



# **Canada's Fiscal Advantage**

*by*

**Joe Ruggeri and Jennifer McMullin**

**November 2004**

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This book challenges a widely held view that Canada's fiscal system is not competitive with that of the United States. Comparing the fiscal systems of the two countries with respect to the current situation and future prospects, the authors conclude that Canada has a fiscal advantage because it has a sustainable fiscal structure while the US does not. The authors suggest that this fiscal advantage should be used to promote balanced growth and human development. They present a domestic policy strategy that rests on four fundamental pillars: (a) maintaining a sustainable fiscal structure, (b) developing more effective institutions and practices of cooperative federalism, (c) enhancing the mechanisms and forces of social cohesion, and (d) strengthening the foundations of balanced growth and sustainable development.

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*The views expressed in this monograph are those of the authors and do not necessarily reflect those of the Caledon Institute of Social Policy.*

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## INTRODUCTION

Joe Ruggeri

The new international economic order that is being created by the forces behind the globalization of economic activity, rapid technological advances and the information revolution is re-shaping national institutions and re-defining the role of the public sector. In Courchene's view "globalization and the knowledge/information revolution are signalling the advent of a new socio-economic order with profound and pervasive implications for citizens, governments, markets and, therefore, public policy" [2001: 3]. In particular, these changes are exposing domestic public policy to the forces of international competition. Even within a closed economy, public policy has the capacity to change the distribution of income and to alter the decisions of private agents. These effects, however, are predictable because they are confined within the borders of a nation. In a globalized economy these borders may still matter, as Helliwell [2002] reminds us, but are made of a very porous material that allows the largely unimpeded flow of people, capital, goods and even selected services. When people can vote with their feet at the international level, capital has no fixed address, even bulky goods can be transported cheaply over long distances, and information technology workers in Bombay can instantaneously transfer their output to New York. National governments no longer can formulate public policy in an international vacuum.

So far, for Canada, the globalization of economic activity has largely meant increasing integration with the US economy. As our exports have increased as a share of GDP, so has the share of exports going to our neighbour to the south. And the expanded southward movement of goods also has been accompanied by the increased movement of human capital – a phenomenon commonly known as the "brain drain."

These developments have stimulated interest in comparing the economic and fiscal structures of the two countries. Comparisons of productivity performance between Canada and the United States can be found routinely in the publications of the Canadian Centre for the Study of Living Standards, for example. The increased mobility of goods, capital and labour between Canada and the US has raised concerns about the effect of differences in fiscal structures on factor flows, economic performance and living standards [e.g., Mintz 2001].

Making fiscal comparisons between the two countries is important for at least two reasons. First, given the expanding degree of integration between the two economies and the increasing mobility of labour and capital, large differences in their fiscal systems may have significant implications for economic performance. Second, analyzing the fiscal experience of our major trading partner may provide useful lessons for the design of our fiscal structure. When these comparisons are confined to the current experience and the recent past, conventional wisdom holds that Canada has a fiscal disadvantage compared to the United States for three reasons: (a) it has a

higher national debt, (b) it devotes a larger share of GDP to public spending, and (c) it has a less competitive tax structure. Finally, challenging conventional wisdom often yields special insights.

This monograph shows that using comparisons of the current situation as a basis for policy formulation is likely to lead to myopic decision making. A myopic approach to the analysis of fiscal trends, but this time confined to Canada, also was prevalent in the early 1990s when both federal and provincial governments were running large budget deficits in addition to carrying heavy debt burdens relative to the size of the economy. Projecting past trends into the future led to a widespread view that Canada was heading for fiscal disaster. This myopic analysis missed the fact that what would determine Canada's future fiscal path, especially at the federal level, were not past trends but the dynamics of the existing fiscal structures interacting with future economic developments. When fiscal projections were based on this dynamic framework, the results showed that the federal government had put in place a fiscal structure that would lead to balanced budgets before the end of the decade even in the absence of discretionary policies [e.g., Ruggeri, Van Wart and Howard 1993].

A similar dynamic framework must be used in comparing the fiscal structures of Canada and the United States. In order to determine whether Canada has a fiscal advantage or disadvantage compared to the US, we must analyze both their current structures and their long-term sustainability. Such a double comparison is presented in this monograph with respect to the areas mentioned earlier – namely, public debt, government spending and taxation.

When the comparison between the two countries is confined to the current situation, the results do not lead to any decisive conclusions about competitiveness. Ratios to GDP are higher in Canada than in the US for public spending, tax revenues, gross public debt and interest on the debt. However, not only have these ratios been falling steadily over the past decade, but the existing gaps do not represent conclusive evidence of a Canadian fiscal disadvantage.

The higher share of GDP captured by public spending in Canada is the result of collective decision-making in a democratic society and may reflect a more balanced approach to the equity-efficiency tradeoff. The associated higher GDP ratio of tax revenues also need not make the Canadian tax system less efficient than that of the United States because the difference is due largely to the unwillingness of US governments to finance current spending with current revenues. The federal deficit in the US for fiscal year 2003-04 is estimated to exceed the combined spending of all governments in Canada. Moreover, the differences in tax levels between Canada and the US are not general, but are largely sector or region specific because of the wide variation in interprovincial and interstate tax systems. The higher ratio of gross debt-to-GDP that currently exists in Canada may have implications for intergenerational equity, but does not affect our current competitive position.

When the comparison is extended to the future, the conclusions are unambiguous: Canada has a clear fiscal advantage. The studies reviewed in this monograph show that Canadian governments as a whole have a fiscal structure capable of generating surpluses that may be small over the medium term but will increase in size over time, while US governments are expected to run deficits for quite a long time. This means that Canadian governments have fiscal flexibility through a potential virtuous circle that may afford lower taxes and higher public spending in combination with falling debt-to-GDP ratios and lower shares of revenues directed at debt servicing costs. By contrast, governments in the United States have no fiscal flexibility and will be hard pressed to maintain a constant debt-to-GDP ratio over the long term.

The conclusion that Canada's fiscal system is sustainable over the long run should not be taken to imply that either Canada's fiscal structure or public policy framework need no changes, nor that domestic policy should ignore developments south of the border. Rather, Canadian reforms should be based on Canadian needs and long-standing values rather than motivated by the desire to match a US fiscal system – found to be unsustainable over the long run – in the hope that getting into a tax competition with the US will stimulate productivity and growth in Canada.

This study views the scope of domestic policy in the broader context of the debate on globalization and national policy independence. Our policy framework agrees with the views of McCallum (1995) and Helliwell (2002) that “borders matter.” It rests on four fundamental pillars: (a) maintaining a sustainable fiscal structure, (b) developing more effective institutions and practices of co-operative federalism, (c) enhancing the mechanisms and forces of social cohesion, and (d) strengthening the foundations of balanced and sustainable development.

This monograph contains two separate papers. The first paper, co-authored by Joe Ruggeri and Jennifer McMullin, compares the fiscal systems of Canada and the United States including taxation, government spending and the national debt. The second paper, written by Joe Ruggeri, presents the elements of a domestic policy strategy that is consistent with the view that Canadian governments have policy flexibility on both economic and social fronts.

The preparation of this monograph benefited from the comments provided by a number of colleagues. We are particularly indebted to Vaughan Dickson, Jonathan Kesselman and Melville McMillan, but we acknowledge that we responded only to comments that were directed at specific issues, particularly in the first paper, and not to the normative framework used in the second paper. We are grateful to Ken Battle for doing a thorough editing job on an earlier version of the monograph. We are also indebted to David Goodwin for patiently proofreading the entire manuscript and to Lucina MacDonald for preparing the camera-ready version. We remain fully responsible for any remaining errors or biases.

## A FISCAL COMPARISON BETWEEN CANADA AND THE US

Joe Ruggeri and Jennifer McMullin

This paper focuses on the major components of the fiscal structures of Canada and the United States in order to address the issue of whether Canada's fiscal system is "competitive." Because policy deals with the future and because future fiscal developments (in the absence of discretionary policies) are determined by the dynamics of current structures, our comparison spans three separate time periods: the present, the medium-term future and the long-term future.

### *Current Comparisons*

Comparing the fiscal structures of Canada and the United States is not a simple task, even when the comparison is confined to a single year, because fiscal transactions are not recorded in the same manner in the two countries. Direct comparisons are made easier in the case of taxation by the publication of consistent data by the Organization for Economic Development and Co-operation (OECD). No such data, however, are available for government spending. In the case of the public debt, the comparison is made more difficult by the inclusion of trust funds, primarily for social security and health care, in the unified budget of the US federal government and the exclusion of the Canada and Quebec Pension Plans (CPP/QPP) from budgetary transactions in Canada. Before presenting the relevant information for comparing the fiscal systems of the two countries, therefore, it may be useful to briefly explain some of the measurement issues affecting the comparison.

In the case of taxation, the OECD data allow a consistent comparison of government revenues from different sources, their relationship to major macro-economic variables such as GDP, and the composition of the revenue mix. For this aspect of the revenue comparison, we used data contained in the 2001 issue of *Revenue Statistics*. Direct comparisons of effective tax rates cannot easily be made, especially in the case of personal and corporate income taxes, because those rates are affected by the rate structure and its interaction with various components of the tax base. In order to facilitate the comparison, we will provide information on various components of the two tax structures using the most recent available data, for 2003.

Directly comparable data on government spending in Canada and the United States by major category are not available. The OECD, for example, provides information on total government spending and separate information on government spending on health care, education and other areas in separate publications and based on different data sets. The International Monetary Fund (IMF) publishes data on government spending by function and by order of government, but no data on consolidated government spending. An attempt to fill this information gap recently was made by Kennedy and Gonzales [2003], who started with data from the Bureau of Economic Analysis'

National Income and Product Accounts (NIPA) for the US and from Statistics Canada's Financial Management System (FMS) and then made the necessary adjustments that allowed a comparison of government spending by function in the two countries. Since detailed data on these outlays by function are not available, the authors made some *ad hoc* adjustments. In comparing the pattern of public spending in Canada and the US developed by Kennedy and Gonzales, two points must be kept in mind. First, the ratio of government spending-to-GDP is roughly four percentage points higher than the ratio derived from the national accounts data on public spending for both countries. Second, the adjustment for the different treatment of sales of goods and services tends to understate government spending in the US compared to Canada. This means that the gap in the spending-to-GDP ratio between Canada and the US is somewhat overstated. We use the data developed by Kennedy and Gonzales for the government spending comparisons, supplemented by OECD data from the 2003 issue of *OECD Economic Outlook No. 74* for total government spending.

Major issues of comparability also exist in the case of the national debt. Governments accumulate debt when they incur budget deficits that are financed through borrowing. The existence of a public debt creates the obligation to pay interest and often to refinance when outstanding securities mature. The amount of the total liabilities of government arising from its borrowing activities is called gross debt. Governments also hold financial assets, such as cash, investments and loans. Subtracting these financial assets from the gross debt yields the net debt.

While there is general agreement on the definitions of gross and net debt, there are major differences among countries in the way these concepts are measured. As pointed out by the OECD, for example, "gross debt data are not always comparable across countries due to a different definition or treatment of debt components" [OECD 2003, note to Annex Table 33]. These differences may be compounded in the case of net debt by differences in the definition and measurement of the components of financial assets.

In this paper, the comparison between Canada and the United States is based on the data for both general government gross and net financial liabilities contained in the OECD publication quoted above (Annex Tables 33 and 34). We recognize, however, that the OECD data do not correspond to the Canadian data on gross and net debt found in Statistics Canada's publications and the Department of Finance's *Fiscal Reference Tables*. In the second paper, which focuses on Canada and not on the comparison with the United States, we will use the above Canadian data sources for net debt.

### ***Deficits and Debt***

The pattern of deficits and debts in Canada and the United States from 1986 to 2002 is shown in Table 1. Starting with deficits, we notice that the entire period can be divided into two sub-periods, namely, 1986-1992 and 1992-2002. The first sub-period highlights the inability and/or unwillingness of governments in both countries to restore fiscal stability. During this sub-period,

deficits first declined as a share of GDP from 1986 to 1988 and then started to rise again. By 1992, they represented a larger share of GDP than six years earlier. The deficit as a share of GDP was higher in Canada than the US in 1986 and the gap increased in 1992.

The two deficit series shown for the US highlight the importance of accounting procedures in international comparisons of fiscal developments. The unified budget in the US includes the Social Security fund while in Canada the CPP/QPP is treated as a non-budgetary item. Because the Social Security fund was in a surplus position throughout the entire sub-period, it produced a partial offset to the deficit in the other government budgetary transactions. The exclusion of the Social Security fund, however, would not change the general conclusion that, during the 1986-1992 period, the fiscal position of Canadian governments was deteriorating at a faster rate than that of US governments.

Different trends developed after 1992. In Canada, the overall government deficit was eliminated in 1997 and surpluses were recorded for the following five years. In the United States, the overall deficit including the Social Security surplus was eliminated in 1998 but reappeared three years later. If the Social Security surplus is excluded, which makes the result more comparable with Canada's, there were deficits over the entire period from 1986 to 2002. Moreover, the deficit-to-GDP ratio in 2002 had a higher value than in 1994.

The deficits discussed above include the effects of both program spending and interest payments on the debt. The primary balances, which measure the difference between revenues and program spending, emphasize even more the change in trends between the two sub-periods. During the first sub-period, primary balances were generally negative in both countries and their ratio to GDP followed a U-shaped pattern, first falling from 1986 to 1988 and then rising again and reaching higher values in 1992 than had existed in 1986. In Canada, primary balances turned positive in 1995 (0.3 percent of GDP) and remained positive throughout the rest of the entire period. In the US, primary balances also became positive in 1995 (0.6 percent of GDP), but remained positive only until 2001 and then turned negative in 2002. This means that in 2002, all governments combined in the US had to borrow funds to pay for the goods and services they provided (in addition to the interest on the debt). In that year, Canadian governments recorded positive primary balances in excess of the interest payments on the debt, thus ending up with an overall surplus. In the US, by contrast, interest payments on the debt were compounded by the deficit on primary balances.

As shown in Table 1, Canadian governments are still paying for the high deficits of the 1980s through higher interest payments as a proportion of GDP than in the United States. This ratio, however, has fallen steadily since 1995 and in 2002 was 3.1 percentage points lower than in 1995. In the US, this ratio peaked at 3.7 percent in 1991 and was 3.6 percent in 1995, but has declined at a lower rate thereafter, falling by 1.8 percentage points from 1995 to 2002. In the latter year, the ratio of interest payments to GDP in Canada compared to that of the US had fallen to half a percentage point, which is one-quarter of the difference that existed in 1995.

**Table 1**  
**Total Government Surpluses or Deficits (-) and Debt as Percentage of GDP,**  
**Canada and the US, Selected Years, 1986 to 2002**

|                               | 1986 | 1988 | 1990 | 1992 | 1994 | 1996  | 1998 | 2000 | 2002 |
|-------------------------------|------|------|------|------|------|-------|------|------|------|
| Surplus (Deficit) Canada      | -7.1 | -4.3 | -5.9 | -9.1 | -6.7 | -2.8  | 0.1  | 3.0  | 0.8  |
| US, including Social Security | -5.3 | -3.6 | -4.3 | -5.9 | -3.6 | -2.2  | 0.3  | 1.4  | -3.4 |
| US, excluding Social Security | -5.4 | -4.4 | -5.4 | -6.7 | -4.5 | -3.1  | -0.9 | -2.1 | -5.0 |
| Primary balances              |      |      |      |      |      |       |      |      |      |
| Canada                        | -3.0 | -0.1 | -0.7 | -4.1 | -1.7 | 2.5   | 4.8  | 6.2  | 3.3  |
| US                            | -2.0 | -0.3 | -0.8 | -2.2 | -0.2 | 1.3   | 3.5  | 4.1  | -1.4 |
| Net debt interest payments    |      |      |      |      |      |       |      |      |      |
| Canada                        | 4.1  | 4.3  | 5.2  | 5.1  | 5.0  | 5.3   | 4.7  | 3.1  | 2.5  |
| US                            | 3.3  | 3.3  | 3.5  | 3.7  | 3.5  | 3.5   | 3.2  | 2.6  | 2.0  |
| Gross debt                    |      |      |      |      |      |       |      |      |      |
| Canada                        | 71.0 | 71.1 | 74.5 | 89.9 | 98.2 | 100.3 | 93.9 | 82.0 | 77.8 |
| US                            | 62.6 | 64.7 | 66.6 | 74.0 | 74.8 | 73.5  | 67.6 | 58.7 | 60.8 |
| Net debt                      |      |      |      |      |      |       |      |      |      |
| Canada                        | 39.7 | 38.2 | 43.3 | 58.5 | 67.4 | 67.5  | 60.8 | 44.9 | 38.0 |
| US                            | 45.4 | 48.5 | 49.9 | 57.0 | 59.4 | 58.3  | 52.3 | 42.9 | 44.4 |

Source: OECD (2003), Annex Tables 28, 30, 32, 33, 34.

The higher interest payments in Canada reflect the higher national debt compared to the US. As shown in Table 1, Canada's gross debt-to-GDP ratio (as measured by the OECD) increased during the 1986-95 period, first slowly and then rapidly, reaching a peak of 100.8 in 1995. A similar pattern occurred in the United States, but the peak was reached two years earlier with a much lower debt-to-GDP ratio (75.6). The debt-to-GDP ratio in Canada has fallen steadily since 1995 and in 2002 stood at 77.8 percent – 30 percentage points lower than its peak value in 1995. In the US, the debt-to-GDP ratio fell from 1993 to 2001, but increased substantially in 2002 to a level only 14.8 percentage points lower than in the 1993 peak year. In 2002, the debt-to-GDP ratio in Canada was still 17 percentage points higher than in the United States, but this difference was more than one-third lower than in 1995.

Canada's performance improves when debt is measured by net (rather than gross) financial liabilities as measured by the OECD. We still have an upward trend from 1986 to 1995, but the peak of the net debt-to-GDP ratio in the latter year reached only 69.3 percent. Moreover, the decline over the following seven years was more dramatic and amounted to 31.3 percentage points or 45 percent. The United States started in 1986 with a higher net debt-to-GDP ratio than Canada, but this ratio increased at a lower rate over the next eight years and reached a peak of 59.4 percent in 1994.

Therefore, by the time Canada's net debt-to-GDP ratio reached its peak in 1995, the ratio in the US was 10.4 percentage points lower. The US, however, recorded a very different pattern of this ratio over the following seven years. After falling by only 16.7 percentage points from 1994 to 2001 (17.2 points from the peak in 1994) compared to 31.3 percentage points in Canada, this ratio increased to 44.4 percent in 2002. As a result, in 2002, Canada's net debt-to-GDP ratio was 6.4 percentage points lower than that of the US.

### ***Government Spending***

A comparison of the pattern and evolution of program spending in Canada and the United States from 1992 to 2001 is found in Table 2. The results for 2001 indicate that government spending on goods and services and on transfers to persons and businesses (under the category total program spending) as a percentage of GDP is higher in Canada than in the US by 2.9 percentage points. The gap in the case of non-defence spending increases to 5.7 percentage points because Canada spends a much smaller proportion of GDP on the military. A large portion of the civilian spending gap is due to higher GDP ratios of spending on income security programs in Canada, which include not only direct transfer payments, such as Employment Insurance (EI) benefits and benefits for the elderly, but also refundable tax credits, such as the Goods and Services Tax (GST) credit and the Canada Child Tax Benefit.

**Table 2**  
**Government Spending as Percentage of GDP, Canada and the US, 1992 and 2001**

| Function                     | Canada | US   | gap  | Canada | US   | gap  |
|------------------------------|--------|------|------|--------|------|------|
| Income Security              | 14.3   | 7.9  | 6.4  | 11.0   | 7.1  | 3.9  |
| Housing & Community Services | 1.9    | 0.7  | 1.2  | 1.4    | 0.5  | 0.9  |
| Economic Affairs             | 5.8    | 3.2  | 2.6  | 3.5    | 3.2  | 0.3  |
| Recreation and Culture       | 1.3    | 0.3  | 1.0  | 1.0    | 0.3  | 0.7  |
| Education                    | 7.7    | 5.7  | 2.0  | 5.9    | 6.2  | -0.3 |
| Health                       | 7.3    | 6.0  | 1.3  | 7.0    | 6.7  | 0.3  |
| General Public Services      | 2.4    | 2.0  | 0.4  | 1.9    | 1.9  | 0.0  |
| Public Order and Safety      | 2.3    | 1.9  | 0.5  | 1.9    | 2.2  | -0.3 |
| National Defence             | 1.7    | 6.0  | -4.3 | 1.2    | 4.0  | -2.8 |
| Total Program Spending       | 44.6   | 33.7 | 10.9 | 34.8   | 31.9 | 2.9  |
| Non-Defence Program Spending | 42.9   | 27.7 | 15.2 | 33.6   | 26.4 | 5.7  |

Source: Kennedy and Gonzales (2003), Table 2, p. 5.

It should be noted that the gap of 2.9 percentage points shown for total program spending likely overestimates the relative scope of government fiscal activity in Canada for two reasons. First, as pointed out by Kennedy and Gonzales [2003:3], the adjustment for the treatment of sales of goods and services leaves the “total US spending ...understated in relation to the Canadian figures used in this study.” Second, the gap for some items in the “income security” category may reflect different economic conditions and program structures rather than “program generosity.” For example, EI expenditures reflect labour market conditions; in 2000 the unemployment rate in Canada (6.4 percent) was 1.7 percentage points higher than in the United States (4.7 percent). Also, the GST credit can be viewed as a tax reduction delivered as an expenditure program because it is an instrument for reducing the impact of the consumption tax reform on low-income consumers. If it was delivered as a non-refundable tax credit, it would not enter the expenditure side and would reduce tax revenues.

Focusing on the changes between 1992 and 2001, the period of fiscal restraint in both countries, the most notable trends are (a) a reduction in the scope of government as measured by the ratio of government spending to GDP, (b) a much faster rate of decline in Canada (-9.8 percentage points) than in the United States (-1.9 percentage points), and (c) a reduction in the gap between Canada and the US to about one-quarter its value in 1992. Four spending functions were largely responsible for the change in the gap. The first three – income security, economic affairs and education – reduced the gap while the fourth function, national defence, raised it.

The largest reduction occurred in the income security category, with a drop of 2.5 percentage points – nearly half of which was due to lower unemployment benefit payments in Canada. The large reduction in the gap for economic affairs was due mostly to a large decline in spending by Canadian governments on resource conservation, industrial development, and transportation and communications. In the case of education, the GDP ratio increased moderately in the US but dropped by two percentage points in Canada, primarily because of lower spending by provincial and local governments on primary and secondary education. The shrinking negative gap in the national defence category was due to a much larger reduction in the GDP ratio in the US compared to Canada. This trend has more recently been reversed due to the large increases in US defence spending.

In summary, Canadian governments still spend a higher percentage of GDP, but the gap has been reduced substantially over the past decade. In interpreting this gap we should remember that, in democratic societies, the level of public spending and its relationship to GDP results from a process of voters' choices which reflect collective valuations of private versus public consumption and collective views about equity. While recognizing that the process of collective decision-making involves conflicts among different interest groups and may be subject to “market failures” in the “political marketplace,” it is important to emphasize that a higher ratio of public spending to GDP does not mean government overspending any more than a lower ratio implies government underspending.

## ***Taxation***

### ***Tax Revenues***

The OECD publication entitled *Revenue Statistics* contains a detailed list of government revenues. It also groups all tax revenues into six categories in accordance with the base on which the tax is levied: (1) taxes on income, profits and capital gains, (2) social security contributions, (3) taxes on payroll and workforce, (4) taxes on property, (5) taxes on goods and services, and (6) other taxes.

We have used these major categories because the manner in which they are grouped tends to facilitate an analysis of the tax structure with respect to its potential efficiency effects. We noted that, for the United States, no values were assigned to the third category. Therefore, we combined categories 2 and 3 and named this new category “payroll taxes” to identify clearly the base upon which they are levied. Finally, we included some disaggregation for income taxes in order to separate payments by individuals from payments by businesses, for payroll taxes to separate unemployment insurance premiums from social insurance contributions, for property taxes in order to separate taxes on immovable property from other taxes, and for taxes on goods and services in order to separate general taxes from taxes on specific items.

Table 3 shows tax revenues as a percentage of GDP by major category for Canada and the US for 1990 and 2001. When interpreting this information, it is important to remember that the level of corporate taxes in the US is unusually low because of the drop in profits during 2001.

Inspection of Table 3 leads to the following observations:

- Tax revenues represent a larger share of GDP in Canada than in the United States.
- From 1990 to 2001, these ratios followed divergent paths in the two countries. The tax revenues-to-GDP ratio fell marginally in Canada from 35.9 percent to 35.1 percent, while it increased by 2.2 percentage points in the US. As a result, the gap of 9.2 percentage points that existed in 1990 was reduced to 6.2 percentage points 11 years later.
- The GDP ratio of income taxes, both on individuals and corporations, is higher in Canada, but the difference fell from 5.3 percentage points in 1990 to 2.8 percentage points in 2001.
- The GDP ratio of personal income taxes is higher in Canada, but the difference dropped substantially between 1990 and 2001, moving from 4.9 percentage points to 1.2 percentage points.
- As a share of GDP, the US relies more on payroll taxes and Canada relies more on consumption taxes. Both countries generate a small and similar GDP ratio of taxes on property.

