# The Role of Expenditure Reform in Fiscal Consolidations

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# I. Introduction

The financial crisis has resulted in a dramatic change in the fiscal situation faced by most countries. The first part of the decade was marked by improvement in the budget balance of a large number of countries – with the marked exception of the United States whose fiscal situation deteriorated between 2000 and 2007. In many cases, public indebtedness had stabilized as a share of GDP, and a growing number of countries had undertaken significant reforms of their public pension and health care systems to at least slow the projected rise in government expenditures on the aged. However, as shown in table 1, there has been a large and widespread deterioration of the fiscal situation during the past two years. The deficits are both a response to the crisis as governments introduced coordinated stimulus programs as well as a result of the recession which reduced revenues and increased social welfare payments. Table 1 summarizes the fiscal situation for a group of 44 major economies drawn largely from IMF data files.

On average, the fiscal balance deteriorated by 4-5 percent of GDP between 2007 and 2010. For the ten G-20 countries classified as emerging market economies, the fiscal balance shifted from a small surplus in 2007 to a deficit of 3.1 percent of GDP in 2010. The changes were larger for the nine advanced economies of the G-20 where the average deficit grew from 1.7 percent of GDP to 7.3 percent. Most of the change has been on the expenditure side of the accounts: expenditures rose by 3 percent of GDP in the emerging market economies and 5 percentage points in the advanced economies.

These fiscal measures highlight the unprecedented magnitude of the fiscal challenge that is facing the advanced economies. Yet, there is an equally important concern that a preoccupation with the deficit could lead to a premature scaling back of the stimulus efforts in an economic situation where many countries are still vulnerable to continuing high levels of unemployment or sliding back into recession. With short-term interest rates near zero and rising fears among debt holders, the policy options for responding to a renewed crisis in the near term would be extremely limited. A clear priority needs to be assigned to achieving a strong and sustained recovery. At the same time, one reason for developing a credible program of fiscal consolidation is that it can stabilize expectations even if the concrete measures are conditional on an assured future economic recovery.

The purpose of this note is to examine the options for reducing the fiscal imbalances through a scaling-back of government expenditures. The first section is devoted to providing some details about the relative magnitudes of government expenditures, their composition across the G-20 countries, and potential magnitudes of targeted adjustments. The second section reviews the experiences of Canada and Sweden, who undertook major fiscal consolidations in the recent past, in order to determine if they offer any useful lessons for the current situation. The United States' experience with a major shift from deficit to surplus in the last half of the 1990s is also examined. The third section focuses on some differing approaches or rules that might be used to guide governments in a scaling back of the fiscal stimulus on the expenditure side of their budgets.

**Table 1. Fiscal Balances, Pre- and Post-Crisis**

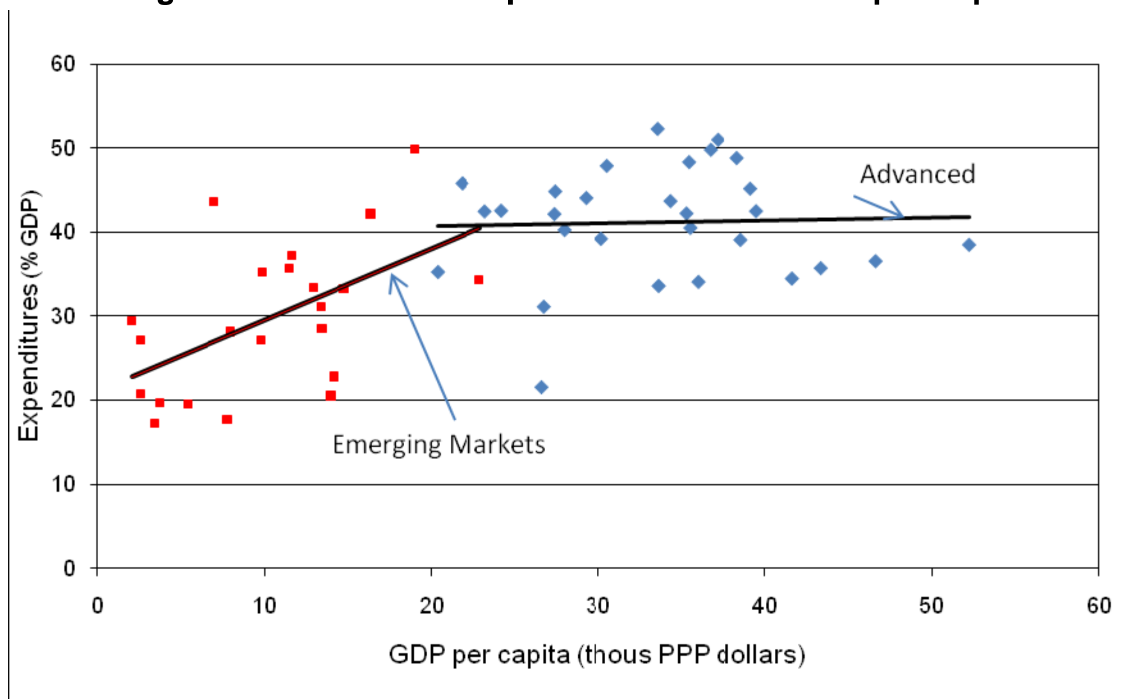
| Country Group | 2007 | | | 2010 | | | Balance Change |
|---|---|---|---|---|---|---|---|
| | Revenue | Total Expenditures | Fiscal Balance | Revenue | Total Expenditures | Fiscal Balance | |
| Emerging Markets | 27.0 | 26.6 | 0.4 | 26.5 | 29.6 | -3.1 | -3.5 |
| G-20 | 26.4 | 25.7 | 0.7 | 26.0 | 29.1 | -3.1 | -3.8 |
| Asia | 20.9 | 21.7 | -0.8 | 20.5 | 24.6 | -4.1 | -3.3 |
| Latin America | 29.0 | 28.7 | 0.3 | 29.0 | 30.9 | -1.9 | -2.2 |
| Eastern Europe | 40.0 | 36.9 | 3.1 | 38.5 | 40.8 | -2.2 | -5.3 |
| Advanced Economies | 37.5 | 38.6 | -1.1 | 36.7 | 43.4 | -6.7 | -5.7 |
| G-20 | 36.5 | 38.3 | -1.7 | 35.7 | 43.0 | -7.3 | -5.6 |
| Europe | 44.3 | 44.6 | -0.3 | 43.5 | 49.6 | -6.1 | -5.8 |
| United States | 33.9 | 36.5 | -2.6 | 32.9 | 41.4 | -8.5 | -5.8 |
| Japan | 31.1 | 33.6 | -2.5 | 30.7 | 40.1 | -9.4 | -6.9 |

