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9 Canada: On the Road to Fiscal Balance

Philip Oreopoulos

9.1 Introduction

On the whole, Canadians have enjoyed exceptional economic and social growth over the past 35 years. Average incomes have been rising steadily, international trade has increased substantially, and a highly skilled labor force has been promoted. In 1961, per capita GDP in Canada was 70 percent of that in the United States; by 1990 it had virtually caught up, to 92 percent, establishing Canada as one of the richest countries in the world.[1] During the same period, a broad and extensive social safety net was entwined, which soon became recognized as one of the defining characteristics of the country.

Yet, despite these past fiscal arrangements, it had become apparent in the early 1990s that the country's method of financing its welfare state through deficit spending could not be sustained. A slowdown of economic growth, underestimation of debt-servicing costs, and lower than expected tax revenue base had led the ratio of total net debt to GDP in Canada to rise steadily, from 11.3 percent in 1975 to 70.1 percent in 1995, the second highest level (next to Italy) among the G-7 countries.[2] Moreover, should the government try to maintain the 1995 level of social programs without further reform, this ascending trend would continue.

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1. Cairns et al. (1996) note that although this convergence was not unique, the degree to which it occurred in Canada was greater than for most industrialized countries.

2. For purposes of consistency and international comparison, all references to government debt are based on a national accounts basis.

Over the past several years, the federal and 10 provincial governments have instigated a number of initiatives specifically designed to realign fiscal policy on a more sustainable path. Social policy has now been placed at the front of the political agenda, as individual programs are assessed for efficiency and effectiveness in light of current economic pressures. The reforms are intended to reverse the trend of spiraling interest costs—not just for the following year, but for the coming decades as the population ages.

This chapter applies the generational accounting approach to Canada, to examine whether these changes have been enough to actually reach fiscal balance.[3] Despite persistent government deficits in recent years, the main findings suggest that Canada's fiscal policy is at a state of sustainability. The recent federal budget, the prevalent pattern of partial indexing of particular expenditures, and the anticipated payroll tax hikes for the Canada and Quebec Pension Plan (C/QPP) all have significant influence in reducing the estimated net tax burden on future Canadians. After these changes are factored in, future generations are projected to face lifetime net tax burdens 3.1 percent more than that of today's newborns under current policy. It would take, for example, only a 0.1 percent hike in personal income taxes to remove this generational imbalance. That no further reform is required is due largely to these policies, which have not yet had their full impact on currently living Canadians.

There is one chief cautionary note, however. Now that the federal deficit is set to become surplus by around the turn of the century, the government is considering using a portion of the surplus for either tax relief or more spending. This may be myopic policy in that the large revenue requirements that will occur beginning around 2015 when the baby boomers start to retire are not taken into account. Simulating this policy using mainly income tax cuts over the first 20 years, I find the net tax burden on future generations would rise to a level 58 percent higher than that on current newborns. (For a more detailed look at the implications of not using the surpluses primarily for debt reduction, see Oreopoulous and Valliancourt [1998b].)

Section 9.2 will outline in brief detail what has happened to Canadian fiscal policy since the 1960s. Section 9.3 will discuss the data sources used to calculate the generational accounts for Canada. In section 9.4, I present the main findings and provide a sensitivity analysis of the results. The impact from the recent federal budget and the projected changes to the C/QPP will be shown in section 9.5. Finally, section 9.6 summarizes and concludes the chapter.

9.2 Canadian Fiscal Policy since 1960

As in most other industrialized countries, the 1960s were a prosperous time in Canada. The country's population was growing rapidly, with high fertility rates of 3.0 and more. Hence, the labor force was also increasing. Economic