**Table 3**  
**Tax Revenues as Percentage of GDP, Canada and the US, 1990 and 2001**

| Type of Tax                 | 1990        |             | 2001        |             |
|-----------------------------|-------------|-------------|-------------|-------------|
|                             | Canada      | US          | Canada      | US          |
| Taxes on Income             |             |             |             |             |
| Individuals                 | 14.9        | 10.0        | 13.4        | 12.2        |
| Corporations                | 2.5         | 2.1         | 3.5         | 1.9         |
| Subtotal                    | 17.4        | 12.1        | 6.9         | 14.1        |
| Payroll Taxes               |             |             |             |             |
| Social Security pensions    | 1.4         | 6.1         | 2.6         | 6.5         |
| Unemployment insurance      | 1.9         | 0.4         | 1.7         | 0.3         |
| Other                       | 1.9         | 0.4         | 1.6         | 0.3         |
| Subtotal                    | 5.2         | 6.9         | 5.9         | 7.1         |
| Taxes on Property           |             |             |             |             |
| Immovable property          | 3.0         | 2.7         | 2.8         | 2.6         |
| Other property              | 0.6         | 0.3         | 0.6         | 0.4         |
| Subtotal                    | 3.6         | 3.0         | 3.4         | 3.0         |
| Taxes on goods and services |             |             |             |             |
| General                     | 5.1         | 2.1         | 5.1         | 2.2         |
| Other                       | 4.2         | 2.5         | 3.6         | 2.4         |
| Subtotal                    | 9.3         | 4.6         | 8.7         | 4.6         |
| Other Taxes                 | 0.4         | 0           | 0.2         | 0           |
| <b>Total Taxes</b>          | <b>35.9</b> | <b>26.7</b> | <b>35.1</b> | <b>28.9</b> |

Source: OECD [2003].

In making inter-temporal comparisons of ratios to GDP of government revenues and expenditures, it is important to point out that these comparisons are affected by both structural and cyclical factors. Since Canada and the US were roughly on the same stage of the business cycle in 2001, the fiscal comparison provides a general indication of differences in the overall size of government relative to the economy. The data show that the differences are quite small for both expenditures and revenues. If we compared the revenue ratios on an equal fiscal position, namely, 0.8 percent surplus for Canada and 5.0 percentage deficit for the US, the difference in the ratio of government revenues to GDP between the two countries would almost disappear.

Another dimension of the revenue structure of the two countries is presented in Table 4, which shows the percentage distribution of the major components of tax revenues.

**Table 4**  
**Percentage Distribution of Major Components of**  
**Tax Revenues in Canada and the US, 1990 and 2001**

| Type of Tax                 | 1990         |              | 2001         |              |
|-----------------------------|--------------|--------------|--------------|--------------|
|                             | Canada       | US           | Canada       | US           |
| Taxes on Income             |              |              |              |              |
| Individuals                 | 41.6         | 37.7         | 38.1         | 42.3         |
| Corporations                | 7.04         | 7.7          | 10.0         | 6.5          |
| Subtotal                    | 8.6          | 45.4         | 48.1         | 48.8         |
| Payroll Taxes               |              |              |              |              |
| Social Security pensions    | 4.0          | 22.9         | 7.3          | 22.5         |
| Unemployment insurance      | 5.2          | 1.4          | 4.7          | 1.0          |
| Other                       | 5.2          | 1.5          | 4.7          | 1.1          |
| Subtotal                    | 14.4         | 25.8         | 16.7         | 24.6         |
| Taxes on Property           |              |              |              |              |
| Immovable property          | 8.3          | 10.2         | 8.1          | 9.1          |
| Other property              | 1.7          | 1.2          | 1.8          | 1.5          |
| Subtotal                    | 10.0         | 11.4         | 9.9          | 10.6         |
| Taxes on Goods and Services |              |              |              |              |
| General                     | 14.1         | 8.0          | 14.5         | 7.7          |
| Other                       | 11.7         | 9.3          | 10.2         | 8.4          |
| Subtotal                    | 25.8         | 17.3         | 24.7         | 16.1         |
| Other Taxes                 | 1.2          | 0            | 0.6          | 0            |
| <b>Total Taxes</b>          | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

Inspection of Table 4 leads to the following conclusions:

- Taxes on income account for about 50 percent of total tax revenues in both countries.
- The gap in the share of income taxes between the two countries was reversed during the 1990-2001 period; in 1990, that share was 3.2 percentage points higher in Canada; by 2001 the roles were reversed with the share being 0.7 percentage points higher in the US.
- A role reversal occurred for each of the two income tax components. The share of personal income tax (PIT) revenues was higher in Canada in 1990 but lower in 2001. The corporate income tax (CIT) share, which was lower in Canada in 1990, became higher in 2001.

- The US relies more heavily on payroll taxes than Canada; however, the gap was reduced between 1990 and 2001. Starting at 11.4 percentage points in 1990, it fell to 7.9 percentage points in 2001. This reduction was due to a combination of a rising share in Canada and a falling share in the United States.
- Property taxes account for similar shares in the two countries (about 10 percent of the total) and in both countries their share fell during the sample period by similar levels.
- Canada relies more heavily than the United States on consumption taxes primarily because the latter does not have a general sales tax at the federal level such as the GST (but some states do have general retail sales taxes). The share of those taxes fell in both countries during the sample period and the gap between the two countries remained roughly constant at about nine percentage points.

### *Tax Rates*

Taxes generate different behavioural responses depending on their rate structure and the base on which they are imposed. For example, general sales taxes influence the leisure-work decision, as do taxes on wages. Personal income taxes may affect the work-leisure choice as well as the choice between consumption and saving (present versus future consumption) and investment in human capital. Corporate taxes influence investment decisions by firms. In open economies with high mobility of factor inputs, all taxes influence location decisions by firms and workers, as do the benefits provided by public spending.

When international tax comparisons are made for the purpose of determining relative tax competitiveness, the analysis is often confined to personal and corporate income taxes for two major reasons: These taxes account for a large share of total government revenues, and they affect the factor inputs that drive economic performance – namely labour, human capital and physical capital. In comparing tax rates between Canada and the United States, we will also focus on income taxes, with supplementary information on other taxes when necessary.

Three sets of tax rates may be identified: statutory rates, average tax rates and marginal tax rates. Statutory rates are the rates listed in the relevant tax statutes as they apply to the selected tax bases. Average tax rates are calculated as the ratio of the tax payments (which are adjusted for subsidies or credits) to the appropriate concept of income. Marginal tax rates measure the tax to be paid on the last dollar of labour compensation or the income earned on the last dollar of a capital investment.

For personal income taxes, statutory tax rates provide a useful approximation of marginal tax rates. This is not the case for corporate tax rates because of the variety of special provisions that

apply to capital investments. In this report, we will show the different tax rates in order to facilitate a comparison of the broad structure of taxation between Canada and the United States.

*i. Personal Income Tax Rates*

Some comparisons of personal income tax rates in Canada and the United States are found in Tables 5 to 7.

Tables 5 to 7 show that the personal income tax structures in Canada and the US have many similarities, but also major differences. At the federal level, they both have a progressive rate structure applied to measures of taxable income, with four statutory rates in Canada and six rates in the US. Both countries provide a personal exemption (a non-refundable credit in Canada). The tax reduction from this item is constant for all taxpayers in Canada; it may be greater than in the US for

**Table 5  
Federal Personal Income Taxes, Statutory  
Rates in Canada and the US, 2003**

| Taxable Income Bracket |                          | Statutory Rates   |                   |    |  |
|------------------------|--------------------------|-------------------|-------------------|----|--|
| Canada                 |                          |                   |                   |    |  |
| Up to \$32,183         |                          | 16 %              |                   |    |  |
| 32,184 - 64,368        |                          | 22                |                   |    |  |
| 64,369 - 104,648       |                          | 26                |                   |    |  |
| Over 104,648           |                          | 29                |                   |    |  |
| United States          |                          |                   |                   |    |  |
| single filers          | married (filing jointly) | filing separately | head of household |    |  |
| Up to 7,000            | Up to 14,000             | Up to 7,000       | Up to 10,000      | 10 |  |
| 7,001 - 28,400         | 14,001 - 56,800          | 7,001 - 28,400    | 10,001 - 38,050   | 15 |  |
| 28,401 - 68,800        | 56,801 - 114,650         | 28,401 - 57,325   | 38,051 - 98,250   | 25 |  |
| 68,801 - 141,250       | 114,651 - 174,700        | 57,326 - 87,350   | 98,251 - 159,100  | 28 |  |
| 143,501 - 311,950      | 174,701 - 311,950        | 87,351 - 155,975  | 159,101 - 311,950 | 33 |  |
| Over 311,950           | Over 311,950             | Over 155,975      | Over 311,950      | 35 |  |

Source: CCRA T1 General, 2003; IRS Tax Rate Schedules, 2003.

lower-income taxpayers (depending on the net benefits from the standard deduction) and lower for high-income taxpayers.

While Canada's PIT is based on the individual taxpayer, the US system differentiates among single filers, head of households, married filing jointly and married filing separately. Also, unlike Canada, the US system allows the deduction of state-municipal personal income taxes and mortgage interest payments. The PIT of both countries also delivers special tax expenditures in the form of tax-assisted saving plans.

All Canadian provinces levy personal income taxes, but a number of states in the US have no personal income taxes. In general, federal PIT rates are higher in the United States and provincial-state rates are higher in Canada. In the US, there is wide use of income taxes by local governments, including large cities (New York and Washington, D.C.) and a variety of other local governments in several states, notably Maryland, Ohio, Pennsylvania and Kentucky. With the exception of the 4 percent rate imposed in New York City, however, the municipal rates are quite low.

Since it is difficult to make general comparisons of the combined rates, given the variation of PIT regimes among provinces and particularly states, it may be more instructive to show combined statutory rates, which are a close approximation of marginal tax rates, for selected provinces and states and for three taxable income levels, expressed in the currency of each country – namely,

**Table 6**  
**Other Elements of the Personal Income Tax**  
**System in Canada and the US, 2003**

|  | Canada                                 | US         |
|--|--|------------|
| Personal Exemption or Credit                     | \$8,012                                | \$4,750    |
| State-Provincial, Municipal Income Taxes         |  | deductible |
| Mortgage Interest                                |  | deductible |
| Tax-Assisted Saving Plan Limits,<br>RPP and RRSP | 15,500 and 14,500                      |            |
| 401(k), IRA*                                     | 12,000 with differences among programs |            |

Source: CCRA T1 General, 2003; IRS Form 1040, 2003.

\* There is more than one type of IRA in the US.

Note: The value for Canada is a tax credit equal to approximately 25 percent of the value shown in the table for all taxpayers; the value for the US is a deduction and the tax reduction associated with it varies with the statutory tax rates. The US system also allows for a substantial standard deduction in lieu of itemized deductions. Lower-income taxpayers with insufficient itemized deductions benefit from this standard deduction.

**Table 7**  
**State-Provincial Personal Income Tax Revenues as Percentage**  
**of Federal PIT Revenues, Canada and the US, 2002, Range and Average**

|                  | Percentage of Federal PIT Revenue |      |     |      |
|------------------|-----------------------------------|------|-----|------|
|                  | Canada                            |      | US  |      |
|                  | low                               | high | low | high |
| State-Provincial | 39                                | 75.3 | 0   | 23.8 |

Source: Statistics Canada (FMS) and the Bureau of Economic Analysis (NIPA).

**Table 8**  
**Statutory Federal-Provincial-Municipal Personal Income Tax Rates**  
**for An Additional Dollar of Taxable (Domestic Dollars) Income,**  
**Canada and the US, Selected Cities and Taxable Income Levels, 2003**

|              | \$50,000 | \$100,000 | \$200,000 |
|--------------|----------|-----------|-----------|
| Halifax      | 36.9     | 42.7      | 45.7      |
| Montreal     | 42.0     | 50.0      | 53.0      |
| Toronto      | 31.2     | 37.2      | 40.2      |
| Winnipeg     | 36.9     | 43.4      | 46.4      |
| Edmonton     | 32.0     | 36.0      | 39.0      |
| Vancouver    | 31.2     | 40.7      | 43.7      |
| Boston       | 32.3     | 35.3      | 40.3      |
| New York     | 37.5     | 40.5      | 45.5      |
| Philadelphia | 34.3     | 37.3      | 42.3      |
| Atlanta      | 34.0     | 37.0      | 42.0      |
| Seattle      | 27.0     | 30.0      | 35.0      |
| Dallas       | 27.0     | 30.0      | 35.0      |
| Los Angeles  | 36.3     | 39.3      | 44.3      |

Source: Authors' calculations based on information from the Department of Finance Canada and the Federation of Tax Administrators.

\$50,000, \$100,000 and \$200,000 (Table 8). The rates shown in this table incorporate the deductibility of state and local income taxes in the United States. The income levels are expressed in Canadian dollars for Canadian cities and US dollars for US cities. The estimated rates shown in Table 8 address the following questions: (a) if a US worker living in a selected US city earned US \$50,000, US \$100,000, or US \$200,000 and received an extra dollar of labour income, what portion

of this extra dollar would be paid in personal income taxes? (b) what would be the tax share of the extra dollar if the US worker is replaced by a Canadian worker who resided in a Canadian city and had the same earnings in Canadian dollars? Consistency in the comparison is maintained by the fact that the tax rates are calculated by comparing income and tax payments in the same currency.

Table 8 shows that it is not possible to make general comparisons about marginal personal income tax rates between Canada and the US because of the wide differences in the PIT structures of provinces and states. For example, a worker earning \$50,000 (in the respective currencies of the two countries) would face a higher tax rate on an extra dollar of income in New York, Boston, Philadelphia and Atlanta than in Toronto, Edmonton and Vancouver. However, they would face a lower marginal tax rate in Dallas and Seattle than in any Canadian city because those two cities are located in states that do not levy personal income taxes. Similar results are obtained for the other three income levels

When figuring out the implications of these tax rate comparisons for the behaviour of taxpayers, it should be kept in mind that the personal income tax system influences five major decisions by individuals: (a) where they plan to work (location), (b) how much they want to work (work-leisure choice), (c) the work effort they intend to make, (d) how much of the income they earn they plan to save (choice between present versus future consumption), and (e) how to allocate some of their time and savings to acquire human capital.

The location decision is affected by a variety of non-tax factors, such as job opportunities, before-tax wages, publicly funded services, quality of life, cost of living and, for Canadians who plan on a temporary move to the US, the exchange rate. Anecdotal evidence from radio and TV interviews with Canadian nurses indicates that one of the reasons for some accepting employment in the US was the desire to pay off their debts faster. By moving to the US, they could gain 50 Canadian cents for each US dollar they saved (now reduced to 25 cents). With respect to taxation, what matters to the potential migrant is not the personal income tax rate on the additional income earned, but the total amount of all taxes that must be paid on the total income earned and the portion spent. In other words it is the average tax rate for all taxes that affects the location decision, not the marginal tax rate.

For federal taxes, the information contained in Table 3 suggests that the overall tax burden would be similar in both countries: Payroll taxes are higher in the US, but consumption taxes are higher in Canada because the US does not levy a general sales tax at the federal level, while personal income taxes have similar structures and rates. The differences widen when we include state-provincial-municipal taxes. Some states levy sales taxes, although at a lower rate than provinces. Not all states impose personal income taxes; those that do, generally levy them at lower rates and these taxes are deductible in calculating the federal tax liability. When all taxes on individuals are combined, whether the average tax burden is higher in Canada than in the US depends on the province of residence and the state or city of potential relocation.

The implications of tax differentials for the migration of skilled workers from Canada to the US were the topic of hot debates at the peak of the US economic boom of the 1990s. For example, Iqbal [1999] argued that there was a considerable outflow of skilled workers to the US and that tax differentials played an important role in this “brain drain.” Other researchers, [Frank and Belair 1999, Helliwell 1999, Zhao, Drew and Murray 2000, Helliwell and Helliwell 2000, and Finnie 2001] found that this brain drain was much smaller than the general perception and even smaller than in previous decades. Moreover, Wagner [2000] and Helliwell [2000] found that taxes do influence migration decisions, but these effects are quite small even in the case of large tax differentials.

The decision on how to allocate the available time between work and leisure is affected by the tax system in a complex manner and depends on whether this decision is placed within a single period or a lifetime framework. In the short term, the work-leisure choice involves adjustments in hours of work supplied in response to changes in real after-tax wages, and this choice is affected by marginal tax rates on labour income (i.e., the tax rates on the additional dollar of employment income earned). Changes in these tax rates generate both an income effect (an increase in PIT rates, for example, reduces the after-tax income earned by working a given number of hours) and a substitution effect (the same tax change makes leisure more desirable because it reduces its relative price). These two effects drive labour supply in opposite directions and economists have found that they largely offset each other, thus resulting in small labour supply responses to changes in real after-tax wages.

For example, summarizing a survey of recent studies, Phipps concluded that “modern empirical labour economics concludes that labour supply behaviour of men *and* women is inelastic – highly inelastic if we focus on the most recent estimates using the best available data” [Phipps 1993: 40]. One of the reasons for this low response is the existence of constraints on the ability of workers to make marginal adjustments to their hours of work [Phipps and Osberg 1993]. In cases where hours of work are fixed, as in most civil service jobs for example, an employee can reduce working hours only by taking unpaid holidays and can increase working hours only by taking a second job. Another important result is that the labour supply elasticity is not uniform for workers in different income brackets; specifically, it is lower for higher-income workers, partly because their jobs do not provide ample opportunity for marginal adjustments to hours of work [Allie 1994].

Within a lifetime framework, the work-leisure choice becomes a participation rate decision. In a demographic environment that may lead to labour supply constraints, this decision may be more important for policy purposes than the hours of work decision. The fundamental issue in this case is how the tax structure affects the decision of workers about interruptions in their working life and early retirement. Even within this framework we may identify two separate effects: (a) the wage income that must be foregone upon retirement (a form of substitution effect), and (b) non-wage income that is available as a replacement (a wealth effect). There is some empirical evidence that these two effects may cancel each other out. For example, Pissarides [1990] suggests that the labour supply may be perfectly inelastic over the long run because aggregate participation rates have

remained largely constant despite substantial increases in real wages. Bower [1989] also found low inter-temporal labour supply elasticities for US men.

More recently, however, there has been a trend to retirement before the age of 65. Since real after-tax wages have been increasing, the determining factor must be changes in non-wage income. The latter includes public and private pensions, private wealth, and health care coverage under retirement before the age of 65. The last item is not a factor in Canada because of universal coverage, but may be a factor in the US where such universal coverage is not available. Even in the US, this factor may operate selectively as the ability to pay for private health insurance is positively related to a person's wealth. The importance of private pensions and wealth in the participation rate decision near retirement age suggests that, within a lifetime framework, the relationship between the tax structure and the labour supply is affected by marginal tax rates on both labour and non-labour income. For example, tax-assisted saving plans such as Registered Retirement Saving Plans (RRSPs) in Canada and Individual Retirement Accounts (IRAs) in the US may provide an incentive to early retirement by increasing the amount of financial wealth accumulated before the age of 65 from a given rate of annual saving. If these tax incentives are financed through higher tax rates on labour income, the wealth effect on the retirement decision is compounded by the substitution effect as the higher tax rates reduce the after-tax income that must be given up when leaving the labour force.

The wealth effect generated by tax incentives for personal savings may also be compounded by the existence of constraints on the hours of work. Evidence of hours constraints has been recently provided by Martinez-Granado [2003], whose analysis was based on data for US prime-age males from the National Longitudinal Survey of Youth. This author separated workers into those who changed jobs frequently (movers) and those who did not (stayers) and found that (a) the variance of changes in hours was more than six times higher for movers, and (b) the inter-temporal labour supply elasticity was positive for movers and zero for stayers. Ruggeri and Yu [1999] argue that hours constraints may interact with the tax system to promote early retirement. Workers subject to hours constraints receive "too much" income and "not enough" leisure while employed. All or part of this extra income will be saved, with incentives from the tax system, to accumulate wealth that later in life will enable the worker to purchase the delayed leisure through early retirement.

Determining how the PIT systems in Canada and the US affect differentially these labour supply decisions, thus influencing economic performance, is not an easy task. The lack of universal health care coverage in the US would tend to provide a disincentive to early retirement for lower-income workers. On the tax side, both countries offer tax incentives for personal savings and, as shown in Table 8, differences in marginal personal income tax rates between the two countries depend on the specific state or province.

Economic performance depends also on the effort that workers make in their jobs. Efficiency wage models assume that workers adjust the effort they put in their current job to changes in the

wage they receive relative to the wage paid by other firms, the availability of jobs, income available while unemployed either from government transfers or from private sources, and other unobservable factors.

For the purpose of our analysis, efficiency wage models provide two important insights. First, work effort is affected by average and not marginal tax rates on wages. Second, work effort is affected by the taxation of both labour and non-labour income. For example, a reduction in the tax burden on the return to personal savings has no effect on hours worked, but will reduce work effort because it alters the relationship between wage income and non-wage income. As income from not working increases relative to income from work, the incentive to make a full effort in the job a worker holds is reduced. Making comparisons of the work effort effect of personal income taxation between the two countries is a difficult task, especially since there is no standard method for measuring work effort.

Since the personal income tax is applied to a base that includes the returns to personal savings, in theory it should also affect the choice between current consumption and future consumption (saving). In practice, however, because of the broad availability of tax-assisted saving instruments, this effect may be confined largely to high income earners who are constrained by the upper limits on these types of savings. There is no consensus in the relevant literature on this strength of this potential effect because of “the relative ignorance that still surrounds the reasons why households save” [Browning and Lusardi 1996: 1799]. This view is echoed by Hubbard and Skinner [1996: 89] who state that “economists are just beginning to realize how little is understood about consumption and saving behaviour.” People may save for a variety of reasons, and not all of them are responsive to changes in after-tax rates of return.

For example, people may save because they want to help their kin either through *inter-vivos* transfers, such as financial assistance for post-secondary education or large wedding gifts, or through bequests. Although the amount that is transferred may ultimately be affected by taxation as it affects the net after-tax rate of return, there is no evidence that saving behaviour associated with this motive is affected by taxation.

Similarly, individuals and families may save as precaution against uncertainties with respect to income flows, health care needs, changes in government policies, and as a buffer against unforeseen developments. This motive for saving is unlikely to be very responsive to changes in after-tax rates of return. In fact, if precaution is satisfied by reaching a certain target of accumulated savings, tax reductions would lower the saving rate because a smaller amount of annual savings would be required to achieve the desired target. The evidence on precautionary studies is mixed. Skinner [1988] and Dynan [1993] found no evidence of precautionary savings. Carroll [1992], Carroll and Samwick [1995] and Kazarosian [1997] found that the precautionary motive explains a large portion of wealth holdings. Moreover, Engen [1994] and Carroll [1992] estimated an interest rate elasticity of savings close to zero.

In theory, savings are responsive to changes in after-tax rates of return when households are assumed to save only to smooth consumption patterns before and after retirement. Even in this case, however, the saving response is ambiguous because, as in the case of the labour supply response, there are two separate effects. An increase in personal income tax rates reduces the net return on saving, thus lowering the cost of current consumption with respect to future consumption and reducing saving. The lower rate of return, however, increases the amount of saving required to finance a given level of future consumption.

Efforts by economists to measure the direction and magnitude of this effect have not led to a general agreement on results. For example, David and Scadding [1974], Howrey and Hymans [1978], Bosworth [1984] and Baum [1988] found very low interest rate elasticities. On the other hand, Wright [1964], Boskin [1978], Gylfason [1981] and Makin [1987] found interest elasticities of saving ranging between 0.18 and 0.40. The potential effect of the personal income tax on personal savings is reduced substantially in both countries by the preferential tax treatment of a variety of saving instruments. They include tax-free capital gains from the sale of owner-occupied residences (with certain limits in the US), lower tax rates on realized capital gains, tax-free accumulation of funds in social security pension funds, employer-sponsored retirement funds and personal retirement funds.

Even for the portion of personal savings that is not sheltered for personal income taxation, tax-induced changes in personal saving behaviour are not automatically translated into efficiency effects. In this respect, there are a number of differences between Canada and the United States.

First, while both countries may be viewed as open economies, the US is a large open economy while Canada may be viewed as a small open economy. This means that, in theory, Canadian business can borrow on the international market any amount they need at given interest rates. By contrast, large increases in borrowing by the US would have some influence on world interest rates. Second, the US dollar plays a special role in international trade and finance which creates financial flows that may be unrelated to domestic borrowing requirements. Third, Canadians tend to have a higher propensity to save than Americans. Fourth, while Canada generates more than enough savings to finance its domestic investment, the US relies heavily on foreign funds. Finally, Canadian governments as a group are a net saver while US governments are a net dissaver. The experience of the 1990s, however, indicates that investment and economic growth were not impeded by the lack of domestic savings in either country. Canada had enough domestic savings and the US seems to have had no difficulties in using the savings generated in other countries. The difference between the two countries for the future is that Canada has a more stable source of funds through its domestic savings, while the US is exposed to changes in the preferences of foreign savers.

In making decisions about human capital, individuals compare the total costs of acquiring a certain level of skills – including direct cash costs as well as lost earnings and use of leisure time – with the expected increase in earnings over their working lifetime. The personal income tax system affects those decisions on both the cost and return sides.

On the return side, the acquisition of human capital is affected by the marginal tax rate on the expected increase in earnings. A highly progressive rate structure would tend to discourage the acquisition of human capital by taxing away an increasing portion of the extra income generated by the higher educational level.

On the cost side, incentives are provided through special tax deductions or credits for tuition costs in attending post-secondary institutions and for full-time enrollment in those institutions. The net effect is not realized in a single year because the costs are incurred for a short period of time, while human capital is being acquired, but the revenue stream is expected to flow for a long period. The educational decision, therefore, is based on known costs (net of subsidies), projected revenues and associated projections of incremental tax burdens, over a long period of time.