Sources: IMF and author's calculations; Data are based on 22 emerging market countries, 32 advanced economies, and include all of the G-20 countries. Data are weighted by GDP (PPP).

## II. Variations and Growth in Government Expenditure Programs

There is considerable variation across countries in the size of the government sector. In part, this is believed to be because the demand for public services is income elastic, so that higher-income countries devote a larger share of their GDP to the government sector. We can find clear evidence of this phenomenon for our sample of emerging markets, but there is no evident correlation for the more advanced economies (figure 1). This suggests there is a core set of public programs that all countries strive to provide as average incomes rise, but beyond a threshold the elaborateness of those programs seems to be driven by more complex socio-economic factors other than just income alone.

**Figure 1. Government Expenditures Versus GDP per Capita**




Source: IMF Weo data.

### A. Government Outlays by Function

For a subset of the OECD, information is also available on the allocation of expenditures by principle function. The data for 2007 are summarized in Table 2 for the original 15 members of the EU, the four European countries who participate in the G-20, the United States, and Japan.

**Table 2. General Government Outlays by Function, 2007**
(In percent of GDP)

| | EU-15 | EU-4 | USA | Japan |
|---|---|---|---|---|
| General public services | 6.3 | 6.4 | 5.1 | 4.7 |
| Defense | 1.5 | 1.6 | 4.3 | 0.9 |
| Public order and safety | 1.7 | 1.8 | 2.2 | 1.4 |
| Economic affairs | 3.7 | 3.2 | 3.7 | 3.8 |
| Environment protection | 0.7 | 0.8 | 0.0 | 1.2 |
| Housing and community amenities | 1.0 | 1.1 | 0.7 | 0.6 |
| Health | 6.7 | 6.9 | 7.7 | 7.2 |
| Recreation; culture and religion | 1.1 | 1.0 | 0.3 | 0.1 |
| Education | 5.1 | 5.1 | 6.3 | 3.9 |
| Social protection | 18.0 | 18.9 | 7.1 | 12.4 |
| Total general government | 45.9 | 46.7 | 37.4 | 36.3 |
| Total less social protection | 27.8 | 27.8 | 30.3 | 23.9 |
| Gross Fixed Capital Formation | 2.5 | 2.2 | 2.5 | 3.1 |

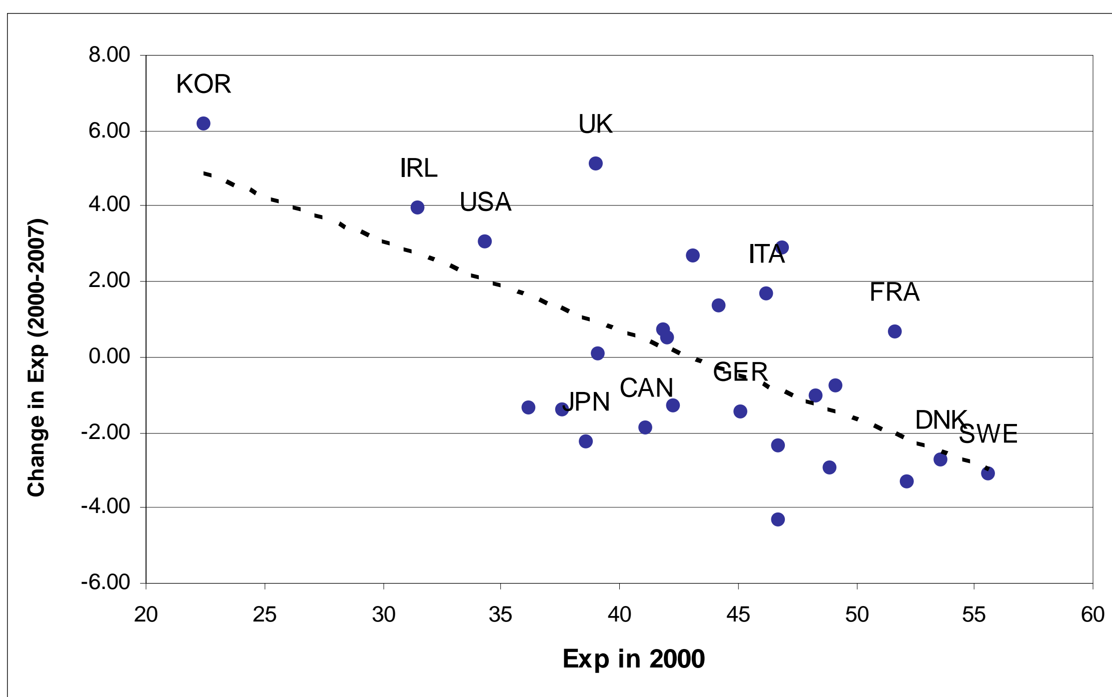
Sources: OECD National Accounts and author's calculations.

