

TAX EXPENDITURES AND EVALUATIONS

2006



CANADA'S NEW GOVERNMENT

Canada

TAX EXPENDITURES AND EVALUATIONS

2006



Department of Finance
Canada

Ministère des Finances
Canada

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Tel: 613-995-2855
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Price: \$15.85 including GST

This document is available free on the Internet
at www.fin.gc.ca

Cette publication est aussi disponible en français.

Cat. No.: F1-27/2006E
ISBN 0-660-19661-1



Table of Contents

Preface.....	5
Part 1—Tax Expenditures: Estimates and Projections	7
Introduction.....	9
What’s New in the 2006 Report	11
The Tax Expenditures.....	16
Table 1—Personal Income Tax Expenditures	17
Table 2—Corporate Income Tax Expenditures	26
Table 3—GST Tax Expenditures.....	32
Part 2—Tax Evaluations and Research Reports.....	35
Taxes on Business Investment: An International Comparison of Marginal Effective Tax Rates in the Manufacturing Sector.....	37
Investing in Post-Secondary Education: The Impact of the Income Tax System.....	59



Preface

Since 2000 the tax expenditure report has been separated into two documents. This document, *Tax Expenditures and Evaluations*, is published on an annual basis. It provides estimates and projections for broadly defined tax expenditures as well as evaluations and descriptive papers addressing specific tax measures. This year's edition includes two analytical papers:

- “Taxes on Business Investment: An International Comparison of Marginal Effective Tax Rates in the Manufacturing Sector”
- “Investing in Post-Secondary Education: The Impact of the Income Tax System”

The companion document, *Tax Expenditures: Notes to the Estimates/Projections*, was published in 2004. It is a reference document for readers who wish to know more about how the estimates and projections are calculated and who want descriptions of, or information on the objectives of, particular tax expenditures. New tax expenditures are described in the relevant section of this document.

Part 1

TAX EXPENDITURES: ESTIMATES AND PROJECTIONS



Introduction

The principal function of the tax system is to raise the revenues necessary to fund government expenditures that reflect society’s priorities. The tax system can also be used directly to achieve public policy objectives through the application of special tax rates, exemptions, deductions, rebates, deferrals and credits that affect the level and distribution of tax. These measures are often described as “tax expenditures” because they reduce government revenue.

In order to define tax expenditures, it is necessary to establish a “benchmark” tax structure that applies the relevant tax rates to a broadly defined tax base—e.g. personal income, business income or consumption. Tax expenditures are then defined as deviations from this benchmark. Reasonable differences of opinion exist about what should be considered a normal part of the tax system and hence about what should be considered a tax expenditure. For example, a deduction for expenses incurred in earning income is generally considered as part of the benchmark and thus not as a tax expenditure. But in some cases the deduction may confer some personal benefit, making its classification ambiguous.

This report takes a broad approach and includes estimates and projections of the revenue loss associated with all but the most fundamental structural elements of the tax system, such as the progressive personal income tax rate structure. This includes not only measures that may reasonably be regarded as tax expenditures but also other measures that may be considered part of the benchmark tax system. The latter are listed separately under “memorandum items.” For instance, the dividend tax credit is listed under this heading because its purpose is to reduce or eliminate the double taxation of income earned by corporations and distributed to individuals through dividends. Also included under this heading are measures for which there may be some debate over whether they should be considered tax expenditures, or where data limitations do not permit a separation of the tax expenditure and benchmark components of the measure. This approach provides information on a full range of measures.



Caveats

Care must be taken in interpreting the estimates and projections of tax expenditures in the tables for the following reasons.

- The estimates and projections are intended to indicate the potential revenue gain that would be realized by removing individual tax measures. They are developed assuming that the underlying tax base would not be affected by removal of the measure. However, this is an assumption that is unlikely to be true in practice as the behaviour of economic agents, overall economic activity and other government policies could change along with the specific tax provision.
- The cost of each tax measure is determined separately, assuming that all other tax provisions remain unchanged. Many of the tax expenditures do, however, interact with each other such that the impact of several tax provisions at once cannot generally be calculated by adding up the estimates and projections for each provision.
- The federal and provincial income tax systems interact with each other to various degrees. As a result, changes to tax expenditures in the federal system may have consequences for provincial tax revenues. In this publication, however, any such provincial effects are not taken into account—that is, the tax expenditure estimates and projections address strictly the federal tax system and federal tax revenue.
- In the case of the harmonized sales tax in effect in Nova Scotia, New Brunswick, and Newfoundland and Labrador, only the federal cost of the tax expenditures is reported.

The tax expenditure estimates and projections presented in this document are developed using the latest available taxation data. Revisions to the underlying data as well as improvements to the methodology can result in substantial changes to the value of a given tax expenditure in successive publications. In addition, estimates and projections for some tax measures, such as the half inclusion rate on capital gains, are particularly sensitive to economic parameters and hence may also differ significantly from one publication to the next.



What's New in the 2006 Report

A number of new tax measures have been introduced since last year's report and others have been modified. These are described below.

Personal Income Tax

Personal Income Tax Rates

The lowest personal income tax rate was reduced to 15 per cent from 16 per cent effective January 1, 2005. The rate is 15.5 per cent effective July 1, 2006. Accordingly, the full-year rate is 15 per cent for 2005, 15.25 per cent for 2006, and 15.5 per cent for the 2007 and subsequent taxation years.

For the 2005 taxation year, the 15-per-cent rate applies to taxable incomes of up to \$35,595. For the 2006 taxation year, the 15.25-per-cent rate applies to taxable incomes of up to \$36,378. The upper limit for the application of the 15.5-per-cent rate is indexed for taxation years after 2006. These rates will also be generally used to calculate non-refundable tax credits and the alternative minimum tax for the 2005 and subsequent taxation years.

Basic Personal Amount

The basic personal amount was increased by \$500 to \$8,648 for the 2005 taxation year. For the first half of 2006, it was increased by indexation plus a further \$200, for a total of \$9,039. The basic personal amount was reduced by \$400 to \$8,639 on July 1, 2006. For the purpose of calculating personal income taxes for the 2006 taxation year, these two half-year amounts are applied as an annual average of \$8,839. For 2007, the \$8,639 amount is increased by indexation plus an additional \$100. For 2008, it is increased by indexation plus an additional \$200.

Personal amounts in respect of a spouse or common-law partner or wholly dependent relative were also adjusted. Specifically, for the 2005 taxation year, these amounts were increased by \$425 to \$7,344. For the first half of 2006, they were increased by indexation plus a further \$170, for a total of \$7,675. The amount was reduced by \$340 to \$7,335 on July 1, 2006. For the purpose of calculating personal income taxes for the 2006 taxation year, these two half-year amounts are applied as an annual average of \$7,505. For 2007, the \$7,335 amount is increased by indexation plus an additional \$85. For 2008, it is increased by indexation plus an additional \$170.

Pension Income Credit

Budget 2006 provided greater tax relief to pensioners by increasing to \$2,000 from \$1,000 the maximum amount of eligible pension income that can be used in calculating the pension income credit. This measure applies to the 2006 and subsequent taxation years.



Pension Income Splitting

Objective: This major positive change in tax policy for pensioners will enhance the incentives to save and invest for family retirement security.

The October 31, 2006, Tax Fairness Plan proposes to allow pension income splitting commencing in 2007. The measure will allow any Canadian resident who receives qualifying pension income to allocate to their resident spouse or common-law partner up to one-half of that income.

Age Credit

The Tax Fairness Plan increased the age credit amount, a credit that provides tax relief to low- and middle-income seniors, by \$1,000 from \$4,066 to \$5,066. This increase is effective for the 2006 and subsequent taxation years. The credit amount will continue to be indexed thereafter.

Canada Child Tax Benefit and Child Disability Benefit

The Canada Child Tax Benefit (CCTB), which includes the CCTB base benefit and the National Child Benefit supplement, as well as the Child Disability Benefit (which was shown separately), are no longer included in this publication, reflecting changes to the presentation of government financial information. Acting on a recommendation by the Auditor General of Canada, the Government now presents its financial statements on a gross basis to more accurately reflect the nature and size of its revenues and expenses. Previously, the CCTB and its components were netted against personal income tax revenues, and were considered a tax expenditure. The CCTB and its components are now reported as government expenses.

Refundable Medical Expense Supplement

Budget 2006 increased the maximum amount of the refundable medical expense supplement to \$1,000 from \$767 per year, effective 2006.

Textbook Tax Credit

Objective: To encourage Canadians to pursue post-secondary education by providing better tax recognition for the cost of textbooks.

This new measure provides \$65 per month for full-time students, and \$20 per month for part-time students, in textbook tax credit amounts. Students receive a credit on these amounts, in recognition of the costs of post-secondary textbooks.

Full Exemption for Post-Secondary Scholarships and Bursaries

Budget 2006 introduced a full exemption for post-secondary scholarship, fellowship and bursary income. The conditions that apply to the full exemption are the same as those that applied to the \$3,000 exemption: the scholarship, fellowship or bursary must be received by a student in connection with a student's enrolment in a program for which the student can claim the education tax credit.



Canada Employment Credit

Objective: This new tax credit recognizes work-related expenses incurred by Canadians for items such as home computers, uniforms and supplies.

This new credit, which took effect July 1, 2006, provides tax relief on the lesser of \$500 and the individual's employment income for the year. Because this measure took effect on July 1, 2006, the maximum amount on which the credit is calculated for the 2006 taxation year is \$250. For the 2007 and subsequent taxation years, the maximum amount on which the credit is calculated is increased to \$1,000. The tax credit for a taxation year is calculated by reference to the lowest personal income tax rate for the taxation year (i.e. 15.25 per cent for 2006 and 15.5 per cent for the 2007 and subsequent taxation years). The amount on which the credit is based is indexed after 2007.

Tradespeople's Tool Expenses

Objective: To provide tax recognition for the cost of tools that tradespeople must provide as a condition of employment and to encourage apprenticeships.

Budget 2006 allows the total cost of eligible new tools acquired by an employed tradesperson in a taxation year, in excess of \$1,000 (indexed after 2007), to be deductible up to a maximum of \$500 for that year. For the cost of tools to qualify for the deduction, the employer will have to certify that the employee is required to acquire those tools as a condition of, and for use in, the employment. This measure applies to new tools acquired on or after May 2, 2006.

Children's Fitness Tax Credit

Objective: To help parents offset some of the costs associated with registration fees for children's sports, thereby promoting physical fitness and healthy living among children.

Budget 2006 will allow parents to claim a non-refundable tax credit in respect of up to \$500 in eligible fees for the enrolment of a child under the age of 16 in an eligible program of physical activity. The measure will apply to the 2007 and subsequent taxation years. The credit will be calculated by reference to the lowest personal income tax rate for the taxation year and can be claimed by either parent for eligible fees incurred during the calendar year.



Mineral Exploration Tax Credit for Flow-Through Share Investors

In October 2000, a 15-per-cent tax credit was introduced to help moderate the impact of a global downturn in mineral exploration on mining communities by promoting exploration. This tax incentive, available to individuals investing in flow-through shares used to finance exploration, expired on December 31, 2005, after two extensions.