Comparing the net fiscal effects on the acquisition of skills between Canada and the US is a difficult task because of major differences in both tax structures and subsidy programs. For example, Canada relies more heavily on public delivery of education, while the United States has a large private component but provides large public subsidies to private educational institutions. As shown in Table 2, in 2001 public spending on education as a share of GDP was higher in the US than in Canada.

One way of comparing the two countries with respect to their education policies, including the design of the fiscal structure, is to focus on educational results. Some indicators of educational attainment are contained in Table 9. These indicators suggest that overall Canada's educational system is performing better than that of the US, although the public sector of both countries spends the same percentage of GDP on education. The gap in educational performance is particularly wide in the case of the level of mathematical and scientific literacy.

**Table 9**  
**Selected Indicators of Educational Attainment, Canada and the US**

|   | Canada | US   |
|---|--------|------|
| Adult literacy rate*  | 52     | 51   |
| Reading proficiency of 15-year-olds (level 3 and over)                      | 72     | 61   |
| Mathematical literacy of 15-year-olds, rank out of 27 OECD countries        | 6      | 18   |
| Scientific literacy of 15-year-olds, rank out of 27 OECD countries          | 5      | 14   |
| Percentage of the population 25-64 with tertiary (post-secondary) education | 41     | 37   |
| School expectancy,** full time  | 15.7   | 15.5 |

\* Proportions of people 16 years and over with a level 3 or better on the three "prose" tests.

\*\* Expected years of schooling, under current conditions (2001), excluding education for children under the age of 5.

Three general observations can be derived from the foregoing discussion. First, the economic effects of the personal income tax structure are generated through a variety of behavioural responses and complex interactions. Second, a full evaluation of the economic those effects requires also an analysis of the use of tax revenue. This extension to the fiscal system is particularly important in the case of human capital, which is heavily subsidized by the public purse. Third, there is no convincing evidence that the PIT system in Canada hampers our competitive economic position relative to the United States.

*ii. Corporate Tax Rates*

Information on corporate income tax rates for 2003 is found in Table 10 for Canada and Table 11 for the US. We notice that, for large corporations, the federal rate is substantially higher in the US than in Canada. As is the case of the personal income tax, all Canadian provinces impose a corporate income tax but not all states do so. Even in those states that levy a corporate income tax, the statutory rates are lower than those levied by the Canadian provinces. When we combine federal and provincial-state governments, the combined rate is lower in the US only in those states that do no impose a corporate income tax. The combined top rate is lower in Canada (41.12 percent) than in the US (45.5 percent).

**Table 10**  
**Statutory Corporate Income Tax Rates in Canada, 2003**

|                  | General      | Manufacturing and Processing | Small Business |
|------------------|--------------|------------------------------|----------------|
| Federal*         | 24.12        | 22.12                        | 13.12          |
| Provincial range | 12.5 - 17    | 5.0 - 16                     | 3.0 - 8.9      |
| Total range      | 36.62- 41.12 | 27.12 - 38.12                | 16.12 - 22.02  |

\*Includes surtax.

**Table 11**  
**Statutory Corporate Income Tax Rates in the US, 2003 \***

|             |             |
|-------------|-------------|
| Federal     | 35.0        |
| State range | 0 - 10.5    |
| Total range | 35.0 - 45.5 |

\*Applies to corporations with taxable income in excess of \$18.3 million; the rate is 15% on taxable income not exceeding \$50,000 and there are graduated rates for income between the two values mentioned above.

**Table 12**  
**Statutory Corporate Capital Tax Rates in Canada, 2003**

|                  | Financial Corporations | Other         |
|------------------|------------------------|---------------|
| Federal          | 1.0 - 1.25             | 0.225         |
| Provincial range | 0.6 - 4.0              | 0.25 - 0.6    |
| Total range      | 1.6 - 5.25             | 0.475 - 0.825 |

Source: OECD [2003].

In Canada, the federal government and most provinces levy taxes on the paid-up capital of large corporations, with different rates applying to financial and non-financial corporations (Table 12). There is an exemption of \$200 million at the federal level and \$5 million at the provincial level (with variations among provinces). In the US, the federal government does not levy any capital taxes and only a small number of states impose such taxes.

As in the case of the personal income tax for individuals, corporate taxes may affect a variety of decisions by firms. In general, we can identify four such decisions: (a) location, (b) reporting of borrowing and profits, (c) marginal additions to investment, and (d) lumpy investments.

The decision about where to locate a production facility depends on a complex set of factors. The major factors determining business location have been evaluated by KPMG [2004] in a study that compares business costs in North America, Europe and Asia-Pacific. The study measures the impact of 27 major cost components for 17 industry operations in 11 countries. The comparison is based on the after-tax cost of start-up and operation over a 10-year period.

KPMG identifies two groups of location factors – business factors and personal factors. The first group includes, in ranking order, state and local incentives, labour costs, occupancy or construction costs, tax exemptions, corporate taxes, energy availability and costs of land. Personal factors relevant to a firm's location decision include low crime rates, health facilities, housing availability and cost, rating of public schools, climate, colleges and universities in the area, and recreational and cultural opportunities. The most significant cost component is labour costs with taxes being a distant second, representing 3 to 11 percent of location-sensitive costs. The general conclusion of this study is that "Canada is the overall costs leader, followed very closely by Australia, both with business costs approximately eight to nine percent below those in the United States" [KPMG 2004: 1].

Decisions by multi-jurisdiction firms about where to declare interest expenses and profits are affected by statutory tax rates. It is advantageous for a multi-jurisdiction firm to shift taxable income to jurisdictions with low statutory rates and interest expenses to jurisdictions with high statutory rates.

As pointed out by Bartlett [2003], the tax system also influences the country where a company incorporates. Bartlett identifies two types of tax systems for corporations: In the “territorial system” a country taxes income only within its borders, while in the “worldwide system” used by the US companies are taxed on income earned abroad. Comparing Canada and the US, Bartlett [2003: 1] points out that “a territorial company that incorporates in Canada pays taxes only on its operations in Canada. If it has a US subsidiary, the subsidiary pays US taxes on its profits here, but none to Canada. However, due to the US worldwide tax system, the exact same US company with an identical Canadian subsidiary will pay Canadian taxes plus US taxes on its Canadian operations. Thus the US company will pay more total taxes even if the US and Canada have the same tax rates.” Tax-related decisions by multi-jurisdiction firms are complicated by the special provisions contained in international tax treaties and by the availability of credits on the foreign tax paid.

Statutory tax rates affect the amount of tax that is payable on an extra dollar of taxable income from current production, but this amount is not related to the decision to invest in new capital assets. To capture the effect of taxation on a firm’s investment decision, economists have developed the concept of the marginal effective tax rate (METR), which can be defined as “the amount of tax paid on income invested in a marginal project (just on the margin of acceptability)” [Report of the Technical Committee on Business Taxation: 2-5]. A more detailed evaluation of this tax rate is presented in this section because this rate is increasingly being used as the standard of comparison of corporate tax systems in different jurisdictions [Chen 2000, Chen and Mintz 2003].

The theoretical foundation of the METR is the profit-maximizing decision by firms. A firm will undertake additional investment up to the point where the marginal revenue generated by the investment equals the cost of the additional investment – that is, when marginal cost equals marginal revenue. The tax structure may affect both marginal revenues and marginal costs. Tax liabilities reduce revenue while tax allowances – such as special tax credits, the deduction of interest costs and differences between capital costs allowances and economic depreciation – reduce costs. Through its effects on the marginal revenue generated by additional investment (including the effect on the cost side), tax policy creates a wedge between the pre-tax rate and the after-tax rate of return. Given the condition of profit-maximization, and recognizing that what is directly measurable even before a project is undertaken is its cost, the METR is calculated as the net tax cost as a proportion of the marginal cost (including depreciation). Under this procedure, the pre-tax cost of capital, usually approximated by a combination of debt and equity financing, is the pre-tax return on capital. As pointed out by Chen [2000: 3], the METR measures “the effective tax cost as a share of marginal cost.”

Four major features of METRs should be emphasized. First, they are calculated on the assumption that “markets are perfectly competitive, and that firms behave as profit maximizers – which is to say that capital is fully mobile and firms chase the same goal” [Chen 2000: 10]. Second, they are marginal, not average rates, because they apply to investment decisions at the margin. They measure “the impact of tax on the income generated by an incremental dollar of capital investment”

[Chen 2000: 4]. Third, they are effective rates in the sense that they “take into account all tax provisions – not just statutory rates but also allowances and other provisions such as carry-over rules, inventory accounting methods, thin capitalization rules, and so on” [Chen 2000: 3]. Finally, they are calculated as the wedge between the pre-tax and post-tax rate of return on capital expressed as a ratio to the pre-tax return. For example, if the pre-tax rate of return is 10 percent and the post-tax rate of return is 6 percent, the associated METR is 40 percent.

In interpreting estimated METRs across different countries, it is important to remember that those estimates are based on the assumption that all other factors are the same in each country. For example, no account is taken of non-tax factors that may affect the risks associated with a given investment. Locating a given investment in Country A which has a stable political system, low crime rate, highly educated population, and well-developed transportation and communication systems will generate a less risky flow of revenue than in Country B which has lower standards of the above factors. Even if marginal costs are equal, risk-adjusted marginal revenue will be higher in Country A. If the lower risk is produced by publicly-funded institutions and programs, Country A may generate a higher after-tax rate of return even if it has a higher measured METR. Some government-funded programs not incorporated in the tax system, such as the availability of inexpensive serviced land and the provision of loans and loan guarantees, may have a double effect on the METR by altering both the absolute size of the wedge and the pre-tax rate of return

An attempt at incorporating the spending side as well as taxation has recently been made by Mintz [2001]; his analysis extended the coverage of taxes on business to include corporate capital taxes and sales taxes on capital equipment and included benefits such as R&D credits and public spending on health care and education. In his estimation, however, Mintz assumes that taxes on the labour input are borne entirely by employers – an assumption contrary to the results of most theoretical and empirical studies [Dahlby 1992].

Since the estimation of METRs requires the use of complex models, comparative estimates for a variety of countries are not readily available. Moreover, even when different studies for the same countries are available, the results are not always comparable or consistent. For example, Chen and Mintz [2003] estimated a METR of 16.8 percent for large manufacturing corporations in the US in 2002, while Devereux, Griffith and Klemme [2002] estimated a METR of 24 percent for the same sector in 2001. The most recent METR estimates for Canada and the US are found in Chen and Mintz [2003] and are shown in Table 13.

Table 13 shows higher METR values for Canada in all sectors. These results led Chen and Mintz to conclude that “Canada looks less competitive than the United States, despite the advantage of having a lower statutory corporate income-tax rate” [Chen and Mintz 2003: 9].

This conclusion may be misleading, especially when placed within the context of labour productivity and capital accumulation, because it includes investment in inventories; inventories bear a much lower burden of taxation in the United States. One may argue that, for the purpose of

raising productivity and living standards, the focus should be on fixed investment excluding inventories. Although inventories are part of the overall process that ultimately determines the rate of return on capital, they are directly part of the production decision and are affected by short-term developments that do not influence the investment decision. Let us consider, as an example, the manufacturing sector. Combining the information on METR values contained in Table 13, which is based on Chen and Mintz [2003], with the composition of capital by type found in Chen [2000: Table 1], one can show that the METR values are lower in Canada when inventories are excluded from the calculations or the METR for inventories in Canada is set to be equal to that in the US. When we exclude inventories, the conclusion about Canada's non-competitive corporate tax system in terms of METR no longer holds in the case of manufacturing.

The concept of the METR on capital is well founded in standard microeconomic theory as it is based on profit maximization in perfectly competitive markets. The investment decisions of firms, however, do not always involve marginal adjustments especially in the case of large corporations. Quite often they involve "lumpy investments" in the form of large and expensive projects that are

**Table 13**  
**Estimates of METRS for Large Corporations, Canada and US, 2002**

|                 | METR (%) |      |
|-----------------|----------|------|
|                 | Canada   | US   |
| Forestry        | 31.9     | 15.7 |
| Manufacturing   | 18.8     | 16.8 |
| Construction    | 29.3     | 19.8 |
| Transport       | 24.6     | 10.3 |
| Communications  | 22.7     | 12.2 |
| Electric power  | 29.5     | 13.8 |
| Wholesale trade | 29.4     | 19.6 |
| Retail trade    | 29.4     | 17.1 |
| Other services  | 30.6     | 27.4 |
| Structures      | 22.1     | 19.7 |
| Machinery       | 26.1     | 24.8 |
| Inventory       | 39.3     | 17.7 |
| Land            | 22.1     | 17.7 |
| Aggregate       | 24.3     | 16.8 |

expected to generate a flow of revenue over a long period of time. In those cases, the impact of taxation is measured by calculating the amount of tax that will be paid on the profits earned by the firm over the lifetime of the project (an average rather than a marginal rate concept) where taxes are treated as one of a number of factors influencing the location and investment decision. Estimates of these effective corporate income tax rates for different cities in 11 countries have been developed by KPMG [2004]. A sample of those estimates for selected cities in Canada and the US are shown in Table 14.

The foregoing discussion suggests that all three sets of tax rates – statutory, METR and average rates – play an important role in various decisions by firms about investment. Therefore, it seems prudent to use all three sets of rates in evaluating the relative competitiveness of the Canadian tax system as it applies to the business sector. When the comparison between Canada and the US includes the different tax rates that may affect investment decisions – location and lumpy investments as well and marginal investments – general conclusions that the corporate tax structure in Canada is non-competitive rest on shaky factual foundations.

*iii. Payroll Taxes*

So far our analysis has focused on income taxes. Economic performance, however, may also be affected by taxes on wages as they influence the work-leisure choice and the decision to acquire and use human capital. As shown earlier (Table 4), payroll taxes represent a major source of

**Table 14**  
**Average Effective Corporate Income Tax Rates in Selected Cities, 2004**

| City      | Tax rate (%) | City         | Tax rate (%) |
|-----------|--------------|--------------|--------------|
| Halifax   | 30.8         | Detroit      | 43.7         |
| Montreal  | 26.6         | Dallas       | 33.9         |
| Toronto   | 31.3         | Buffalo      | 32.5         |
| Winnipeg  | 31.4         | Minneapolis  | 33.1         |
| Edmonton  | 31.5         | Philadelphia | 34.6         |
| Vancouver | 30.7         | San Diego    | 34.5         |
| Atlanta   | 33.8         | Seattle      | 34.2         |
| Boston    | 35.6         | Tampa        | 34.2         |
| Chicago   | 35.6         |              |              |

Source: KPMG (2004).

government revenues in both countries as they account for 25 percent of government revenues in the US and 14 percent in Canada. The major difference between the two countries with respect to payroll taxes is in the area of social security pensions; therefore, the discussion in the sub-section will be confined to this item.

Details on payroll taxes for social insurance pensions in Canada and the US are contained in Table 15. This table shows that the structure of this tax differs in the two countries with respect to both coverage and rates. In Canada the first \$3,500 of wages are exempt and the maximum level of wages subject to the tax is \$40,500 in 2004, which indicates that a maximum of \$37,000 may be taxed. In the US, the tax applies to the first dollar of labour earnings and is levied up to an income of \$87,900 US in 2004. In both countries, the total tax is split equally between employer and employee, but the rates are more than 50 percent higher in the US. The net result is a maximum contribution that is substantially higher in the US. The maximum contribution in the US (\$13,449 US) is 3.8 times higher than that in Canada (\$3,663 Cdn.), even without currency conversions.

This large difference in the level of payroll taxation for social security pensions reflects different approaches to public support for retirement living in the two countries. Aside from tax-assisted saving plans common to both countries, the US relies exclusively on payroll taxes to finance its Social Security pension and Medicare (health care for seniors). In Canada, health care is financed through general revenue, mostly from provincial governments, and only part of public pensions is financed through a payroll tax, Canada and Quebec Pension Plan (CPP/QPP) premiums. The foundation tier of public pensions in Canada – the universal Old Age Security pension (OAS) (which is clawed back for high income retirees so is not truly universal) and the income-tested Guaranteed Income Supplement (GIS) and the Allowance – are funded from general revenue.

**Table 15**  
**Canada and US Social Security Premium Rates, 2004**

|                                    | CPP    | US Social Security<br>Including Medicare |
|------------------------------------|--------|--|
| Premium Rates                      |        |  |
| Employer                           | 4.95   | 7.65                                     |
| Employee                           | 4.95   | 7.65                                     |
| Total                              | 9.90   | 15.30                                    |
| Taxable Earnings                   | Cdn \$ | US \$                                    |
| Floor                              | 3,500  | 0  |
| Ceiling                            | 40,500 | 87,900                                   |
| Maximum Amount of Taxable Earnings | 37,000 | 87,900                                   |
| Maximum Total Annual Premium       | 3,663  | 13,449                                   |

Source: Social Security Administration. [Http://www.ssa.gov/e](http://www.ssa.gov/e). Public Works and Government Services Canada. <http://www.tpsgc.gc.ca/compensation/cd/cd-2003-019-notice-e.html>.

Reflecting on this comparison, Kesselman [2004: 24] concluded that “because of its sharply lower payroll taxes, Canada can remain competitive with the US even with significantly heavier burdens from other kinds of taxes. Given that the largest differential in premiums between the two countries arises at upper middle income, Canada could impose heavier personal taxes in the range of \$50,000 to \$120,000.” It should be pointed out, however, that social security taxes can be viewed largely as benefit taxes because their payment assures an entitlement to a pre-determined benefit after retirement from the labour force. To the extent that this future benefit entitlement is taken into consideration by forward-looking workers, the taxes that finance it should have little effect on workers’ decisions about their labour force activity, and the differentials between Canada and the US would have little effect on economic efficiency comparisons.

### *Combining Taxes on Labour and Taxes on Capital*

Because of the expanding contribution of human capital to economic growth and the increasing mobility of capital and skilled labour, some international tax comparisons have focused particularly on the taxation of these two factors. Specifically, they have tried to combine the various taxes levied on them to make international comparisons of tax burdens on labour and capital. Direct comparisons of the results are rarely possible because these studies differ with respect to both coverage and methodology. The results for two such Canadian studies are compared below.

In the first study, Ruggeri and Vincent [2000] provide measures of the effective average tax rates on capital income and labour income in Canada and four other OECD countries. They started by classifying tax revenues as either revenues from a labour income base or from a capital income base. The first group includes personal income taxes on labour income and payroll taxes, while the second group includes corporate income and capital taxes. The effective average tax rates are calculated as the revenues from each tax divided by its respective base. A special feature of this study is the detailed calculation of the special provisions in the personal income tax system, commonly known as tax expenditures, that either reduce taxable income below total income or directly reduce the tax liability. Ruggeri and Vincent show that most of these tax expenditures benefit income from capital received by individuals. Their results, shown in Table 16, lead to the following conclusions with respect to 1993:

- Canada taxes labour income more heavily than the US.
- Canada taxes capital income less heavily than the US.
- Canada taxes labour income more heavily than capital income; the lower effective average tax rates on capital income result “from the combination of a preferential treatment of the returns to personal savings and relatively high business taxation” [Ruggeri and Vincent 2000: 1459].

**Table 16**  
**Effective Average Tax Rates on Labour Income and Capital**  
**Income in Selected OECD Countries, 1988 and 1993**

|  | Canada | US    | UK    | Australia | France |
|--|--------|-------|-------|-----------|--------|
| (a) Labour income                            |        |       |       |           |        |
| 1988   | 33.75  | 28.00 | 32.74 | 25.93     | 46.03  |
| 1993   | 36.92  | 27.60 | 26.72 | 26.21     | 47.83  |
| (b) Capital income                           |        |       |       |           |        |
| 1988   | 24.78  | 29.51 | 39.07 | 43.84     | 23.81  |
| 1993   | 29.44  | 33.47 | 31.25 | 38.03     | 22.02  |
| (c) Labour income excluding tax preferences  |        |       |       |           |        |
| 1993   | 30.96  | 26.76 | 23.54 | 22.28     | 49.06  |
| (d) Capital income excluding tax preferences |        |       |       |           |        |
| 1993   | 49.49  | 40.47 | 42.84 | 42.73     | 24.28  |

Source: Ruggeri and Vincent (2000), Tables A3 and A4, p. 1467.

- Misleading conclusions may be reached when tax preferences are ignored, as it happens in the comparison between Canada and the US.

The second study is that by Mintz [2001]. This study differs from the one discussed above in a number of ways. First, it includes only net payroll taxes, that is, tax revenues net of benefits paid. Second, it includes sales taxes. Third, PIT rates are marginal rates on the average labour earnings by industry and not average tax rates as in Ruggeri and Vincent [2000].

The results, however, lead to the same conclusion – namely that taxes on labour are higher in Canada than in the US. The tax rates reported by Mintz [2001] are higher than those in Ruggeri and Vincent [2000] because the former are expressed as a ratio to income net of taxes whereas the latter are expressed as a ratio to the tax bases which are measured in gross income. When the tax rates in Mintz [2001] are expressed as percentages of gross income, they are only moderately higher and the difference is partly due to the use of marginal instead of average tax rates for the PIT. Similar results were recently derived by Kesselman [2004]. Comparing the payroll tax system in Canada and the US, Kesselman concluded that “since US Medicare premiums, including both the employer and employee shares, add 2.9 percentage points to the taxes on labour incomes at the highest incomes, the top US federal MTR on labour income is 37.9 percent, nearly 9 percentage points above the current Canadian top federal MTR” [Kesselman 2004: 20].

**Table 17**  
**Effective Net Tax Rates on Labour, 2000**

|  | Canada | US   |
|--|--------|------|
| PIT plus payroll taxes net of benefits and sales taxes | 76.8   | 50.5 |
| PIT plus payroll taxes net of benefits                 |        | 43.3 |
| Based on net wages                                     | 62.3   | 30.2 |
| Based on gross wages                                   | 38.4   |      |

Source: Mintz (2001) Table 3, p. 86.

Note: Author's calculation

A direct comparison of the tax rates on capital income received by individuals contained in the two studies referred to above is not possible because of major differences in the methodology used in the two studies. However, combining the results from Mintz [2001] with those from Ruggeri and Vincent [2000] suggests that individuals are taxed at a lower rate on their income from capital in Canada because of the tax preferences for this type of income incorporated in the PIT. Corporations face higher marginal effective tax rates.

### ***The Medium Term***

We now turn to the future, starting with fiscal developments in the medium term – a few years into the future which allow for the implementation of tax changes already announced. The medium-term focus will help us to evaluate the fiscal effects of government decisions that have already been made, while the long-term horizon will help us understand the trends that are likely to be generated by the existing fiscal structures in the absence of discretionary policy decisions.

### ***Deficits and Debt***

We start with trends in deficits and debt over the period from 2002 to 2005. The information contained in Table 18 makes it evident that the fiscal stance of the governments of Canada and the United States will follow divergent paths over the medium term. All Canadian governments combined are expected to record budget surpluses, although probably at lower levels than projected because of the large deficits in some provinces. However, the expectation for the US is the continuation of budget deficits to levels that will represent a GDP share higher than the average share recorded on average per year during the period of high deficits in 1986-93. The increase in general US government deficits is more dramatic when the surplus of the social security fund is excluded from the calculations. In this case, the average deficit-to-GDP ratio per year during 2003-2005 will be higher than it was in any single year over the previous 17 years.

The divergent fiscal paths that will be followed by Canadian and US governments over the medium term are even more evident when the comparison is based on primary balances. During 2003-05, Canadian governments are expected to experience average annual primary surpluses of about 3 percent of GDP, while US governments are expected to record average annual primary deficits of 3.2 percent. Because the size of the national debt is also moving in opposite directions, interest payments as a share of GDP continue to converge between the two countries and, by 2005, this share in Canada (2.1 percent) will be only 0.3 percent higher than in the US. Given the periodic upward adjustments in the US federal deficit, this small difference may actually disappear as early as 2005.

These divergent fiscal paths will have an effect on the national debt. In Canada, the gross debt-to-GDP ratio as measured by the OECD is expected to continue to fall from 77.8 percent in 2002 to 70.8 percent in 2005. By contrast, that ratio is expected to continue rising in the US and reach 68.5 percent in 2005. In that year, the difference in the gross debt-to-GDP ratio between Canada and the United States will be just 2.3 percentage points. If the trends from 2003 to 2005

**Table 18**  
**General Government Surpluses or Deficits (-) and Debt as**  
**Percentage of GDP, Canada and the US, 2002-2005**

|                               | 2002 | 2003 | 2004 | 2005 |
|-------------------------------|------|------|------|------|
| Surplus (Deficit) Canada      | 0.8  | 1.0  | 0.7  | 0.8  |
| US, including Social Security | -3.4 | -4.9 | -5.1 | -4.9 |
| US, excluding Social Security | -5.0 | -6.6 | -6.9 | -6.8 |
| Primary Balances              |      |      |      |      |
| Canada                        | 3.3  | 3.3  | 2.9  | 2.9  |
| US                            | -1.4 | -3.2 | -3.4 | -3.1 |
| Net Debt Interest Payments    |      |      |      |      |
| Canada                        | 2.5  | 2.2  | 2.2  | 2.1  |
| US                            | 2.0  | 1.7  | 1.7  | 1.8  |
| Gross Debt                    |      |      |      |      |
| Canada                        | 77.8 | 75.6 | 73.6 | 70.8 |
| US                            | 60.8 | 63.4 | 66.0 | 68.5 |
| Net Debt                      |      |      |      |      |
| Canada                        | 38.0 | 35.0 | 32.8 | 30.4 |
| US                            | 44.4 | 46.9 | 49.5 | 52.0 |

Source: OECD (2004) Annex Tables 28, 30, 32, 33, 34.

continue in the future, the debt-to-GDP ratio will be lower in Canada as early as 2006. The ratio of the net debt-to-GDP, as measured by the OECD, was already lower in Canada in 2002 by 6.4 percentage points. This difference is expected to more than triple by 2005.