The high level of outlays are very evident within Europe where total expenditures of general government average about 46 percent of GDP, about 10 percentage points more than in the United States and Japan. It is noteworthy, however, that the differences are largely concentrated in the category of social protection, where Europe spends much more on pensions, disability, unemployment and welfare programs. Excluding social protection, the United States actually devotes a larger share of GDP to the government sector because of a higher than average level of defense spending, but the pattern of other expenditures closely matches that of Europe. A case can also be made that the United States spending on health is also distorted because the public component only includes the aged and the poor.[2] Japan is much smaller than Europe in the provision for social protection and a bit smaller in the non-social protection programs.

The initial size of government is likely to play some role in the ease of achieving a fiscal consolidation, as evidenced by figure 2, which shows a strong inverse correlation between the initial size of government and the extent of expenditure change between 2000 and 2007.

[2] If employee premiums for private health care insurance were included, U. S. outlays would be increased by about six percent of GDP and would be well above those of the other countries.

**Figure 2. Change in Government Expenditures vs. Initial Level, 2000–07**




Source: OECD National Accounts; General government for 26 OECD countries.

Countries with small government sectors, such as Korea, have seen significant growth, whereas countries with large governments, such as Scandinavia, have sought to scale back their programs in recent years. Comparisons between countries are also useful in highlighting areas for possible reform. For example, most recent examples of successful fiscal consolidations have focused on components of social protection.

Most of the recent stimulus programs were specifically designed to be temporary in nature. Thus, the surge of expenditures shown in table 1 should be automatically reversed during the recovery phase. However, a more drawn-out economic recovery increases the probability of some of the expenditure increases becoming more deeply embedded in longer-term programs. Sustained periods of underutilization create a changed political dynamic as representatives advocate structural changes in programs in the name of job creation that become increasingly difficult to reverse in future years.

## B. Pensions and Health

Finally, the severity of the economic decline has reduced the previous urgency that countries faced to deal with programs, such as health and social protection, that will be most affected by the aging of populations. Thus, the fiscal concerns arise not just from the size of the current deficits, but also because of the projected growth in pensions and health services for the aged. These lie at the core of the long-term budget problem because most are designed with eligibility criteria that, once satisfied, become an entitlement to the benefit or service.

Given the long-term and irreversible aspect of retirement planning, these programs are not easily controlled in the short run.

Projections of the costs of public pensions and health care out to 2030 are shown on the next page in table 3 for a group of 28 advanced economies and 21 emerging-market countries.[3] In general pension and health outlays account for a smaller share of GDP in the emerging market countries, but there are large pension programs in Eastern Europe. Because the programs are small, the projected growth is also quite low, with an average increase of about one percent of GDP for both pensions and health over the next two decades.

**Table 3. Projected Expenditures for Pensions and Health, 2010–30**

| | 2010 | | Change 2010–30 | |
|---|---|---|---|---|
| Country Group | Pension | Health | Pension | Health |
| Emerging Markets | 4.0 | 2.6 | 1.1 | 1.0 |
| G-20 | 3.8 | 2.7 | 1.2 | 1.1 |
| Asia | 1.9 | 1.7 | 0.3 | 0.7 |
| Latin America | 4.8 | 3.6 | 1.2 | 1.4 |
| Eastern Europe | 10.0 | 3.9 | 3.1 | 1.5 |
| Advanced Economies | 7.2 | 6.7 | 1.1 | 3.6 |
| G-20 | 7.2 | 7.1 | 0.9 | 3.9 |
| Europe | 10.0 | 7.0 | 1.3 | 3.0 |
| United States | 4.9 | 6.7 | 1.1 | 4.7 |
| Japan | 10.3 | 6.9 | -0.2 | 2.9 |

Sources: IMF and author's calculations. Data are based on 18 emerging market countries, 26 advanced economies and include all of the G-20 countries. Data are weighted by GDP (PPP).

The current level and projected growth of these programs is particularly low in Asia, suggesting that most of these countries do not face serious fiscal problems. However, the projections should probably be viewed as a minimum bound, as these countries will come under pressure to expand the programs as incomes rise.

Existing pension and health programs are much larger in the advanced economies, but surprisingly, the projected increases in pension costs are similar to those of emerging markets. This is because many countries have foreseen the financial problems of maintaining previous pension commitments and they have acted to scale back the size of those programs. In contrast, public health costs are projected to rise sharply in future years due both to the aging of their populations and technological innovations in health care.[4] To date, those

[3] The data were assembled by the staff of the IMF fiscal department from a variety of sources and are drawn from appendix tables of IMF (2010b).

[4] Projections of health costs are inherently difficult and the estimates for the next two decades are higher than those of the past, presumably due to further aging of the populations. For the advanced countries of the G-20, health expenditure rose by an average of 2.2 percent of GDP over the past two decades, compared to a projected increase of 3.9 percent in the 2010-30 period.

innovations have been cost-increasing and there are no obvious cost controls other than rationing. The influence of aging on health care expenditures is also much stronger in the United States because the public programs are restricted to those over age 65 and the poor. Thus, the transition of the baby-boom generation into old age sharply increases Medicare expenses.

The financial crisis has increased the current cost of the pension system by accelerating some workers' retirement decisions. However, the largest effects are in other programs, such as unemployment insurance, family support, and disability which are closely related to variations in the availability of jobs. Given the lags of labor market improvements behind the general economy, these other social outlays are likely to continue at elevated levels for several more years.

## III. Lessons from the Past

In recent years, several studies have reviewed the experience with past episodes of fiscal consolidations to discern if there are any common features that distinguish successful and failed programs. One recent OECD study focused on the experiences within 24 advanced economies since 1978–a total 85 episodes (Guichard and others, 2007). They found that the size of the adjustment is related to the magnitude of the initial imbalance and that programs that emphasize reductions in current expenditures, as opposed to tax increases or reductions in capital outlay, are more likely to succeed in terms of stabilizing the debt to GDP ratio. They also concluded that in many cases fiscal rules in the form of deficit targets or expenditure limits also had a favorable effect on outcomes. Much of this result appears to be associated with the emphasis placed on a fiscal deficit of less than three percent in qualifying for admission to the Eurozone. Anderson and Minarik (2006) argue that expenditure rules are more successful than deficit targets because they exclude more of the uncontrollable business cycle effects on revenues and deficits. Two countries, Sweden and Canada, are interesting case studies of successful large consolidation programs; we also review what appears to be a successful United States effort to deal with its budget deficit in the 1990s.