Budget 2006 reintroduced the credit for the period from May 2, 2006 until March 31, 2007. The one-year “look-back” rule will allow funds raised with the benefit of the credit in 2007, for example, to be spent on eligible exploration activity up until the end of 2008.

\$500,000 Lifetime Capital Gains Exemption for Qualified Fishing Property

Budget 2006 extended the \$500,000 lifetime capital gains exemption available on the transfer of farm property and small business shares to qualified fishers. This measure applies to the disposition of fishing property on or after May 2, 2006.

Eliminating Double Taxation of Large Corporation Dividends

Budget 2006 eliminated the double taxation of dividends from large corporations at the federal level by introducing an enhanced gross-up and dividend tax credit (DTC) for dividends paid after 2005 by large corporations. Specifically, starting in 2006, shareholders will include 145 per cent of the eligible dividend amount in income (that is, a 45-per-cent gross-up), and the federal DTC with respect to eligible dividends will be approximately 19 per cent of that grossed-up amount.

Tax Credit for Public Transit Passes

Objective: The new transit tax credit will make transit more affordable, reduce traffic congestion and lower greenhouse gas emissions.

Budget 2006 allows individuals to claim a non-refundable tax credit for the cost of monthly public transit passes or those passes of a longer duration effective July 1, 2006. Specifically, it will be claimable by the individual, or the individual’s spouse or common-law partner, in respect of eligible transit costs of the individual, the individual’s spouse or common-law partner, and the individual’s dependent children that are under 19 years of age.

Corporate Income Tax

Accelerated Elimination of the Federal Capital Tax

The federal capital tax was eliminated as of January 1, 2006, two years earlier than originally scheduled. The tax was levied at a rate of 0.125 per cent in 2005 on taxable capital in excess of \$50 million.



Apprenticeship Job Creation Tax Credit

Objective: To encourage employers to hire new apprentices and to support apprentices in their training, the Government has created a new Apprenticeship Job Creation Tax Credit of up to \$2,000 per apprentice.

In order to encourage employers to hire new apprentices, Budget 2006 introduced a new Apprenticeship Job Creation Tax Credit, effective May 2, 2006. Eligible employers will receive a tax credit equal to 10 per cent of the wages paid to qualifying apprentices in the first two years of their contract, to a maximum credit of \$2,000 per apprentice per year.

Elimination of the Federal Corporate Surtax

The federal corporate surtax will be eliminated for all corporations in 2008. Its elimination is equivalent to a 1.12-percentage-point reduction in corporate income tax rates.

The corporate surtax applies to all corporations and is calculated at a rate of 4 per cent of federal corporate income tax payable after the 10-per-cent abatement for income earned in a province, but before credits such as the small business deduction and credits for foreign taxes paid.

Increase of the Small Business Deduction

The small business deduction currently reduces the federal corporate income tax rate applied to the first \$300,000 of qualifying active business income of a Canadian-controlled private corporation to 12 per cent.

The small business tax rate will be reduced by 1 percentage point by 2009. The tax rate will be reduced to 11.5 per cent in 2008 and then to 11 per cent in 2009 and thereafter. In addition, the annual amount of active business income eligible for the reduced tax rate (generally referred to as the small business limit) will be increased to \$400,000 as of 2007.

Reduction of the General Corporate Income Tax Rate

The general corporate income tax rate will be reduced to 19 per cent from 21 per cent by 2010. The rate will be reduced to 20.5 per cent in 2008, to 20 per cent in 2009, and to 19 per cent in 2010 and thereafter.

Goods and Services Tax

Reduction in the Goods and Services Tax Rate

As announced in the 2006 budget, the goods and services tax rate was reduced by 1 percentage point as of July 1, 2006. The tax expenditure projections reflect this reduction.

Elimination of the Visitor Rebate Program

The Visitor Rebate Program is proposed to be eliminated effective April 1, 2007, as part of the package of specific spending restraint measures announced by the Government on September 25, 2006.



The Tax Expenditures

Tables 1 to 3 provide tax expenditure values for personal income tax, corporate income tax and the goods and services tax (GST) for the years 2001 to 2008.

Estimates and projections are developed using the methodology set out in Chapter 1 of *Tax Expenditures: Notes to the Estimates/Projections*.¹ The economic variables used to develop the projections are based on the average of private sector forecasts presented in the May 2006 budget.

The tax expenditures are grouped according to functional categories. This grouping is provided solely for presentational purposes and is not intended to reflect underlying policy considerations.

All estimates and projections are reported in millions of dollars. The letter “S” indicates that the cost is less than \$2.5 million, “n.a.” signifies that data is not available to support a meaningful estimate/projection, and a dash means that the tax expenditure is not in effect. The inclusion in the report of items for which estimates and projections are not available is warranted given that the report is designed to provide information on measures included in the tax system even if it is not always possible to provide their revenue impacts. Work is continuing to obtain quantitative estimates and projections where possible.

¹ Available on the Department of Finance website at www.fin.gc.ca.



Table 1
Personal Income Tax Expenditures*

	Estimates			Projections				
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Charities, Gifts and Contributions								
Charitable donations credit	1,490	1,580	1,825	1,965	1,925	1,990	2,025	2,055
Reduced inclusion rate for capital gains arising from donations of publicly listed securities and ecologically sensitive land ¹	6	3	6	8	10	26	29	29
Non-taxation of capital gains on gifts of cultural property ²	6	3	14	7	3	4	4	4
Non-taxation of gifts and bequests	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Political contribution tax credit ³	8	9	11	19	16	14	10	11
Culture								
Assistance for artists	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deduction for artists and musicians	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Education								
Adult basic education—tax deduction for tuition assistance	–	10	5	5	5	5	5	5
Apprentice vehicle mechanics' tools deduction	–	10	10	10	10	10	10	10
Education tax credit ⁴	260	250	235	235	215	220	220	220
Tuition tax credit	275	275	270	275	260	260	265	270
Textbook tax credit ⁵	–	–	–	–	–	80	82	83
Education and tuition tax credits carried forward from prior years ⁶	170	245	290	290	270	265	285	310
Transfer of education and tuition tax credits ⁷	390	420	440	455	435	485	500	505
Partial exemption of scholarship, fellowship and bursary income ⁸	14	13	11	11	10	38	38	39
Registered education savings plans ^{9,10}	96	110	130	150	145	175	215	285
Student loan interest tax credit	66	59	63	65	62	65	67	69
Employment								
Canada Employment Credit	–	–	–	–	–	439	1,805	1,881
Deduction for income earned by military and police deployed to high-risk international missions	–	–	–	30	30	30	30	30
Deduction of home relocation loans	S	S	S	S	S	S	S	S
Deferral of salary through leave of absence/sabbatical plans	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Employee benefit plans	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Employee stock options ¹¹	650	415	480	730	540	565	595	625

* The elimination of a tax expenditure would not necessarily yield the full tax revenues shown in the table. See the publication *Tax Expenditures: Notes to the Estimates/Projections*, published in 2004 and available on the Department of Finance website (www.fin.gc.ca), for a discussion of the reasons for this.



Table 1
Personal Income Tax Expenditures (cont'd)

	Estimates			Projections				
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Non-taxation of certain non-monetary employment benefits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-taxation of strike pay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Northern residents deductions	125	130	135	135	135	135	135	140
Overseas employment credit	57	62	58	59	60	60	61	62
Tax-free amount for emergency service volunteers	14	14	14	14	14	14	14	14
Tradespeople's tool expenses	-	-	-	-	-	15	15	15
Family								
Adoption expense tax credit ¹²	-	-	-	-	5	5	5	5
Caregiver credit	57	65	73	80	77	81	85	85
Deferral of capital gains through transfers to a spouse, spousal trust or family trust	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Infirm dependant credit	6	6	6	6	6	6	6	7
Spouse or common-law partner credit ^{13,14}	1,165	1,180	1,190	1,245	1,290	1,325	1,330	1,415
Eligible dependant credit ^{13,14}	610	630	660	680	680	710	730	755
Farming and Fishing								
\$500,000 lifetime capital gains exemption for farm/fishing property ¹⁵	215	255	240	240	245	310	315	320
Cash-basis accounting	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral of capital gains through intergenerational rollovers of family farms and commercial woodlots	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral of income from destruction of livestock ¹⁶	3	S	S	9	-9	S	S	S
Deferral of income from sale of livestock during drought years	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral of income from grain sold through cash purchase tickets ¹⁷	-26	21	S	S	25	7	8	9
Deferral through 10-year capital gain reserve	S	S	S	S	S	S	S	S
Exemption from making quarterly tax instalments	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Flexibility in inventory accounting	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Tax treatment of the Net Income Stabilization Account¹⁸								
Deferral of tax on government contributions	66	170	45	S	S	S	S	S
Deferral of tax on bonus and interest income	31	26	22	21	7	S	S	S
Taxable withdrawals	-76	-105	-98	-180	-155	-8	S	S



Table 1
Personal Income Tax Expenditures (cont'd)

	Estimates			Projections				
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Federal-Provincial Financing Arrangements								
Logging tax credit	S	S	S	S	S	S	S	S
Quebec abatement	2,965	3,050	3,215	3,350	3,565	3,465	3,715	3,905
Transfer of income tax points to provinces	13,555	13,585	14,235	14,930	16,010	15,565	16,680	17,530
General Business and Investment								
\$200 capital gains exemption on foreign exchange transactions	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
\$1,000 capital gains exemption on personal-use property	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deduction of accelerated capital cost allowance ¹⁹	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral through use of billed-basis accounting by professionals	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral through capital gains rollovers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral through five-year capital gain reserve	20	31	16	16	16	17	17	17
Investment tax credits	33	36	43	43	44	45	45	46
Mineral exploration tax credit for flow-through share investors ²⁰	12	25	45	49	68	56	-8	-4
Partial inclusion of capital gains ²¹	1,985	1,665	2,040	2,795	2,935	3,080	3,235	3,395
Taxation of capital gains upon realization ²²	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Small Business								
\$500,000 lifetime capital gains exemption for small business shares	345	305	305	305	310	315	325	330
Deduction of allowable business investment losses	41	43	29	33	38	40	40	40
Deferral through 10-year capital gain reserve	S	S	S	S	S	S	S	S
Labour-sponsored venture capital corporations credit ²³	215	180	160	150	150	150	150	150
Rollovers of investments in small businesses	6	3	4	10	10	10	10	10
Health								
Children's fitness tax credit	-	-	-	-	-	-	160	165
Disability tax credit ²⁴	330	350	365	380	425	440	465	475
Medical expense tax credit ²⁵	570	635	700	765	760	825	925	995
Non-taxation of business-paid health and dental benefits	1,710	1,875	2,010	2,165	2,255	2,430	2,595	2,760
Refundable medical expense supplement ²⁶	55	64	68	73	87	100	105	110



Table 1
Personal Income Tax Expenditures (cont'd)