### ***Government Spending***

Detailed data on total government spending by function over the medium term are not available. Our discussion, therefore, is confined to the aggregate, using data published by the OECD.

Table 19 shows that, in Canada, the ratio of total government spending-to-GDP is expected to continue a declining trend that started in 1992. This ratio, which at its peak value in 1993 was 53.3 percent and had fallen to 40.6 percent in 2002, is expected to decline to 39.9 percent in 2005. By contrast, the spending-to-GDP ratio is expected to edge slightly upwards in the US from 35.5 percent in 2002 to 35.7 percent in 2005. The ratios projected by the OECD may understate the final outcomes due to substantial increases in US military spending and Medicare not included in the projections. The spending-to-GDP ratio still remains higher in Canada, but the gap is reduced from 5.1 percent to 4.2 percent. Our earlier analysis showed, however, that making the necessary adjustments to make the program spending data between the two countries comparable and adding the ratio of interest payments to GDP, yield a gap of 3.4 percentage points in 2001, whereas the gap based on OECD data was over 6 percentage points. This means that the difference in the spending-to-GDP ratio between Canada and the US in 2005 may be close to zero.

### ***Tax Rates***

The federal governments of both countries have already introduced major income tax reductions,

**Table 19**  
**General Government Spending as Percentage of GDP, Canada and the US, 2002-05**

| Total Spending | 2002 | 2003 | 2004 | 2005 |
|----------------|------|------|------|------|
| Canada         | 40.6 | 40.1 | 40.1 | 39.9 |
| US             | 35.5 | 35.9 | 35.7 | 35.7 |
| Gap            | 5.1  | 4.2  | 4.4  | 4.2  |

Source: OECD (2004) Annex Table 26.

some of which are being phased in over a period of years. Some information on changes that have already implemented or have been announced but will be implemented in the future is contained in Tables 20 to 22. The personal income tax changes have already been implemented in both countries and there are no major changes expected in the medium term. On the corporate side, the phased-in changes are only for Canada and include the elimination of the federal capital tax and reductions in federal and provincial corporate income tax rates. By 2008, the combined federal-provincial corporate tax rate in Canada will be below that of the US by 6.2 percentage points compared to less than one percentage point in 2003. It should be emphasized, however, that these comparisons are for the average of all provinces and states. Therefore, the gap between Canada and the US will differ considerably among selected pairs of provinces and states. The general conclusion is that the tax changes already announced will tend to reduce the tax burden on corporations in Canada relative to the US.

### ***Long-Term Prospects***

In the long run, what matters is the sustainability of the existing fiscal structures. If, for example, Canada currently had a fiscal structure that offered advantages over that of the US, in terms of lower tax burdens and public debt levels, but this structure were not sustainable over the long term, the comparison of current fiscal structures would be misleading because the current Canadian advantage would vanish over time. Because policy is directed at the future, it is essential to evaluate both the current fiscal structures and their dynamics over time. These dynamics have been analyzed through the use of two related techniques – fiscal balances and fiscal gaps.

Under the fiscal balances approach, government revenues and expenditures that will be generated by the existing tax and spending structures (under certain economic structures) and in the absence of future discretionary policies are projected into the future to determine whether they lead to chronic deficits or sustained surpluses. The fiscal gap approach also makes projections of primary balances (revenues minus program spending). However, while the fiscal balances approach incorporates projections of the interest payments on the federal debt directly into the projections of total government spending, the fiscal gaps approach excludes those payments, thus focussing on primary balances, but introduces the government's inter-temporal budget constraint. This constraint usually takes the form of an assumption with respect to the time path of the debt-to-GDP ratio such as a value of this ratio that in the final year of the projection period returns to the value that existed in the initial year. Comparisons of the Canadian and US fiscal systems in terms of both fiscal balances and fiscal gaps are discussed below.

### ***Fiscal Balances***

In a contribution to the analysis of fiscal federalism, Ruggeri, Van Wart and Howard [1993] argued that, when we compare the fiscal balances of federal and provincial governments to detect

**Table 20**  
**Personal Income Tax Changes Already Announced, Canada and the US**

| Canada  | US  |
|---|---|
| <i>Tax Brackets:</i> Indexed to inflation starting in 2001.   | Only the first tax bracket will be indexed for inflation, starting in 2004.   |
| <i>Personal Exemptions (non-refundable credits in Canada):</i> re-indexed for inflation, starting in 2001.  | The personal deduction was raised from \$6,000 to \$7,000 for a single filer and from \$12,000 to \$14,000 for a joint return.  |
| <i>Tax Rates:</i> Personal income tax rate reductions announced in 2001 have been fully implemented.  | The rate reductions announced in 2001 were accelerated in 2003. The rates shown in Table 5 are scheduled to hold until 2010.  |
| <i>Capital Gains:</i> Only 50% of realized capital gains are included in taxable income; this means that at the federal level, capital gains are subject to statutory tax rates ranging from 8% to 14.5%. | For low-income taxpayers (those in the first two tax brackets) the maximum rate is 5%, falling to zero in 2008; for those in the other tax brackets, the maximum rate is 15%. |
| <i>Dividends:</i> Preferential treatment (through a tax credit) under the PIT system, but less than full integration with the CIT.  | Same treatment as for capital gains; these tax reductions for dividends and capital gains are scheduled to expire after 2008.   |

**Table 21**  
**Phased-in Elimination of the Federal Capital Tax in Canada**

|                              | 2003  | 2004  | 2005  | 2006  | 2007  | 2008 |
|------------------------------|-------|-------|-------|-------|-------|------|
| Tax rate (%)                 | 0.225 | 0.200 | 0.175 | 0.125 | 0.065 | -    |
| Tax-free amount (\$ million) | 10    | 50    | 50    | 50    | 50    | -    |

**Table 22**  
**General Corporate Tax Rate Comparisons, Canada and the US, 2003 and 2008**

|   | 2003   |      |       | 2008   |      |       |
|---|--------|------|-------|--------|------|-------|
|   | Canada | US   | diff. | Canada | US   | diff. |
| Federal rate                                | 23.0   | 35.0 | -12.0 | 21.0   | 35.0 | -14.0 |
| Surtax                                      | 1.1    | -    | 1.1   | 1.1    | -    | 1.1   |
| Federal rate, including surtax              | 24.1   | 35.0 | -10.9 | 22.1   | 35.0 | -12.9 |
| Provincial-state average income tax         | 12.0   | 4.0  | 8.0   | 9.8    | 4.0  | 5.8   |
| Combined income tax rate                    | 36.1   | 39.0 | -2.9  | 31.9   | 39.0 | -7.1  |
| Combined tax rate (including capital taxes) | 39.4   | 40.0 | -0.6  | 33.8   | 40.0 | -6.2  |

the presence of vertical fiscal imbalances, we should not focus on the existing budget outcomes in a given period, but must concentrate on the dynamic implications of the existing fiscal structures. The same approach can be used to compare the dynamics of the fiscal structures of two countries. This methodology has recently been used in other studies to develop projections of vertical fiscal imbalances as a background to federal-provincial negotiations on health care financing. Two studies that have used this methodology will be reviewed in this report.

The first study is that of Ruggeri [2001], which was prepared for the provincial Premiers as a background paper for their negotiations with the federal government on health care financing. In developing the fiscal projections, Ruggeri started with Statistics Canada's medium population projection, which incorporates an average annual growth rate of 0.67 percent over the period from 2000 to 2020, and assumed employment growth of 1.28 percent per year and labour productivity growth of 1.30 percent per year, annual inflation of 2.04 percent and average annual growth of 2.59 percent for real GDP and 4.66 percent for nominal GDP. For federal personal income tax revenues, the author used the projections from the Fall 2000 Economic Statement and Fiscal Update for 2000 to 2004 and an elasticity of 1.25 with respect to nominal GDP for the rest of the projection years to take into account the re-indexing of the personal income tax. A similar approach was used for corporate income taxes with the difference that the GDP elasticity was reduced to one. GST revenues were also assumed to grow at same rate as the growth of nominal GDP, while other revenues – which represent a small portion of revenues – were projected to increase roughly in line with inflation.

On the spending side, Old Age Security pensions and child benefits were projected to increase at the combined rate of population growth and inflation while GIS and Allowance payments were projected to increase at the rate of inflation alone. CHST cash payments followed the First Ministers Agreement until 2005-06 and then were kept constant at the same level for the rest of the projection period. Equalization payments were assumed to increase at an average annual rate of 2.5 percent. All other expenditures combined were projected to grow at about 2.5 percent per year, roughly the combination of inflation and population growth. In order to test for the sensitivity of the results to alternative assumptions, projections were developed for five scenarios.

1. Base Case. This case incorporates a moderate growth rate of health care spending (5.3 percent per year) and makes no allowance for a contingency reserve. No amount of any surplus is used for debt repayment.
2. Variant 1. This variant starts with the surplus (deficit) in the base case and subtracts a contingency reserve equal to 2 percent of revenues.
3. Variant 2. This case makes no allowance for a contingency reserve, but incorporates a half a percentage point increase in the annual growth of health care spending.

4. Variant 3. This case combines variants 1 and 2.
5. Variant 4. This variant starts with the base case, but allows governments to use 50 percent of any surplus to pay down the debt.

Three major observations will be made on the projections contained in Table 23. First, the projections of revenues and expenditures are derived by tracing their time-path that will result from the existing fiscal structures, without taking into account potential future corrective measures. Therefore, the projected values for revenues and expenditures so derived should not be treated as forecasts against which to compare actual outcomes. Rather, they represent the values that would materialize under certain assumptions about trends in selected demographic and economic variables and the assumption that the current fiscal structure remains unchanged over the projection period.

Second, the federal government had in place in 2000 a fiscal structure capable of generating large and increasing surpluses over time. Although provincial governments as a group may have small surpluses or deficits, depending on the assumptions used, the total government sector is expected to record surpluses that will increase over time. This means that the ratio of the national debt-to-GDP is projected to fall in the future because of increases in nominal GDP and no increases in the level of the national debt.

Finally, Table 23 highlights the importance of taking a long-term look when evaluating fiscal structures. The federal surplus, which is projected to range between \$2.2 and \$7.5 billion in 2004-05 under the 2000 fiscal structure, would rise to over \$100 billion in 2019-20 if no changes were made to revenues or expenditures.

**Table 23**  
**Federal and Provincial Surplus (Deficit) under Alternative Scenarios, \$billions**

| Fiscal Year | Basic Case |       | Variant 1 |       | Variant 2 |       | Variant 3 |        | Variant 4 |       |
|-------------|------------|-------|-----------|-------|-----------|-------|-----------|--------|-----------|-------|
|             | Fed.       | Prov. | Fed.      | Prov. | Fed.      | Prov. | Fed.      | Prov.  | Fed.      | Prov. |
| 1999-2000   | 4.9        | (1.2) | 1.4       | (5.0) | 4.9       | (1.2) | 1.4       | (5.0)  | 4.9       | (1.2) |
| 2004-2005   | 6.3        | (5.2) | 2.3       | (9.7) | 6.2       | (7.0) | 2.2       | (11.5) | 7.5       | (6.4) |
| 2009-2010   | 39.1       | 0.3   | 34.0      | (5.1) | 38.9      | (4.2) | 33.8      | (9.6)  | 44.5      | (1.9) |
| 2014-2015   | 77.1       | 2.7   | 70.8      | (3.7) | 76.8      | (6.2) | 70.5      | (12.9) | 94.1      | 0.8   |
| 2019-2020   | 126.2      | 5.5   | 118.3     | (2.2) | 125.7     | (9.7) | 117.8     | (17.4) | 165.2     | 4.2   |

Similar methodology was used by the Conference Board of Canada [2002] in a report that analyses the fiscal prospects for federal and provincial/territorial governments. The demographic and economic assumptions are very close to those used by Ruggeri [2001]. Population is projected to grow at an average annual rate of 0.7 percent from 2001-02 to 2019-20, real GDP by 2.53 percent, the Consumer Price Index (CPI) by 2.2 percent (higher than the growth of the GDP deflator) and nominal GDP by 4.3 percent.

On the government revenue side, PIT and CIT revenues are projected on the basis of in-house econometric models, GST revenues are assumed to increase in line with nominal taxable consumption, and the Employment Insurance (EI) contribution rate is assumed to fall to \$1.70 for \$100 of insurable earnings in 2007 and to remain at the level thereafter. Revenues from other taxes increase roughly in line with inflation and population growth.

On the spending side, four groups of expenditures can be identified: (a) elderly benefits, (b) health care and education, (c) intergovernmental transfers, which are expenditures for the federal government and revenues for the provincial governments, and (d) all other spending. Old Age Security expenditures are projected to increase in line with inflation and demographic changes while Guaranteed Income Supplement outlays are raised in line with inflation only. Health care spending is projected on the basis of historical trends in real expenditures per person in each of eighteen age groups by gender. The average annual growth rate of health care spending is projected at 5.2 percent. Regression results of historical trends are also used for education, which is projected to increase at an average annual rate of 3.2 percent due to declining student population. Equalization payments are projected to increase in line with GDP, while CHST payments are assumed to follow the First Ministers agreement until 2005-06 and then are projected to be adjusted annually by the combined rate of inflation and population growth. All other expenditures are projected at the average of two growth rates, that of nominal GDP and that of the combination of inflation and population growth. Finally, deficits add to the debt and surpluses are used entirely to reduce the debt.

The results, presented in Table 24, show a similar pattern of fiscal balances as alternatives 1-3 in the Ruggeri [2001] study – namely increasing surpluses for the federal government and small but increasing deficits for the provincial governments. The major difference between the two studies is the projection of lower surpluses for the federal government and higher deficits for the provincial governments (except for alternative 3). The conclusion in Ruggeri [2001] – that the combined fiscal structures of federal and provincial governments is capable of generating increasing surpluses over time – is supported by the results of the Conference Board study.

Fiscal projections for the US federal government are routinely prepared by the Congressional Budget Office (CBO) and the Office of Management and Budget (OMB). We present the CBO's January 2004 projections primarily because their projection period extends to 2014 while that of the OMB stops at 2008. For the common projection period, however, the two projections yield very similar federal budget balances. In its projections, the CBO assumed an average annual growth rate

**Table 24**  
**Projections of Federal Fiscal Balances in Canada: 2000 to 2020, \$billions**

| Selected Years | Surplus (Deficit) |            |       |
|----------------|-------------------|------------|-------|
|                | Federal           | Provincial | Total |
| 2000-01        | 17.1              | 12         | 29.1  |
| 2004-05        | 2.8               | -2.4       | 0.4   |
| 2009-10        | 16.2              | -6.3       | 9.9   |
| 2014-05        | 40.1              | -11.2      | 28.9  |
| 2019-20        | 85.5              | -12.3      | 73.2  |

Source: Conference Board (2002), Appendix Tables 2B and 3A.

of 2.8 percent for real GDP, 2.0 percent for the GDP deflator and the CPI, and 4.8 percent for nominal GDP during the period from 2003 to 2014. The CBO also assumed that the unemployment rate will fall steadily from 6.0 percent in 2003 to 5.2 percent by 2014. In addition, the yield on the 10-year treasury note is projected to rise from 4.6 percent in 2003 to 5.5 percent in 2014. Federal revenues and expenditures are projected on the base of detailed models for each item. They also incorporate the following assumptions: (a) the tax cuts will expire in 2010, (b) spending on discretionary programs will increase at the rate of inflation, and (c) no policy changes will be made. The CBO's projections of federal fiscal balances are shown in Table 25.

Inspection of Table 25 leads to the following conclusions. First, budgetary transactions generate deficits for each year of the projection period, even under the assumption that the tax cuts are temporary. Second, even when the surpluses from Social Security trust funds and the net remittances from the Postal Service are included, the federal budget balances are in the red for the

**Table 25**  
**CBO's Baseline Projections of Federal Government**  
**Surpluses (Deficits), 2002-2014, \$ billions**

|            | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|
| On-Budget  | -536 | -631 | -535 | -464 | -477 | -504 | -507 | -511 | -421 | -299 | -294 | -277 |
| Off-Budget | 161  | 154  | 174  | 195  | 211  | 226  | 239  | 249  | 259  | 279  | 278  | 290  |
| Total      | -375 | -477 | -362 | -269 | -267 | -278 | -268 | -261 | -162 | -24  | -16  | 13   |

Note: The off-budget line includes the surpluses in the Social Security trust funds and the net cash flow of the Postal Service.

Source: CBO (2003), Summary Table 1.

whole period, except the last year. Commenting on these projections, the CBO emphasized two major issues. First, if the tax cuts were made permanent, the small surplus of \$13 billion projected for 2014 would turn into a deficit of \$443 billion in 2014. Second, over the long run, the fiscal pressures arising from increasing demand from the major entitlement programs – Social Security, Medicare and Medicaid – could not be alleviated by economic growth alone.

In comparing the projections for Canada and the US, two points should be stressed. First, as pointed out earlier, these projections are not forecasts. As governments make projections of their fiscal position in the future arising from the existing fiscal structure, they make adjustment to revenues or expenditures. These adjustments change the fiscal structure and, as a result, alter the pattern of future fiscal balances. Second, the adjustments that may be made by the two countries to their future fiscal structures are likely to differ dramatically. In Canada, the federal government has the option of a combination of tax reduction, spending increases and debt reduction. In the US, the federal government will be forced to raise taxes or reduce spending if it does not want to see its debt-to-GDP ratio increase over time.

### *Fiscal Gaps*

A direct comparison of the federal finances of the two countries in terms of fiscal sustainability has recently been provided by Kennedy and Matier [2002], hereafter called KM, who used the “fiscal gap” methodology. Following Blanchard et al. [1990] and Auerbach [1994], KM define the sustainability of the current fiscal system as a debt-to-GDP ratio that in the final period of the projections returns to the level in the initial period.

Fiscal gaps do not provide information on future deficits or surpluses. For example, a fiscal gap of zero may be associated with projections of deficits every year as long as these deficits grow at the same rate as GDP. They provide information on what kinds of fiscal adjustments may be needed to ensure that the above condition of sustainability is fulfilled. Within this framework, zero or negative gaps indicate that the current fiscal structure is sustainable in the sense that the stream of future primary balances is capable of returning the debt-to-GDP ratio in the final period to the level in the first period. Positive fiscal gaps indicate that the current fiscal structure is unsustainable because the future stream of primary balances is insufficient to meet the above condition of sustainability.

In comparing fiscal gaps between Canada and the United States, it is important to take into account the different treatment of Social Security and the Canada Pension Plan. In Canada, the CPP is not part of the federal government fiscal structure. Therefore, any surpluses or deficits in the CPP account do not affect the federal fiscal position. In the US, the Social Security fund is part of the unified budget, therefore, its budget balance is affected by the position of the Social Security fund. Currently, the Social Security system is generating surpluses and, as a result, is reducing the US

government's market debt. This system is expected to generate deficits starting in 2017. In the future, the Social Security fund will increase the federal market debt and will make achievement of fiscal sustainability more difficult. In order to provide consistent comparisons of fiscal gaps, KM incorporated projections of the CPP account into their estimation of fiscal gaps for Canada. Their results show negative fiscal gaps for the CPP, thus indicating that this public pension system in Canada is sustainable over the projection period, which ends in 2075.

The estimates of the US fiscal gap are those developed by the General Accounting Office (GAO) and are based on the economic and fiscal assumptions contained in the January 2002 fiscal outlook by the CBO. In the GAO projections, discretionary spending is kept constant as a share of GDP after 2002, spending on Social Security and Medicare is based on Fund Trustees' estimates, and spending on Medicaid is based on CBO's January 2002 long-term projections. The June 2001 tax cut package is assumed to be implemented according to the approved schedule and is made permanent; tax revenues are held constant as a share of GDP.

The estimation of the fiscal gaps for Canada is based on the following assumptions. KM divide federal spending into three major categories: (a) elderly benefits (Old Age Security, Guaranteed Income Supplement and the Allowance) and Employment Insurance benefits, (b) other direct program spending, and (c) intergovernmental transfers. For the first group, they calculate spending by single year age group in the base year and increase it by 2 percent for inflation and an enrichment factor of 1.5 percent per year. The projections of total spending are obtained by combining these cost estimates per age group with population projections. For other direct program spending, the projections follow the 2001 Budget forecasts to 2003-04 and then assume a constant ratio of this spending to GDP. With respect to intergovernmental transfers, KM assume that equalization payments will grow at the rate of GDP and CHST payments will follow the First Ministers' agreement to 2005-06 and then will grow at a rate of 3.5 percent per year. Other transfers are projected to increase at the same rate as GDP. Federal revenues are assumed to follow the path laid out in the 2001 Budget to 2006-07 and thereafter will increase at the same rate as GDP. The projected fiscal gaps for Canada and the US are shown in Table 26.

**Table 26**  
**KM's Projections of Federal Fiscal Gaps in Canada and the US, Percentage of GDP**

|        | Through 2025 | Through 2050 | Through 2075 |
|--------|--------------|--------------|--------------|
| US     | 0.2          | 2.5          | 4.1          |
| Canada | -2.1         | -1.6         | -1.6         |

Note: Fiscal gaps include Social Security in the US and Canada Pension Plan in Canada.  
Source: Kennedy and Matier (2002), Table 2, p.14.

Inspection of Table 26 leads to the following observations. First, the positive gap in the US indicates that the current federal fiscal structure in that country is unsustainable over the long term in the sense that it would lead to rising debt-to-GDP ratios. Second, these fiscal gaps are projected to increase in size over time. As pointed out by KM, these positive and increasing fiscal gaps indicate that “the US will likely face very difficult decisions down the road, and that it will need to raise taxes by a significant amount and/or drastically cut spending in order to maintain control over its debt” [Kennedy and Matier 2002: 14]. Third, Canada’s current fiscal structure is sustainable in the long run because its fiscal gap is negative and it remains stable over a long period.

KM’s fiscal gap analysis highlights how short-term comparisons of tax structures and debt levels between Canada and the United States may lead to misleading conclusions and possibly unwise policy recommendations. KM points out that: “the US fiscal gap estimates indicate that the fiscal outlook for the US is unsustainable” and that “the recent round of tax cuts and market debt reduction in the US will not be sustainable. Moreover, the fiscal gap analysis demonstrates that when the broad picture is taken into account, Canada’s long-term fiscal position is more favourable than that of the US” [Kennedy and Matier 2004: 14].

### ***Concluding Comments***

The findings presented in this paper indicate that comparisons of the Canadian and US fiscal regimes are complex exercises that do not lead to simple answers. When the focus is on the elements of the existing structures and their outcomes in the present, the conclusions are ambiguous.

The US has a lower overall tax burden as measured by the ratio of tax revenue to GDP. The ratio in the US, however, would be similar to that of Canada if the large budget deficits in the US were financed through current taxation. The tax structures of the two countries are very similar. The major difference is the relatively greater reliance by the US on payroll taxes and the relatively greater reliance by Canada on consumption taxes. Moreover, because of wide interprovincial and interstate differences in income taxes, the tax differences between the two countries cannot be generalized to all regions.

The US also has a lower ratio of government spending to GDP, but this difference is quite small and cannot be automatically treated as a competitive advantage. There is no theoretical foundation to the proposition that a smaller government, in terms of the level of the spending-to-GDP ratio, leads to greater economic efficiency than a larger government. If a larger government is associated with additional spending on programs that strengthen the nation’s capacity for sustained growth and human development, the “additional size,” may enhance economic efficiency. When we focus on fiscal aggregates, Canada has an advantage on current balances because all governments

combined are in a small surplus position while in the US they have a large deficit. With respect to government liabilities, Canada has a higher ratio of gross debt-to-GDP, but a lower ratio of net debt-to-GDP.

When the comparison is based on the dynamics of the fiscal systems of the two countries, Canada has a decisive advantage. In the absence of discretionary policies, the combined fiscal system of federal and provincial governments is projected to generate surpluses that will increase over time. By contrast, the US federal fiscal system is projected to generate potentially large deficits for the foreseeable future. As a result, Canada can count on a steady and rapid decline in its debt-to-GDP ratio while the US may face an increasing ratio.

There is no justification to pursue tax and spending policies that are guided by the desire to match a fiscal system that has been found to be unsustainable over the long run. A similar conclusion was reached by Kesselman [2004: 7] who suggests that “it would hardly be prudent for Canada to cut its tax rates to imitate US tax rates that, in the long run, are unsustainable and some of which are already slated to rise.”

These conclusions do not imply that Canada should be satisfied with the status quo. Rather, they indicate that Canada has the flexibility to develop domestic policies unencumbered by major concerns about fiscal competitiveness with the United States. The outline of an approach to domestic policy that is aimed at strengthening the economic and social foundation of this country and reinforcing the values that help cement social cohesion and our institutions of cooperative federalism is presented in the second paper.

## **ELEMENTS OF A DOMESTIC POLICY STRATEGY**

Joe Ruggeri

### ***Globalization and the Scope of Domestic Policy***

The first paper in this monograph presented a comparison of the fiscal systems of Canada and the United States and evaluated their long-term sustainability. That paper concluded that Canada has a fiscal advantage over the United States. How can this fiscal advantage be turned into an instrument of economic growth and human development? That is the question addressed in this paper.

In order to provide a meaningful answer, we must place the question within the broader context of globalization and we must first address a more fundamental question: Can nation-states design and implement domestic policies that will be effective in addressing domestic issues?

