiscal situation becomes worse than expected, tighter discipline on aggregate expenditure will be required. Moreover, the overall expenditure ceiling in a medium-term budget framework should preferably be fixed over the framework's period. No adjustments should be allowed except for legitimate and very serious reasons, so that the automatic stabiliser of fiscal policy can function effectively.

Second, cautious economic forecasts are required to achieve fiscal soundness. Prudent and objective economic assumptions, rather than optimistic ones, facilitate the government's efforts to achieve fiscal soundness. For this purpose, a government may consider either establishing an independent body for economic forecasting like the Netherlands Central Planning Bureau, or using private sector forecasts as a baseline for budget formulation as is done in Canada. Moreover, windfalls that are realised as the result of prudent economic assumptions can be spent to repay debt or to finance spending increases – decisions which should be made with due consideration of the state's fiscal situation.

Third, flexibility in operating the system is very important. In this vein, it is not desirable to have an excessive number of sub-ceilings or to over-regulate against fund transfers among budget categories. The government needs to make appropriate adjustments in the fiscal system according to the state's economic and fiscal circumstances. As a general rule, the worse the situation, the tighter should be control on expenditure. End-year flexibility may be able to provide departments with greater flexibility in multi-year spending, ultimately enhancing responsibility and accountability in their spending.

Fourth, there has to be behaviour change by the participants in the budget process if the transition to top-down budgeting is to succeed. The finance ministry should not intervene in the internal allocations of line ministries but focus on strengthening a fiscal management strategy from a medium-term perspective. Line ministries should observe the expenditure ceilings approved in the cabinet meeting and be more responsible in allocating money to their individual appropriations. It is worth emphasising that "each minister is his own finance minister" in the top-down budgeting system.

Last, strong leadership is required of the finance minister. Charged with ultimate responsibility for the system's success, the finance minister needs to lead line ministers with expertise as well as personal skills. Additionally, adequate backing from the head of the cabinet will improve the odds that the top-down budgeting system will fully perform as expected.

The factors above are the key considerations that merit serious attention when a government designs a top-down budgeting system. Other technical issues, such as the composition of the expenditure ceiling and the extent to which the ceilings should be made public, are matters for each government to decide in view of public opinion in its society. Finally, top-down budgeting has contributed to achieving fiscal consolidation in many countries, but this does not necessarily imply that it is unequivocally the best practice that has yet emerged in budgeting. The best budget system for any particular country must always remain one that adequately reflects the established political structure and that society's historical as well as socio-economic background.

Notes

1. Chile is an established observer of the OECD Working Party of Senior Budget Officials.

2. The Royal Commission on Financial Management and Accountability (Lambert Commission) enforced the principle of top-down budgeting. This principle evolved several times, and in 1994 was transformed into the Expenditure Management System (EMS) which put a strict control on public expenditure.

3. They are the well-known Golden Rule and Sustainable Investment Rule.

4. In theory, this is the nature of the final budget under the bottom-up approach. However, in practice the provisional aggregate expenditure target is determined to an approximate level by the finance ministry in an early stage of the budget process, taking into account the economic forecast and the fiscal situation.

5. Australia and Canada have such cabinet committees that review new policy initiatives.

6. The United Kingdom revises its medium-term budget frameworks every two years.

7. Sometimes the economic forecast is affected by political pressure, which is also a question of the person who has the power.

8. There is another institution called the “copper price” panel, as Chile’s fiscal finances are heavily dependent on the volatile price of copper which accounts for 4% of total government revenue. The panel consists of 14 persons appointed by the Minister of Finance from mining companies and related enterprises. This committee estimates the average long-term price for copper as the reference price. The method of determining the price is identical to that used by the “output gap” panel. (Blöndal and Curristine, 2004, p. 13-14)

9. If the government takes the fixed MTBF, the coming year’s expenditure ceiling will already have been determined when the MTBF covering that year is confirmed. Under the flexible framework, it will be adjusted according to the economic situation. Details will be discussed in section 3.4.2.

10. However, the Ministry of Finance monitors individual programmes to verify that they conform to the fiscal rules.

11. Exceptionally, Sweden does not use programme review for setting sub-ceilings, but only for monitoring.

12. The budget margin is the overall expenditure ceiling minus the sum of the 27 sectoral expenditure ceilings.

13. Expenditures for the war against Iraq came out of the DEL reserve, not from the defence sector DEL.

14. Recently, the Dutch government has been considering the possibility of excluding interest payments from the expenditure ceiling. This is because the interest rate is forecast to increase in the long term, which poses greater difficulty for the government in controlling the expenditure ceiling.

15. The purpose of introducing the Bidding Fund was, first, to counter the incremental nature of the traditional budget process by having line ministries prioritise their requests for funding new initiatives. Second, it was designed to improve the technical quality of the funding requests, which were often deficient. (Blöndal and Curristine, 2004, p. 17)

16. A minister who disagrees with the mediation in PSX can request final mediation by the Prime Minister.

17. In practice, such violations have never occurred in either country.

18. The targets ranged from 5% to 60%, and were to be implemented over the coming three years.

19. The fiscal deficit in 1993 was 8.7% of GDP.

20. In Sweden, a supplementary budget is formulated twice during the fiscal year; the first is formulated in April when the MTBF is confirmed, and the second in September when the budget bill is confirmed.

21. This was set in the coalition agreement.

22. In constrast, for the 27 sectoral ceilings, the government determines the ceilings for t+1, and manages those of t+2 and t+3 as a guideline when confirming the MTBF every year.

23. A fixed medium-term framework also brings greater stability to the budget system because tax revenue fluctuations are no longer a reason for adjusting expenditure limits.

24. The decision to target a surplus of 1% of GDP was taken in order to offset a perennial deficit of 1% of GDP at the Central Bank of Chile. When the two are consolidated, the public sector has an approximately zero balance. (Blöndal and Curristine, 2004, p. 12)

25. Originally, there were ten spending envelopes.

26. The PSA is a kind of performance management system in which HM Treasury takes into account the objectives of each department for the coming three years when it sets the expenditure limits.

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