	Estimates			Projections				
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Income Maintenance and Retirement								
Age credit ²⁷	1,320	1,355	1,440	1,505	1,400	1,760	1,885	1,935
Deferred profit-sharing plans	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-taxation of certain amounts received as damages in respect of personal injury or death	15	15	17	18	17	18	19	20
Non-taxation of Guaranteed Income Supplement and Allowance benefits ²⁸	265	265	295	290	240	245	270	270
Non-taxation of investment income on life insurance policies ²⁹	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-taxation of RCMP pensions/compensation in respect of injury, disability or death	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-taxation of social assistance benefits ³⁰	245	225	220	205	155	150	145	130
Non-taxation of up to \$10,000 of death benefits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-taxation of veterans' allowances, income support benefits, civilian war pensions and allowances, and other service pensions (including those from Allied countries) ³¹	5	4	3	3	S	S	S	S
Non-taxation of veterans' disability pensions and support for dependants ³²	135	140	145	150	140	150	150	145
Non-taxation of veterans' disability award ³³	-	-	-	-	-	-	14	18
Non-taxation of workers' compensation benefits	650	700	630	655	650	695	750	790
Pension income credit ³⁴	405	415	430	435	405	800	840	855
Pension income splitting ³⁵	-	-	-	-	-	-	650	685
Registered pension plans ³⁶								
Deduction for contributions	4,575	5,325	6,615	8,270	8,395	8,700	9,015	9,325
Non-taxation of investment income	2,785	335	11,465	9,630	10,215	10,670	11,405	12,165
Taxation of withdrawals	-6,415	-6,670	-6,905	-7,140	-7,235	-7,560	-8,055	-8,495
Net tax expenditure	945	-1,010	11,175	10,760	11,375	11,810	12,365	12,995
Registered retirement savings plans ³⁶								
Deduction for contributions	6,225	5,915	6,000	6,655	7,030	7,520	8,030	8,555
Non-taxation of investment income ³⁷	1,280	17	6,300	4,995	5,360	5,645	6,115	6,610
Taxation of withdrawals	-3,465	-3,510	-3,670	-4,050	-4,285	-4,720	-5,275	-5,855
Net tax expenditure	4,040	2,425	8,630	7,600	8,110	8,445	8,870	9,310
Supplementary information:								
Present value of tax assistance for retirement savings plans ^{38,39}	5,670	5,850	6,820	8,040	8,490	8,990	9,380	9,850
Saskatchewan Pension Plan	S	S	S	S	S	S	S	S
Treatment of alimony and maintenance payments	115	115	115	105	105	105	105	105



Table 1
Personal Income Tax Expenditures (cont'd)

	Estimates			Projections				
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Other Items								
Deduction related to vows of perpetual poverty	S	S	S	S	S	S	S	S
Deduction for clergy residence	67	74	70	71	71	72	74	75
Non-taxation of capital gains on principal residences ⁴⁰								
Partial inclusion rate	885	1,405	1,830	2,500	3,260	3,325	3,390	3,460
Full inclusion rate	1,770	2,810	3,655	5,000	6,525	6,655	6,780	6,920
Non-taxation of income from the Office of the Governor General	S	S	S	S	S	S	S	S
Non-taxation of income of Indians on reserves	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Special tax computation for certain retroactive lump-sum payments	S	S	S	S	S	S	S	S
Tax credit for public transit passes	-	-	-	-	-	98	212	228
Memorandum Items								
<i>Avoidance of Double taxation</i>								
Dividend gross-up and credit ⁴¹	1,215	1,260	1,330	1,535	1,680	2,065	2,165	2,260
Foreign tax credit	635	665	580	590	595	605	615	620
Non-taxation of capital dividends	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<i>Recognition of Expenses Incurred to Earn Income</i>								
Child care expense deduction ⁴²	530	535	535	535	500	605	695	700
Deduction of carrying charges incurred to earn income	825	730	725	730	745	815	950	1,080
Deduction of union and professional dues	550	575	600	605	625	650	670	690
Disability supports deduction (attendant care deduction) ⁴³	S	S	S	5	5	8	10	12
Moving expense deduction	81	88	82	83	84	87	89	91
<i>Loss Offset Provisions</i>								
Capital loss carry-overs ⁴⁴	86	91	165	255	200	150	150	150
Farm and fishing loss carry-overs	16	15	10	9	9	10	10	10
Non-capital loss carry-overs	78	82	62	63	62	64	66	68
<i>Social and Employment Insurance Programs</i>								
Canada Pension Plan and Quebec Pension Plan ⁴⁵								
Employee-paid contribution credit	1,980	2,245	2,455	2,545	2,455	2,615	2,750	2,840
Non-taxation of employer-paid premiums ⁴⁶	2,975	3,400	3,730	3,795	3,875	4,085	4,265	4,420
Employment insurance								
Employment insurance contribution credit	1,085	1,075	1,050	1,010	950	945	980	1,000
Non-taxation of employer-paid premiums	2,160	2,140	2,085	1,975	1,960	1,935	1,985	2,025



Table 1
Personal Income Tax Expenditures (cont'd)

	Estimates			Projections				
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
<i>Other</i>								
Basic personal amount ¹⁴	20,475	21,105	21,705	22,665	23,010	24,095	24,970	26,285
Deduction of farm losses for part-time farmers	60	61	61	58	60	63	63	63
Deduction of other employment expenses	735	775	825	835	860	890	915	945
Deduction of resource-related expenditures	155	175	270	365	480	515	500	495
Reclassification of flow-through shares ⁴⁷	33	31	35	54	77	84	80	78
Non-taxation of lottery and gambling winnings ⁴⁸	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-taxation of allowances for diplomats, military and other government employees posted abroad	9	10	10	9	9	9	9	9
Partial deduction of meals and entertainment expenses	85	72	76	75	75	77	78	79

Notes:

¹ The increase in the tax expenditure in 2006 and later years reflects the reduction in the capital gains inclusion rate on qualifying donations from one-half to zero in 2006. The total tax expenditure cost of this measure has two components: the revenue forgone as a result of the reduced inclusion rate (which is shown in the main table), and the increased cost of the charitable donations credit from any increase in donations that results from the measure. If all of the donations of publicly listed securities and ecologically sensitive land would have been made in the absence of this measure, then (as shown in the main table) the total cost ranges from \$3 million to \$29 million between 2001 and 2008. If, on the other hand, all donations of publicly listed securities and ecologically sensitive land came about as a result of the reduced inclusion rate on capital gains, and if in the absence of the measure the shares and land would have been sold instead of donated, then the cost of the measure ranges from \$31 million to \$125 million between 2001 and 2008, as shown below (in millions of dollars):

2001	2002	2003	2004	2005	2006	2007	2008
45	31	46	68	74	123	125	125

The true costs fall somewhere between the lower and upper bounds set by the ranges indicated.

² The total tax expenditure cost has two components: the revenue forgone as a result of the reduced inclusion rate (which is shown in the main table), and the increased cost of the charitable donations credit from any increase in donations that results from the measure. If all of the donations of cultural property would have been made in the absence of this measure, then (as shown in the main table) the total cost ranges from \$3 million to \$14 million between 2001 and 2008. If, on the other hand, all donations of cultural property came about as a result of this measure, and if the property would otherwise have been sold instead of donated, then the cost of the measure ranges from \$18 million to \$73 million over the period 2001 to 2008, as shown below (in millions of dollars):

2001	2002	2003	2004	2005	2006	2007	2008
31	18	73	35	17	20	21	21

The true costs fall somewhere between the lower and upper bounds set by the ranges indicated.

³ The projected increase in the tax expenditure for 2004 reflects both the impact of the 38th general election and the onset of two additional factors. First, the three political contribution tax credit thresholds were increased by \$200 each for 2004 and subsequent years. Second, An Act to amend the Canada Elections Act and the Income Tax Act, which received Royal Assent on May 14, 2004, enables additional political parties to become registered and eligible for the tax credit. The continuing high levels for the tax expenditure in 2005 and 2006 reflect the fact that contributions in respect of the 39th general election were spread over the two calendar years.



- 4 The tax expenditure amount is the credit amount earned and claimed in the year. The 2001 budget introduced a measure extending the education tax credit, beginning 2002, to people who receive taxable assistance for post-secondary education under certain government programs. Effective taxation year 2004, Budget 2004 extended the education tax credit to students who pursue post-secondary education related to their current employment, provided that their employer does not reimburse the cost of education in whole or in part.
- 5 This new measure provides \$65 per month for full-time students, and \$20 per month for part-time students, in textbook tax credit amounts. Students receive a credit on these amounts in recognition of the costs of post-secondary textbooks.
- 6 For a given year, the tax expenditure represents the value of education and tuition tax credits earned in past years, and used in that year. The tax expenditure does not include the pool of unused education and tuition tax credits that have been accumulated but will be deferred for use in future years. For example, in taxation year 2006 it is projected that taxpayers will defer \$40 million of education and tuition tax credits accumulated in past years, for use in 2007 and future tax years. In addition, the tax expenditure for the carry-forward for 2007 and beyond increases substantially due to the impact of the textbook tax credit and the full exemption of scholarship and bursary income, which were introduced in Budget 2006.
- 7 The tax expenditure for the transfer of education and tuition tax credits for 2006 and beyond increases substantially due to the impact of the textbook tax credit and the full exemption of scholarship and bursary income, which were introduced in Budget 2006.
- 8 The tax expenditure equals the tax revenue forgone from exempting scholarship, fellowship and bursary income from tax. Budget 2006 introduced a measure that makes all amounts received for post-secondary scholarships, fellowships and bursaries exempt from tax, where these amounts are received in connection with enrolment in a program for which the student can claim the education tax credit. Previously, the first \$3,000 of these amounts were exempt from income tax. All other scholarships and bursaries receive a tax exemption on the first \$500. In addition, a change in methodology has resulted in revised figures for tax years 2001 to 2005.
- 9 The tax expenditure equals the tax revenue forgone on the tax-sheltered income earned on registered education savings plan (RESP) assets, minus the revenue from taxing withdrawals of income (as an education assistance payment or accumulated income payment) from RESPs. The costs have changed significantly due to revised administrative data from Human Resources and Social Development Canada on education assistance payments received.
- 10 The projections include the impact of the Canada Learning Bond introduced in the 2004 budget.
- 11 Poor market conditions led to decreased demand for stock options in 2002 and to a lesser extent 2003. Preliminary data indicates that the improved market conditions in 2004 resulted in increased use of stock option plans for that year. Projections for 2004 and subsequent years reflect an assumption of reduced market volatility and reduced take-up due to changes to the accounting treatment of employee stock options.
- 12 This measure was introduced in the 2005 budget.
- 13 The spouse or common-law partner credit was previously known as the spousal credit. The eligible dependant credit was previously known as the equivalent-to-spouse credit.
- 14 Budget 2005 increased the basic personal amount by \$100 in both 2006 and 2007, and correspondingly increased the amount for a dependent spouse or common-law partner and an eligible dependant.
- 15 Budget 2006 extended the lifetime capital gains exemption available on the disposition of farm property and small business shares to qualified fishers, effective May 2, 2006. Projections have been revised to reflect this change.
- 16 The projected tax expenditure for 2004 is higher than in other years due to the effects of the outbreak of avian flu in British Columbia. Because this provision is a deferral measure, the deferred income from 2004 will be reported in 2005, resulting in a negative tax expenditure that year.
- 17 Estimates and projections are based on Statistics Canada data available up to 2005, which includes cash purchase tickets for wheat, barley, oats, canola, flax and rye. Projections after 2005 are calculated using a historical average growth rate.
- 18 The data for the Net Income Stabilization Account (NISA) program is observed up to 2004. Since the Canadian Agricultural Income Stabilization (CAIS) program has replaced NISA, tax expenditure projections reflect wind-down provisions that require that amounts in NISA accounts be withdrawn by March 31, 2009. Projections also reflect recent data from Statistics Canada, which indicates that withdrawals from the government portion of NISA accounts reached record levels in 2004. It should also be noted that CAIS does not result in a tax expenditure.
- 19 Data for unincorporated businesses is not available to estimate this tax expenditure with precision.
- 20 The projections have been revised to reflect recent data and the reintroduction of the credit for the period from May 2, 2006 to March 31, 2007. The negative figures for 2007 and 2008 reflect the inclusion in income for those years of an amount equal to the credit claimed in the previous year (e.g. credit claimed in 2006 included in 2007 income). A deduction for the full amount of the eligible exploration expenditure is allowed for the year for which the credit is claimed. An amount equal to the credit is required to be included in income the following year, however, so as to reverse the deduction in respect of the portion of the expenditure that was effectively paid for by the credit.
- 21 The estimates and projections for this tax expenditure can vary significantly from year to year, primarily due to unanticipated year-to-year fluctuations in realized capital gains.
- 22 No data is available, as it is difficult to estimate the value of unsold assets.
- 23 The projections of this tax expenditure for 2004 and 2005 are based on preliminary information showing reduced sales of shares of labour-sponsored venture capital corporations for those years. Projections assume sales remain constant after 2005.
- 24 The 2005 budget extended eligibility for the disability tax credit (DTC) to individuals who face multiple restrictions that together have a substantial impact on their everyday lives, and amended the DTC to ensure that more individuals requiring extensive life-sustaining therapy on an ongoing basis are eligible.
- 25 The increase in the projected tax expenditure reflects anticipated growth in medical expense claims as well as enhancements to the credit announced in the 2003, 2004 and 2005 budgets.