No consensus on this issue can be found among economists, business leaders, social advocates and public decision-makers. Business leaders view globalization as an irresistible force that will re-shape the roles of government worldwide. The role of domestic policy is to accommodate this force because, in their view, it will lead to expanded world trade, higher global growth and higher living standards. Social advocates see globalization partly as a destructive force which will lead to greater income inequality and even social polarization, the demise of redistribution policies, and the gradual disappearance of the national identity. They advocate international efforts at curbing the spread of globalization and the use of domestic policies to mitigate its effects on the economic structure and the social fabric of society.

Economists are also divided on this issue. For example, according to Courchene [2001: 6], “powers are being transferred upward, downward and outward from central governments of nation states and, in particular, from central government of federal states.” He argues that there will be a “re-shuffling of the division of powers within Canada” and suggests that the fundamental question to be addressed by policy-makers is “how do we ensure international economic integration does not lead to domestic social disintegration?” [Courchene 2001: 8]. Mintz focuses on the fiscal system as an instrument of international competitiveness, a position similar to that of business leaders. He argues that the role of government will be re-shaped by competition among countries to attract firms and skilled workers. In his view, this competition “will mean that the jurisdictions that provide the best package of spending and taxes will be able to attract jobs and people” [Mintz 2001: 3].

The notion that globalization has emasculated the policy capacity of nation-states is downplayed by Helliwell [2002], who provides a systematic review of the literature, including his own research, on the issue of whether borders matter. This review focuses on three aspects of globalization: (a) the movement of goods (trade), (b) the movement of people, and (c) the movement of capital. With respect to trade, Helliwell starts with the seminal paper by McCallum [1995] which analyses economic linkages between different economic units in terms of their size, the distance between them and whether they are part of a nation-state (the border effect).

McCallum's analysis showed that in 1988, interprovincial trade flows were more intense than those between Canadian provinces and US states. These results were replicated by subsequent research [Helliwell 1998] and reinforced by the findings of Engel and Rogers [1996] that price linkages are stronger between pairs of national compared to international cities. As discussed in the first paper, initial results supporting the link between tax differentials and migration of skilled workers to the US were contradicted by a variety of studies which showed: (a) that this migration flow was smaller than generally believed, and (b) that the effect of tax differentials on migration is not strong. Helliwell and McKittrick [1999: 11] also found some border effects in the case of capital flows. Combining these three aspects of globalization, Helliwell [2002: 11] concluded that "there is much more scope and need for national policies than one would think from widespread media and other commentaries about the irrelevance of the nation-state."

All the different views on the constraints that may be imposed by globalization on domestic policy discussed above acknowledge the need for domestic policies. Where they differ is with respect to the scope and direction of these policies.

Business leaders want governments to focus exclusively on economic policy, with particular emphasis on competitiveness and particularly tax competitiveness, and to reduce their involvement in redistribution policies even in the case where international market forces aggravate inequality of opportunities and outcomes. The general idea behind this approach is that redistribution reduces the size of the economic pie (the trade-off between equity and efficiency) while growth creates the opportunity for improving everyone's living standard by expanding the size of that pie.

Similar views are expressed in Mintz [2001]. Envisioning the rise of Canada as a "northern tiger," Mintz proposes a package of fiscal reforms that involve: (a) smart debt finance, (b) smart spending, and (c) smart taxation. His package of reforms includes: (a) a reduction in the total government debt-to-GDP ratio to 25 percent in the next 10 to 15 years, (b) operating Employment Insurance and health care largely on insurance principles, improving education and infrastructure and targeting social benefits, and (c) rely more on benefit taxation and consumption taxes.

The 'northern tiger' vision of Canada is also reflected in Kesselman's [2004] tax reform program. His main recommendations for tax reform are: (a) a further shift towards a consumption

base in the personal income tax accompanied by lower tax rates for middle-income Canadians, experience rating of firms for Employment Insurance premiums, provincial sales taxes transformed into direct consumption taxes, the tax burden on businesses reduced through the elimination of capital taxes, additional cuts to corporate income taxes and improved depreciation provisions, and the introduction of a federal general payroll tax to pay for the above tax cuts.

Courchene addresses the challenges that Canadians will face if they commit themselves “to making the dramatic transformation from a resource- and physical capital-based economy and society to a human capital-based economy and society” [Courchene 2001: 288]. He aims for a balance between competitiveness and societal cohesion. He also emphasizes that we must rethink the role and structure of social programs by recognizing that these programs, which include health care and education, are “both social and economic instruments” and “are major economic motors ... in their own right” [Courchene 2001: 11]. On the tax side, Courchene proposes lower taxes on mobile factors and shifting the burden of taxation from income to consumption, a policy package similar to that advocated by Mintz. Unlike Mintz, however, Courchene does not treat a reduction in the public debt level as a high policy priority. Instead, he suggests that we focus on the debt-to-GDP ratio and promote this decline by avoiding deficit financing and stimulating economic growth. He seems to concede lack of flexibility in economic policy and emphasizes social policy.

Helliwell [2002] does not provide a specific program of domestic policies. Instead, he provides evidence of “the importance of the social and institutional fabric of society” and stresses “the need for policies to take these fully into account” [Helliwell 2002: 11]. In his view, “geography and borders matter and ... geographic and political separations are likely to reflect current and continuing differences in values and preferences.” Accordingly, he considers it “desirable to have education, health, social and other domestic policies that reflect domestic preferences” [Helliwell 2002: 11].

The above studies have helped shape my own thinking on Canadian public policy. The package of policies that resulted from my own interpretation of these and other studies, however, is sufficiently different that it justifies a separate presentation. In developing such a policy package, proper recognition was given to the fact that, in a world where technology is shrinking economic space and time, domestic policy cannot be formulated in a vacuum nor can it be left unattended for too long. I also accepted Helliwell's conclusion that there is ample room for policies that reflect Canada's history, the institutions that have been developed over one-and-a-half centuries, and the fundamental values upon which both institutions and policies have been built. As we look ahead to the future, we must be alert to changes in world affairs, but we must not allow those changes to reshape our values. Instead, we must use those values as anchors that hold us together even when the sea of change becomes stormy. This is the conceptual framework that forms the foundation to the domestic policy proposals presented in this paper.

## ***The Policy Framework***

At the basic fiscal level, the fundamental policy choice is how to balance the claims of debt reduction, spending increases and tax reductions on the expanding federal fiscal room. This paper places this choice within a broader policy framework, which rests on four fundamental pillars: (a) maintaining a sustainable fiscal structure, (b) developing more effective institutions and practices of cooperative federalism, (c) enhancing the mechanisms and forces of social cohesion, and (d) strengthening the foundations of balanced and sustainable growth.

### ***Debt Policy***

Whether the federal government should use part of its growing surplus to reduce the federal debt is a topic that is being debated among economists and policy-makers. In the 2004 federal Budget, the Minister of Finance announced a plan of debt repayment aimed at reducing the federal debt-to-GDP ratio to 25 percent in ten years. IRPP [2004] recently published a volume dedicated to this issue and containing papers on various aspects of debt financing by leading Canadian economists. Four major criteria may be used to evaluate debt repayment policies: (a) fiscal sustainability, (b) efficiency, (c) intergenerational equity, and (d) risk and financial flexibility.

### ***Fiscal sustainability***

Debt repayment is sometimes justified on grounds that it is needed to restore the sustainability of a given fiscal structure. Economists define fiscal sustainability in terms of the time path of the debt-to-GDP ratio during the selected period of time. The most common assumption used in determining fiscal sustainability is that the debt-to-GDP ratio in the final period returns to its value in the initial period. This assumption was used in the Kennedy-Matier [2001] study that was discussed in the first paper and was based on the analysis developed by Blanchard et al. [1990] and Auerbach [1994].

Canada has exceeded this test of fiscal sustainability for several years. As stressed in the 2003 federal Budget, “the federal debt-to-GDP ratio fell to 46.5 per cent in 2001-02. It has come down nearly 20 percentage points from its peak of 66.4 per cent in 1995-96” [Department of Finance 2003: 205]. That Budget also emphasized Canada’s superior performance (including also provincial/territorial governments) within an international context by pointing out that: “Canada’s total government tax burden is now below the G7 average ... and that Canadian and US total government debt burdens are expected to converge by 2004” [Department of Finance 2003: 206].

This trend is expected to continue in the future. Alternative paths of the debt-to-GDP ratio for the federal government and federal/provincial/territorial governments combined are shown in Table 27. Interpreting this table requires some explanation.

First, I focus on net debt, a commonly-used concept defined as the difference between gross financial liabilities and financial assets. In my calculations, I used the value of net debt found in the study by the Conference Board [2002], also referred to by TD Economics as taxpayer-supported debt. In fiscal year 2002-03, it is lower than the value of federal net debt found in the Department of Finance's *Fiscal Reference Tables 2003* by \$26.7 billion and higher than the provincial/territorial net debt by \$11.4 billion. The difference in the combined federal/provincial/territorial net debt, therefore, is quite small and is equivalent to about one percent of GDP. Second, the nominal GDP values are from the projections contained in the Conference Board study [2002]. Third, the debt-to-GDP ratios were calculated for three scenarios. The base case (scenario 1) assumes that no amount of any federal surplus is dedicated to debt reduction. The second scenario represents the "Goodale plan," which includes an amount of debt repayment needed to reduce the federal debt-to-GDP ratio to 25 percent in ten years. The third scenario portrays the "expanded Goodale plan" where debt repayment continues at the rate of \$7.5 billion per year until the federal debt is eliminated.

Inspection of Table 27 leads to the following observations:

- The federal debt-to-GDP ratio is projected to fall rapidly even without debt repayment. It will fall below 25 percent in 2018 and below 23 percent in 2020. Correspondingly, the combined federal/provincial/territorial debt-to-GDP ratio falls below the 50 percent mark in 2012 and below the 40 percent mark in 2020. In 2017, the combined debt-to-GDP ratio will be lower than the federal ratio in 2004.
- Under the Goodale plan, the 25 percent mark is reached four years earlier. In that fiscal year (2013-14), the federal and combined government debt-to-GDP ratios would be 4.1 percentage points lower than under the base case (no debt repayment).
- The decline in the debt-to-GDP ratio after 2013-14 is faster under the expanded Goodale plan because debt repayment continues until the federal debt is eliminated. The 25 percent mark is still reached in ten years, but by 2020 the debt-to-GDP ratio is lower than in the base case by 5.2 percentage points for both the federal and combined governments.

There seems to be a fascination among politicians with setting targets for the debt-to-GDP ratio as a commitment to fiscal discipline. At the federal level, for example, when this ratio was pushing towards the 100 percent mark, cutting it to 50 percent was considered a desirable target. Now that the initial target has been exceeded, the new target has been set at 25 percent in ten years. The reality is that, as long as there is positive growth in nominal GDP, there will be a steady and substantial decline in the debt-to-GDP ratio if we simply maintain balanced budgets. Therefore, any target for this ratio lower than the current level will automatically materialize in the future. For example, under the assumptions about economic growth incorporated in the Conference Board projections, the 25 percent target for the federal government would be reached in 15 years. Under the Goodale and expanded Goodale plan, this target will be reached four years earlier. The funda-

**Table 27**  
**Ratio of Net Debt-to-GDP in Canada under Alternative Scenarios, Federal and Combined Federal/Provincial, Selected Years from 2003-04 to 2019-20**

| Fiscal year ending March 31 | Debt-to-GDP Ratio (%) |       |              |       |                       |       |
|-----------------------------|-----------------------|-------|--------------|-------|-----------------------|-------|
|                             | Base Case             |       | Goodale Plan |       | Expanded Goodale Plan |       |
|                             | Federal               | Total | Federal      | Total | Federal               | Total |
| 2004                        | 43.8                  | 64.7  | 43.8         | 64.7  | 43.8                  | 64.7  |
| 2005                        | 42                    | 62.2  | 41.6         | 61.8  | 41.6                  | 61.8  |
| 2006                        | 40.4                  | 60    | 39.8         | 59.4  | 39.8                  | 59.4  |
| 2007                        | 38.8                  | 58    | 37.9         | 57.1  | 37.9                  | 57.1  |
| 2008                        | 37.1                  | 55.8  | 35.8         | 54.4  | 35.8                  | 54.4  |
| 2009                        | 35.6                  | 54    | 33.7         | 52.1  | 33.7                  | 52.1  |
| 2010                        | 34.2                  | 52.2  | 31.8         | 49.8  | 31.8                  | 49.8  |
| 2011                        | 32.9                  | 50.7  | 30           | 47.8  | 30                    | 47.8  |
| 2012                        | 31.6                  | 49.2  | 28.3         | 45.9  | 28.3                  | 45.9  |
| 2013                        | 30.3                  | 47.8  | 26.6         | 44.1  | 26.6                  | 44.1  |
| 2014                        | 29.1                  | 46.4  | 25           | 42.3  | 25                    | 42.3  |
| 2015                        | 27.9                  | 45.1  | 24           | 41.2  | 23.6                  | 40.8  |
| 2016                        | 26.8                  | 43.8  | 23           | 40    | 22.2                  | 39.2  |
| 2017                        | 25.6                  | 42.5  | 22           | 38.9  | 20.9                  | 37.8  |
| 2018                        | 24.6                  | 41.3  | 21.2         | 37.9  | 19.8                  | 36.5  |
| 2019                        | 23.6                  | 40.2  | 20.3         | 36.9  | 18.6                  | 35.2  |
| 2020                        | 22.7                  | 39.1  | 19.4         | 35.8  | 17.5                  | 33.9  |

mental policy questions to be asked in this respect are: (a) what do we gain from this accelerated reduction in a debt-to-GDP ratio which is already lower than the G7 average and will be lower than the US in a couple of years, and (b) can greater gains be achieved from fiscal re-structuring that maintains fiscal sustainability while strengthening federalism and the social and economic foundations of Canada? The first question will be discussed below while the second question will be addressed in a subsequent section.

## *Efficiency*

Debt financing may affect economic efficiency through a variety of channels, including (a) saving responses by individuals, (b) changes in distortionary taxation, (c) risk, and (d) the operation of the capital market. The saving response effect operates in the following manner: Financing today's public spending through public borrowing prevents a current tax increase, but requires higher taxes in the future.

If households are forward-looking, they will foresee the future tax increases and will increase their saving rate in order to finance the future tax increases (Ricardian equivalence). In this case, the increase in private savings will offset the funds siphoned off by public borrowing and there will be no crowding out of private investment.

If households fail to make the full saving adjustment, there will be a reduction in the amount of domestic savings, which will have a negative effect on domestic investment and the level or growth of output. If governments raise revenues largely through taxes that distort the decisions of households and firms, the higher future tax liability associated with deficit financing will lead to the mis-allocation of resources and lower future income and consumption.

Deficit financing may also create some uncertainty about government policy and its approach to the public debt. For example, if private agents believe that government will try to reduce its debt burden by "inflating it away" through expansionary monetary policy, they may require a risk premium on government bonds. This risk premium, in turn, would likely raise the cost of borrowing for both governments and the private sector, thus depressing investment and output. On the positive side, the government debt helps diversify the choices available to savers by providing a relatively safe and liquid financial instrument. This effect may be particularly beneficial to institutional investors such as pension funds.

Measurements of the potential efficiency gains from debt repayment using different models have been developed by Dahlby [2004], James [1994] and Macklem, Rose and Tetlow [1994]. Dahlby used an endogenous growth model placed within a closed economy framework with full Ricardian equivalence and distortionary income taxation, which affects only the saving decision, to measure the efficiency gains of reducing the debt-to-GDP ratio by 50 percentage points. He estimated that doubling the debt-to-GDP ratio from 50 percent to 100 percent would generate "only very modest declines in investment and the growth rate" [Dahlby 2004: 226]. According to his calculations, the investment rate would fall by 0.8 percentage points and the growth "by just under one tenth of a percentage point." This means that permanently lowering the debt-to-GDP ratio from 100 percent to 50 percent would raise the growth rate of GDP by slightly less than one-tenth of one percentage point.

James used a dynamic computable general equilibrium model incorporating exogenous growth and variable labour supply within an open economy with imperfect substitutability between domestic and foreign assets. This model, which was calibrated to 1991 data, measures the short-term and long-term effects of having higher distortionary taxes today in order to finance debt repayment that will produce lower debt and lower taxes in the future. He performs two experiments to measure the effects of a 10 percent reduction in the level of the public debt. The first experiment involves the use of wage taxes to finance the debt reduction. His general conclusion is that “initial agent welfare declines significantly ... while steady state welfare increases marginally” [James 1994: 1992]. The steady-state increase in the level of GDP is one-tenth of one percent; it takes 67 years from the wage tax to fall below its pre-experiment level, and the reduction is very small (less than one-third of a percentage point). In the second experiment, the distortionary tax is a corporate tax. In this case, the initial negative effects are smaller and the steady-state increase in GDP is double that under the wage tax.

Macklem, Rose and Tetlow used a calibrated macroeconomic model, which incorporates exogenous growth within an open economy with perfect substitutability between domestic and foreign assets, to estimate the efficiency effects of selected reduction in the debt-to-GDP ratio. In their most general simulation – which includes partial Ricardian equivalence, distortionary taxation on labour, and foreign borrowing which creates a wedge between GDP and consumption – they estimated that a permanent 20 percentage points reduction in the debt-to-GDP ratio, say from 60 percent to 40 percent, would raise the steady-state level of GDP by 0.4 percentage points and consumption by 1.6 percent. Macklem [2004] compared the estimates of the long-run effect of a given reduction in the debt-to-GDP ratio in the three studies discussed above, where the long run is approximated by 30 years. According to his calculations, a permanent reduction in the debt-to-GDP ratio from 80 percent to zero would result in an increase in the level of consumption 30 years later of

**Table 27**  
**Ratio of Net Debt-to-GDP in Canada, Federal versus Provincial,**  
**Selected Years from 1997-98 to 2019-20**

| Fiscal year ending March 31 | Base Case |            | Goodale Plan |            | Expanded Goodale Plan |            |
|-----------------------------|-----------|------------|--------------|------------|-----------------------|------------|
|                             | Federal   | Provincial | Federal      | Provincial | Federal               | Provincial |
| 1998                        | 65.0      | 28.9       | 65.0         | 28.9       | .05                   | 28.9       |
| 2003                        | 46.7      | 22.0       | 46.7         | 22.0       | 46.7                  | 22.0       |
| 2005                        | 42.0      | 20.2       | 41.6         | 20.2       | 41.6                  | 20.2       |
| 2010                        | 34.2      | 18.0       | 31.8         | 18.0       | 31.8                  | 18.0       |
| 2015                        | 27.9      | 17.2       | 24           | 17.2       | 23.6                  | 17.2       |
| 2020                        | 22.7      | 16.4       | 19.4         | 16.4       | 17.5                  | 16.4       |

9 percent in Dhalby's study, 8 percent in James' study and 7.4 percent in the study by Macklem, Rose and Tetlow.

These results cannot be applied directly to the current situation because they involve a permanent reduction in the debt-to-GDP ratio, whereas the current policy options are for an acceleration in the automatic decline in this ratio that will take place even in the absence of debt repayment. Under these conditions, the acceleration in the rate of decline in the debt-to-GDP ratio cannot be transformed directly into a permanent reduction in that ratio. If the estimates in Table 27 are extrapolated into the distant future, the results will show that the difference in the ratios between the Goodale plan and the base case (no debt repayment) falls over time, moving towards zero. In the expanded Goodale plan, this difference also eventually will decline within a finite time frame determined by the year when the federal debt is eliminated. If the equivalent of a permanent reduction in the debt-to-GDP ratio is approximated by an average of the difference between the two debt repayment plans and the base case, the result would be roughly a reduction of two percentage point from the Goodale plan and 5 percentage points from the expanded Goodale plan. This means that, according to Dahlby's model, the growth rate effect of these two debt repayment plans would be 0.04 of one-tenth of one percent and 1/100 of a percentage point, respectively. Similarly, the effect on the level of debt-to-GDP in the Macklem, Rose and Tetlow model would be 0.004 of one percent for the Goodale plan and one-tenth of one percent for the expanded Goodale plan.

Perhaps the comparison is more meaningful if placed within the estimated effects on consumption over the long run mentioned above. The level of consumption in 30 years would increase by about two-tenths of a percentage point under the Goodale plan and by about half a percentage point under the expanded Goodale plan.

These negligible efficiency effects do not imply that large permanent reduction in the debt-to-GDP ratio have minor impacts on output and consumption over the long run. Rather, they indicate that realistic proposals for accelerating the rate of decline of the debt-to-GDP ratio within the existing fiscal situation will generate the equivalent of very small permanent reductions in the debt-to-GDP ratio. Therefore, they cannot generate efficiency effects that may be considered meaningful from a policy perspective.

### ***Intergenerational equity***

If the accelerated reduction in the debt-to-GDP ratio cannot be justified on fiscal sustainability or efficiency grounds, we have to look for a different rationale for such a policy. A major criterion used by economists to determine the optimal debt-to-GDP ratio is intergenerational equity. Deficit financing, the argument goes, provides "unpaid public services" to the present generation by shifting the cost to future generations who will have to pay the interest on the debt accumulated through these deficits. Debt repayment would correct this intergenerational inequity by shifting some of this cost to the present generation.

The issue of intergenerational equity and the optimal debt-to-GDP ratio was recently addressed by Scarth [2004], who based his conclusions on the analysis contained in Scarth and Jackson [1998]. Scarth starts from the assumption that future demographic changes associated with the aging of the baby-boom generation will lower the growth rate of living standards because of the increased old-age dependency ratio. He then asks the following question: How much should the debt-to-GDP ratio be reduced to offset the projected difference in living standards between the cases with and without this demographic shift? His answer is that the combined federal/provincial/territorial debt-to-GDP ratio should be reduced to 45-50 percent in 10 years. As shown in Table 27, however, the 50 percent mark will be reached in 7-8 years even without debt repayment. Even if one accepts Scarth's view of the effects of populating aging on living standards (a more optimistic view is found in Merette [2002]), his results imply that intergenerational equity will be more than satisfied by a policy of keeping constant the level of the public debt and letting the debt-to-GDP ratio fall in response to the pull of a growing GDP.

This conclusion highlights the fact that intergenerational equity, in the sense of shifting fiscal burdens onto future generations, does not hold as a rationale for debt repayment in the framework of declining debt-to-GDP ratios. If the public debt is kept constant in a growing economy, debt charges will claim a declining share of government revenues, unless there are steady increases in interest rates. Since in the existing fiscal structure in Canada, government revenues grow roughly at the same rate as nominal GDP, maintaining a constant level of government debt will result in net revenues available for program spending that will grow at a faster rate than GDP. In this case, a policy of no debt repayment would allow annual tax reductions and a constant ratio of program spending to nominal GDP – that is, program spending growing at the same rate as nominal GDP. Accelerating the decline in the debt-to-GDP ratio through debt repayment would simply increase the “room” for future tax cuts or spending increases. Since, according to Scarth's calculation, intergenerational equity would be more than satisfied under a no debt repayment policy, debt repayment would create “reverse intergenerational inequity” by shifting fiscal benefits from current to future generations – that is, leaving to future generations debt-to-GDP ratio lower than the optimal rate determined by Scarth's analysis.

### ***Risk and financial market flexibility***

These two criteria for evaluating the effects of debt reduction are not very relevant to the current fiscal situation in Canada. The risk premium arises when debt-to-GDP ratios are high and rising. Currently, Canada's debt-to-GDP ratio is comparable to that of other major industrialized countries and is falling rapidly. Therefore, to the extent that there may still be a risk premium rising from Canada's public debt, it will vanish over time as debt-to-GDP ratios decline. Under a non-debt repayment policy, the level of the public debt will remain constant. Therefore, there will continue to be an ample supply of safe and liquid government financial instruments even for those who do not want to take the currency risks of tapping into the broader international government bond market.

In conclusion, none of the four criteria discussed above lends support to a policy of debt repayment. The conclusion that accelerating the decline in the debt-to-GDP ratio through debt retirement is not a meaningful policy option echoes Courchene's suggestion that the debt-to-GDP ratio should be allowed to decline at a rate determined by the growth of GDP. Unlike Courchene – who considers debt reduction “an important goal,” but not as high in the priority list as tax reduction and “the priorities on the social front” – my analysis indicates that accelerating the decline in the debt-to-GDP ratio through debt repayment cannot be justified on fiscal sustainability or intergenerational equity.

Economic models used to estimate the efficiency effects of debt reduction, such as the ones reviewed above, incorporate a budget constraint for only one order of government. As pointed out by Kneebone [1994: 322]: “this specification requires one of two assumptions: that the budget constraint of the federal and provincial levels of government are not interdependent in any serious way so federal fiscal choices have little effect on provincial budgets; or the two levels of government have coordinated their actions so they implement the same fiscal policy at the same time.” The latter assumption is outside any realistic scenario. The former assumption is inconsistent with fiscal arrangements that give the federal government unilateral control over the major intergovernmental transfers.

The extent to which provincial fiscal positions are affected by federal actions became quite evident during the 1990s. This interdependence highlights the fact that the public debt is a national issue which has federal and provincial/territorial dimensions that are interconnected. Therefore, optimal debt policies cannot be developed unilaterally by the federal government without regard for their implications for the budget balances of provincial/territorial governments. In that respect, Myatt and Ruggeri [2004] have suggested that federal debt repayment may be viewed as an instrument of fiscal centralization. As it competes with intergovernmental transfers in the federal priority list, it curtails the funds available for helping provincial/territorial governments finance national programs while raising over time the level of federal surpluses and the gap in budget balances between the two orders of government. I propose in this paper that the federal government abandon its debt repayment plan, because it cannot be justified on the basis of relevant economic criteria, and that the funds so released be directed towards strengthening the federal foundations of the country.