3. Generational accounting was first introduced by Auerbach, Gokhale, and Kotlikoff (1991).

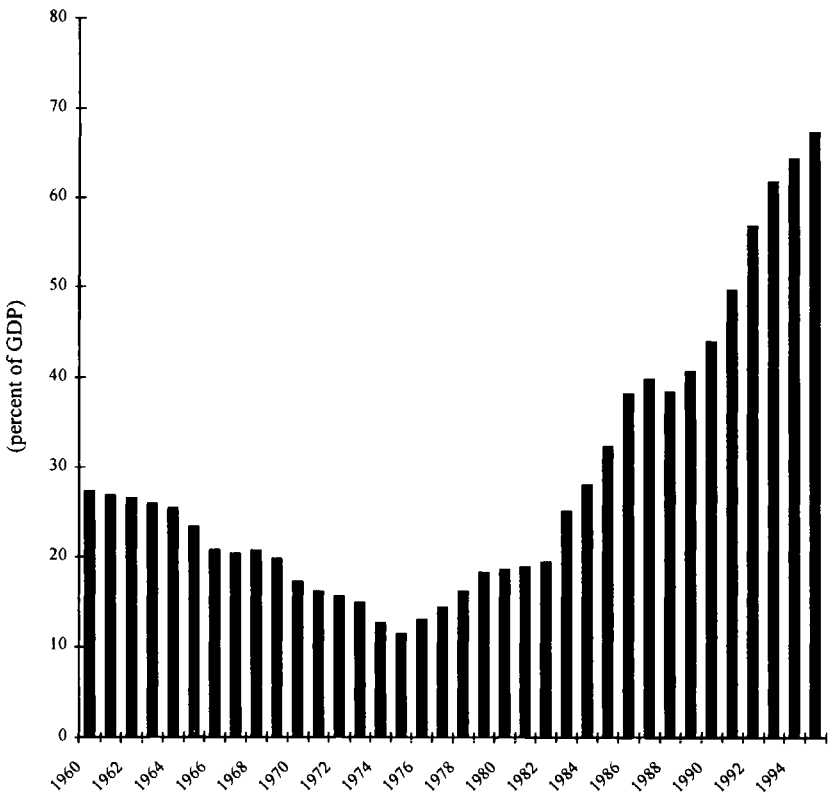

Fig. 9.1 Ratio of net debt to GDP 1960–95 (national accounts basis)
Sources: Statistics Canada, *National Income and Expenditure Accounts,* Catalogue no. 13-201 (Ottawa: Minister of Industry, Science and Technology, various years); Statistics Canada, *National Balance Sheet Accounts,* Catalogue no. 13-214 (Ottawa: Minister of Industry, Science and Technology, various years).

growth and productivity were very robust. Real per capita GDP was rising some 2.0 to 3.0 percent a year, while interest rates were barely higher than inflation levels. The unemployment rate averaged 4.9 percent for this decade, and the debt, relative to the size of the economy, was on a downward track, falling from 27.2 to 17.1 percent of GDP (see fig. 9.1). In short, the 1960s was an affluent period in Canada, which brought promise and optimism. Sustained economic growth was simply taken for granted.

Within this environment emerged a broad expansion of the Canadian welfare state. Policymakers could argue that these newly introduced or expanded programs were affordable by appealing to the economic conditions existing at the time. There were three main developments. First, the Canada Assistance Plan (CAP), enacted in 1966, consolidated and enhanced the existing public assistance programs to meet "basic requirements" of welfare recipients. Sec-

ond, a comprehensive retirement pension program was also phased in. The pay-as-you-go Canada and Quebec Pension Plans were established in 1966 with the intent of providing social insurance for workers and their families against loss of income due to retirement, disability, or death. Additional income security plans for the elderly were also incorporated: Old Age Security (OAS), the Guaranteed Income Supplement (GIS), and the Spouse's Allowance were introduced in 1952, 1967, and 1975, respectively, to provide revenues for individuals who required additional support. Last, universal public health insurance was adopted by each of the provinces by the beginning of 1972.

In the early 1970s, the federal government continued to expand its level of expenditures while posting only modest deficits and one budget surplus. The rise in spending was financed mostly by an increase in taxation, while government borrowing was kept at minimal levels. Prior to 1975, the primary account was in surplus, large enough that the ratio of debt to GDP maintained a downward trend, falling eventually to 11.3 percent. Demand for debt reduction ceased to be a major issue. But ironically, this apathetic attitude toward debt reduction was the main reason for the beginning of debt creation.[4] As the magnitude of debt decreased, fewer Canadians perceived it as a threat, and greater taxation was deemed unnecessary. The federal government recognized this shift in voters' perception, and primary surpluses were finally allowed to become primary deficits, which led the debt-to-GDP ratio to steadily increase to 18.2 percent by 1979.

The situation quickly worsened after 1980. The rate of growth of national income consistently slowed, while the national unemployment rate doubled. The trend was not one particular to Canada. Almost all industrialized countries experienced smaller productivity growth during this period. What made Canada's situation particularly grave was the added strain from the 1981–82 and 1990–92 recessions, which were the most severe ones felt since the Great Depression, and the worst out of all industrialized countries. In the 1981–82 recession, real GDP fell 5.2 percent, real short-term interest rates rose to 7.5 percent, and unemployment rose from 7.5 to 12.5 percent. And in the 1990–92 recession, real GDP fell by 3.2 percent, real short-term interest rates rose to 10 percent, and unemployment rose from 7.8 percent to 11.0 percent. Higher servicing costs resulting from the higher interest rates, coupled with a substantial rise in expenditures and lower revenues instigated by the 1981–82 recession, produced a doubling of the debt-to-GDP ratio in less than a decade.

The federal government was rather slow to react forcefully to its growing financial problems. It was not until 1987 that it recorded a primary surplus, which amounted to only 1 percent of GDP. Federal taxes were increased throughout the latter part of the decade, from 15.5 percent of GDP in 1979 to

4. Gillespie (1996) comments that the influences that led to the rise in relative debt since the mid-1970s are very different from all previous "waves" of debt creation. In the past, substantial increases in federal borrowing occurred during the financing of wars and depressions.