### A. Sweden

The Swedish fiscal consolidation emanated from the financial crisis of 1990-91. Spending rose by about 10 percent of GDP between 1991 and 1993, reaching a peak of 70 percent of GDP – mostly due to efforts to fund the banking crisis and a wide range of unemployment programs. The initial objective of the fiscal consolidation was to achieve a budget surplus of two percent of GDP by 1998 from a 1994 deficit of 11 percent. In addition to the surplus target for general government, the framework includes multi-year expenditure ceilings for the central government and a balanced budget requirement for local governments. In the early 1990s, about 70 percent of government outlays were mandated by statutory rules with no allowance for offsets in other areas or compensatory revenue changes. Under the budget procedures adopted in 1996, three-year nominal ceilings were imposed for total outlays and translated down to 27 program areas. Cost overruns have to be offset by reductions in the same program area, or cost savings in the following two years. The price indexation of pension benefits was tied to the state of the overall budget, with full indexation being dependent on the overall deficit.

The targets for 1998 were met largely through reductions in social transfer programs; but, as shown in table 4, significant reductions were also made in economic affairs (job training) and housing subsidies[5]. Also, Sweden enacted a major pension reform in 1999 that separated the system from the rest of the budget, instituted partial funding of future benefits, and introduced automatic rebalancing of the system in response to demographic changes. By 1998, general government outlays had fallen to 58 percent of GDP, well below the average of the 1980s, and the revenue share was largely unchanged (See figure 2 on the following page).

**Table 4. Government Expenditures by Function, Sweden**

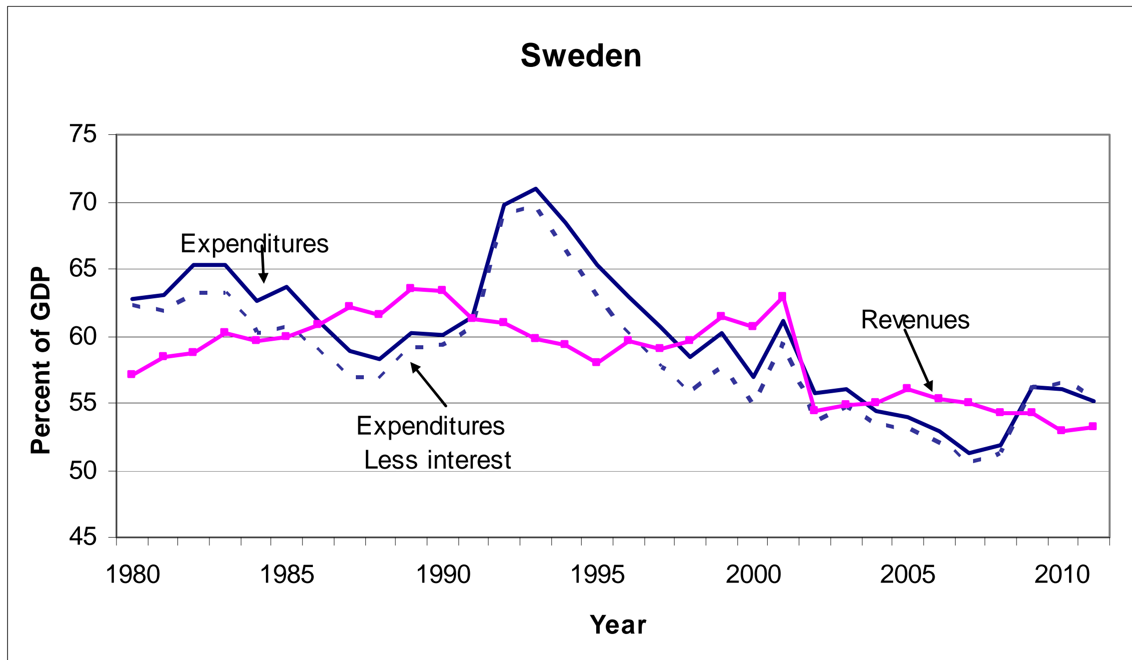
| | 1993 | 2000 | Change |
|---|---|---|---|
| Total | 65.1 | 55.6 | -9.5 |
| General public services | 10.7 | 9.5 | -1.2 |
| Defense | 2.4 | 2.3 | -0.1 |
| Public order and safety | 1.4 | 1.3 | -0.1 |
| Economic affairs | 5.9 | 4.1 | -1.9 |
| Environmental protection | 0.2 | 0.3 | 0.1 |
| Housing and community amenities | 2.8 | 0.9 | -1.9 |
| Health | 6.2 | 6.2 | -0.1 |
| Recreation, culture, and religion | 1.8 | 1.1 | -0.8 |
| Education | 7.0 | 6.8 | -0.2 |
| Social protection | 26.6 | 23.2 | -3.3 |

Source: OECD.

In later years, both expenditures and revenues were further reduced relative to GDP; the respective shares were 51 and 55 percent in 2007, and substantial fiscal surpluses were recorded prior to the crisis. Sweden is an example of the successful use of expenditure ceilings as a tool of fiscal consolidation, but the task was made easier by the highly inflated level of expenditures at the beginning of the process.

[5] Interest payments on the public debt are included in general public services.