- ²⁶ The increase in the projected tax expenditure reflects anticipated growth in medical expense claims as well as enhancements announced in the 2005 and 2006 budgets. Specifically, the 2005 budget increased the maximum amount of the supplement from \$571 to \$750 per year, effective 2005, and the 2006 budget subsequently increased the maximum amount from \$767 to \$1,000, effective 2006.
- ²⁷ The Tax Fairness Plan increased the age credit amount, a credit that provides tax relief to low- and middle-income seniors, by \$1,000 from \$4,066 to \$5,066. This increase is effective for the 2006 and subsequent taxation years.
- ²⁸ The Guaranteed Income Supplement (GIS) and Allowance benefits are indexed to Consumer Price Index inflation. However, in both its frequency of application and in the months covered, the GIS indexation factor differs from that used for most of the parameters in the personal income tax system. Differences between the indexation factors cause the tax expenditure to grow at a faster or slower rate, in a given year, than if the two elements shared a common indexation factor.
- ²⁹ Although this measure does provide tax relief for individuals, it is implemented through the corporate tax system. See under "interest credited to life insurance policies" in Table 2 for estimates and projections of this tax expenditure.
- ³⁰ The decline in this tax expenditure reflects increases in the basic personal amount and reductions in the lowest personal income tax rate implemented in the 2000 budget, the 2000 *Economic Statement and Budget Update*, the 2005 *Economic and Fiscal Update* and the 2006 budget.
- ³¹ Estimates are based on data received from Veterans Affairs Canada. As part of the New Veterans Charter, in 2006, the Canadian Forces Income Support Benefit will be established for eligible low-income veterans.
- ³² As of 2006, the new disability award has replaced the veterans' disability pension for eligible new applicants (current disability pensioners will be grandfathered). Thus, beginning in 2007, tax expenditures are expected to decrease.
- ³³ As of 2006, the new disability award has replaced the veterans' disability pension for eligible new applicants (current disability pensioners will be grandfathered).
- ³⁴ The 2006 budget increased the maximum amount that can be claimed under the pension income credit to \$2,000 from \$1,000 for the 2006 and subsequent tax years.
- ³⁵ The October 31, 2006, Tax Fairness Plan proposes to allow pension income splitting commencing in 2007. The measure will allow any Canadian resident who receives qualifying pension income to allocate to their resident spouse or common-law partner up to one-half of that income.
- ³⁶ Estimates and projections vary from those in last year's report due to changes in tax rates and projected levels of contributions, assets and withdrawals. Observed levels of registered pension plan (RPP) and registered retirement savings plan (RRSP) assets for 2001 to 2004 are used to determine the rate of return on investment, and as such, the tax expenditure will naturally vary from year to year, depending on the derived rate of return. Tax expenditures will be higher in years when assets grow strongly, reflecting the tax forgone on investment income, and lower in years when assets grow slowly or decline. For years where RPP and RRSP asset growth is projected, the tax expenditure projections are much more stable since a 6.4-per-cent nominal annual rate of return is used for those years. This is consistent with the rate of return used to calculate the present-value tax expenditure estimates and projections for RPPs and RRSPs (for more details on the derivation of the rate of return, see the 2001 *Tax Expenditures and Evaluations report*).
- ³⁷ The ratio of 1999 RRSP assets reported in Statistics Canada's Survey of Financial Security (SFS) to 1999 RRSP assets reported in the Statistics Canada publication *Pension Plans in Canada* is used to adjust RRSP assets for 2001 to 2004 to reflect the more comprehensive SFS estimate, which includes funds in self-administered plans (the ratio is \$408 billion/\$268 billion or 1.52).
- ³⁸ The present-value estimates reflect the lifetime cost of a given year's contributions. This definition is different from that used for the cash-flow estimates and thus the two sets of estimates are not directly comparable. Further information on how these estimates are calculated is contained in the paper "Present-Value Tax Expenditure Estimates of Tax Assistance for Retirement Savings," which was published in the 2001 *Tax Expenditures and Evaluations report*.
- ³⁹ The present-value tax expenditure estimates and projections presented in this year's report are lower than in last year's report due to updated estimates of applicable tax rates, which take into account the enhanced gross-up and tax credit for dividends paid by large corporations that will apply as of 2006, and changes in projected RPP/RRSP contribution levels.
- ⁴⁰ Projected tax expenditures reflect anticipated increases in home resales and resale housing prices. The estimates and projections for this tax expenditure can vary significantly from year to year, primarily due to unanticipated year-to-year fluctuations in the number of residence resales and in the average price of residences.
- ⁴¹ Budget 2006 introduced an enhanced gross-up and dividend tax credit for eligible dividends (generally those paid by large corporations) after 2005.
- ⁴² Formerly, some families with young children who claimed little or no child care expenses were eligible to receive the Canada Child Tax Benefit (CCTB) under-7 supplement. Thus, the value of the tax expenditure was partially offset by the increase in the CCTB under-7 supplement that would follow any decrease in the amount of child care expenses claimed. The increase in the tax expenditure in 2006 and later years reflects the phase-out of the CCTB under-7 supplement as of June 30, 2006, for children under the age of 6, and June 30, 2007, for 6-year-old children.
- ⁴³ The 2004 budget replaced the attendant care deduction with a broader disability supports deduction, beginning with the 2004 tax year. The 2005 budget expanded the list of expenses eligible for the disability supports deduction.



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- 44 Projections have been revised to reflect market conditions.
- 45 This includes employee- and employer-paid premiums by and for self-employed workers.
- 46 Self-employed individuals may deduct the employer share of their Canada/Quebec Pension Plan contributions paid for their own coverage. The estimates and projections shown are relative to a benchmark system in which no such deduction (or credit) is provided.
- 47 This tax expenditure applies to a subset of resource-related deductions. Data are available for 2001 to 2003 on the volume of reclassified shares and are used to calculate these estimates. Projections are based on forecast growth rates in the oil and gas industry.
- 48 A number of substantial methodological difficulties call into question the accuracy and utility of estimates and projections of the revenue implications of non-taxation of lottery and gambling winnings. The first methodological difficulty is that the data on payouts/winnings is incomplete. There is solid information on aggregate payouts only for government-run lotteries and bingos. Data on payouts at casinos, video lottery terminals, horseracing, and racetrack slot machines, which constitute a rising share of total spending on gaming, is fragmentary. In addition, no data is available on the payouts/winnings from activities sponsored by charities and other non-governmental organizations. Second, even if complete information on aggregate payouts were available, the revenue implications of non-taxation still could not be determined with precision. For example, if the benchmark tax system were to include taxation of gambling and lottery winnings, consideration would have to be given to including a deduction for expenses incurred in earning this income, i.e. ticket purchases or wagers/losses. This deduction could be allowed either against all income or against only lottery and gambling winnings. A threshold below which winnings would not be taxable would also be necessary, due to the large administrative cost of taxing very small prizes. In the absence of information on the distribution of prizes and the incomes of winners, the resulting potential tax base is difficult to estimate. Further, it would be impractical to tax some forms of winnings (e.g. slot machines) because of the way in which prizes are paid out.

Another important point to note is that under federal-provincial agreements negotiated in 1979 and 1985, the federal government, in exchange for an ongoing payment, undertook to refrain from re-entering the field of gaming and betting and to ensure that the rights of the provinces in that field are not reduced or restricted.



Table 2
Corporate Income Tax Expenditures*

	Estimates		Projections ¹					
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Charities, Gifts and Contributions								
Deductibility of charitable donations ²	490	295	260	320	360	395	415	405
Deductibility of gifts of cultural property and ecologically sensitive land ³	13	26	9	24	9	9	9	9
Deductibility of gifts to the Crown	S	S	S	S	S	S	S	S
Non-taxation of registered charities	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-taxation of other non-profit organizations (other than registered charities)	185	175	160	160	145	165	165	185
Political contribution tax credit ⁴	S	S	S	S	S	S	-	-
Culture								
Canadian film or video production tax credit	160	155	150	165	175	185	195	205
Non-deductibility of advertising expenses in foreign media	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Federal-Provincial Financing Arrangements								
Income tax exemption for provincial and municipal corporations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Transfer of income tax room to provinces	1,145	1,065	1,210	1,455	1,590	1,730	1,810	1,855
Logging tax credit ⁵	17	22	14	59	36	39	40	42
General Business and Investment								
Accelerated write-off of capital assets and resource-related expenditures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral through capital gains rollovers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Taxation of capital gains upon realization	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Partial inclusion of capital gains ⁶	3,270	2,320	2,465	3,330	3,170	3,370	3,525	3,565
Expensing of advertising costs ⁷	50	-80	30	45	35	35	40	40
Atlantic investment tax credit⁸								
Earned and claimed in current year	110	91	67	120	130	135	145	150
Claimed in current year but earned in prior years	220	220	85	150	165	180	195	210
Earned in current year but carried back to prior years	19	7	11	4	11	12	13	14
Total expenditure	349	318	163	274	306	327	353	374

* The elimination of a tax expenditure would not necessarily yield the full tax revenues shown in the table. See the publication *Tax Expenditures: Notes to the Estimates/Projections*, published in 2004 and available on the Department of Finance website (www.fin.gc.ca), for a discussion of the reasons for this.