18.0 percent in 1989. It was also during this period that certain welfare payments were de-indexed to economic growth, or at least were no longer periodically adjusted to keep pace with it. This would not have a significant impact right away. Relative federal program expenditures remained virtually the same, representing 15.9 percent of GDP in 1979 and 15.4 percent in 1989. Despite the large increase in tax revenues, the federal government was unable to raise its primary budget above levels that would begin to lower the ratio of debt to GDP. To be sure, the speed of increase for this figure had slowed. However, the arrival of the 1990–92 recession, and the increased servicing costs from the debt, brought further escalation in the ratio. Between 1990 and 1995, the debt-to-GDP ratio climbed from 43.9 to 67.4 percent.

The provinces, whose aggregate total spending is about the same as the federal government, exhibited similar patterns of fiscal policy.[5] Budget imbalances were usually small and fluctuated from deficit to surplus during the 1960s and 1970s. As it had done to the federal government, the recession of the early 1980s impaired the fiscal positions of the provinces. But whereas the federal deficit continued to balloon, the deficits of the provinces started to decline immediately and dramatically after 1983. The return to solid financial ground did not last long, however. The effort by the provinces to forestall further the need for borrowing was not enough to avoid the strain from the 1990–92 recession. In general, budgetary deficits increased substantially.

The 1990s saw concern about the unsustainable path of Canadian fiscal policy snowball into a massive call for deficit reduction. Opinion polls reported that the public debt load was perceived as the most serious threat to economic stability. Several provinces were given strong mandates to take measures to control their spending. As a result, six of the ten provinces have produced, or are expected to produce by next year, a budget surplus, despite reduced transfers from the federal government. The two largest Canadian provinces, Ontario and Quebec, appear to be the slowest in dealing with their budgets, although Ontario has recently reduced its expenditures dramatically. On the federal side, the election in 1993 brought about a phenomenal makeover in Parliament. The Progressive Conservatives, who came to power in 1984 with the second largest majority in Canadian history, were reduced to 2 of the 295 seats in the House of Commons. Dissatisfied with the government's inability to control its budgets, the electorate had made clear they wanted this practice reversed (although this was not the only factor contributing to the Progressive Conservative defeat). The new government under the Liberal Party has instigated a number of reforms to reduce its overall expenditures, most notably in the areas of unemployment insurance and old age security. Large cuts to provincial cash transfers have been announced and will occur over the next three years. The provinces are, of course, upset about this, but their rhetoric suggests that they will accom-

5. Kneebone (1996) and Wroberl (1995) provide more detailed accounts of the changing fiscal policies among the provinces.

modate the change without borrowing. Neither the provincial nor federal governments are keen to raise taxes. The past few years have seen ardent opposition to higher taxes, and calls even to lower them. The Canadian governments have generally acknowledged this concern, allowing most of their changes to fiscal policy to come from expenditure cuts only.

In addition to anxiety over current fiscal arrangements, the majority of Canadians perceive that their country will have difficulty in the future supporting its elderly population (Northcott 1994). This concern is not surprising. The fertility rate has fallen dramatically since its peak of 3.8 in 1959. A sharp contraction occurred shortly after this time, with the rate dropping to 1.9 by 1973, and to 1.7 by 1985, where it has remained since. Net migration is large enough to offset the low fertility rate so that the total population in Canada is still growing, although very slowly. The senior dependency ratio—the number of Canadians over age 65, expressed as a percentage of the working-age population—is set to rise from 19.0 percent in 1995 to 36.3 percent by the year 2030 (Statistics Canada 1995).

A number of initiatives have been implemented to address the concerns about an aging Canada. The National Forum on Health was launched in 1994, with the purpose of preserving, or improving, Canada's health care efficiency and effectiveness in the midst of the demographic transition. The most important and recent change made in order to anticipate future revenue requirements has been the readjustment to annual rises in C/QPP contributions. When these schemes were devised in 1966, it was expected that Canadians and their employers would never have to pay more than about 5.7 percent of each individual's earnings to fund this pay-as-you-go scheme. But due to unanticipated demographics, enriched benefits, and slower economic growth, this projection was grossly miscalculated. The Chief Actuary of Canada warned in 1995 that without further reform, contribution rates would have to rise from 5.6 percent of earnings in 1996 to 14.2 percent over the next 30 years to meet benefit commitments (Office of the Superintendent of Financial Institutions 1995). The federal and provincial governments reached an agreement in February 1997 to speed up this process, setting contribution rates to rise from 5.6 to 9.9 percent over the next six years. This change in policy significantly reduces the extra burden of contributions over benefits that younger and future Canadians are expected to pay (Oreopoulos 1996a).