### *Strengthening Federalism*

Before turning to options for strengthening federalism, it may be useful to briefly review the main forces that have shaped intergovernmental relations since the early 1970s. The direction of federal-provincial relations in general and fiscal federalism in particular has undergone major changes during the past 25 years.

In the 1960s, intergovernmental relations were dominated by the expansion of national programs – that is, programs of national scope delivered by the provinces but jointly financed with the federal government. Moreover, the federal government was committed as an equal partner in the financing of these programs through 50/50 cost-sharing arrangements. These arrangements were supported by favourable economic conditions, which included vigorous economic growth and relative price stability.

This desirable combination started to unravel at the beginning of the 1970s and was further disrupted by the energy crisis created by OPEC's tripling of oil prices in 1973. It was replaced by the combination of slow growth and high inflation (stagflation). The negative effects of stagflation on the financial position of federal and provincial governments were aggravated by the introduction in 1974 of indexing of the PIT for inflation, a move that curtailed the growth rate of PIT revenue for both orders of government without affecting the growth rate of transfers payments to persons that were indexed for inflation. In the absence of structural changes to the fiscal system, stagflation – combined with a reduction in built-in revenue growth due to PIT indexing and increases in discretionary spending – generated budget deficits that increased in amount over time and resulted in a burgeoning public debt.

Given the large contribution of shared-cost programs in government spending, both orders of government turned their attention to these programs as a means of curtailing the size of budget deficits. The federal government tried to maintain some control over national programs while reducing its financial contribution and provincial governments tried to gain more policy flexibility on cost control without losing federal contributions. A convergence of interests materialized in 1977 and culminated in a new agreement – Established Programs Financing (EPF). This new agreement replaced the cost-shared arrangements for health care and post-secondary education with the combination of income tax points (predominantly PIT) and an unconditional cash grant. The tax points were equalized to the national average, while the per capita cash grant was initially allowed to grow at the rate of a moving average of the growth of per capita GDP.

The cash component of EPF gave the federal government the flexibility it needed to begin a retreat from its original financial commitments to national programs. This retreat was accomplished in steps.

The first step involved adjustments to the formula for calculating cash payments. In 1982, total per capita entitlements were equalized across provinces and tied to the growth of GDP. Cash payments were then calculated as the difference between total entitlements and the value of tax points. Since PIT revenues grow at a faster rate than GDP, this unilateral adjustment to the EPF formula guaranteed a decline in cash payments over time. The level of cash payments was further reduced through additional unilateral actions that lowered the escalator to two percentage points below GDP growth in 1987 and to three percentage below the growth of GDP in 1989. Finally, cash payments were frozen for 1990-91 and 1991-92.

The second step, taken in the 1995 federal Budget, involved the consolidation of the two EPF national programs (health care and post-secondary education) and the remaining cost-shared program (Canada Assistance Plan or CAP) into a single block grant. This consolidation was accompanied by a major reduction in the federal cash contribution. The proportion of federal revenues directed to those transfers fell from 25.7 percent in 1994-95 to 16.0 percent in 2000-01.

As shown in the first paper, the evolution of federal fiscal policy (including intergovernmental fiscal relations) over the past 25 years has resulted in unbalanced fiscal structures. The federal fiscal structure has the capacity to generate surpluses which are projected to increase in magnitude over time, while provincial governments face severe difficulties in containing the size of their budget deficits. Perhaps of greater importance for the dynamics of intergovernmental relations is the situation whereby the federal government dominates the fastest growing revenue source (PIT) and has considerable control over its spending. The federal dominance of the PIT (the federal government receives more than 60 percent of total PIT revenue and this tax accounts for 46 percent of total federal revenue compared to about 25 percent for provincial/territorial governments) has its historical roots in the war and postwar tax rental agreements and in the unwillingness of the provinces to accept the tax point transfer offered by the Pearson government in 1964. The federal government's control over its spending is due partly to the fact that it is not responsible for spending programs with high built-in growth and partly to its control over its cash contributions to national programs. By contrast, the provinces are responsible for the fastest-growing spending programs, particularly health care, but their revenue structure has a lower built-in revenue growth capacity, partly because of the slow growth of federally-controlled cash transfers. Provinces also recently have been under pressure to reduce taxes on mobile factors as a result of international competition for skilled labour, particularly south of the border. The smaller provinces, in particular, have been under the pressure of both international (largely US) and interprovincial tax competition.

The projected different paths of budget balances for the two orders of government, shown in the first paper, will be reflected in the projected trends in the debt-to-GDP ratio. In the absence of federal debt repayment (base case), the debt-to-GDP ratio would fall for both orders of government, but the rate of decline would be much faster for the federal government because its net debt would remain constant while that of provincial/territorial governments would continue to increase. As a result, the difference in this ratio between federal and provincial/territorial governments would shrink from 24.7 percentage points in 2002-03 to 6.3 percentage points in 2019-20. The decline in the federal debt-to-GDP ratio would accelerate under the Goodale and the expanded Goodale plans. As a result, the difference between the federal and provincial/territorial debt-to-GDP ratios in 2019-20 would be further reduced to 3 percentage points and 1.1 percentage points, respectively.

It should be pointed out that the existence of vertical fiscal imbalances (VFI) is not universally accepted. For example, the federal Department of Finance provides a comparison of the fiscal systems of the two orders of government called "the fiscal balance in Canada." It is sometimes also argued that there cannot be vertical fiscal imbalances since provincial governments have the capacity

to raise revenues through a variety of taxes. In my view, this argument is spurious because it fails to recognize that VFIs are the result of the evolution of fiscal structures within the framework of intergovernmental relations. They are indications of the dynamics of these fiscal structures and symptoms of a malaise in intergovernmental affairs. I argue that this malaise has been created largely by the policy of federal retrenchment from its traditional role as equal partner in the financing of national programs, which has evolved into what Ruggeri [2004] calls leveraged unilateralism. This new policy thrust tends to sidestep joint federal-provincial policy-making and to minimize the cost to the federal government of exercising powers over national programs.

This approach is becoming evident in a variety of areas. In health care, it is manifested in the unwillingness of the federal government to make long-term financial commitments and its reliance on *ad hoc* adjustments to cash transfers totally under federal control. In education, it is reflected in a move to direct financing through vehicles such as direct and indirect transfers to students (Millennium Scholarship Fund, Registered Education Plans) and to universities (Canada Research Chairs).

The federal government recently has moved to further undermine provincial jurisdiction by promoting new initiatives that involve direct fiscal relationships with municipalities. This new federal policy of direct engagement with municipalities may be viewed as an (intended?) result of federal fiscal retrenchment. Strapped for cash due to the reduction in federal transfers, provincial governments downloaded part of their fiscal problems onto municipalities, which were unable to handle this additional fiscal load given their limited revenue-raising sources. The federal government is now coming directly to the rescue and in the process it increases its leverage over provincial and municipal spending. There is no indication that this policy thrust will subside. The 2004 federal Budget failed to deliver a federal commitment to an appropriate contribution to health care funding over the long run. Moreover, new spending initiatives were largely in areas of provincial responsibility, but are delivered directly by the federal government to individuals.

Provincial leaders have responded to these federal moves by strengthening the institutions of interprovincial cooperation and joint decision-making. Over the past decade, they have organized several meetings to discuss common concerns and have produced a variety of reports outlining common positions, particularly in the social policy area. These efforts culminated in the establishment of the Council of the Federation in 2003. Whether this new institution of interprovincial cooperation will be effective in improving intergovernmental relations depends in part on the willingness of provincial governments to take common action and in part on the willingness of the federal government to pursue avenues of intergovernmental cooperation. In my view, even with new institutions of common decision-making, the provincial position remains undermined by the existence of imbalances in the fiscal structures of the two orders of government and the financial capacity of the federal government to exercise control over provincial jurisdiction unilaterally and without commensurate financial commitment. For the newfound interprovincial cooperation to be effective, the federal government must abandon its policy of leveraged unilateralism and embrace this united provincial front as an opportunity to develop joint decision-making mechanisms for the benefit of all Canadians.

Intergovernmental disputes have recently been focused on fiscal issues, primarily federal retrenchment and cash payments under both CHST and Equalization programs. This financial focus perhaps has obscured the underlying principles of these programs and the need for coordinated policies to ensure the future social and economic health of the Canadian federation. It is becoming widely recognized that the emergence of human capital as the major driving force behind the growth of productivity and living standards has blurred the traditional separation between economic and social policy [Courchene 2001, Laroche, Merette and Ruggeri 1997]. As argued by Ruggeri and Yu [2001], the production, acquisition, retention and effective utilization of human capital is a lifelong process involving a complex set of individual and collective decisions. This process cannot be partitioned to accommodate interjurisdictional powers, but must be integrated into a coherent and coordinated policy framework if Canada is to prosper in the knowledge-based age. The importance of human capital and social capital for human progress will be further discussed in the next section, which will also extend the traditional analysis of intergovernmental fiscal relations by placing them within the framework of economic justice and social cohesion.

### *Social Cohesion*

As we gain a better understanding of the factors that determine economic growth, human development and well-being, a consensus is developing among social scientists on the crucial role played by human capital, social capital and civic capital [HRDC/OECD 2002]. Although there is still some debate on the definition of these terms, there is mounting evidence of the important contribution that they make to economic growth and human well-being.

Human capital affects human well-being through a variety of channels. First, well-being is enhanced by the process of learning itself for those who see learning as an enriching experience. Second, acquired learning may generate direct utility when it is used for the agent's pleasure, such as reading a novel, playing a musical instrument or enjoying a hobby that makes use of acquired skills. Direct utility is also generated as acquired learning is used in market activities when work is treated as a source of meaning, a view strongly emphasized by the Catholic Church in more than one encyclical. Fourth, acquired human capital raises well-being indirectly when it is used in market activities and generates higher income and a correspondingly higher standard of material well-being.

The above discussion identifies individual-level effects of human capital on well-being. Research has also found community-level effects, what economists call positive externalities from education [Helliwell 2002]. As pointed out by Davies [2003], who also provides a detailed review of the literature, "human capital externalities may be quite diverse. In addition to the effects on the use of technology, innovation and growth ..., there may be static effects on others' earnings, and non-market effects via e.g. health, fertility, longevity, crime, civic participation, political stability, level of democracy, take-up of transfer payments, and higher taxes paid by the more educated ... . Non-market activities may feed back on earnings and growth" [Davies 2003: 1]. Davies concludes that

“education externalities could add something like six to eight percentage points to the after-tax private rate of return to education” [Davies 2003: 40].

The fundamental aspect of these externalities is that they are generated within a social context. They flow from the fundamental characteristic of human capital, which is produced, acquired and utilized within the framework of social interactions [Ruggeri and Yu 2001]. Two separate aspects of these social interactions (sometimes treated as one) are recognized as having important implications for human well-being. The first refers to “norms and linkages” [Woolcock 2001, Putnam 2001] and is usually called social capital. The second identifies political institutions and a set of well-defined laws and property rights, and may be called civic capital.

The importance of social and civic capital in the promotion of economic and human well-being is well documented. Helliwell [2002] modelled well-being as dependent on individual-level and community-level factors for a variety of industrialized countries. His findings indicate that: (a) subjective well-being increases with higher participation in community organizations and higher degrees of trust in other people and in private and public institutions, (b) high levels of social capital affect positively well-being, (c) the effects of norms and institutions are stronger than the effects flowing through higher incomes, and (d) the positive effects of social capital are more sustained than those of higher incomes. Helliwell concluded that “it is important for governments, which have an essential role in the maintenance of so many aspects of the social fabric, to avoid needless or heedless damage to these institutions in pursuit of what is called international competitiveness, often sought for its presumed ability to deliver sustained growth in material standards of living” [Helliwell 2002: 53].

Social and civic capital may be viewed partly as collective emanations of human capital and instruments for the creation of positive externalities. The externalities may arise out of all individual-level effects identified above. In the case of human capital used in market activities, a major externality is generated through the fiscal system. In countries like Canada, which provide heavy subsidization of human capital, individuals effectively borrow from the public purse from the time they are born to the time they are ready to enter the labour force. Then they repay the loan through the tax system when they start earning and spending. The government earns a return on its investment by sharing a portion of the increase in the human capital-induced productivity, primarily through the personal income tax.

These returns can then be re-invested in programs that benefit all citizens. An area where these returns are re-invested in Canada is publicly funded health care. As in the case of education, health care generates both individual-level and community-level effects. Moreover, evidence shows a two-way link between human capital, social capital and health, and hence human well-being; a survey of the relevant studies is found in Yu [2004]. The results of the studies on the relationship between human, social, and civic capital and human well-being have led Helliwell to conclude that “the well-being evidence...shows that both health and education have substantial direct and indirect

effects at both the individual and community levels. These external effects, which have long provided the rationale for government support for health and education, are large enough, and contrast strongly enough with the corresponding effects of higher individual incomes, to suggest that protection of high standards of health care and education is worth what it takes to do well" [Helliwell 2002: 53].

The relevance of the above discussion and Helliwell's conclusion for the subject of this paper is that health care, education and social services are the foundations of intergovernmental fiscal relations in Canada. Although public discussions on these programs are often confined to federal-provincial debates regarding formulas and cash transfers, we should keep in mind that their main purpose is to strengthen social cohesion, not just by allowing similar standards of health care and education across the country and providing a social safety net, but by enshrining a principle of wealth sharing in intergovernmental fiscal relations and a commitment by both orders of government that in Canada citizenship carries the promise of equality of opportunity regardless of economic situation or place of birth. We cherish our national programs and periodically reaffirm the need for joint federal-provincial commitments, not just because they remind us of our heritage and reflect our shared values, but also because, as Helliwell reminds us, they contribute to our collective well-being by strengthening civic institutions and enhancing social cohesion.

The largest intergovernmental cash transfer, the CHST, recently separated into the Canada Health Transfer (CHT) and the Canada Social Transfer (CST), is in principle aimed at social cohesion by nominally targeting health care, post-secondary education and the social safety net. Its importance for the social fabric of society was implicitly recognized in the initial financing arrangements which involved both federal and provincial governments as equal partners. In addition to lightening the fiscal burden of the provinces, which had a more limited fiscal capacity, this equal partnership provided a powerful symbolism that these programs were of paramount national importance. Over the past 25 years, the partnership has progressively deteriorated into an acrimonious relationship because of the federal government's retrenchment towards a position aimed at maintaining considerable control over these programs while curtailing its financial contribution. Moreover, the introduction of block grants for health care and post-secondary education in 1977 (Established Programs Financing) and the addition of social assistance in 1995 into what became the CHST, severed the connection between federal contributions and national standards, except for the tenuous link established by the Canada Health Act.

We need to restore the original joint commitment. Proposal for such restoration are not in short supply.

The Romanow Commission recommended (a) an increase in federal funding so that by 2005-06 it would cover 25 percent of the costs of the services insured under the Canada Health Act, and (b) the establishment of a five-year cash fund dedicated exclusively to health care which would include a built-in escalator. The Institute for Research on Public Policy and the Institute of Intergovernmental Relations in a joint publication [2004] recommended (a) an increase in the federal

cash contribution to 20-25 percent of health costs, and (b) an escalator that reflects the increase in health care costs across the country.

Ruggeri [2002] focused on all three programs covered by the CHST before the health component was separated. He suggested an arrangement called *the notional transfer of tax points*. This arrangement would work in the following manner. First, the level of the CHST cash payment would be increased in order to offset the reductions that were implemented in response to federal fiscal restraint. Second, the number of federal PIT points that would raise that amount of revenue under the current PIT structure would be calculated. Third, this portion of the federal PIT would be earmarked for transfers to the provincial/territorial governments. Fourth, the revenue from the above source would be deposited in a *national programs fund*. Finally, these funds would be allocated among provinces and territories on an equal per capita basis, with possible adjustments for different cost pressures arising from different rates of population aging. This arrangement has a number of important features: (a) it would establish a transparent source of financing of national programs, (b) it would have a permanent built-in escalator with a value in excess of the growth of the economy, and (c) the cash payments would not be subject to federal budgetary policy.

There are indications that, at least for health care, some new arrangements may be introduced in the near future. The quest for votes during the current federal election campaign has led to promises of additional funding to the provinces to help them cope with escalating health care costs. We will have to wait and see whether these promises will lead to the establishment of adequate and sustainable funding of national programs.

The other major intergovernmental transfer, equalization, has traditionally been associated with issues of economic efficiency and horizontal equity. More recently, Ruggeri and Strain [2002] have placed this program within a framework of principles that includes social cohesion. They argue that, when equalization is evaluated within the framework of economic structures dominated by human, social and civic capital, the different rationales for equalization can be integrated into a general rationale that makes this program another pillar of social cohesion and collective well-being.

The efficiency rationale for equalization is based on the distortionary effects of fiscally-induced migration. According to Boadway [1998: 39-40], "In a setting with no provincial public services, free migration would lead to an efficient allocation of labour resources across provinces" because "workers would migrate until wages were equalized across provinces." This result will not occur in a federation where different regional governments have different fiscal capacities. Under these conditions "the net benefit a given worker obtains from the provincial sector may differ across provinces," leading to a misallocation of resources as workers move across provinces because of the effect of different fiscal capacities. This rationale has remained a theoretical argument for a long time because of a study by Watson [1986] which showed that the efficiency gains from equalization are minimal.

This conclusion has recently been challenged by Wilson [2003] who shows that Watson's results depend on the use of annual flows of migrants. Wilson argues that the full migration adjustment to interprovincial differences in fiscal capacity is not completed in one year and suggests that migration flows should cover a longer time span. Using a model that estimates the flow of interprovincial migration from the changes in the stock of potential migrants, Wilson estimates efficiency effects from equalization that are substantially larger than those derived by Watson. Wilson's results show a benefit/cost ratio for equalization of 1.61 compared to the value of 0.02 estimated by Watson. On the basis of these results, Wilson concluded that "equalization payments are much more justified on efficiency grounds than has been thought since the publication of this paper" [Wilson 2003: 392].

Wilson's results suggest that we need to revisit the efficiency argument for equalization. I suggest that, in addition to using appropriate time frames for the analysis of internal migration, we must place the whole analysis within a dynamic framework. Interprovincial migration is not indiscriminate with respect to age and education level. As shown by Ruggeri [2003], for example, during the 1990s net out-migration from Atlantic Canada was heavily weighted in favour of young people with above-average education levels. Moreover, demographic and labour force projections point to potential labour force constraints in Canada and even more so in Atlantic Canada [Ruggeri and Zou 2004]. If, in the knowledge-based age, fiscally-induced migration targeted largely young skilled workers, this migration would not just aggravate potential labour force constraints in Atlantic Canada, but would do so selectively by depriving this region of the human capital growth that is needed to give it a chance to at least keep up with the rest of Canada. In this dynamic framework, equalization performs a regional economic stabilization function by preventing the progressive aggravation of regional disparities that would be generated by regional disparities in fiscal capacity. This function may also serve as a built-in mechanism for stabilizing the level of entitlements under a given formula by preventing the widening of interprovincial differences in fiscal capacity due to increasing regional economic disparities.

The equity argument for equalization has largely been based on some notion of horizontal equity as applied to a federal system. According to Boadway [1998: 57-58], for example, "a fiscal system that satisfies horizontal equity requires that persons who are equally well-off in the absence of government should also be equally well-off in its presence... . In a federal context, fiscal equity requires that otherwise identical persons should be treated equally by the public sector regardless of where they reside." Equalization follows this principle by helping the governments of the less affluent provinces provide their residents with net fiscal benefits reasonably comparable to those in the more affluent provinces. The equity argument has sometimes been misinterpreted, especially at the political level, as involving (a) a cash transfer among provinces rather than a federal transfer to the provinces, and (b) equivalent to cash transfers to individuals; sometimes the reference has been specific to social assistance. This false interpretation overlooks the fact that these are payments from the federal government to the less affluent provinces for the purpose of enabling them to provide roughly national standards of public services without imposing excessive tax burdens on their residents.

What are the public services provided by provinces and for which the less affluent provinces receive financial help through equalization? This question was addressed by Ruggeri and Strain [2002] who show that nearly three-quarters of provincial spending is for health care, education and social services, the programs that earlier in this paper were identified as the foundations of human, civic and social capital. Because the separation of social and economic policy is increasingly being blurred by the economic significance of the above forms of capital, the equity rationale for equalization can no longer be confined to redistribution. Together with the efficiency rationale, it forms a powerful theoretical and practical foundation to a program that makes a major contribution to the economic and human well-being of Canadians. Because of this connection, Ruggeri and Strain [2001] argue for a shift of emphasis from the formula and the level of payments to the fundamental underlying principles. They identify five basic principles for the equalization program: economic justice, social justice, promotion of human rights, social cohesion, and effective democracy.

With respect to economic justice, they point out that equalization is placed in a section of the Constitution that spells out two major responsibilities of both orders of government: (a) the provision of a certain standard of public services for all Canadians, and (b) the promotion of equal opportunity for the well-being of all Canadians. They argue that equalization is an instrument of economic justice because it helps reduce inequality of opportunities by allowing the less affluent provinces to deliver roughly national standards of the public services that are essential for human development. Equalization also serves a social justice principle because it helps reduce inequality of living standards. Since it is financed through a national tax system, when the programs it finances – largely health care, education and social services – are offered at comparable levels to all Canadians regardless of their place of residence, it provides relatively higher benefits to lower-income Canadians.

The Canadian government is a firm supporter of United Nations declarations on human rights, which rest on the foundations of economic and social justice and which acknowledge that “everyone has the right to a standard of living adequate for the health and well-being of himself and his family” [United Nations 1948: Article 25(1)]. Equalization helps fulfill Canada’s international commitment by promoting the pursuit of human rights within Canada by all levels of government, regardless of their own financial capabilities. The importance of social cohesion in promoting economic development and human well-being is well documented [e.g., Helliwell 2002, HRDC/OECD 2002]. By institutionalizing some sharing of wealth among Canadians, facilitating the acquisition of human capital across the country, and promoting economic and social justice, equalization strengthens social cohesion. Finally, it promotes more effective democracy by strengthening the ties that bind Canadians across the country and their sense of belonging to a wider community than their place of residence.

I recognize that periodic negotiations between the federal and provincial governments must deal with the formula used to determine entitlements and with issues related to the level of

payments. One may argue, however, that these discussions should be placed within the proper context and recognize that this program serves a vital function in the Canadian federation. This means that the formula cannot be adjusted on an *ad hoc* basis to accommodate federal and provincial budgetary priorities or short-term political considerations, but should always be focused on the underlying principles. Specifically, the condition of “reasonable comparable standards of services” requires a ten-province standard and not an arbitrary number of provinces determined by the desire to minimize the effects of resource revenues. Similarly, the condition of “reasonably comparable levels of taxation” requires the inclusion of all relevant revenue sources. While recognizing that resource revenues present some special issues, maintaining a clear focus on the principles would involve special adjustments to the way resource revenues are included in the calculation of entitlements and not accommodating adjustments in the number of other revenue sources or in the standard. Proposals for recognizing the special features of resource revenues in the equalization formula have been advanced by a variety of economists. The common component of these proposals is the inclusion of only a portion of resource revenues into an equalization formula based on a ten-province average. Suggestions for an inclusion rate of 25 percent or in the range of 20 percent to 30 percent are found in Feehan [2004], the Parliamentary Tax Force on Federal-Provincial Fiscal Relations [1981], the Economic Council of Canada [1982], Boadway et al. [1983], and the Royal Commission on the Economic Union and the Development Prospects for Canada [1984].

A variant of this approach is the establishment of an interprovincial revenue-sharing pool for resource revenues [e.g. Gainer and Powrie 1975, Courchene and Copplesstone 1980, Helliwell and Scott 1984]. Under this proposal, a province with per capita resource revenues in excess of the national average would contribute 25 percent of this excess to the pool and provinces with a deficiency would access this pool to offset 25 percent of their deficiency. Finally, the level of annual entitlements determined by a formula which maintains consistency with the above two constitutional conditions should not be compromised through the unilateral federal imposition of ceilings.

The changes in the two major intergovernmental transfers outlined above should be viewed not as an end in themselves, but as the desirable outcome of new arrangements for the conduct of intergovernmental relations which involve joint decision-making by two equal partners. Such an arrangement should be facilitated by the recent evolution of provincial ascendancy which has led to two national political institutions – the federal government and the Council of the Federation. Moving from federal dominance to equal partnership in decision-making, however, will not be an automatic response to the newfound interprovincial cooperation, but requires the fulfilment of a number of conditions [Ruggeri 2004]. Accepting the major responsibility for social policy, provincial leaders must (a) “transcend the limits imposed by regional interests and ideologies and embrace a national vision,” and (b) “must become collective gate-keepers of the caring and sharing values which have been the defining characteristic of Canada.” Reaffirming their full commitment to the national programs that help define Canada as a federation, the federal government must (a) “treat provincial leaders as equal partners,” and (b) must ensure that “the increased fiscal responsibilities thrust upon provincial governments (is) accompanied by the appropriate transfer of fiscal resources.”

Such a revival of cooperative federalism would enhance social cohesion directly by replacing confrontation with equal partnership and indirectly by providing a stronger and more long-term foundation for the national programs that are fundamental for the expansion of human, social and civic capital. Recent negotiations on health care financing do not bode well, however. While the federal government seems to be making some effort to raising its long-term financial commitment to health care, provincial governments seem to be moving towards their traditional pattern of behaviour – namely, to shift to the federal government fiscal responsibility for provincial programs that raise financial issues involving decisions with high political costs.