Table 2
Corporate Income Tax Expenditures (*cont'd*)

	Estimates		Projections ¹					
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Scientific research and experimental development investment tax credit								
Earned and claimed in current year	1,800	1,860	1,755	1,770	1,755	1,900	2,060	2,235
Claimed in current year but earned in prior years ⁹	495	480	610	930	1,010	1,095	1,185	1,285
Earned in current year but carried back to prior years	89	96	88	94	93	95	97	98
Total expenditure	2,384	2,436	2,453	2,794	2,858	3,090	3,342	3,618
Write-off of capital assets before available for use	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Apprenticeship Job Creation Tax Credit ¹⁰	–	–	–	–	–	145	200	205
Small Business								
Deduction of allowable business investment losses ¹¹	35	35	25	21	23	28	31	33
Low tax rate for small businesses ¹²	3,650	3,610	3,440	3,305	3,560	3,940	4,250	4,420
Accelerated rate reduction for small businesses ¹³	50	65	35	7	–	–	–	–
Non-taxation of provincial assistance for venture investments in small businesses	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
International								
Exemption from Canadian income tax of income earned by non-residents from the operation of a ship or aircraft in international traffic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Exemption from tax for international banking centres	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Exemptions from non-resident withholding tax ¹⁴								
Dividends	340	325	400	590	505	625	685	720
Interest								
On deposits	400	185	135	110	120	120	115	120
On long-term corporate debt	195	170	195	365	260	260	255	260
Other ¹⁵	220	330	415	260	310	310	305	310
Rents and royalties								
Copyright royalties	36	29	43	31	36	38	40	42
Rents and royalties for the use of, or right to use, other property	115	125	91	90	105	110	115	125
Research and development royalties	3	4	S	S	S	S	S	S
Natural resource royalties	S	S	S	S	S	S	S	S
Rents from real property	S	S	S	S	S	S	S	S
Management fees	74	70	64	65	73	76	79	82
Estate or trust income	10	18	4	11	12	13	13	14



Table 2
Corporate Income Tax Expenditures (*cont'd*)

	Estimates		Projections ¹					
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Non-taxation of life insurance companies' world income	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Tax exemption on income of foreign affiliates of Canadian corporations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sectoral Measures								
<i>Farming</i>								
Cash-basis accounting	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deferral of income from destruction of livestock	S	S	S	4	S	S	S	S
Deferral of income from grain sold through cash purchase tickets ¹⁶	-18	14	S	S	14	S	S	S
Flexibility in inventory accounting	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Agricultural cooperatives ¹⁷	-	-	-	-	-	30	30	30
<i>Resource</i>								
Corporate mineral exploration tax credit ¹⁸	-	-	S	12	21	26	35	46
Deductibility of contributions to a qualifying environmental trust	S	S	S	S	S	S	S	S
Earned depletion ¹⁹	45	21	14	28	38	38	33	30
Net impact of the resource allowance and the non-deductibility of Crown royalties and mining taxes ²⁰	285	360	365	395	420	225	25	-
Tax rate on resource income ²¹	-85	-210	-250	-595	-680	-335	-40	-
Transitional arrangement for the Alberta Royalty Tax Credit ²²	-	-	S	S	3	5	S	S
<i>Other Sectors</i>								
Exemption from branch tax for transportation, communications, and iron ore mining corporations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Film or video production services tax credit ²³	81	77	110	115	120	130	135	140
Low tax rate for credit unions ²⁴	79	80	69	67	75	82	85	83
Manufacturing and processing allowance ²⁵	1,520	1,130	470	75	-	-	-	-
Surtax on the profits of tobacco manufacturers ²⁶	-80	-75	-75	-55	-55	n.a.	n.a.	n.a.



Table 2
Corporate Income Tax Expenditures (*cont'd*)

	Estimates		Projections ¹					
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Other Measures								
Deductibility of countervailing and anti-dumping duties	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deductibility of earthquake reserves	7	5	5	5	5	6	6	6
Deferral through use of billed-basis accounting by professional corporations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Holdback on progress payments to contractors ²⁷	20	5	35	40	40	40	40	40
Interest credited to life insurance policies	66	68	76	81	82	85	89	93
Non-taxation of certain federal Crown corporations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Memorandum Items								
<i>Mechanisms for the Integration of Personal and Corporate Income Tax</i>								
Investment corporation deduction	S	S	S	S	S	S	S	S
Refundable capital gains for investment corporations and mutual fund corporations ²⁸	520	35	55	115	130	135	140	145
Refundable taxes on investment income of private corporations ²⁹								
Additional Part I tax ³⁰	-655	-670	-800	-1,150	-1,285	-1,395	-1,490	-1,590
Part IV tax	-2,105	-1,940	-1,950	-1,965	-2,140	-2,310	-2,465	-2,585
Dividend refund	4,145	3,805	3,265	3,910	4,260	4,600	4,910	5,145
Net expenditure	1,385	1,195	515	795	825	895	955	970
<i>Expenses Incurred to Earn Income</i>								
Deduction for intangible assets	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deductibility of provincial royalties (joint venture payments) for the Syncrude project (remission order) ³¹	n.a.	n.a.	n.a.	-	-	-	-	-
<i>Loss Offset Provisions</i>								
Capital loss carry-overs								
Net capital losses carried back ³²	585	1,425	465	210	205	250	285	310
Net capital losses applied to current year	305	190	320	440	420	445	465	475
Farm and fishing loss carry-overs	22	18	18	23	20	22	23	22



Table 2
Corporate Income Tax Expenditures (*cont'd*)

	Estimates		Projections ¹					
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Non-capital loss carry-overs								
Non-capital losses carried back	2,840	2,000	1,900	1,185	1,230	1,415	1,575	1,715
Non-capital losses applied to current year	2,995	3,385	3,060	3,205	3,190	3,315	3,405	3,280
<i>Other</i>								
Non-resident-owned investment corporation refund ³³	285	420	135	–	–	–	–	–
Partial deduction of meals and entertainment expenses	270	275	280	305	335	370	385	365
Patronage dividend deduction	240	390	330	355	405	440	455	435

Notes:

- ¹ Unless otherwise indicated in the footnotes, changes in the projections from those in last year's edition of this document as well as variations from year to year result from changes in the explanatory economic variables upon which the projections are based. These changes and variations also reflect the availability of new data and improvements to the methodology used to derive the estimates/projections. Estimates and projections reflect the impact of the reduction in the general corporate income tax rate to 27 per cent on January 1, 2001, 25 per cent on January 1, 2002, 23 per cent on January 1, 2003, 21 per cent on January 1, 2004, and 20.5 per cent on January 1, 2008. The corporate surtax, which raises these rates by 1.12 percentage points, will be eliminated on January 1, 2008.
- ² Donations in 2001 were significantly higher than the historical average.
- ³ The increase observed for 2004 reflects the availability of new information compiled from corporate income tax returns filed for the 2004 tax year.
- ⁴ The Federal Accountability Act prohibits political contributions from corporations. Accordingly, this tax expenditure will be zero after 2006.
- ⁵ Increases for 2004 and later years reflect a significant improvement in industry performance in 2004.
- ⁶ The estimate for 2001 has been revised downward relative to last year to reflect improvements in methodology and the impact of the partial inclusion of capital gains on the value of the refundable capital gains for investment and mutual fund corporations. The lower amount in 2002 reflects an estimated decrease in capital gains as well as the reduction in the corporate income tax rate. For the most part, the lower amounts in 2002 and 2003 are due to a decrease in capital gains resulting from declines in the market value of technology stocks.
- ⁷ The amount of this tax expenditure can fluctuate significantly from year to year depending on the amount of advertising expenses claimed.
- ⁸ Cyclical investments in oil and gas projects explain the downward trend from 2001 to 2003.
- ⁹ The large amounts for 2004 to 2007 relative to last year's estimates reflect the availability of preliminary data for 2004, which shows a substantial increase in the profitability of large firms engaged in scientific research and experimental development activities allowing them to use credits earned in previous years.
- ¹⁰ This measure was introduced in the 2006 budget (see the "What's New in the 2006 Report" section for more details).
- ¹¹ The amount of this tax expenditure can fluctuate from year to year depending on the amount of current-year losses and the availability of income against which to apply these losses.
- ¹² The reduction in the tax expenditure from 2001 to 2004 results from reductions in the benchmark rate. Projections reflect the increase in the amount of income eligible for the small business deduction (from \$200,000 in 2002 to \$400,000 in 2007) and the decrease in the small business tax rate from 12 per cent in 2007 to 11.5 per cent in 2008, followed by an additional half-point reduction, to 11 per cent, in 2009 announced in the 2006 budget. Methodological improvements have resulted in higher tax expenditures in all years compared to the 2005 publication.
- ¹³ This measure was announced in the 2000 budget and became effective January 1, 2001. On that date the general federal corporate income tax rate on income between \$200,000 and \$300,000 earned by a Canadian-controlled private corporation from an active business carried on in Canada was reduced to 21 per cent. The lower rate on the general income of small businesses and the change in the general federal corporate income tax rate effective January 1, 2001, only partially affect the estimate for tax year 2001 since many firms reporting income in the 2001 tax year earned a portion of that income in the 2000 calendar year, before the rate reductions were introduced. Subsequent declines in the tax expenditure are a result of the reduction in the general corporate income tax rate and the increase, announced in the 2003 budget, in the amount of income eligible for the small business deduction. This measure was effectively eliminated on January 1, 2004, when the general corporate income tax rate was reduced to 21 per cent. Some tax expenditure occurs in 2004, however, as many firms reporting income in the 2004 tax year earned a portion of that income in the 2003 calendar year.