**Figure 3. General Government Expenditures and Revenues for Sweden, 1980–2011**



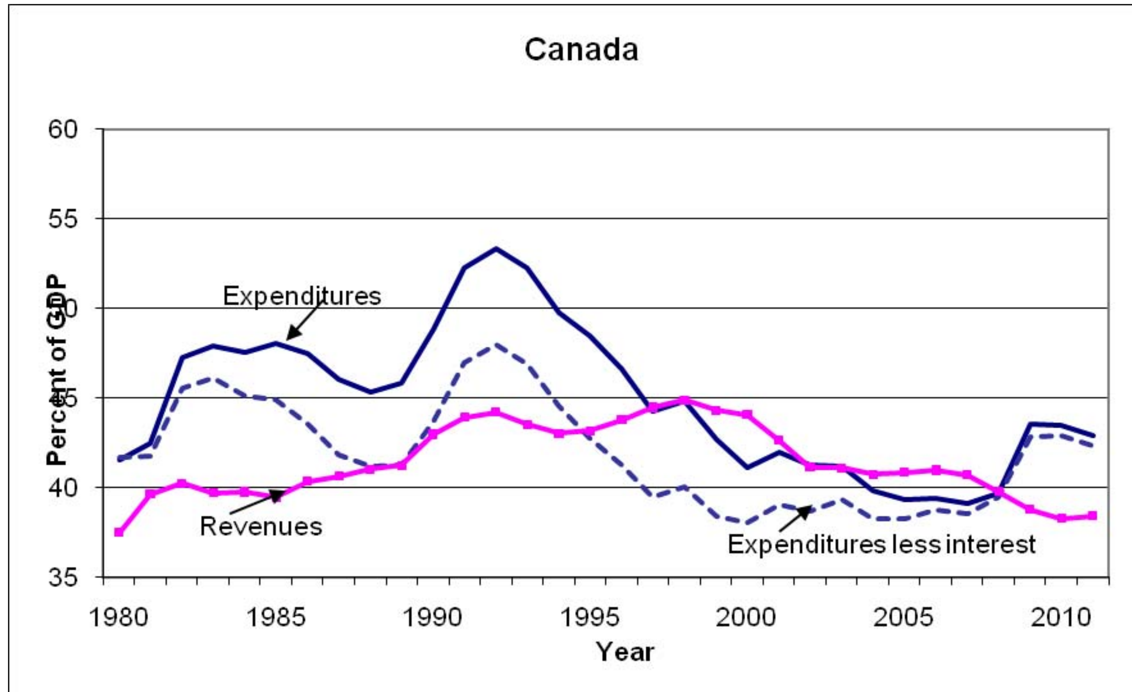

Source: OECD Economic Outlook Data Bank, General Government.

## B. Canada

Canada's fiscal consolidation began in 1994 after nearly two decades of deteriorating growth, sustained fiscal deficits, and a public debt that rose from 20 percent of GDP in the mid-1970s to nearly 70 percent in the early 1990s. As shown in figure 3, government expenditures had risen above 50 percent of GDP.

Yet coming out of the 1991 recession, unemployment was stagnating at 10 percent of the labor force. The driving force behind the fiscal consolidation was a comprehensive review of all of the government departments with an emphasis on program redesign to meet future needs and to raise productivity. What emerged was a new budget structure that reduced outlays from 52 percent of GDP in 1993 to 44 percent in 1997 and 41 percent by 2000. Meanwhile, revenues remained largely unchanged, rising from 43 percent of GDP in 1993 to 44 percent in 2000.

**Figure 4. General Government Expenditures and Revenues for Canada, 1980–2011**




Sources: OECD Economic Outlook Data Bank.

Although Canada did not impose across-the-board cuts, the reductions in central government outlays extended across a very wide range of program areas, including grants to the provincial governments (table 5). It separated the pension system from the regular budget, and instituted a system of partial-funding and contribution increases to ensure long-term actuarial balance. It also introduced a relatively short two-year planning horizon because of concerns that longer-term horizons led to excessive postponement of corrective actions. Program outlays and revenues continued to decline relative to GDP after 2000, and the expenditure and revenue shares were 39 and 41 percent of GDP in 2007. The policy objective has been to achieve a fiscal surplus or better in each budget cycle. That goal was largely achieved and the public debt was reduced to less that 25 percent of GDP by 2007. Canada has achieved one of the largest fiscal consolidations among advanced economies in recent history. In part, it was made possible by a large decline in the real exchange rate and the emergence of a large trade surplus that offset much of the economic effects of the rapid shift to fiscal restraint.

**Table 5. Government Expenditures by Function, Canada**

| | 1993 | 2000 | Change |
|---|---|---|---|
| Total | 52.2 | 41.1 | -11.1 |
| General public services | 13.4 | 9.9 | -3.5 |
| Defense | 1.6 | 1.1 | -0.4 |
| Public order and safety | 2.0 | 1.6 | -0.4 |
| Economic affairs | 4.5 | 3.5 | -1.0 |
| Environmental protection | 0.6 | 0.5 | -0.1 |
| Housing and community amenities | 1.1 | 0.9 | -0.2 |
| Health | 6.7 | 5.9 | -0.7 |
| Recreation, culture, and religion | 1.1 | 0.9 | -0.2 |
| Education | 9.4 | 7.3 | -2.1 |
| Social protection | 12.0 | 9.5 | -2.5 |

Source: OECD.