### ***Strengthening the Economic Foundations***

In this final section, I suggest that our fiscal advantage should be aimed at strengthening the foundations of balanced and sustainable growth. Since policy is directed at the future, it is important to identify some special features of the new economy and some trends that are relevant for the development of policy suggestions towards the achievement of this objective.

First, as mentioned earlier, the emergence of human, social and civic capital as major determinants of economic growth and human development has blurred the distinction between economic and social policy. This means that government policy will be misdirected and inefficient if such a distinction is artificially maintained in the decision-making process. This artificial distinction is particularly damaging when the indiscriminate focus on “international competitiveness” in general and fiscal competitiveness with the United States in particular leads to a weakening of social cohesion.

Second, if human capital is the engine of growth and social and civic capital are turbochargers, public policy should place greater emphasis on these types of capital. Third, demographic dynamics are leading towards potential labour supply constraints, not considering an expansion of immigration. These potential constraints may be more severe in the smaller provinces which will experience a faster rate of population aging. The structures of some social programs in Canada, such as social assistance (welfare) and Employment Insurance, have been developed within the framework of labour surpluses. These programs must be revisited as these surpluses begin to dissipate. Finally, Canada has developed an elaborate system of programs, both on the spending and taxation side, to ensure a smooth transition to retirement life with minimal adjustments to living standards. As a result, our tax system has developed a bias in favour of retirement which is financed by higher tax burdens on workers. I suggest a major revision of this strategy that would lead to a more favourable treatment of labour earnings.

The discussion contained in the previous three sub-sections indicates that the top priority for promoting sustainable growth is to strengthen the institutions of federalism and to enhance the programs that support human, social and civic capital. This means that our fiscal advantage should

be used first towards these objectives. The rest of this section, therefore, discusses a variety of policy options on the assumption that the first priority has been taken care of.

### ***Taxation***

When domestic economic policy is focused on international competitiveness, the discussion often turns to taxation. In this area, there seems to be developing a consensus that Canada should (a) reduce its overall burden of taxation, and (b) shift its tax mix from income taxes to consumption taxes [e.g., Courchene 2001, Kesselman 2004, Mintz 2001]. In this paper I challenge what is becoming conventional wisdom with respect to item (b) and offer an alternative package of reforms that may be more suitable to Canada's position in the world economy and the domestic challenges it faces.

The shift from income-based taxes to consumption-based taxes is deeply rooted in a closed economy where output levels or growth, depending on whether the trend in total factor productivity is exogenous or endogenous, depend on the rate of physical capital accumulation. In this type of economy, domestic investment must equal domestic savings as a condition of equilibrium; therefore, raising domestic saving rates will lead to higher investment and output. Even in a closed economy framework, however, there is more than one way to stimulate domestic investment. Reducing the tax burden on personal savings is expected to raise saving rates by increasing the after-tax rate of return. Firms will, then, have a more abundant and cheaper source of funds and can expand their investment. The same result can be obtained directly through reduction in corporate taxes. These reductions would raise the after-tax rate of return for a given before-tax rate of return. The increased demand for funds arising from the higher level of investment will place upward pressures on the cost of funds. The higher return on those funds, in turn, will lead to higher personal savings. For the firm, the higher cost of borrowing is balanced by the lower tax rate on gross returns; for individuals, higher net returns are generated by higher before-tax returns with given tax rates rather than given before-tax returns and lower taxes. There is no *a priori* reason why lowering the tax rate on personal savings would be preferable to lowering corporate tax rates and there is no economic justification for using both tax instruments when one would suffice.

In evaluating the efficiency effects of lower taxes on personal savings, a variety of related issues must be kept in mind. First, the potential magnitude of this effect depends on how responsive savings are to changes in the after-tax rate of return. As discussed in the first paper, theory does not provide a unique answer to the direction of this effect, let alone its magnitude, because higher rates of return on savings generate both an income and a substitution effect, which operate in opposite directions. The empirical literature is not much more helpful, because the range of estimates include strong responses and no response at all.

Second, within a tax mix composed of a variety of distortionary taxes and a given level of spending, reducing the distortion from a tax necessarily involves raising the distortion from another

tax. In the case of a shift from an income-based to a consumption-based tax, a higher distortion in the work-leisure choice, which affects the labour supply, is traded for a lower distortion in the choice between current and future consumption (savings decision).

As discussed in more details in the appendix, the distortion in the work-leisure choice may be magnified by the interactions between capital income taxation and labour supply choices which affect work effort and early retirement. In efficiency wage models, the work effort is reduced when the tax burden on capital income is lowered relative to that on labour income [Marchildon, Sargent and Ruggeri 1996]. The accumulation of wealth facilitated by lower taxes on capital income combined with the lower after-tax rate of return on work (caused by a shift from an income-based to a consumption-based tax) would provide incentives for early retirement, thus raising the distortions on the lifetime labour supply decision. The links between the taxation of labour and non-labour income and lifetime labour supply decisions may not create concerns if we expect the continuation of labour supply surpluses and if the public purse does not subsidize heavily the acquisition of human capital. Neither of these conditions holds for Canada.

Of particular concern should be the conflict between the financial support for the acquisition of human capital and the tax incentives to under-utilize this human capital by retiring earlier from the labour force. For a given cost of subsidizing a certain level of human capital acquisition, the return to society from this investment is affected by its efficient utilization and the time span of its utilization. Providing both tax-funded subsidies for the acquisition of human capital and tax incentives to promote early retirement imposes a double cost on society.

The equivalence of changes in corporate taxes and income taxes on personal savings no longer holds when a closed economy is replaced by a small open economy. In the extreme case where there is perfect capital mobility and domestic firms can borrow any amount at world interest rates, the level of domestic savings has no effect on the level of domestic investment. Therefore, it influences neither employment nor output. Even when there is less than perfect capital mobility, domestic savings do not constrain domestic investment when a country is a net capital exporter. Supporters of consumption-based taxes argue that, even when domestic savings do not constrain domestic investment, a shift from income-based to consumption-based taxes can still produce efficiency gains by allowing individuals to achieve optimal lifetime consumption patterns. As pointed out above, however, this utility gain is acquired at the cost of higher distortions in the other individual choices, specifically choices with respect to the labour supply and work effort.

In my view, reform packages leading to a tax structure that penalizes work by imposing unnecessarily high tax rates on labour income and promotes the under-utilization of publicly-financed human capital through incentives for early retirement in order to subsidize higher consumption by middle- and high-income Canadians in their retirement years is inconsistent with the Canadian reality in the 21<sup>st</sup> century. Therefore, I propose that, to the extent that our fiscal advantage allows a reduction in tax burdens, tax policy changes should be aimed directly at the two mobile factors of

production – namely, human and non-human capital. This approach addresses directly the issues of inter-national tax competitiveness and incorporates the fundamental realities of the Canadian economy mentioned earlier: (a) a small open economy in an increasingly global market, (b) the expanding role of human and social capital in generating economic growth and human well-being, and (c) looming labour shortages in the absence of large increases in immigration.

Instead of lightening the tax burden on personal savings in the hope that it will lead to higher domestic investment, I propose tax reductions for the real drivers of economic growth – namely, human and non-human capital. The level of domestic savings also will rise, but in response to higher incomes and not to tax incentives. Tax incentives for personal saving in a small economy simply improve the lifetime consumption of middle- and high-income Canadians. The lower tax burden on labour income and human capital that can be financed with the reduction or elimination of these incentives will produce gains in employment, income and government revenues and will allow an increase in both private and public consumption for all Canadians.

Three major taxes affect the work-leisure choice and the utilization of human capital: (a) personal income taxes on labour income, (b) payroll taxes, and (c) sales or consumption taxes. Investment decisions by firms are also affected by a variety of taxes, including (a) corporate income taxes, (b) corporate capital taxes, (c) sales taxes on business inputs and (d) payroll taxes levied on employers which are not shifted back to labour. For the taxes on labour, I will focus on personal income taxes and one of the two major payroll taxes – namely, Employment Insurance premiums. Contributions to the Canada Pension Plan are equivalent to benefit taxes and the relationship between benefits and contributions has been strengthened by the recent reform, which raised contributions to make the plan sustainable over the long term.

### ***Personal Income Taxes***

The focus on reducing the tax burden on mobile factors leads to the conclusion that, on the personal income side, tax cuts should be focused at labour income. This objective can be achieved through the use of a refundable employment credit delivered by the personal income tax system. This credit would have a ceiling and the rate structure could incorporate a single rate (a proportional tax credit up to the ceiling) or declining multiple rates. Both sets of rate structures would generate a progressive (in favour of lower wages) pattern of benefits, but the degree of progressivity would be higher under the second option. This is not a novel idea, as both Canada and the US have experimented with employment tax credits. The above proposal simply aims at making more general a policy tool that has generally been limited in scope to a narrow range of wages and emphasizes that the personal income tax system offers preferential treatment to income from work.

Some adjustments may also be needed in the relative taxation of dividends and capital gains. Recent changes have created an imbalance in the taxation of these two income sources. While the

tax burden on capital gains has been reduced substantially by lowering the inclusion rate to 50 percent, the tax burden on dividends has been raised through the erosion of the mechanisms that were designed to ensure integration between personal and corporate income taxes. One option for re-balancing the taxation of these two income sources is to raise the inclusion rate of capital gains to two-thirds and take the necessary steps to move as closely as administratively possible to full tax integration. Also, the increase in the inclusion rate of capital gains should be accompanied by a more flexible treatment of capital losses.

### *Employment Insurance (EI)*

The Employment Insurance program has undergone numerous studies and periodic reforms. From a tax policy perspective, three special features will be examined in this paper. First, EI premiums represent a combination of benefit taxation (the revenue that finances the benefits) and general payroll taxation (the revenue that generates a surplus for the federal government). Second, unlike the Canada Pension Plan where employers and employees pay the same contribution rate, in the EI program the contribution rate is higher for employers. Third, the program structure is a mixture of social insurance and redistribution, among individuals, occupations, industries and regions. These features create inefficiencies and should be eliminated or reformed.

The federal government used the payroll component of EI premiums as ammunition in its fight against the deficit. When budget balances were restored, however, this surplus was maintained while personal and corporate tax rates were being reduced. As pointed out by Kesselman [2004: 25], “one consequence of these large EI surpluses is to tilt the overall revenue system further towards labour income ... the use of EI premiums to collect what amounts to a labour income tax provides an inefficient bias towards self-employment, a regressive tilt because of the ceiling on taxable earnings, and a disincentive to hiring, particularly low skilled workers.”

I am in full agreement with Kesselman that the payroll tax component of EI premiums should be eliminated. I also suggest that the higher rate paid by employers be eliminated. The differential premium rates between employers and employees would have no economic implications if the employer component were fully shifted back unto wages. In this case, differential rates are simply an optical device that gives the impression that firms are taxed more heavily than individuals. If the employer component is not fully shifted back, it has real economic effects as it reduces the demand for labour. It seems to me that in the first case the differentiation serves no meaningful economic purpose, while in the second case it generates undesirable economic effects. The case for the elimination of this differential is strengthened when placed within the overall package of proposed tax changes that includes a reduction in the taxation of labour income through the refundable employment tax credit delivered by the personal income tax.

Finally, I argue that the redistributive component is more justifiable under conditions of persistent labour supply surpluses, a situation in which retraining is not very effective because of the

lack of employment opportunities and because tightening benefit entitlements would shift redistribution from Employment Insurance to social assistance. This justification is weakened as the labour supply surpluses vanish and are replaced by potential shortages. As we take a realistic look at future demographic and labour market trends, we need to adjust the structure of the EI program by shifting the emphasis from redistribution to retraining. Some authors, for example Kesselman [2004], have proposed that the adjustment should be made by “experience-rating” premiums, a feature that would impose differential premium rates on employers depending on their layoff records. Experience-rating “would provide incentives for employers to find ways to stabilize their labour demand ... thereby reducing their layoffs” [Kesselman 2004: 25]. I suggest a more flexible and proactive approach, which combines a recognition of differential layoff experiences with options for retraining, either directly by firms or in partnership with government.

### ***Business Taxes***

Decisions by firms may be affected by a variety of taxes, including corporate income taxes, capital taxes, property taxes, payroll taxes and sales taxes on business inputs. Starting with income taxes, the first paper showed that statutory rates are generally lower in Canada than in the US and that this gap will widen as the phased-in reductions by the federal government are fully implemented. Therefore, there is no justification for further reductions in statutory rates.

There is justification, however, for other changes in the structure of corporate income taxation. One of the major findings of the Technical Committee on Business Taxation and successive studies is the great variation in marginal effective tax rates among industries. For example, in the case of large corporations, Chen and Mintz [2003] found a range of METRs between 18.8 percent for manufacturing and 31.9 percent for forestry. Perhaps of greater concern is the fact that METR levels are also relatively high in the service industries, which include the industries that are supposed to drive the economy in the knowledge-based age. Efficiency considerations dictate the elimination or substantial reductions in these differentials.

Comparing Canada and the US, one significant difference is in the provisions for depreciation. As pointed out by Chen and Mintz [2003], the US provides more generous depreciation deductions following the temporary (three-year) adoption of accelerated depreciation. Some steps towards closing that gap have been taken in the 2004 federal Budget by increasing the depreciation rate to 45 percent from 30 percent for computer equipment and to 30 percent from 20 percent for broadband, Internet and other network infrastructure equipment. Consideration should be given to expanding this approach to other sectors.

Another concern about tax competitiveness, namely capital taxes – which are rarely applied in the US, but are imposed at the federal and provincial level in Canada – has been partly addressed by the phased-in elimination of this tax introduced by the federal government. On purely efficiency grounds, one should also suggest the elimination of provincial capital taxes. The recent federal

actions and the above suggestions will ensure a competitive corporate tax structure. Moreover, provincial capital taxes are levied at very low rates, affect mainly financial institutions and large corporations, and provide a stable though small revenue source. Therefore, the argument for eliminating those taxes at the provincial level is not compelling.

### *Pensions and Tax Assistance for Savings*

The personal income tax system incorporates preferential treatment of capital income in a selective manner. For example, interest is taxed in the same manner as labour income, and dividends are partly double-taxed under the PIT and CIT because of less than full integration. Capital gains receive preferential tax treatment because (a) they are taxed on a realized basis, (b) they are taxed at half the PIT rate applying to other income sources, and (c) certain types of capital gains are entirely exempt from taxation, as in the case of capital gains on the sale of owner-occupied homes and the first \$500,000 on the sale of a small business. The major tax breaks for capital income are delivered through the tax-assisted saving plans, for which contributions earn either a deduction (RPP and RRSP) or a credit (CPP) and the income they earn over time accumulates tax-free.

The preferential treatment of retirement savings has developed over time and its expansion has been justified under different rationales. The original rationale was the desire to ensure some financial support for individuals and their families after they retired from employment. The concern for the well-being of workers after retirement was initially expressed by selected employers. Company-sponsored pension plans, commonly known as Registered Pension Plans or RPPs, existed even before the enactment of the Pension Fund Societies Act of 1887. A tax preference for this type of retirement saving was incorporated into the Income Tax Act almost from its inception as a section was added in 1919 providing a deduction for the amount taken from an employee's wages and placed in a pension fund for employees. In 1936 the amount of the deduction was limited to \$300 per year, but this amount was raised over time.

Governments got into the pension game at a later date. In 1929, the federal government introduced the Old Age Pension Act, which offered a federal contribution of 50 percent of the cost of pensions provided by a province to residents 70 years and over. All provinces joined this program by 1936. In 1951, the provinces agreed to a constitutional amendment that authorized Parliament "to make laws in relation to old age pensions in Canada", and this agreement led to the introduction the same year of the Old Age Security Act and its implementation the following year. Over the years, this Act has been revised several times, primarily to reduce the age of eligibility to 65 and to increase and add benefits, including the introduction of the Guaranteed Income Supplement (GIS) in 1967 and the Spouse's Allowance (SPA) in 1975 (recently renamed Allowance).

The combination of RPPs and OAS was not considered sufficient to provide for income security in retirement because of the low take-up rate for RPPs and the low level of OAS benefits

(\$46 per month on July 1, 1957). In an effort to encourage individuals to save for their retirement, the government introduced Registered Retirement Saving Plans (RRSPs) in 1957. These plans provided an annual deduction for voluntary contributions up to a limit, tax-free accumulation of earnings, and taxation as regular income when withdrawn. As pointed out by Horner and Poddar [1992: 7] “where the taxpayer is in the same tax bracket when benefits are withdrawn as when contributions were made, the tax benefit is equivalent to the provision of a tax-free investment return on an asset purchased out of after-tax dollars.”

As early as 1957, the federal government incorporated into its policy the idea of stimulating private savings by raising the after-tax rate of return on those savings. The history of RRSPs is one of expansion over time and the formalization of a link with RPPs. A major restructuring of RRSPs took place in 1991, when these plans were integrated with RPPs. This integration was achieved in three steps: (a) the selection of a target pension eligible for tax assistance, (b) determination of a comprehensive contribution limit based on the selection in (a), and (c) subtracting from the comprehensive limit an estimate of the savings in RPPs (called pension adjustment or PA) in order to determine the limit on RRSP contributions [Horner and Poddar 1992].

The programs of financial support to Canadians for maintaining their living standards during their retirement years – both direct cash payments and tax preferences – have become a large share of government spending, as shown in Table 29. In this table, the cash payments are confined to programs financed through general revenue, including Old Age Security (OAS, GIS and the Allowance) benefits and provincial income supplements for low-income seniors. For the CPP/QPP, only the amount of the tax preference as calculated by Department of Finance (for 2003) is included. For all tax preferences, the value listed in Table 29 is the amount for the federal government plus an estimated provincial-territorial amount equal to 60 percent of the federal amount (based on the ratio of provincial/territorial personal income tax revenues to federal PIT revenues). Two sets of figures are shown: The narrow definition includes only cash payments and tax preferences for pension income and RPPs and RRSPs, while the broad definition includes other tax preferences for retirement income.

Inspection of Table 29 leads to the following observations. First, the total amount of government support for retirement living in 2003 was \$70 billion, which is equivalent to half of personal income tax revenues. Second, the revenue loss from the narrowly-defined tax preferences is 17 percent higher than direct cash payments; it is nearly 50 percent higher in the case of the broadly-defined measure of tax preferences. Finally, tax preferences for RPPs and RRSPs are 91 percent of the cash payments.

As it currently stands, the complex system of fiscal support for retirement rests on a rationale with three components. First, it is generally recognized that, in retirement, a family can maintain the pre-retirement standard of living with 70 percent of the pre-retirement income. Direct expenditures in the form of old age pensions and CPP/QPP benefits are aimed at that target for lower-income Canadians. Second, a peculiar notion of equity (explained below) has extended this fiscal benefit to

middle- and high-income Canadians through tax expenditures incorporated in the personal income tax system. Third, efficiency arguments have been used in support of these measures. I find the first component compelling and consistent both with a notion of equity that extends over a person's lifetime (OAS, GIS and the Allowance) and the idea that individuals are also responsible for their standard of living after retirement (CPP/QPP). The rationale for the other two components is unconvincing, for the reasons explained below.

The extension of the fiscal benefits for retirement to middle- and high-income Canadians is built into the formula that determines contribution limits to tax-assisted saving plans and is revealed by the distribution of participants in those plans. In the analysis that led to the 1991 reform of these plans, the target of 70 percent of pre-retirement income was approximated by a pension equal to 2 percent of the average of the best three years of earnings for an individual with 35 years of employ-

**Table 29**  
**Dimensions of Government Support for Retirement, 2003**

| Program   | Cost<br>\$billion | Percentage of Total  |                     |
|---|-------------------|----------------------|---------------------|
|   |                   | narrow<br>definition | broad<br>definition |
| A. Cash payments  |                   |                      |                     |
| OAS, GIS, Allowance   | 26.1              | 42.7                 | 37.5                |
| Provincial programs   | 2.0               | 3.3                  | 2.9                 |
| Subtotal  | 28.1              | 46.0                 | 40.4                |
| B. Tax preferences for RPPs and RRSPs and pension income          |                   |                      |                     |
| RPPs  | 11.8              | 19.3                 | 17.0                |
| RRSPs   | 14.1              | 23.1                 | 20.2                |
| CPP/QPP   | 6.4               | 10.5                 | 9.2                 |
| Pension income credit   | 0.7               | 1.1                  | 1.0                 |
| Subtotal  | 33.0              | 54.0                 | 47.4                |
| C. Total, narrow definition (A + B)                               | <b>61.1</b>       | <b>100</b>           | <b>87.8</b>         |
| D. Other tax preferences for retirement and wealth accumulation   |                   |                      |                     |
| Partial inclusion of capital gains                                | 3.1               |                      | 4.5                 |
| Non-taxation of capital gains on principal residence              | 4.0               |                      | 5.7                 |
| Lifetime capital gains exemption for farming and small businesses | 1.1               |                      | 1.6                 |
| Labour-sponsored venture capital                                  | 0.3               |                      | 0.4                 |
| Subtotal  | 8.5               |                      | 12.2                |
| E. Total, broad definition (C + D)                                | <b>69.6</b>       |                      | <b>100</b>          |

ment. The dollar amount of the limit was based on the maximum level of earnings that will receive full coverage of the 2 percent tax-assisted pension. In the 1992 federal Budget, this limit was set at \$1,722 per year of service or \$60,000 over the maximum period of 35 years. This limit was frozen until 1996 when it represented 2.5 times average wages. In the 2003 federal Budget, the maximum pension limit was raised to \$2,000 per year of service by 2005, equivalent to \$70,000 for the maximum 35-year period. For subsequent years, this limit will be indexed to average wage growth.

It is clear, therefore, that tax assistance is being provided for retirement living far beyond the average income of Canadians. This assistance is not only substantial, as shown in Table 29, but is largely geared to middle- and high-income Canadians (details are found in the Appendix). The pursuit of this peculiar notion of equity, whereby we subsidize the retirement standard of living of well-to-do Canadians because we provide cash assistance to lower-income retirees is costly because it is financed with distortionary taxation. How can we justify these costly subsidies to those who do not need them? In addressing this question, one may argue that what I call a subsidy within the structure of a personal income tax system is in effect a reduction in the saving distortion generated by that tax. This argument will be discussed below.

Tax preferences for personal savings within a personal income tax system are justified on grounds that they (a) raise the saving rate and stimulate investment, output and economic growth, and (b) reduce distortions in the choice between current and future consumption. Starting with (a), it is important to emphasize that a number of conditions must be satisfied in order for tax-based saving incentives to affect economic performance.

First, they must increase *private savings* by raising the private saving rate. This effect depends on the sensitivity of private saving behaviour to changes in after-tax rates of return. Second, they must increase national savings. Since these tax preferences result in lower tax revenues at a given level of economic activity, the potential increase in private savings must exceed the revenue cost if higher levels of national savings are to be achieved. Third, higher national savings must generate a higher rate of capital accumulation. As argued by Feldstein [1995], the increase in output resulting from a higher rate of investment generates additional revenues which may more than compensate over the long run for the revenue used to finance the saving incentives.

There is no conclusive evidence that these conditions are met in the case of Canada. As shown in the Appendix, the empirical evidence on their effect on private savings is mixed, and no studies show that they raise national savings. Moreover, as discussed earlier, even if they raised national savings they would have no effect on employment and output in a small open economy, which realistically describes Canada's position in the world economy.

The lack of conclusive evidence of positive effects of tax-assisted saving plans (TASPs) on either private or national saving and the evidence that these tax incentives are largely accessed by middle- and high-income Canadians indicates that these programs are effectively a transfer payment

to the latter, delivered as a tax expenditure, which parallels the direct transfers provided largely to low- and middle-income Canadians through the Old Age Security system. If this use of the fiscal system to subsidize retirement consumption by those who need it least did not generate negative efficiency effects, we may not be very concerned about it. But we should be concerned because the potential economic costs may be considerable when this subsidy is paid through higher taxation that distorts the labour supply, work effort and the utilization of human capital.

As suggested earlier, tax reductions should be focused directly on the two factors of production that drive economic performance. Therefore, I suggest that personal income tax assistance for retirement savings be reduced, and the savings used to finance the recommended reduction in the tax burden on labour income. Specifically, I suggest that the limits for contributions to tax-assisted saving plans be curtailed by setting the level of tax-assisted pension to no more than average wages, as defined in the current program. Instead of providing tax assistance to middle- and high-income Canadians for higher consumption upon retirement, as is done under the current system, my proposal provides incentives for Canadian workers to increase their lifetime labour earnings. The higher income gives them the opportunity to accumulate higher savings over their lifetime so they can afford higher consumption after retirement without government support.

### ***Human Capital and Social Policy***

The policy agenda has recently focused in a more visible manner on human capital, especially at the federal level. The 2004 federal Budget document devotes a separate section to human capital and lists a variety of old and new initiatives in that area [Department of Finance 2004: 112].

Two general observations may be derived from that list. First, although a distinction is made between various stages of learning over a person's lifetime, most of the federal programs involve cash payments or loans for post-secondary education. Second, these programs are aimed at low- and middle-income Canadians, thus incorporating an element of redistribution.

It is heartening to see a formal recognition that learning, even when ultimately directed at market activities, is a lifelong endeavour which requires fiscal attention throughout a person's life. It is a concern, however, to see that the federal policy involves largely unilateral actions in the exercise of its spending power. Human capital is not only an increasingly important contributor to economic growth, but as a component of social and civic capital it is also directly or indirectly touched by almost each element of public policy. As such it links generations and communities and crosses jurisdictional boundaries. This means that policies directed at human capital need to be comprehensive and coordinated among different orders of government.