- ¹⁴ Estimates and projections were computed on the basis of an analysis of payments to non-residents and withholding tax collections available for 1997 to 2004. Significant variations from last year's estimates and projections are due mainly to revised and new data, as well as to specific methodological changes that were adopted to address certain deficiencies identified with the data.
- ¹⁵ This category includes interest paid to non-resident persons or organizations that would be exempt from income tax in Canada were they residents in Canada. Also included is interest paid under certain securities-lending arrangements exempt under subparagraph 212(1)(b)(xii) of the Income Tax Act, and interest exempt under certain other domestic and treaty provisions.
- ¹⁶ Projections are calculated using a historical average growth rate. Since tax expenditures are estimated on a cash-flow basis, an increase in the balance of uncashed grain tickets represents additional income that is being deferred and results in a positive tax expenditure. A decrease in the balance of uncashed grain tickets indicates that less income is being deferred and results in a negative tax expenditure. The tax expenditure estimates and projections are volatile over time since a small number of corporations are affected in a very specific sector. Estimates and projections are based on data obtained from Statistics Canada.
- ¹⁷ This measure will apply only to patronage dividends paid after 2005. See the "What's New in the 2005 Report" section in the 2005 *Tax Expenditures and Evaluations* publication for further details.
- ¹⁸ This credit was introduced in the 2003 budget and phased in starting at 5 per cent in 2003, 7 per cent in 2004 and 10 per cent in subsequent years. In the prior years, tax expenditure estimates for this credit were based primarily on exploration estimates. The projections have now been modified to incorporate actual tax collection information for 2003 and 2004. Cost estimates include the value of credits used in the year, whether they were earned in the current year or carried forward from a previous year, and credits carried back to a previous year in the current year's tax return.
- ¹⁹ Additions to earned depletion pools were eliminated as of January 1, 1990. Determination of the tax expenditure reflects projected use of the existing earned pools.
- ²⁰ The tax expenditure is calculated as the revenue cost of the resource allowance net of Crown royalties and provincial mining taxes. Over a five-year period beginning in 2003, the resource allowance is being phased out and a deduction for Crown royalties and mining taxes phased in, so that by 2007, this tax expenditure will be removed. See the technical paper "Improving the Income Taxation of the Resource Sector in Canada" (Department of Finance, March 2003) for further details. Costs for 2007 relate to companies that do not have a December 31 year-end for which the 2007 tax year includes a portion of 2006 activities.
- ²¹ Budget 2003 announced the extension to resource income of the lower general corporate income tax rate, to be phased in over five years beginning in 2003. Although the rate difference no longer exists in 2007, there are still costs associated with 2006 rates for companies that do not have a December 31 year-end and the 2007 tax year includes some income earned in 2006.
- ²² The Alberta government has announced that the Alberta Royalty Tax Credit (ARTC) will be eliminated as of January 1, 2007. Costs for the federal transitional measure will continue into 2007 and 2008 because some credit amounts related to 2006 will only be received in 2007, and for companies that do not have a December 31 year-end, some amounts received in 2007 will fall into their 2008 taxation year.
- ²³ Projections for 2003 and subsequent years reflect the increase of the rate of the credit from 11 per cent to 16 per cent.
- ²⁴ The increases from last year's projections for 2006 and 2007 are due to an increase in the growth rate of taxable income. This tax expenditure also includes credit unions' deposit insurance corporations, which receive similar tax treatment to credit unions.
- ²⁵ Although this tax expenditure was eliminated on January 1, 2004, when the general corporate income tax rate was reduced to 21 per cent, many firms reporting income in the 2004 taxation year earned a portion of that income in the 2003 calendar year.
- ²⁶ The decrease in this tax expenditure after 2003 is due to the decrease in tobacco manufacturers' profits. For confidentiality reasons, projections for 2006 to 2008 are not published.
- ²⁷ The amount of this tax expenditure can fluctuate significantly from year to year depending primarily on the level of construction activity. Therefore, it is projected at its historical average.
- ²⁸ For the most part, the large declines in 2002 and 2003 are due to a decrease in capital gains resulting from declines in the market value of technology stocks.
- ²⁹ Refundable tax provisions of the corporate income tax system provide some integration of the corporate and personal income tax regimes. For more information about these measures, see the 2004 publication *Tax Expenditures: Notes to the Estimates/Projections*.
- ³⁰ This item includes the additional 6% per cent refundable tax on investment income as well as the Part I tax paid on investment income in excess of the benchmark rate. Increases in this tax expenditure result from the increase in the difference between the Part I tax on investment income and the benchmark rate.
- ³¹ The cost of the Syncrude Remission Order ("Order Respecting the Remission of Income Tax for the Syncrude Project," P.C. 1976-1026, May 6, 1976 [C.R.C. 1978, Vol. VII, c. 794]) is published annually in the *Public Accounts of Canada* (ISBN 0-660-177792-7). The order expired on December 31, 2003.
- ³² Large values in 2001 and 2002 reflect, for the most part, the capital losses recorded in these two years resulting from declines in the market value of technology stocks.
- ³³ This measure was repealed in 2000. To allow for an orderly restructuring of their operations, however, existing non-resident-owned investment corporations were entitled to retain their status until the end of their last tax year that began before 2003.

Table 3
GST Tax Expenditures*

	Estimates				Projections			
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Aboriginal Self-Government								
Refunds for Aboriginal self-government ^{1,2}	S	S	S	S	S	S	S	S
Business								
Exemption ³ for domestic financial services	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Exemption for ferry, road and bridge tolls ⁴	5	10	10	5	5	5	5	5
Exemption and rebate for legal aid services	25	25	25	25	30	25	25	30
Non-taxability of certain importations ⁵	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Rebates for foreign visitors ⁶	80	85	85	70	80	70	20	–
Small suppliers' threshold	155	165	170	180	195	180	160	170
Zero-rating ⁷ of agriculture and fish products and purchases	S	S	S	S	S	S	S	S
Zero-rating of certain purchases made by exporters	S	S	S	S	S	S	S	S
Charities and Non-Profit Organizations								
Exemption for certain supplies made by non-profit organizations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Rebates for registered charities ¹	240	255	270	280	295	290	280	295
Rebates for non-profit organizations ¹	60	60	70	70	75	75	70	75
Education								
Exemption for education services (tuition) ⁴	395	435	470	505	535	525	515	545
Rebates for book purchases made by qualifying public institutions ⁸	30	30	30	30	30	30	30	35
Rebates for colleges ¹	80	85	85	80	80	80	80	80
Rebates for schools ¹	375	380	380	400	420	410	400	420
Rebates for universities ¹	180	205	240	260	275	270	260	270
Health Care								
Exemption for health care services ⁴	325	445	480	505	525	515	510	555
Rebates for hospitals ¹	390	395	425	465	490	480	465	485
Zero-rating of medical devices ⁴	120	135	145	150	160	155	155	165
Zero-rating of prescription drugs ⁴	430	465	500	535	565	555	545	575
Households								
Exemption for child care and personal services ⁴	130	130	130	125	130	130	125	135
GST/HST credit ⁹	3,130	3,250	3,415	3,460	3,545	3,620	3,660	3,720
Zero-rating of basic groceries ⁴	3,270	3,515	3,650	3,800	4,015	3,935	3,855	4,095

* The elimination of a tax expenditure would not necessarily yield the full tax revenues shown in the table. See the publication *Tax Expenditures: Notes to the Estimates/Projections*, published in 2004 and available on the Department of Finance website (www.fin.gc.ca), for a discussion of the reasons for this.



Table 3
GST Tax Expenditures (cont'd)

	Estimates				Projections			
	2001	2002	2003	2004	2005	2006	2007	2008
	(\$ millions)							
Housing								
Exemption for sales of used residential housing and other personal-use real property	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Exemption for residential rent (long-term) ⁴	1,275	1,355	1,420	1,445	1,515	1,490	1,465	1,565
Rebates for new housing ¹⁰	640	785	835	925	990	1,015	970	1,050
Rebates for new residential rental property	40	45	50	60	60	65	60	60
Municipalities								
Exemption for municipal transit ⁴	85	105	105	160	170	165	165	175
Exemption for water and basic garbage collection services ⁴	160	180	185	230	245	240	235	250
Rebates for municipalities ^{1,11}	700	725	805	1,435	1,510	1,480	1,435	1,500
Memorandum Items								
<i>Recognition of Expenses Incurred to Earn Income</i>								
Rebates to employees and partners ¹²	105	105	115	115	120	110	100	105
<i>Other</i>								
Exemption for quick method accounting	200	205	215	230	245	240	230	245
Partial input tax credits for meals and entertainment expenses ¹³	120	125	135	160	180	170	155	155

Notes:

- ¹ The public sector body rebates are based on Canada Revenue Agency administrative data for the years up to and including 2004. The projections are based on the National GST Model of the Department of Finance.
- ² These refunds are paid to Aboriginal governments that have an agreement providing for a GST/HST (harmonized sales tax) refund for goods and services acquired for self-government activities.
- ³ Final consumers and businesses pay no tax on exempt goods and services. Vendors, however, are not entitled to claim input tax credits to recover the GST/HST paid on inputs to these products.
- ⁴ The National GST Model used to generate these estimates is based on the 2002 national input-output tables from Statistics Canada and the latest release of the National Income and Expenditure Accounts.
- ⁵ Certain importations are tax-free including, for example, duty-free personal importations by Canadian travellers.
- ⁶ The Visitor Rebate Program is proposed to be eliminated effective April 1, 2007.
- ⁷ Final consumers and businesses pay no tax on zero-rated goods and services. Vendors of zero-rated products are entitled to claim input tax credits to recover the GST/HST paid on inputs to these products.
- ⁸ Book rebates are now taken directly from administrative data for 2001 to 2004.
- ⁹ Based on personal income tax data.
- ¹⁰ Estimates for the housing rebate are based on information provided by Statistics Canada.
- ¹¹ The rebate rate for municipalities increased from 57.14 per cent to 100 per cent effective February 1, 2004.
- ¹² This item includes the apprentice vehicle mechanics' tools deduction.
- ¹³ Based on tax expenditure estimates and projections reported for the personal and corporate income tax systems.

Part 2

TAX EVALUATIONS AND RESEARCH REPORTS

TAXES ON BUSINESS INVESTMENT:
AN INTERNATIONAL COMPARISON OF
MARGINAL EFFECTIVE TAX RATES
IN THE MANUFACTURING SECTOR



Introduction

The amount and quality of capital Canadians have to work with is a key determinant of their productivity, which is the ultimate determinant of the wages and hence the living standards that they can enjoy. The decision to invest is highly sensitive to the rate of return, and taxes have a direct and measurable effect on the rate of return. In order to assess the impact of taxes on capital spending, it is important to consider not only the statutory tax rate on corporate income but also all other elements of the tax system, which is often measured by what is known as the marginal effective tax rate (METR) on investment.

Last year's edition of *Tax Expenditures and Evaluations* contained a report summarizing the METR methodology and presenting estimates for all jurisdictions in Canada and the United States. This report extends the earlier analysis of Canada's tax competitiveness by comparing the tax treatment of investment by manufacturers in Canada and 35 other countries. The focus is on manufacturing because it represents a large share of Canada's inbound foreign direct investment and because manufacturing investment is particularly sensitive to international differences in rates of return. Comparisons with the US are especially important given the close economic linkages between the two countries, but it is also revealing to make comparisons with other members of the Group of Seven (G7), with other smaller open economies and with emerging economies.

The main findings of the report are:

- Canada's manufacturing METR compares favourably with the US in 2011, when the measures announced in 2006 will be fully phased in. In the G7, only the United Kingdom and Italy have lower METRs.
- Canada places a higher tax burden on manufacturing investment than most other countries, having the second highest METR among the group of smaller open economies and the fourth highest among emerging economies.
- Canada stands out as one of five countries imposing capital taxes and one of three countries, including the US and China, levying retail sales taxes on investment goods.
- Canada and the US are among eight countries in the comparison group that single out the manufacturing sector for special tax treatment such as lower tax rates and higher depreciation allowances.

Marginal Effective Tax Rates—Methodology, Assumptions and Caveats

A marginal effective tax rate is a comprehensive indicator of the tax burden on new investment. It combines in a single measure the statutory tax rate that applies to corporate income, factors that affect the corporate tax base—capital cost allowances and interest deductibility—and profit-insensitive levies such as capital taxes, investment tax credits and sales taxes on investment goods.¹ A METR measures the extra return on an investment required to pay corporate-level taxes, expressed as a percentage of the total return to shareholders. For example, if the gross-of-tax return to shareholders is 6 per cent and if the corporate tax system reduces this return to 4 per cent, the METR would be 33 per cent.²

¹ A more detailed review of the methodology is presented in the 2005 edition of *Tax Expenditures and Evaluations*.