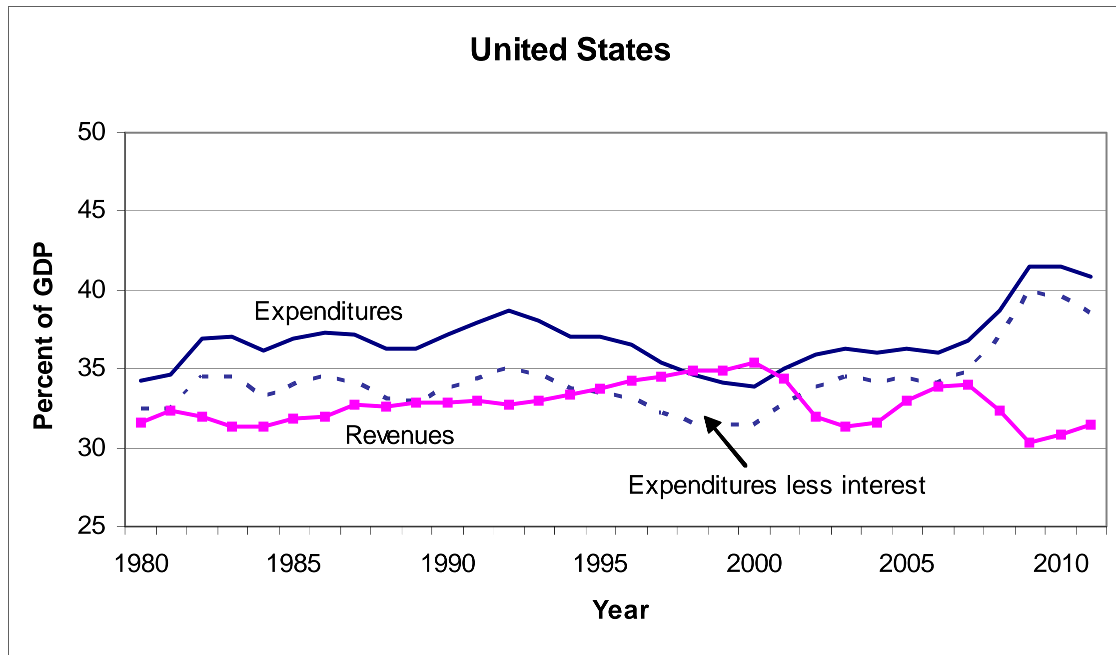
## C. United States

The United States had a successful episode of fiscal consolidation in the last half of the 1990s, after more than a decade of fruitless debate, reform of the budget process, and efforts to impose various fiscal rules.[6] Budget deficits were not a major problem at the federal level prior to the 1980s. While the federal government consistently recorded budget deficits after World War II, they were small and the public debt steadily declined from its peak in excess of 100 percent of GDP at the end of the war to 26 percent in 1980.

The 1980s marked the start of a sharp ideological split as Republicans, under the leadership of Ronald Reagan, shifted their focus from a traditional opposition to budget deficits toward a sustained advocacy of tax reductions–leaving the problem of the deficits to be raised by others. While both political parties professed concern with the growing deficits and a public debt that rose back to 50 percent of GDP by the mid-1990s, it was not the top priority of either party. Democrats were unwilling to cut domestic programs and Republicans opposed tax increases. Both spending and revenues were stable as shares of GDP, but with a large gap between the two. As shown in figure 4, the stalemate persisted throughout the 1980s and up to 1995; but there was a major reduction in the fiscal deficit over the last half of the 1990s and budget surpluses were recorded for several years until enactment of another round of tax cuts at the beginning of the Bush Administration.

[6] This discussion of fiscal deficits focuses on the budget of the federal government because the United States maintains a high degree of separation between the central government and state and local governments. The latter have their own sources of financing, constitutional provisions calling for balanced budgets, and perhaps most important, populations that are very willing to move to another jurisdiction if they judge that the cost and benefits of public services are no longer aligned.

**Figure 5: United States Government Expenditures and Revenues, 1980–2011**




Source: OECD Economic Outlook Data Bank, General Government.

Some observers perceived the inability of the Congress to resolve the budget conflicts in the 1980s as a procedural problem, and the Congress made two major attempts to control the deficits through changes in the budget process. The first of these, the Balanced Budget and Emergency Deficit Control Act of 1985, was known as the Gramm-Rudman-Hollings (GRH) Act. The act distinguished between discretionary spending programs that are subject to annual appropriations and mandatory programs, where the Congress establishes basic eligibility and other program rules, but does not determine spending through annual appropriations. GRH set annual deficit targets and called for the sequestration of discretionary spending if those overall targets were not achieved. Mandatory spending programs, which represented over half of the budget, were exempt from the sequestration process.

Even with some modifications in 1987, GRH never worked. A primary problem was that the deficit targets applied to planned levels of taxes and expenditures. Thus, the Congress and the administration could avoid the constraints by adopting optimistic economic and technical assumptions to project deficits that complied with the targets; but the deficit targets were never achieved in practice.

The Budget Enforcement Act (BEA) replaced GRH in 1990. With revisions, it continued to provide a basis of budget decisions until 2002, when it was allowed to lapse. It also divided the budget into two parts: (1) caps on discretionary spending to be enforced by sequestration, and (2) pay-as-you-go (PAYGO) rules for changes in taxes and mandated spending (basically the entitlement programs). The PAYGO provision prevented legislation that would lower taxes, create new entitlement programs, or expand existing programs unless the costs were offset by other legislative action. It provided a strong mandate in support of the status quo.

The effectiveness of the BEA remains subject to considerable debate. Certainly, during the period that it was in force, there was a large and dramatic decline in the budget deficit; however, it is not evident how much credit should be given to the BEA procedures. After all, the focus of the BEA was legislative actions, not the deficit; and as noted by Auerbach (2000), legislative actions appear to have accounted for a very small portion of the decline in the deficit. On the other hand, there is a notable absence of new programs or tax reductions, restraint which might be traced to the PAYGO provisions.[7]

Over the last half of the 1990s, the budget situation turned highly favorable for other reasons. The end of the cold war provided the United States with a substantial fiscal dividend in the form of reduced defense spending; combined with lower interest rates; this led to a reduction of overall spending of about two percent of GDP. At the same time, the economic boom raised revenues by another two percent of GDP between 1995 and 2000, primarily due to increased capital gain tax receipts. Both effects are very evident in figure 4, which shows the decline in expenditures and rise in revenues relative to GDP.

A stalemate between the two political parties also proved beneficial for fiscal consolidation since Republican control of the Congress blocked any new spending proposals and the Democratic administration opposed further tax reductions. Given its dependency on external factors, however, the U.S. experience should not be taken as an illustration of an effective fiscal consolidation policy. Nor was it sustained, since the stock market crash of 2002 and tax cuts following the Republican victory in the 2000 election pushed the budget back into deficit.