9.3 Data Sources Used to Calculate the Canadian Generational Accounts

Generational accounting methodology provides a means to assess the implications of past borrowing by Canadian governments, in addition to current and expected reforms that would bring fiscal policy to a more sustainable path. Canada in particular is a country in which deficit accounting can give no meaningful information to assess the overall impact of government policy on current

and future generations. Projected rises in financial costs from the aging population and forecasted declines in costs from expected future budgets are simply not accounted for when referring to the government's most recent deficit.

To produce generational accounts for Canada, we require (1) a set of population projections; (2) projections of average taxes, transfers, and government purchases by age and sex; (3) an estimate of government net debt for the base year (1995); and (4) a discount rate assumption.

9.3.1 Population Data

Age- and sex-specific population projections were obtained from Statistics Canada (1994) under official medium baseline forecasts up to 2041. Estimates were extended to 2100 using the same component assumptions prevalent at the end of that year. Specifically, the fertility rate remains at 1.70, while life expectancy rises from 74.8 and 81.3 years in 1993 to 78.5 and 84.0 years by 2016 for males and females, respectively. Net migration between 2016 and 2100 is 196,030, contributing to an overall increase in population during this period. A steady state is assumed thereafter.

9.3.2 Fiscal Projections

Projections for aggregated taxes and transfers begin with the 1995 official totals for all levels of government (measured on a national accounts basis). These totals were further consolidated into more general categories, which are displayed in table 9.1. Our baseline results classify educational and health expenditures as implicit transfers, whose remaining present value amounts are allocated to specific generation cohorts and subtracted from overall net tax payments. The Social Policy Simulation Database and Model (SPSD/M), produced by Statistics Canada, was used to distribute expenditures and receipts by age and sex.[6] Data from Health Canada (1996) were also used for allocation purposes. In general, taxes were assumed to be borne by those paying the taxes. The one major exception was that corporate taxes were allocated according to wage and salary income. Elementary, secondary, and postsecondary expenditures were distributed according to profiles discussed in Cameron and Wolfson (1994).

Average tax payments and transfer receipts were projected forward by examining historical, recent, and expected changes to these categories. Productivity growth is assumed to be 1.5 percent per year in the base-case results. All taxes increase in line with productivity, in addition to population served, and inflation. For transfers, several social programs have not remained in step with economic growth in recent years. Under current legislation, the government is only obliged to raise spending on a number of transfers by inflation. Although, historically, these expenditures were increased discretely to keep pace with productivity changes, recent data show them growing at a lesser rate. Oreopoulos

6. See Bordt et al. (1990) for a detailed description of the SPSD/M.

Table 9.1 **Consolidated Government Expenditures and Receipts, 1995 (percent of GDP)**

Receipts	
Personal income taxes	13.95
Capital income taxes	2.64
Commodity taxes	8.78
Property taxes	3.83
Unemployment insurance contributions	2.67
Workers' compensation contributions	0.57
C/QPP contributions	1.73
Public pension contributions	0.51
Other taxes	2.08
Income from government wealth	5.48
Total receipts	42.24
Expenditures	
Government purchases	13.89
Education	5.94
Health care	6.40
Elderly benefits (OAS, GIS, and Spouse's Allowance)	2.93
Social assistance	1.98
Child tax benefits	0.70
Unemployment insurance	2.01
Workers' compensation	0.52
C/QPP	2.65
Public pensions	0.72
GST credits	0.38
Interest	9.17
Total expenditures	47.32
Deficit	5.08

Source: Statistics Canada, *National Income and Expenditure Accounts,* Catalogue no. 13-201 (Ottawa: Minister of Industry, Science and Technology, 1995).

and Valliancourt (1998) discuss the indexing assumptions for projecting social programs. Many of the transfers are assumed to grow only with inflation and population, or only in partial step with productivity. These include elderly benefits, social assistance, child tax benefits, C/QPP, and goods and services tax (GST) credits. Per capita real health care expenditures and general government purchases (excluding education) are projected to grow in line with productivity.[7]

The three-year federal budget projection for 1997 is also included in the base-case results. Successive cuts in cash transfers to the provinces are as-

7. Oreopoulos (1996b) provides the motivation behind assuming health care expenditures grow at the same rate as productivity. Despite the much slower relative growth rates in such expenditures in recent years, a model of real per capital public health spending regressed on lagged per capita real income shows that the slower growth can be explained solely by the recession in the early 1990s. Without further reform, real health expenditure per person is predicted to grow approximately 1:1 with productivity.

sumed to be accommodated by reducing respective government purchases. Unemployment insurance reforms reduce unit costs initially and then grow with productivity. Tuition fees are increased by 10 percent by 2005. Finally, under current legislation, C/QPP contribution rates are increased from 5.6 percent of earnings in 1996 to 9.9 percent by 2002.