² Calculated as $(6-4)/6$. The return to shareholders is net of all expenses including depreciation.



In addition to tax parameters, calculation of METRs requires assumptions about the financial structure of firms, the rate of return on debt and equity and the rate of inflation, all of which are used to calculate the financial cost of capital.³ The estimates are also sensitive to the capital assets—machinery and equipment, buildings, inventories—used by firms and how quickly they depreciate.⁴ In order to focus on differences in tax systems, the same “economic” assumptions are used for all countries included in the international comparison. As a result, the comparisons examine the impact of applying different tax regimes to a given investment in Canada.

An alternative approach would be to use country-specific tax and economic variables to calculate METRs. An international comparison would then show relative tax burdens on investment as they are affected by the tax system as well as by such factors as the rate of return on debt and equity, inflation and the mix of capital assets used in the investment. A case can be made that inflation is likely to be the single biggest source of variance in economic variables across countries, so some analysts present METR estimates based on common assumptions for all economic variables except inflation.⁵ The impact on the estimates of making this change is shown in Annex 1.

The METRs presented in this document are applicable to a large taxable firm making an investment that is small relative to its ongoing operations. This assumption ensures that there is no delay in using the deductions and credits available on the investment. A delay would result in a higher effective tax rate.

Tax Competitiveness

While the METR is a comprehensive indicator of how the tax system is affecting the decision to invest, there are circumstances in which the statutory tax rate is a more relevant indicator of tax competitiveness.

- Differences in statutory rates determine the incentive for multinational enterprises to shift taxable income across international boundaries.
- METRs are calculated assuming that the investment generates just enough income to pay shareholders the minimum rate of return. Firms undertaking projects that are expected to exceed this minimum return would be particularly concerned about the statutory rate, since all income above the minimum return is taxed at that rate.

³ The financial cost of capital is a weighted average of the return on debt and equity paid by firms. The weights are determined by the economy-wide debt-asset ratio of 40 per cent. The returns on debt and equity are measured in real terms (i.e. observed returns are reduced by the inflation rate, assumed to be 2 per cent) and adjusted for risk. The adjustment for risk recognizes that suppliers of capital require a premium for investing in riskier assets, but in the long run expect to obtain the same real, risk-adjusted rate of return on all investments.

⁴ The economic depreciation rates used in this study are based on analytical work undertaken at Statistics Canada over the last several years. This analysis indicates that the official estimates now being used by Statistics Canada are too low, particularly for structures. See Gellatly, G., M. Tanguay, and Y. Beiling, “An Alternative Methodology for Estimating Economic Depreciation: New Results Using a Survival Model,” *Productivity Growth in Canada*, Statistics Canada, Catalogue No. 15-204-XPE (2002); Baldwin, J., G. Gellatly, A. Patry, and M. Tanguay, “Estimating Depreciation Rates for the Productivity Accounts” Statistics Canada Working Paper, forthcoming; and Patry, A. “Economic Depreciation and Retirements of Canadian Assets: A Comprehensive Empirical Study,” Statistics Canada Working Paper, forthcoming.

⁵ Mintz, J. M., D. Chen, Y. Guillemette and F. Poschmann, “The 2005 Tax Competitiveness Report: Unleashing the Canadian Tiger,” C.D Howe Institute Commentary No. 216 (September 2005).



It is therefore important to consider both the statutory rate and the marginal effective rate when assessing the competitiveness of the tax system.

Tax competitiveness is clearly not the only factor affecting foreign direct investment (FDI). Wage costs, the quality of labour, infrastructure, political risk, agglomeration effects (i.e. the presence of industrial clusters and a large market) and distance to export markets are some of the other factors affecting the decision to invest in a particular location. But investment decisions are highly sensitive to the rate of return, and taxes have a direct and measurable impact on the rate of return.

Tax competitiveness with the United States is particularly important since that country supplies two-thirds of Canada's inbound FDI and is the destination for more than 40 per cent of outbound FDI by Canadians. Further, overseas countries often invest in Canada to serve the North American market and would therefore be comparing locations in Canada and the US. Changes proposed by the federal and provincial governments in 2006 will give Canada a substantial statutory tax rate advantage over the US in 2011, assuming no further changes in the US, on both general and manufacturing income (Table 1). Canada's advantage as measured by the marginal effective tax rate on investment is, however, considerably smaller (Table 2).

Table 1
**Statutory Tax Rates on Corporate Income in 2011—Canada and the US
(Combined Federal/Provincial-State)**

	Canada	US (%)	Canada-US
Pre-2006 measures			
General income	35.4	39.4	-4.0
Manufacturing	34.3	36.1	-1.8
Combined	35.0	37.9	-2.9
Post-2006 measures¹			
General income	31.1	39.4	-8.3
Manufacturing	30.3	36.1	-5.8
Combined	30.8	37.9	-7.1

¹ Includes measures announced in federal and provincial/state budgets as well as Canada's Tax Fairness Plan and Saskatchewan retail sales tax reduction, both announced in October 2006.

Despite the dominant position of the US, Canada does compete against many other countries for investment. For example, Mexico is an alternative location for FDI by US and overseas firms if transport costs, duty-free entry or other factors necessitate a North American location.⁶ In many cases, however, there is no compelling reason to locate in North America, so Canada is competing against a long list of countries for inbound FDI. Finally, Canadian multinational enterprises often have the choice of serving foreign markets through exports from Canada or by setting up production facilities abroad. More than half of Canada's non-US outbound FDI goes to the European Union while the balance is spread over a large number of developed and emerging economies.

⁶ The free trade agreements (FTAs) between Mexico and a large number of countries strengthen Mexico's position as a competitor for overseas investment. Mexico has FTAs with the European Union, Japan, the European Free Trade Association, most Latin American countries, except the Mercosur, and Israel. Mexico is currently negotiating FTAs with the Mercosur and South Korea.



Table 2
METRs in 2011—Canada and the US (Combined Federal/Provincial-State)

	Canada	US (%)	Canada-US
Pre-2006 measures			
Manufacturing	30.7	30.0	0.7
All sectors	34.6	34.4	0.2
Post-2006 measures¹			
Manufacturing	27.0	30.0	-3.0
All sectors	31.1	34.4	-3.3

¹ Includes measures announced in federal and provincial state budgets as well as Canada's Tax Fairness Plan and Saskatchewan retail sales tax reduction, both announced in October 2006.

International Comparison

In order to assess the competitiveness of Canada's tax system, METRs for 36 countries have been prepared. All 30 members of the Organisation for Economic Co-operation and Development are included, along with four emerging economies, Hong Kong Special Administrative Region (SAR) and Singapore. The estimates include national and sub-national taxes,⁷ except those applicable in selected regions of sub-national jurisdictions. This report is primarily concerned with how Canada's business tax system affects FDI, so it focuses on METRs for the manufacturing sector,⁸ which accounts for more than 40 per cent of Canada's inbound FDI and the bulk of "footloose" FDI—i.e. FDI that supports production that is not tied to a specific location, making it particularly sensitive to tax differentials across countries. In contrast, most service sector industries are oriented to the domestic market, making FDI in these industries less sensitive to international tax differentials.⁹

Canada taxes business investment in the manufacturing sector at a high rate relative to the countries in the comparison group, occupying the ninth highest position for the METR, projected for 2011 (Chart 1). The impact on Canada's tax competitiveness of corporate tax reductions proposed in 2006 is highlighted in Chart 1, which shows Canada with the sixth highest METR prior to these initiatives. The corporate tax reductions proposed by the federal government in 2006 will trim 3.2 percentage points from the Canadian manufacturing METR in 2011, while provincial measures will subtract a further 0.6 percentage points. These proposed changes are likely affecting investment decisions now, particularly for projects with long lead times, because investment is affected by *expected* after-tax returns.

⁷ The estimates exclude property taxes and other business taxes imposed by municipal governments. The main reason for their exclusion is that part of local taxes represents a fee for service received, but data limitations preclude determination of the fee-for-service element.

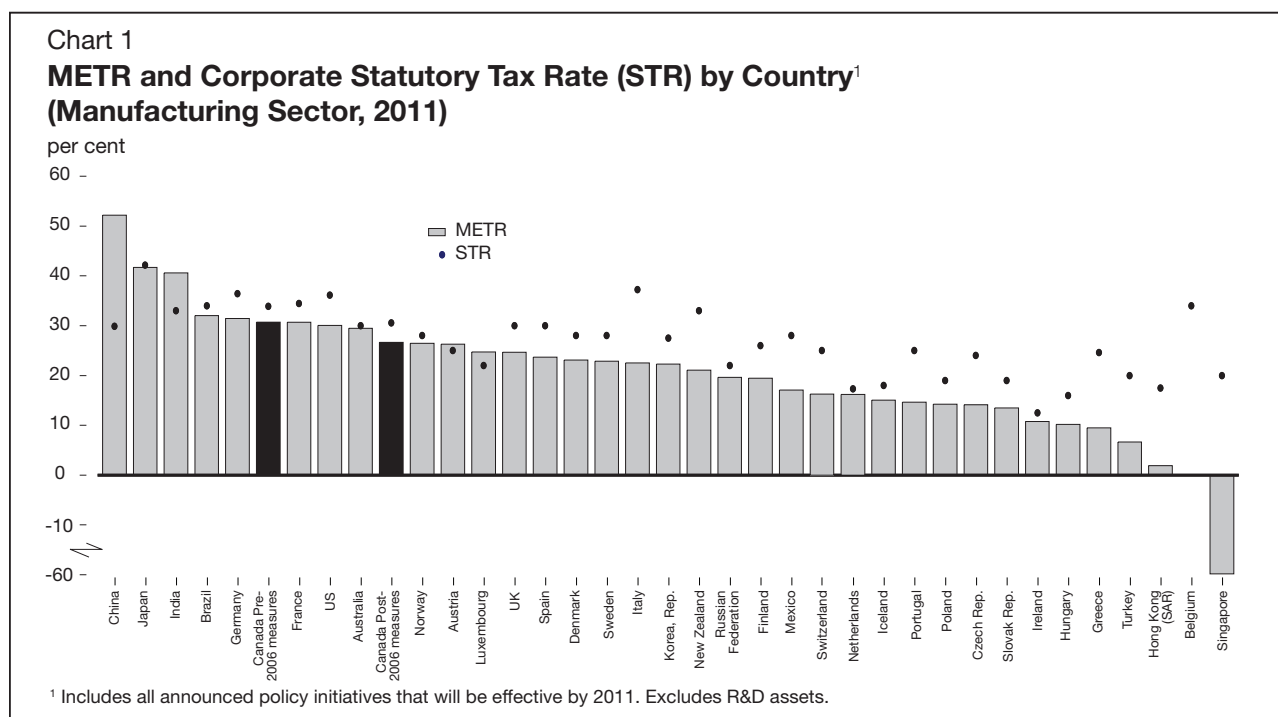
⁸ METRs are available for 32 manufacturing industries. Research and development (R&D) assets are not included in the comparison.