### D. Emerging Markets

Several past studies have focused on some of the unique problems of fiscal consolidation in emerging markets. Since they typically have smaller expenditure programs relative to GDP, they often have had more room to employ revenue increases as part of the fiscal adjustment (Adam and Bevan, 2003, and Gupta and others, 2003). This contrasts with the findings of studies of advanced economies that have emphasized expenditure reductions. However, there is considerable variation across regions since Asian economies typically have a smaller government sector and many countries of Eastern Europe have a government structure more similar to that of higher-income countries. Some observers of past programs have also stressed the reform of fiscal institutions in emerging markets as being critical to sustaining a fiscal consolidation.

[7] The Congressional Budget Office provides semiannual overviews of the federal budget outlook based on assessments of current policy. Those projections decompose the change in the budget outlook since the prior assessment into revisions due to changes in the economic outlook that underlay the projections, technical changes in the CBO estimates, and legislative actions. Beginning in 1995, the projection horizon was extended from five to ten years. These analyses are very useful in allowing us to indentify the source of changes in the budget.

## IV. THE POST-CRISIS OUTLOOK

The current economic outlook shows considerable diversity across the major economic regions. The recovery is expected to proceed at a modest pace for the advanced-income economies of Europe, North America and Japan –leading to concerns that the stimulus measures not be withdrawn at an overly rapid pace. However, emerging-market economies in Asia and to a lesser extent in Latin America are expecting growth to return to near pre-crisis rates in the near future. For those countries that entered the crisis with a relatively strong fiscal condition and concentrated on temporary tax and expenditure measures, the exit strategy for fiscal policy should be a relatively simple termination of the prior measures, and the debate is largely about timing. A significant number of countries are in that situation: including G-20 countries such as Australia, Brazil, Canada, China, Germany Indonesia, Korea, Germany, Russia, Saudi Arabia, and South Africa. For others, the pre-crisis fiscal imbalances were more serious, the crisis has imposed larger long-term costs, or the recovery phase is expected to be particularly long and drawn out. Studies by both the IMF and the OECD imply that these deficits are largely structural in nature. Thus, those countries are faced with far more complex problems of fiscal consolidation. Particularly severe examples are provided by the situation in the United States, Japan, and much of the EU other than Germany.

The United States provides a useful illustration of the ways in which the budget outlook has been altered by the crisis because the Congressional Budget Office prepares 10-year budget projections on an annual basis. These are based on current law and do not assume any changes in program design. Thus, by comparing the projections for the fiscal year 2008 budget and those for 2010, we can observe the changes in planned expenditures. A summary is provided in table 6 on the following page.

Total expenditures, as projected before and after the crisis, are shown at the top of the table. They are further divided into discretionary spending (based on annual appropriations), mandatory or entitlement programs, and net interest payments.

**Table 6. U.S. Federal Expenditure Projections**
(In percent of GDP)

| | Fiscal Years | | | |
|---|---|---|---|---|
| | 2007 | 2010 | 2015 | 2018 |
| Total Expenditures | | | | |
| 2008 forecast | 21.3 | 21.4 | 20.7 | 20.6 |
| 2010 forecast | 21.3 | 25.9 | 23.6 | 23.9 |
| Change | | 4.5 | 2.9 | 3.3 |
| Discretionary Spending | | | | |
| 2008 forecast | 7.6 | 7.3 | 6.5 | 6.1 |
| 2010 forecast | 7.6 | 9.4 | 7.5 | 7.0 |
| Change | | 2.1 | 1.0 | 0.9 |
| Mandatory Outlays | | | | |
| 2008 forecast | 11.9 | 12.3 | 12.8 | 13.4 |
| 2010 forecast | 11.9 | 15.1 | 13.6 | 14.0 |
| Change | | 2.7 | 0.9 | 0.6 |
| Interest | | | | |
| 2008 forecast | 1.7 | 1.7 | 1.4 | 1.2 |
| 2010 forecast | 1.7 | 1.4 | 2.5 | 3.0 |
| Change | | -0.3 | 1.1 | 1.8 |
| Obama budget: | | | | |
| *2010 baseline forecast* | 21.3 | 25.9 | 23.6 | 23.9 |
| *Obama proposed changes:* | | | | |
| Discretionary | | 0.1 | -0.3 | -0.2 |
| Mandatory | | 0.4 | 1.0 | 1.1 |
| Interest | | 0.0 | 0.3 | 0.6 |
| Total Outlays | | 26.4 | 24.7 | 25.5 |

Source: Congressional Budget Office and author's calculation.

The most notable feature of the projections is that the current increase in spending is not completely temporary. Expenditures in the 2010 budget are 4.5 percent of GDP higher than projected in the 2008 budget. While they are expected to decline in future years, they would still remain 3.3 percent of GDP higher in 2018, when the economy is assumed to have returned to full employment. A small part of the change is the result of a lower level of GDP as the collapse of investment reduces the contribution of capital to future growth. Thus, the denominator for the share of GDP is slightly smaller in 2018 than in the 2010 projections. A substantial portion of the increase in 2010 (2.1 percent of GDP) is in the discretionary programs, but only about half is projected to fade away in future years. In part, this is a reflection of changes in defense programs but nondefense spending also continues at a higher level. Mandatory programs are 2.7 percent of GDP higher in 2010; and although much of the increase disappears in future year, the projected level of these programs is 0.6 percent above the 2008 baseline in 2018. Altogether, program outlays are increased by 2 percent of GDP in 2015 and 1.5 percent in 2018. However, the biggest effect on the budget results from the

increased size of the public debt in the intervening years and the cost of financing it. Additional interest costs will add 1.8 percent of GDP to outlays in 2018.