9.3.3 Government Net Debt

Consolidated net financial assets, as measured by Statistics Canada's National Balance Sheet Accounts, was used as the estimate for net government debt (or the negative of). Beginning in 1995, this amount was U.S.$374,801 million, or 70.1 percent of GDP.[8]

9.3.4 Discount Rate

The discount rate used to convert amounts to present value was 5 percent. This amount was similar to those used in other studies for calculating particular unfunded liabilities for Canada (e.g., Canadian Institute of Actuaries 1995).

9.4 Main Findings and Sensitivity Analysis

Table 9.2 presents the base-case Canadian generational accounts for males, females, and both combined. The base year is 1995. Educational and health expenditures are classified as implicit transfers. Productivity growth is assumed to be 1.5 percent, and the discount rate used is 5.0 percent.

The accounts exhibit a life cycle pattern, with expected remaining net tax payments to the government peaking at age 25 for both males and females and then falling. The initial rise is due to younger generations' approaching their heaviest taxpaying years. Present values become greater when the time period until actually realizing a payment or receipt gets smaller. The accounts decline for cohorts after age 25, as more taxpaying years fall into the past, and the time in which old-age-related transfers are paid becomes closer. The generational accounts for male cohorts aged 60 or older are negative, indicating that, on average, these generations will receive more in transfers than they will have to pay in taxes for the remaining portion of their lives. Generational accounts for females aged 55 or older are also negative.

Since the accounts measure net tax payments for only the remainder of a cohort's lifetime, we cannot use these values to compare burdens on living generations directly. Older cohorts are projected to pay little, or receive more from government than they will have to pay in taxes. But the taxes that these people paid in the past are not included in the results. The most useful information from this table can be gained from comparing newborn generational accounts with those for future generations, since remaining lifetimes for them are the same.

Recall from chapter 2 that initially the generational accounts assume current

8. An exchange rate of 1.389 Canadian dollars per U.S. dollar was used throughout this paper.

Table 9.2 **Generational Accounts: Base Case, Education as Part of Government Transfers (thousands of U.S. dollars)**

Generation's Age in 1995	Present Value of Net Tax Payments		
	Males and Females Combined	Males	Females
0	56.3	88.7	22.1
5	66.4	103.2	27.7
10	99.0	141.8	54.2
15	138.5	187.6	86.7
20	177.0	232.2	119.3
25	193.1	252.9	131.9
30	183.3	242.8	122.2
35	161.1	217.6	103.7
40	134.5	187.5	81.8
45	97.1	142.7	51
50	50.8	85.1	16.1
55	5.5	33	−21.8
60	−44.8	−29.8	−59.4
65	−83.6	−80.9	−86.1
70	−87.9	−85.2	−90.1
75	−84.4	−80.1	−87.6
80	−79.8	−74.3	−83.2
85	−68.5	−62.9	−71.4
90	−10.9	−12.7	−10.3
Future generations	58.0	91.4	22.7
Percentage difference	3.1		

Source: Author's calculations.

policy will remain in place for living generations, while future generations will have to bear any residual net tax burden that would be required to satisfy the government's intertemporal budget constraint (i.e., to make the government's long-term fiscal policy sustainable). The burden is spread equally among the future cohorts, except for a productivity growth rate adjustment. In table 9.2, newborn males and females are projected to pay $56,300 in present value net taxes. This amount includes the expected three-year budget expenditure cuts and anticipated increases in C/QPP contributions in the future. On the other hand, Canadians-to-be are projected to be burdened by net taxes of $58,000, measured in present value, a $1,700 difference, or 3.1 percent more than what newborns face under existing policy. Thus the findings indicate that Canada is approximately at a state of fiscal balance such that no further policy reform would be required to maintain indefinitely the same net tax burden for all future generations (measured in proportion to earnings).

A sensitivity analysis of the base-case productivity and discount rate assumptions is displayed in table 9.3. Smaller productivity growth will mean that future expenditures and receipts will be less than projected before. A greater

Table 9.3 **Sensitivity Analysis for Generational Imbalance**

	$g = 1$			$g = 1.5$			$g = 2$		
	$r = 3$	$r = 5$	$r = 7$	$r = 3$	$r = 5$	$r = 7$	$r = 3$	$r = 5$	$r = 7$
N	118.6	39.1	3.8	154.6	56.3	11.0	197.9	76.8	19.9
F	130.7	47.1	12.2	158.0	58.0	14.1	191.5	72.9	17.9
Percentage difference	10.2	18.9	218.7	2.2	3.1	28.2	−3.28	−5.1	−9.85
AD	12.1	7.4	8.4	19.3	1.7	3.1	−6.4	−3.9	−2.0
PIT	3.1	2.8	3.3	1.3	0.8	1.3	−2.1	−1.8	−2.3

Source: Author's calculations.