A framework for evaluating policies aimed at human capital has been developed by Ruggeri and Yu [2001], who identified four stages of human capital to which can be assigned the relevant

public policies, as shown in Table 30. This table suggests that the links between public policy and human capital are complex and involve different types of policies for different stages. In the first stage, the most relevant policies are those that involve the instrument of traditional social policy. In the second stage, the focus shifts to policies directed at formal education. The third stage recognizes that even producing people with the necessary skills and education will not guarantee their availability largely because of labour mobility. All policies affecting labour mobility, and not just emigration and immigration, are important in this stage. The final dimension brings attention to an issue that is not often evaluated in the context of human capital – namely, the effectiveness with which human capital is utilized. This dimension has a direct bearing on productivity and involves both public policy and private decision-making by employers as they affect workplace safety, working conditions, and opportunities for human development.

Table 30 also suggests that policies that apply to one dimension may generate lasting effects that are carried through the following dimensions. This link through time makes the coordination of public policy imperative for the success of human capital strategies. For example, if policies directed at the first dimensions do not correct the factors that may cause the degradation of potential human capital before children enter the formal education system, additional resources will be required to correct that damage during elementary and secondary school. If the damage is permanent, no amount of extra spending will be able to correct it. Also, if reduced federal transfers to provinces lead ultimately to higher levels of tuition at colleges and universities, the scholarships and student loans offered by the federal government will not increase accessibility to post-secondary education. They replace a simple subsidy through lower tuition with a complicated system that may reduce accessibility while creating potential inequities.

I recognize that the level of policy coordination required to optimize the production and utilization of human capital is difficult to achieve in a federation like Canada where provincial governments have the constitutional responsibility for the delivery of the relevant programs and the federal government is largely involved in partial financing through intergovernmental grants. The transformation of these grants into block funding with no conditions attached on the human capital acquisition side make this coordination more difficult. Acknowledging political realities, however, does not hinder one's ability to see what should be done, unrealistic as it may seem. In my view, as in the case of equalization discussed earlier, in developing policies aimed at human capital it is essential to start with fundamental principles. I find very appealing the principle enunciated by Courchene [2001:154]: "Design a sustainable, socially inclusive and internationally competitive infrastructure that ensures equal opportunity for all Canadians to develop, to enhance and to employ in Canada their skills and human capital, thereby enabling them to become full citizens in the information-era Canadian and global societies."

Transforming this principle into an effective human capital strategy requires coordinated policies involving cooperation between federal and provincial governments and not unilateral actions by both orders of government. Two areas require particular attention.

**Table 30**  
**Summary of Policy Suggestions**

| Dimensions       | Public Policies   |
|------------------|---|
| 1. Potential     | Social programs such as universal health care, anti-poverty programs, pre-school programs. Labour market policies affecting prospective parents, such as maternity and paternity leaves under the EI program and the treatment of child-rearing years under the CPP/QPP.                                    |
| 2. Acquired      | Public policies affecting the quality of primary and secondary education. Accessibility to post-secondary education. Policies affecting the net cost of post-secondary education. Private and public involvement in adult education and job training programs.  |
| 3. Availability  | Trade policies that affect the mobility of human capital. Immigration policy. Macroeconomic policies that affect employment opportunities. Fiscal policies that affect location decisions by both firms and individuals.  |
| 4. Effectiveness | Macroeconomic policies that affect employment opportunities. Labour market policies that improve the operation of the labour market. Programs that help improve management skills. Universal health care that helps reduce absenteeism. Policies that help improve workplace safety and working conditions. |

The first is early childhood. Providing equal opportunity for all children to develop their potential, regardless of their residence and the economic position of their parents, requires the elimination of barriers to human development at the earliest possible stage. One of these barriers is the unequal access to quality child care across the country. While correcting this situation has been recognized as a policy priority, with greater emphasis during federal election campaigns, concrete steps are still lacking.

The second area is social assistance. This program is strictly under provincial control because there is no specific component of the CHST (now called the CST) for social assistance and post-secondary education earmarked for this purpose. While its structure has evolved over time, its main purpose has remained redistributive in nature. Viewing social assistance exclusively as an income support program fails to recognize that some of the clients are young, uneducated and unskilled people. They still carry with them the potential to acquire human capital, though such potential may have been damaged through early life experiences that included poverty, family neglect, and limited opportunities for learning and human development. In an environment of looming labour supply constraints, the social cost of this undeveloped human capital will rise. I suggest that, in this area, the traditional concern for providing a social safety net should be combined with a recognition that

helping these young people work towards achieving their potential is an economic investment with a human face. In the discussion of Employment Insurance, I argued that, as labour supply constraints become more severe as time goes by, the EI program should be adjusted to include an increasing retraining component. The same suggestion applies to the part of social assistance that includes people who are not permanently hampered from actively participating in productive activity.

### ***Regional Balance***

Finally, while recognizing that different regions of Canada differ with respect to size, resource endowment, population levels and fiscal capacities, it is essential that economic growth be balanced among regions in order to ensure that they all contribute to the economic and social health of the nation. Federal policies have been increasingly focused on international competitiveness, human capital and innovation. This focus may result in programs structured in a manner that is biased in favour of the richer provinces with large urban centres. It is important, therefore, that the regional implications of new federal initiatives be explicitly incorporated into the program design. In this respect, and following Ruggeri [2003], I suggest that the analysis of regional policies recognize two separate components.

The first component is called *counterbalancing regional policies* and involves policies that correct regional disparities aggravated by national policies. These counterbalancing policies may even aggravate the problem they intended to correct if they take the form of redistributive policies with adverse efficiency effects. For example, regional disparities will be aggravated over the long run by a policy of maintaining an EI structure that provides limited opportunities for retraining and incentives for workers to remain attached to industries with chronic high unemployment rates as a counterbalance to innovation policies that primarily help large cities in the richer provinces. The second component is called *discretionary development policies* and includes programs aimed at reducing regional disparities caused by resource endowments and market forces. This analytical separation should help design regional strategies that are largely focused on the second component and tend to minimize the first one.

Regional development policies traditionally have been delivered through spending programs. The time may be ripe for a review of the merits of this approach.

A major concern with regional disparities is the differential fiscal capacity of different provinces and the potential for interprovincial tax competition in response to international tax competition. Provinces like Alberta, Ontario and BC design their tax structure not to compete with the smaller provinces within Canada, but to compete internationally and with each other. Given the recent thrust towards a reduction in the taxation of mobile factors at the international level, the larger provinces face real or perceived pressures to follow course. The smaller provinces do not have the fiscal capacity to match these tax reduction.

The equalization program is not designed to correct this type of imbalance. As the larger provinces – Ontario and British Columbia under the current formula – reduce their income taxes, they affect negatively the total entitlements of the receiving provinces, further limiting the ability of these provinces to match their tax reductions. Increasing differentials in income tax rates between the larger and smaller provinces, in turn, would tend to increase fiscally-induced interprovincial migration of skilled labour, an effect that would further aggravate regional disparities while creating inefficiencies in the allocation of human resources. The most direct way of addressing this issue, if it becomes serious, is through regionally-differentiated federal income taxes. For corporate taxes, this differentiation would be reflected in different statutory rates; for personal income taxes, it would be reflected in regionally differentiated rates of the credit for labour income.

Regional policies also must expand in scope to explicitly include labour market programs and immigration issues. While the population is aging at the national level, it is aging at a faster rate in the smaller provinces. For example, Statistics Canada has projected for Atlantic Canada, a static population over the next 25 years and a rapidly increasing share of people 65 years of age and over. Population aging will lead to a declining aggregate participation rate and a decline in the labour force within about five years. In the absence of major increases in the participation rate of older workers or a reversal of the net out-migration trend, employment growth will come to a halt in the near future. In the face of declining employment over the long run, unprecedented (and probably unattainable) labour productivity gains are needed to maintain the past growth in living standards. If immigration is to become a major component of the solution, the special needs of the smaller provinces must be recognized and immigration policy must be incorporated into a comprehensive human resources policy.

## *Conclusion*

The motivation for this paper came from the desire to evaluate the validity of a view – often encountered but not universally accepted – that Canada's fiscal system is not competitive with that of the United States. The comparison between the two countries was extended beyond the present fiscal structure by probing the long-term sustainability of those fiscal structures. I found that, when the comparison is confined to the current situation, Canada's governments spend a larger share of GDP than US governments and collect in tax revenues a larger share of GDP, largely because our governments collectively have a budget surplus as opposed to a large deficit in the United States. The two countries have similar tax mixes, the major difference being a greater reliance on payroll taxes by the US and greater reliance on consumption taxes by Canada. With respect to income tax rates, the differences between the two countries are not general, but specific to location and, in the case of corporate income taxes, economic sector.

I found no theoretical or empirical foundation that would translate these differences into a non-competitive fiscal position for Canada. When the comparison is extended to the future, the results are unambiguous: Canada has a sustainable fiscal structure and the US does not. This result limits

the usefulness of comparisons of current fiscal structures between the two countries because Canada can maintain its current fiscal structure indefinitely, and has the option of reducing tax rates in the future, whereas the U.S. may not be able to afford an extension of the tax reductions implemented in 2003.

The discovery that Canada has a fiscal advantage led naturally to the question: How should Canada use this fiscal advantage? The notion that Canada has limited policy flexibility and that its policy strategy should be directed exclusively at what is vaguely called “international competitiveness” was found to be neither appealing nor convincing, especially in light of the Helliwell-led research showing how borders matter. Moreover, given the close economic ties with the United States, this policy thrust would imply a passive policy stance directed at mimicking US policies. In a world where internal strife prevents economic development in many countries, where industrialized countries are unable to contain their budget deficits, and the unbridled operation of a market system corrupted by imperfections is polarizing countries and socio-economic groups within, Canada can act as a leader and operate as a beacon showing how governments can help improve human conditions while promoting balanced growth. To that end, this paper presents a domestic policy strategy that rests on four fundamental pillars: (a) maintaining a sustainable fiscal structure, (b) developing more effective institutions and practices of cooperative federalism, (c) enhancing the mechanisms and forces of social cohesion, and (d) strengthening the foundations of balanced and sustainable development. The specific policy options incorporated in this strategy are summarized below.

*Fiscal Sustainability.* Canadian governments collectively have developed a fiscal structure with the built-in capacity to generate surpluses that will increase over time. As a result, the debt-to-GDP ratio is projected to decline rapidly even in the absence of debt repayment. Since, in this fiscal environment, accelerated rates of decline in the debt-to-GDP ratio cannot be justified either on efficiency or on equity grounds, it is recommended that the federal plan to use part of its surplus to repay the federal debt be shelved.

*Federalism.* Sustainability of the federal fiscal structure was restored partly by reducing federal contributions to national programs, a move that weakened the fiscal position of provincial/territorial governments and aggravated vertical fiscal imbalances. I suggest that, in the decisions affecting federal surpluses, priority should be given to measures that reduce vertical imbalances and restore the long-standing commitment of the federal government to the financing of national programs as an equal partner.

*Social Cohesion.* Highlighting the importance of human and social capital for economic growth and human well-being, this paper points out how these forms of capital that help cement social cohesion are enhanced by our national programs. Therefore, we suggest that giving priority to these programs in fiscal decisions will improve Canada's prospects for the future as it strengthens its federal foundations.

*Balanced Growth.* With the foundations of federalism and the elements of social cohesion strengthened by our fiscal advantage, attention should be turned to strategies that enhance balanced growth. On the tax side, the major policy thrust is a direct focus on reducing the tax burden on mobile factors of production. The current emphasis on providing tax support for retirement consumption through tax incentives for personal savings is replaced by greater emphasis on incentives for the effective utilization of human capital. This shift is based on the following rationale.

Incentives for personal savings improve the lifetime consumption of middle- and high-income Canadians as they reduce the distortions in personal decisions with respect to current and future consumption. Tax reductions for labour income have positive effects on the labour supply, work effort and the utilization of human capital, and they stimulate employment and output. They also raise government revenues at given tax rates and allow increased levels of both private and public consumption. I also stress the need for a comprehensive policy towards human capital that includes not only the educational system, but also the whole array of what are called social programs. Finally, I suggest a restructuring of regional policies, which would include the use of both spending and tax instruments. A summary of the policy suggestions is presented in Table 31.

In conclusion, it is important to point out that the four pillars of a domestic policy strategy and the specific policy suggestions originate from the belief that public policy is directed at human beings and its ultimate purpose is to enhance human well-being.

**Table 31**  
**Summary of Policy Suggestions**

| Area                            | Suggestion  |
|---------------------------------|---|
| 1. Fiscal Sustainability        | No need for debt repayment; let economic growth determine the rate of decline in the debt-to-GDP ratio.   |
| 2. Fiscal Federalism            | Give priority in the use of Canada's fiscal advantage to reduce vertical fiscal imbalances by strengthening the federal commitment to act as an equal partner in the financing of national programs.  |
| 3. Social Cohesion              | Will be enhanced by policies that strengthen federalism. Equalization: 10-provinces standard with no ceiling, a comprehensive revenue base and a recognition of the special properties of natural resource revenues. National programs: introduce adequate financing with a suitable built-in growth rate, which is independent of federal or provincial/territorial short-term budgetary decisions; the suggested option is for the establishment of a national programs fund financed by the notional transfer of personal income tax points. |
| 4. Balanced Growth              |   |
| Taxation                        | Introduce refundable labour income tax credit, based on labour income and incorporating a ceiling; reduce inter-industry differentials in corporate taxes and improve tax treatment of depreciation; reduce tax assistance for personal savings by setting the level of tax-assisted pension to no more than average wages.   |
| Employment Insurance            | Eliminate the surplus generated by the general payroll tax component of EI contributions; eliminate the contribution rate differential between employers and employees; take more explicitly into consideration the layoff records of firms or industries and include a flexible approach that provides incentives for retraining.  |
| Human Capital and Social Policy | Work towards a comprehensive and coordinated human capital policy which recognizes that social programs represent investment in human capital; enhance the education and training component of social assistance.   |
| Regional Balance                | Minimize the negative impact of national policies on regional disparities; combine spending programs with regionally-differentiated tax rates; include immigration policy into a comprehensive human resources policy with differential regional dimensions.  |

## APPENDIX

The appendix elaborates on some the issues raised in the text and provides additional information.

**Table A-1**  
**RRSP Contribution Limits, 1957 to 2007**

|      | Individuals with RPPs    |             | Individuals without RPPs |         |
|------|--------------------------|-------------|--------------------------|---------|
|      | percent of earned income | maximum     | percent of earned income | maximum |
| 1957 | 10                       | \$1,500     | 10                       | \$2,500 |
| 1972 | 20                       | 2,500       | 20                       | 4,000   |
| 1976 | 20                       | 2,500       | 20                       | 5,500   |
| 1986 | 20                       | 3,500       | 20                       | 7,500   |
| 1991 | 18                       | 11,500 - PA | 18                       | 11,500  |
| 1997 | 18                       | 13,500 - PA | 18                       | 13,500  |
| 2004 | 18                       | 14,500 - PA | 18                       | 14,500  |
| 2006 | 18                       | 18,000 - PA | 18                       | 18,800  |

### 1. RRSP Limits

### 2. Who Uses RPPs and RRSPs

A study by Maser and Dufour [2002] found that in 1999 private pension assets (RPPs plus RRSPs and RRIFs) accounted for close to 29 percent of the value of all assets held by Canadians. Less than half (47 percent) of family units have RPP assets compared to 60 percent for family units with RRSP and RRIF assets. Employees in the public sector, including education and health care, have the highest percentage participation in private pension plans and the highest median private pension assets. Private pension assets are highly concentrated at the top end of the income scale with 25 percent of family units with \$100,000 or more holding 84 percent of the assets.

A study by Akyempong [2000] found that both participation in RRSPs and the level of the average contribution are positively related to income. From 1991 to 1997, less than 10 percent of eligible contributors with income below \$30,000 participated in the program, compared to 30

percent for those with income of \$45,000 and over 80 percent for those with income above \$75,000. This study also shows that, in 1997, the average contribution of taxpayers with income above \$80,000 was more than double that of taxpayers with income of \$50,000 and over six times the contribution of taxpayers with income below \$20,000.

Palameta [2001] analyzed the pattern of RRSP contributions in 1999 and found that, for all ages combined, the participation rate of taxfilers with income above \$80,000 (83 percent) was 2.2 times that of taxfilers with income in the \$20,000 to 30,000 range and 1.6 times taxfilers with income in the \$30,000 to 40,000 range.

### **3. Tax-assisted saving plans (TASPs) and private savings**

In theory, efficiency gains from tax-assisted saving plans (TASPs) are generated through the following steps: (a) the increase in after-tax rates of return will stimulate private savings, (b) the increase in private savings will raise domestic investment, (c) the increase in domestic investment will increase productivity and economic growth. The existing literature on this issue indicates that none of these steps is assured. Step (a) is not guaranteed even in theory, but implicitly assumes that the substitution effect is stronger than the income effect of an increase in the after-tax rate of return. The issue, therefore, must be solved empirically. Most of these studies have been conducted with US data and the results are ambiguous. Poterba, Venti and Wise [1996] are convinced that TASPs are effective instruments for raising private savings; Gravelle [1991] believes that conventional economic theory and evidence strongly suggests that IRAs were not effective saving incentives; Engen, Gale and Scholtz [1996] are convinced that these instruments are ineffective in raising the saving rate: Hubbard and Skinner [1996: 71] suggests that “there is good reason to believe that the truth lies somewhere between the extremes of no new saving and all new saving;” while [Bernheim 1994: 153] remains unconvinced by these contradictory results and believes that “the jury on saving incentives is still out.”

Canadian studies are few and were largely motivated by comparisons with the US. Jump and Wilson [1986: 181] “examined and rejected” the hypothesis that saving rate differentials between Canada and the US were caused by more generous tax incentives in Canada. In their view, “tax incentives ... can be argued to be more akin to lump-sum tax reductions than schemes for effectively increasing after-tax returns to savings at the margin.” The opposite result was obtained by Carroll and Summers [1987: 249] who concluded that “differences in tax structure ... appear to be important factors explaining the divergent behaviours of the American and Canadian private savings rate.” Carroll and Summers’ conclusion has recently been disputed by Sabelhous [1997] who provides a detailed explanation of saving rate differentials between the two countries that does not include the effect of TASPs. The conclusions of the Carroll and Summers study have also been rejected by Burbidge, Fetz and Veall [1998: 259] who concluded that (a) “RRSP contributions are not well correlated with either the magnitude or timing of changes in Canadian saving rates” and (b) “RRSPs

cannot reasonably account for the differences in aggregate saving rates between the two countries.” Focussing strictly on RRSPs, three studies performed for the federal Department of Finance by Wise [1984], Gupta, Venti and Wise [1992], and Venti and Wise [1995] found that contributions would rise in response to increases in contribution limits and the seven year carry-forward of unused contribution room and that RRSP contributions were not substitutes. This latter result is at odds with the conclusions reached by Burdridge and Davies [1995: 28] that “between 1977 and 1984, families at all stages of the life cycle substituted RRSPs for deposits in financial institutions.” Moreover, the methodology, which follows that used in US studies by the same authors, has been shown to have a number of shortcomings [Gale and Scholtz, 1994].

#### **4. TASP's and National Savings**

Even if there were conclusive evidence that TASP's raise *private savings*, this result would not automatically guarantee an increase in *national savings* because the revenue foregone in financing these programs reduces public savings. The evidence on this issue is more consistent. Jump and Wilson [1986: 181] argue that “even if the tax measures have provided incentives for higher personal saving, they have probably been blunted or completely offset by the higher government deficits or increases in other taxes necessary to finance them.” Ragan [1996: 66] quotes an unpublished study which concludes that “an increase in the RRSP limits leads to an increase in household saving and a larger reduction in government saving for a net result of an overall reduction in national saving.” The effect of TASP's on national savings using simulations of individual saving behaviour in the US was measured by Engen and Gale [1993] and Gale and Scholtz [1994] and these results were summarized in Engen, Gale and Scholtz [1996:134]. According to their estimates “public saving is negative for many years after saving incentives are introduced. Annual public saving eventually turns positive as the funds are cashed in, but the public debt is immediately and permanently higher with the incentives than without.” Feldstein [1995] also used the simulation approach and concluded that, when we consider the effect of the increase in private savings on investment and on corporate income tax revenues, the total increase in government revenues may be sufficiently large to offset the revenue loss from tax incentives. Ruggeri and Fougere [1997] performed an exercise similar to that of Feldstein under a variety of different assumptions and showed that Feldstein's results represent an extreme case with assumptions very favourable to positive responses to tax incentives. They concluded that the more general results that TASP's reduce government revenues are likely to hold, although the magnitude of the effect may not be very large.

#### **5. Financing TASP's with Distortionary Taxation**

When proposals for expanding the role of tax incentives for saving are advanced, rarely one finds estimates of the associated revenue loss and its offsets. Perhaps the proponents have in mind

offsetting reduction in public expenditures that provide no benefits to them. Since these programs are delivered as tax expenditures incorporated in the personal income tax system, and since the main concern with tax policy currently is Canada's competitiveness in the taxation of mobile factors, these tax preferences should be evaluated within the PIT structure as representing a trade-off with lower tax rates. Within this framework it becomes evident that reducing the distortions in the inter-temporal consumption decision is paid through an increase in the distortion with respect to the choice between work and leisure. The higher tax rates required to finance the saving incentives have no effect on tax-sheltered savings, but increase the tax burden on unsheltered savings and labour income, which represents to a large extent the return to human capital. While higher taxes on labour and human capital do have negative effects on economic activity, as discussed earlier no economic benefits are generated by the preferential treatment of sheltered savings, except for an increase in the publicly-subsidized lifetime consumption of the contributors.

These plans may generate additional economic costs by affecting the labour force participation decision of mature workers. There is evidence that the participation rate of workers approaching retirement age (55 to 64 years of age) is affected by their level of wealth [e.g., Barnet et al. 2004]. In general, the decision to retire prior to reaching the age of 65 is affected by wages earned at decision time, the level of public and private pensions available at 65 or earlier, and the amount of wealth. The level of wealth affects the retirement decision by raising the standard of living that would be afforded by pensions alone and provides a financing bridge between the age of early retirement and the pensionable age. If tax incentives increase private saving as they raise the rate of return on tax-sheltered savings, they will also raise the level of wealth that would be accumulated as retirement age approaches. Since wealth seems to be positively associated with early retirement decisions, these tax incentives may also provide incentives for early retirement. This effect may be stronger in the case of workers who are constrained in the flexibility as to hours of work while they are employed. In the presence of those constraints, workers will provide more hours of work than they desire and receive income in excess of the desired amount. Unable to acquire the desired amount of leisure while they are employed, these workers will adjust their work-leisure choice later in life by taking early retirement. This early retirement decision is facilitated by the additional accumulation of wealth, facilitated by the tax incentives for saving, through the extra saving from the monetized leisure [Ruggeri and Yu 1999].

## **6. A Cost-Benefit Analysis of TASP**

Even when these tax incentives raise national savings, the potential net benefits to society depend on how they are financed and how they affect economic performance. A cost-benefit analysis of TASP, specifically the IRA in the US, was conducted by Hubbard and Skinner [1996]. They focused on the relationship between TASP and capital accumulation, thus placing their analysis within the framework of a closed economy where, as a condition of equilibrium, an increase in national savings will result in a higher capital stock. Under the assumption that a contributor

increases their savings by 26 cents for each dollar of IRA contribution, Hubbard and Skinner estimated a corresponding increase in the capital stock of \$1.21. They also evaluated the effect of a reduction in the distortions in consumer choices between present and future consumption in response to the tax incentives for saving. They measured the net benefit of the reduction in this distortion that can be attributed to the IRA and the cost to the government under the assumption that this program is financed through distortionary taxation with a deadweight loss of 30 cents per dollar of revenue. They concluded that “the saving incentive would fail the cost-benefit test judged solely on reducing tax distortions” [Hubbard and Skinner 1996: 87]. In fact they would fail the test even if they were financed by non-distortionary taxes. According to Hubbard and Skinner’s calculations, this saving incentive would pass the cost-benefit test only if it were financed by government spending which provided benefits of less than 75.7 cents per dollar of expenditure.

The benefit-cost test would be even more unfavourable in a small open economy, which is a more realistic representation of Canada. In this case, the link between domestic savings and domestic investment is largely severed, which means that the potential increase in corporate income tax revenue that would result from higher capital accumulation in a closed economy would not materialize. Two other features of Canada tend to reduce the potential economic impact of tax incentives for personal saving. First, even if “borders matter” with respect to capital flows, there is no evidence that domestic investment in Canada is being hampered by capital supply constraints. Second, and perhaps more important, most of the investment in human capital – broadly defined to include its maintenance through health care, and research and development – is funded by the government.

## **7. Redistribution over the Lifetime**

What is often forgotten in discussions about expanding the contribution limits for RRSPs is that financing these increases leads to higher tax rates. If these programs were eliminated or drastically reduced, we could afford substantially lower personal income tax rates without reducing the provision of public services. What we are doing with all these programs directed at life in retirement is skewing the lifetime pattern of fiscal redistribution in favour of the life-span outside the labour force and against working life. In a study of fiscal redistribution in Canada in 1986, Ruggeri, Van Wart and Howard [1997: 39-40] suggested that “redistribution has clearly an intergenerational dimension” and concluded from their results that “the youngest group, singles, incurs a small fiscal loss. As they form families, especially two-income families, they become severely penalized by the fiscal system. However, they recover their losses after they retire from the labour force at 65 years of age. If one viewed the fiscal system strictly from an efficiency perspective, one might question the merits of a fiscal structure that penalizes households during their labour attachment years, when they make labour supply decisions, and rewards them when they no longer have an attachment to the labour force.”

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