The Obama administration has also proposed additional expenditure programs in the 2011 budget beyond the CBO baseline. These are estimated to add another 1.6 percent of GDP to total outlays in 2018, bringing total federal expenditures to 25.5 percent of GDP, compared to the CBO's pre-crisis (2008) projection of 20.1 percent. This would be an unprecedented level of federal expenditures, and the challenge for future fiscal reform is extraordinary. However, the government has not yet put forth a plan of a sustainable future fiscal path.

Comparable data for other countries is difficult to obtain as most governments only provide projections on the basis of future plans rather than a current law baseline. For example, the UK government projects a decline in the deficit from 11 percent of GDP in 2010-11 to 4 percent in 2014-15, with a reduction in the expenditure share from 48 percent of GDP in 2010-11 to 42 percent in 2014-15. However, there is no detailed budget plan of how that would be achieved.

## V. Options for Fiscal consolidation

The research on historical efforts to achieve fiscal consolidation suggests a variety of different approaches. Some governments made use of fiscal rules that set a target for the overall budget deficit. Such an approach was particularly common for those European countries seeking membership in the Eurozone. The target was simple and directly relevant to the goal that they were trying to achieve. One the other hand, the budget deficit rule was less effective within the Stability and Growth Pact in constraining governments once they were members of the Eurozone. A budget deficit rule was also ineffectual in the United States during the 1980s because there was no penalty for failing to achieve it. Others, such as Sweden, used a wider set of differentiated expenditure ceilings for various groups of expenditure programs. Canada achieved a high degree of success on a more flexible approach that focused on a government-wide program review without explicit caps–similar in some respects to "zero-based budgeting." The United States also achieved some temporary success with its PAYGO rule, but that was more appropriate to an effort aimed at maintaining the status quo, rather than outright budget reductions. The major lesson is that the measures have to be tailored to the particular circumstances of each country. [8]

The reviews of past experiences do, however, highlight the importance of three common themes: (1) credible and transparent rules, (2) the need for an enforcement mechanism, and (3) flexibility and robustness in the response to unforeseen shocks. Many have argued, therefore, for an emphasis on expenditure caps rather than a deficit rule because of the uncertainty of short-run revenue yields. Business cycle shocks have the greatest effect on the revenue side. Efforts might be made to compute cyclically-adjusted budget measures, but the estimation is more of an art than a science, and the adjustments c easily contribute to a loss of

[8] Recent papers that provide extensive reviews include Guichard, S. *et al.* (2007), Anderson and Minarek (2006), and IMF (2009).

transparency and credibility. Expenditure caps also provide for stronger accountability that can be carried down to the level of individual ministers. The advocacy of expenditure controls is not meant to rule out a role for tax increases that will have to be included in the policy mix for countries with large deficits. Officials in the Scandinavian countries and Canada have also stressed the importance of not promising too much, since a failure to meet intermediate goals can quickly destroy the credibility of the overall program. Fiscal consolidation is as much a political as an economic task, and the successful countries are also identified by the high degree of public support that the effort generated.

Some researchers have argued for exempting automatic stabilizer programs from the expenditure rules. However, such an approach can lead to the exclusion of large portions of the budget, since many programs, such as social expenditures and health care, are based on underlying entitlement rules rather than annual appropriations. Sweden provided flexibility in response to unforeseen increases at the level of individual programs by establishing multi-year rules in which cost overruns in one year required larger reductions in future years.

Some observers have suggested the introduction of a fiscal policy committee modeled after the independent committees for monetary policy. A committee of experts would be charged with establishing a multi-year path for restoring fiscal balance and setting forth annual targets based on their economic forecasts. The legislature would commit to meeting the committee's broad budget targets but would continue to determine the specific tax or expenditure actions that would be taken. Such an approach would be primarily a response to the need for a credible and transparent means to monitor progress. For example, there has been increasing concern in recent years about the use of creative accounting measures to camouflage the cost of some fiscal actions. The danger is that the committee could quickly become as political as the legislature it is meant to assist if it begins to enter into value judgments about the particular composition of the fiscal measures. The Scandinavian economies did make some use of such council during their period of fiscal consolidation in the 1990s.

In many countries, the problems of unwinding the fiscal response to the crisis will merge with the need to restructure and reform the entitlement programs that serve a rapidly-growing elderly population. One surprise in this area has been the extent to which many countries have already undertaken important reforms in the pension area. For example, while the share of GDP devoted to pensions is still expected to rise in the future, the increases shown in table 3 are quite modest–averaging only about one percent of GDP over the next two decades. Lessons from the actions of the reformers can be useful to those who have not yet undertaken reforms. The key ingredient seems to be an emphasis on stabilizing the proportion of life that is spent in retirement versus work. Reforming countries have increased the official retirement age and in some cases indexed it to projections of life expectancy. Often, the indexing of retirement ages has not been enough, and countries have either reduced the replacement rate (ratio of average benefits to the wage rate) or means-tested the benefits.

Health care cost increases raise a much more difficult problem as successful strategies for controlling their rate of increase have yet to emerge. Without a system of universal insurance, it is difficult to means-test health insurance. Deductibles and co-payments can be increased, but the burden quickly becomes unacceptably large for those with major health

problems. Yet, as long as health care is largely a free service, consumers will overuse it, requiring some form of rationing. These problems are magnified by the aging of populations, since the elderly have sharply escalating health care needs. In addition, the lack of effective cost constraints creates a bias in technological innovations towards those that are cost-increasing. This seems to be a greater problem in countries, such as the United States, where the health care system is highly fragmented. Some countries control costs through administrative rationing of access to care, but that is less successful in countries with socially-diverse populations that are unwilling to rely on the informal actions of health providers.

Finally, the greatest fiscal effect of the financial crisis has been the extraordinary increases in public indebtedness that will now have to be financed in future years. It will take major efforts to either increase taxes or cut other expenditures to make room for the higher level of interest payments. It would be even more extraordinary if countries could undertake fiscal consolidations sufficient to generate the surpluses required to restore public debt to prior levels.

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