Notes: g is productivity growth (percent); r is discount rate (percent).

N: Generational account for newborns (thousands of U.S. dollars). F: Generational account for future generations (adjusted for growth). AD: Absolute difference between F and N (thousands of U.S. dollars). PIT: Percentage increase in personal income taxes required to reach generational balance.

discount rate will also cause expenditures and receipts to be lower, once they are converted to present value. Thus, in general, the larger the gap between the assumed productivity growth and discount rate, the smaller the generational accounts, measured in absolute value. This effect will increase the percentage difference between generational accounts for newborns and future generations. A wide range of alternative productivity growth rates (1.0, 1.5, and 2.0 percent) and discount rates (3.0, 5.0, and 7.0 percent) was used. As shown, the percentage differential between newborn and future generations' net payments ranges widely. When productivity growth (g) is 1.0 percent and the discount factor (r) is 7.0 percent, the generational account for newborns is very small—$3,800. Consequently, the percentage difference of this payment with the $12,200 to be paid by future generations (after growth adjustment) is high—218.7 percent. Conversely, in the three cases where productivity growth is assumed to be 2.0 percent and the discount rate varies among 3.0, 5.0, and 7.0 percent, percentage differences between newborns and future cohorts are actually negative, although not very different from zero.

Examining absolute differences between the two accounts and magnitudes of policy changes shows, in general, that Canada is approximately at a state of fiscal balance, regardless of the assumptions used. When we examine the absolute difference, the amounts range from $6,400, for the case when productivity growth is 2.0 percent and the discount rate is 3.0 percent, to $19,300, when g and r equal 1.5 and 3.0 percent, respectively. The magnitude of policy change required to remove any differential between the accounts is also minimal. For example, personal income taxes would have to adjust by either falling by 2.3 percent for the case where growth is 2.0 percent and the discount rate is 7.0 percent or rising by 3.3 percent when the growth and discount rates are 1.0 and 7.0 percent, respectively. Thus, while the imbalance measured by percentage differences between newborns and future generations varies considerably, the sensitivity for absolute differences and the policies required to remove the gap is relatively small.

9.5 Alternative Policies

The base-case generational accounts for Canada projected net tax payments for living generations under "current fiscal policy" conditions. Current fiscal policy was defined to include a number of reforms that are legislated, or expected to take place in the future, as well as slower relative growth for certain transfer payments. It is useful to examine the extent to which these influences reduce generational imbalance. This section examines such cases, and in addition looks at an alternative policy in which the federal government decides to cut taxes once budget surpluses begin to occur early next decade.

Table 9.4 shows how the generational accounts (with males and females together) would look with alternative projections for future budgets. Column (1) assumes all taxes and transfers are indexed to productivity, inflation, and

Table 9.4 **Effects on Generational Accounts of Expected Future Changes to Fiscal Policy (thousands of U.S. dollars)**

Generation's Age in 1995	Generational Accounts: Males and Females Combined			
	(1)	(2)	(3)	(4)
0	39.9	47.3	49.4	56.3
5	48.5	56.3	58.7	66.4
10	78.9	87.4	90.1	99.0
15	116.5	125.5	128.6	138.5
20	154.2	163.4	166.9	177.0
25	171.4	180.5	183.9	193.1
30	163.6	172.4	175.5	183.3
35	143.2	151.9	154.6	161.1
40	118.1	127.0	129.4	134.5
45	82.4	91.5	93.4	97.1
50	37.7	47.0	48.5	50.8
55	−5.8	3.4	4.5	5.5
60	−54.2	−45.7	−45.1	−44.8
65	−91.0	−84.0	−83.6	−83.6
70	−93.6	−88.1	−87.9	−87.9
75	−88.4	−84.5	−84.4	−84.4
80	−82.3	−79.9	−79.8	−79.8
85	−69.8	−68.5	−68.5	−68.5
90	−10.9	−10.9	−10.9	−10.9
Future generations	111.0	90.4	72.0	58.0
Percentage difference	178.2	91.1	45.6	3.1

Source: Author's calculations.

Notes: Col. (1): All taxes and transfers indexed to population change, inflation, and productivity; no adjustments to budget or C/QPP. Col. (2): Expected slower real growth for old-age security transfers, social assistance, child tax benefits, and GST credits. Col. (3): Slower growth to transfers, and three-year federal budget forecast included. Col. (4): Base-case results: Includes slower transfer growth, 1996 federal budget, and legislated changes to C/QPP contribution rates.

population. The 1997 budget forecasts and the legislated changes to C/QPP contributions are also not included in these results. The difference between newborns' and future generations' net tax payments is much larger than in the base case. Here, newborns are estimated to pay $39,900 in present value net taxes, while future generations would have to pay $110,944 to satisfy the government's intertemporal budget constraint (after adjusting for future changes to productivity). This represents a very significant generational imbalance of 178.2 percent.

This scenario no longer appears likely, however. Several social transfers, legislated to increase with inflation and population, are no longer fully adjusted to also increase with productivity. Column (2) examines the Canadian generational accounts by adding new projections for social transfers that accommodate this recent trend of slower relative growth. The imbalance between newborns and future generations is reduced substantially, from 178.2 to 91.1

percent. The smaller fiscal burden on future generations comes at the expense of those currently living. Net taxes for living generations (except those 90 years of age) are increased—by about the same absolute amount for those younger than 60 years old, and less so for older cohorts who will not be around long enough to experience the relatively smaller benefits. It should be understood that the real value of these transfers to generations has not been reduced—they have only increased at smaller rates than productivity growth or remained constant in per capita terms.

Column (3) uses the same tax and transfer projections but includes the three-year budget forecasts made by the federal government in 1997. The generational imbalance is further reduced as a result of these planned reforms—from 91.1 to 45.6 percent. This decline is mainly due to cuts in cash transfers to the provinces. It is assumed that the provinces correspondingly reduce their own government purchases.[9] Thus net tax payments for living generations are not significantly influenced by these actions.

Column (4) displays the original base-case generational accounts shown in section 9.4. In addition to including the adjusted social transfer index assumptions and the 1997 federal budget, legislative changes to the C/QPP have also been accommodated. Contributions to the C/QPP are raised from 5.6 percent of earnings in 1996 to 9.9 percent by 2002. Net tax payments for newborns are consequently raised from $49,400 to $56,300, while net tax payments for future generations fall from $72,000 to $58,000. This leaves a remaining generational imbalance of 3.1 percent.

Thus, by factoring for these expected future developments to Canadian fiscal policy, we are able to get a much better picture of the government's ability to meet its bills than we would have had we only examined the recent upward trend in the Canadian debt-to-GDP ratio. The policies have substantial impact on reducing the overall net tax burden on future generations but have little or no influence on the recorded yearly deficit. Generational accounting's dynamic approach of examining budgetary effects over time reveals a much smaller generational imbalance compared to other countries, despite a significant aging of the Canadian population. The country is close to fiscal balance because the expected changes to fiscal policy will eventually affect those generations living now, even though they may not feel the effects right away.

It is useful to examine the impact from speeding up the process of raising the contribution rates for the country's pay-as-you-go pension scheme, the C/QPP. Rather than increase contribution rates over a 40-year period, as legislated previously, rates are now set to rise over the next 6 years. Both policies cover the plan's unfunded liabilities, but the impact on different age groups is different. Table 9.5 compares these differences. Column (1) assumes a 30-year

9. As long as the provinces do not resort to greater borrowing to reconcile their budgets with this change, the reduction in the estimated generational imbalance will be about the same, whether taxes are increased, transfers reduced, or government purchases diminished.

Table 9.5 **Change to Base-Case Generational Accounts under Alternative Policy for Canada and Quebec Pension Plan Reform (thousands of U.S. dollars)**

Generation's Age in 1995	Alternative: Raise Contribution Rates to 14.2% by 2025 (1)	Base Case: Raise Contribution Rates to 9.9% by 2002 (2)	Absolute Change from Alternative to Base Case (3)
0	58.6	56.3	−2.3
5	68.2	66.4	−1.8
10	99.8	99.0	−0.8
15	138.1	138.5	0.5
20	175.4	177.0	1.6
25	190.9	193.1	2.2
30	180.8	183.3	2.5
35	158.5	161.1	2.6
40	132.1	134.5	2.5
45	95.1	97.1	2.0
50	49.4	50.8	1.4
55	4.9	5.5	0.7
60	−45.0	−44.8	0.2
65	−83.6	−83.6	0.0
70	−87.9	−87.9	0.0
75	−84.4	−84.4	0.0
80	−79.8	−79.8	0.0
85	−68.5	−68.5	0.0
90	−10.9	−10.9	0.0
Future generations	60.4	58.0	−2.4
Percentage difference	3.0	3.1	

Source: Author's calculations.

transition, with contribution rates raised from 5.6 percent of earnings to 14.2 percent.[10] Column (2) shows the base-case generational accounts, which include the 6-year transition of C/QPP contribution rates.

As shown, the percentage difference between newborn and future generation net tax payments is approximately the same for the 30-year and 6-year transition scenarios—3.1 and 3.0 percent, respectively. However, the absolute net tax burden on future generations is lower for the shorter transition period. The reason is that by increasing contribution rates sooner, the generations who would have retired before any significant contribution rate increases under the 30-year transition are now required to pay more. This results in higher net taxes to be faced by older generations (who are under age 65) and lower net tax

10. The 6-year, 9.9 percent steady state contribution rate is equivalent to the 30-year, 14.2 percent steady state contribution rate in making the self-contained C/QPP program sustainable. In other words, both policies satisfy an intertemporal budget constraint for just the pay-as-you-go system of the C/QPP. Oreopoulos (1996a) discusses in more detail the intergenerational effects from such different paths to a sustainable Canada Pension Plan.

Table 9.6 **Change to Base-Case Generational Accounts under Per Capita Income Tax Freeze until 2010**

Generation's Age in 1995	Base Case: No Policy Change	Alternative: Per Capita Tax Freeze	Absolute Change from Base Case to Alternative
0	56.3	46.5	−9.8
5	66.4	55.4	−11.0
10	99.0	86.7	−12.4
15	138.5	124.9	−13.7
20	177.0	162.8	−14.2
25	193.1	179.6	−13.6
30	183.3	171.0	−12.3
35	161.1	150.0	−11.1
40	134.5	124.8	−9.7
45	97.1	89.0	−8.1
50	50.8	44.2	−6.6
55	5.5	0.5	−5.1
60	−44.8	−48.7	−3.9
65	−83.6	−86.8	−3.2
70	−87.9	−90.5	−2.6
75	−84.4	−86.4	−2.0
80	−79.8	−81.4	−1.6
85	−68.5	−69.7	−1.2
90	−10.9	−11.0	−0.2
Future generations	58.0	74.5	16.5
Percentage difference	3.1	60.3	

Source: Author's calculations.

burdens for younger and future generations. Column (3) in table 9.5 shows the differences in generational accounts due to the shorter transition period. The biggest losers from the move to the shorter transition are the 35-year-old cohorts, who have to pay $2,600 more in present value net taxes for the remainder of their lives. The higher net taxes for the generations aged 15 to 60 reduce the required revenues for the younger cohorts. Future generations gain the most with the 6-year transition, having to pay $2,400 less than under the slower transition scenario.

With the rising trend in the debt-to-GDP ratio reversed and surpluses appearing in some government budgets, many Canadians have considered the option of tax relief or spending increases. As was mentioned earlier, however, a balanced budget now does not necessarily correlate with a state of fiscal balance. Much of the strain on the government's finances will not be felt until beginning in 2015, when the baby boomers start to retire. If taxes are lowered or expenditures increased now, policy will have to be reversed later to afford the higher elderly costs.

Table 9.6 shows what would happen if the government froze per capita income taxes at their 1998 levels until 2010, so that they are no longer growing

in step with productivity increases during this period. This policy is broadly similar to one designed to maintain balanced budgets during the same period using income tax reductions.[11] In this case, some of the net tax burden on the current age groups is reduced. Newborns are estimated to have to pay $40,800 in net taxes over their lifetimes, compared to the $56,300 under the base case. However, this policy is not sustainable, and at some point later on, the government will have to increase taxes again, or reduce expenditures further. The lifetime net tax payment by a cohort born in the future becomes $74,500 (adjusted for growth), $16,500 higher than before. Thus, to the extent that the government relaxes its policies to reduce or eliminate budget surpluses early in the next century, the net tax burden on future age groups will rise.

9.6 Summary and Conclusion

Canada's fiscal situation worsened in the 1980s and early 1990s mainly because of slower than expected economic growth and two particularly severe recessions. The reaction by the federal and provincial governments was modest, and not sufficient to stop the debt-to-GDP ratio from growing dramatically. The worsening financial situation, coupled with the ominous aging of the population, has caused the public to demand that the governments get their houses in order. Several policies have been implemented to respond to these calls, including large expenditure cuts already imposed or expected in the next few years and a slower pattern of growth for some transfers, in relation to productivity changes.

This chapter has applied the generational accounting approach to Canada to assess the sustainability of the country's current fiscal policy and its potential impact on living and future generations. The findings emphasize the importance of looking not only at borrowing done by governments in the past but also at the financial resources that will be needed in the future. Under the base-case scenario, which includes factoring for contribution rate increases to the C/QPP, the net tax burden on future generations is estimated to be 3.1 percent more than for newborns, who face net taxes under the existing fiscal position. The magnitude of policy change required to remove the remainder of this imbalance is very small, indicating that Canada is just about at state of fiscal balance.

The changes implied in restoring generational balance are permanent ones. Relaxing current policy now would impose a much greater burden on future generations, because of the effects from the demographic transition, which will not begin to have full impact until 2015. Yet, if the Canadian fiscal position remains on its current course, no further tax hikes, transfer cuts, or government purchase reductions will be required to maintain fiscal balance. Canadians

11. A more detailed discussion on this alternative policy scenario is given in Oreopoulos and Valliancourt (1998).

have not been a content bunch lately as a result of recent restraint by their governments. But, at least, they can now see light at the end of the tunnel.

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