⁹ Footloose industries in the service sector include call centres and a number of other business services, but these industries account for a very small share of both Canada's inbound FDI and service sector output.



In these 36 countries, statutory tax rates and manufacturing METRs are correlated, but in most countries the statutory rate overstates the overall tax burden on investment as deductions and credits reduce the effective tax rate (Table 3 and Chart 1). In addition, there is substantially less variance across countries in the statutory rate than in the METR.

The countries examined have been organized into three groups for comparison purposes: G7 countries, smaller developed countries and emerging and transition economies.¹⁰ On average, the G7 countries impose the highest taxes on business investment, with both the statutory tax rate and the METR well above the corresponding averages for the other groups (Table 3). It is sometimes argued that large economies can sustain relatively high business tax rates because capital is more efficient due to agglomeration effects, so governments are able to capture some of the benefits through higher taxes.¹¹ Smaller economies, in contrast, may be using tax policy to offset locational disadvantages as well as the perception that investments in these countries are riskier due to exchange rate fluctuations and the potential for suffering reduced access to export markets. This pattern can be seen more clearly in a comparison of the typical country in each group, as measured by the median,¹² which shows successively lower METRs for G7 countries, smaller open economies and emerging economies.



¹⁰ Countries are grouped according to per capita gross national income (GNI) in 2004 adjusted for purchasing power parity. Smaller developed countries have per capita GNI of at least \$22,000 while emerging and transition economies have per capita GNI below this threshold. Source: The World Bank (2006).

¹¹ See, for example, Haufler, A., and I. Wooton, "Country Size and Tax Competition for Foreign Direct Investment," *Journal of Public Economics*, vol. 71 (1999), pp. 121-139.

¹² The median METR for emerging and transition economies is substantially lower than the mean or average METR because of a particularly high METR in China.



Table 3

Summary Statistics—METR and Corporate Statutory Tax Rate (STR)

	METR (%)			Corporate STR (%)			METR/STR correlation
	Median	Mean	Coefficient of variation	Median	Mean	Coefficient of variation	
All countries	21.1	21.1	49.4	27.8	27.1	25.7	0.74
G7 members	30.0	30.7	20.1	36.1	35.9	11.4	0.69
Smaller developed economies ¹	21.1	19.7	38.2	25.0	25.1	23.2	0.67
Emerging and transition economies	15.9	24.2	55.9	24.5	25.2	23.1	0.77
Canada		27.0			30.5		

¹ Statistics exclude Singapore and Belgium. Their low METRs significantly alter the results, lowering the METR/STR correlation to 0.2 for smaller developed economies.

The ability to attract and retain internationally mobile capital is not, however, the only reason to be concerned about the competitiveness of Canada's tax system. If Canada imposes a relatively high tax burden on business investment, the amount of capital per worker in firms operating in Canada, whether serving the domestic market or selling overseas, is likely to be lower than in other countries, which would put downward pressure on relative levels of productivity and wages in Canada. A comparison of economy-wide METRs on investment is more appropriate to address this issue.

METRs for the overall economy are generally higher than for the manufacturing sector, and the international rankings change slightly. Canada's ranking deteriorates from ninth to seventh highest when METRs for the overall economy are compared. While only eight countries in the comparison group have explicit tax preferences for manufacturing, such as lower tax rates, most countries provide depreciation allowances for machinery and equipment that are generous relative to other assets. The manufacturing sector benefits disproportionately from this policy approach because it makes particularly intensive use of machinery and equipment (see Annex 2 for additional details).

Comparison With Other G7 Countries

Canada has the third lowest manufacturing METR among the G7 countries, although the gap with the US and France is not large. Italy has the least onerous business tax regime, undercutting the Canadian METR by 4½ percentage points (Chart 2). The decomposition of the METR shown in Chart 2 reveals that a low statutory income tax rate is the main reason for Canada's favourable ranking. Canada has the second lowest statutory rate in the G7, only half a percentage point higher than in the UK.



In contrast, the capital cost allowance (CCA) regime has only a small adverse impact on Canada's tax competitiveness in the G7. CCA recognizes for tax purposes the annual expense resulting from the depreciation of a capital asset over its useful life. The positive values shown in Chart 2 for "economic depreciation less CCA" therefore indicate that in all G7 countries, CCA is not adequate to compensate for economic depreciation.¹³ However, the impact on the METR of a given gap between economic depreciation and CCA rates is affected by the statutory rate of income tax: inadequate recognition of economic depreciation increases taxable income, so the impact on the METR rises along with the statutory rate. Removing the statutory rate from the calculation therefore isolates the *relative* impact of CCA regimes on METRs. This is shown in Panel B of Chart 2, which demonstrates that most G7 countries have similar CCA regimes. The exceptions are Italy, which comes closest to offering adequate recognition of economic depreciation of assets, and Japan, which has one of the least generous CCA provisions among the 36 countries examined.

In contrast to the CCA regime, inventory accounting methods slightly reduce Canada's advantage relative to other G7 countries. In an inflationary environment, firms realize a gain on inventories because there is usually a lag between when goods are produced and when they are sold. Firms are required to bring this gain into taxable income under first-in first-out (FIFO) inventory accounting, but not under the last-in, first-out (LIFO) inventory accounting convention, which effectively values inventories in line with current production costs.¹⁴ This difference in taxable income results in a higher METR under FIFO accounting than under LIFO. In the G7, Canada, the UK and France do not allow LIFO inventory accounting for tax purposes.

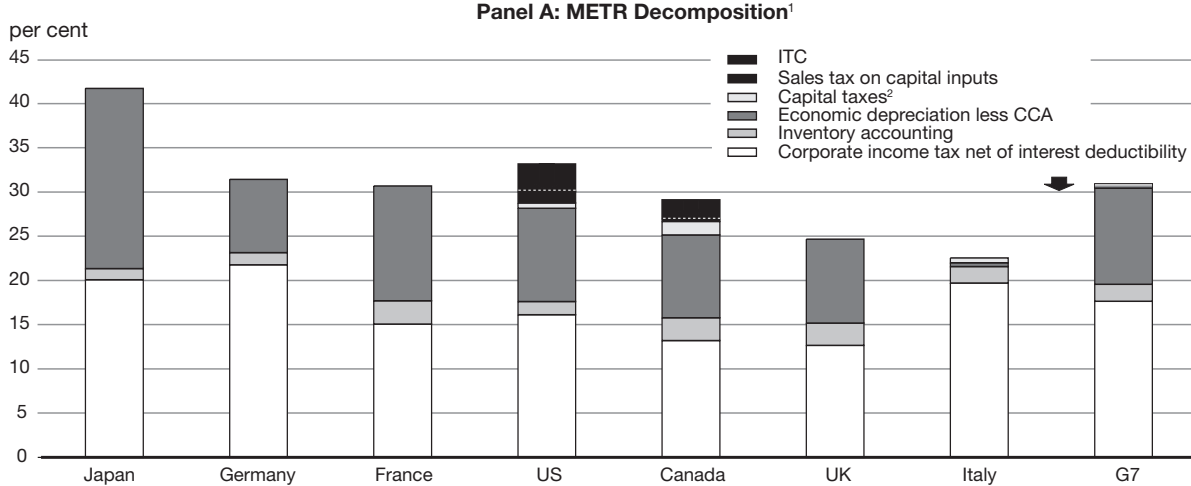
Germany and Italy impose restrictions on interest deductibility that put substantial upward pressure on their METRs. In Germany, sub-national governments allow only 50 per cent of interest expense to be deducted from taxable income, thereby raising the national METR more than 5 percentage points. Sub-national governments in Italy do not allow any deduction for interest on debt issued to finance capital investment, raising the national METR just over 3 percentage points. Japanese firms are not allowed to deduct interest payments on debt issued to finance the purchase of land, but this has a negligible impact on the METR given the small share of land in the capital structure of firms.

¹³ Inflation affects the adequacy of CCA. Economic depreciation is calculated using the replacement cost of the asset while CCA is calculated using the original purchase price of the asset. As a result, even if the CCA rate is equal to the economic depreciation rate, in the presence of inflation it will not fully recognize depreciation expense for tax purposes, which will put upward pressure on the METR. In Canada, the declining real value of CCA accounts for almost half of the impact shown in Panel A of Chart 2, adding about 4 percentage points to the METR. See Annex 3 for a more detailed discussion of capital cost allowances and inflation.

¹⁴ Note that inventory accounting methods put upward pressure on the METR even in those countries that allow LIFO accounting since many firms still choose to use FIFO inventory accounting. Countries allowing the use of LIFO accounting for tax purposes require businesses to adopt LIFO for financial reporting as well. Since LIFO accounting produces lower earnings and may result in higher bookkeeping costs, some firms prefer to use FIFO in both tax and financial accounts. US survey information suggests that the share of firms using LIFO accounting for some or all of their inventories is around 50 per cent. (Source: American Institute of Certified Public Accountants, *Accounting Trends and Techniques*, 58th edition (2004), p.177). In our METR calculations, this share is assumed to apply to all countries that allow LIFO except Mexico, where there are no restrictions on the use of LIFO.



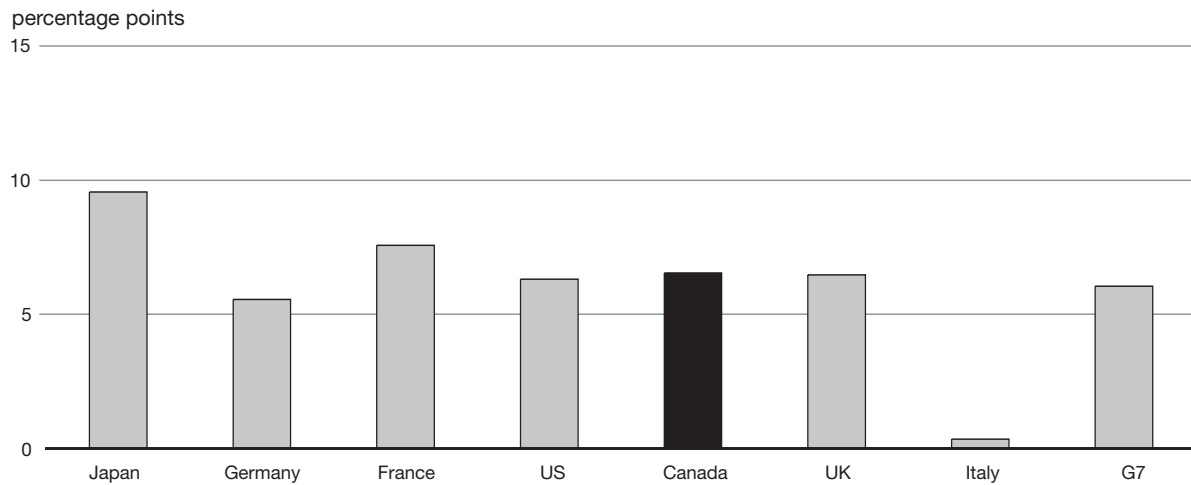
Chart 2
METR Comparison—G7
(Manufacturing Sector, 2011)



¹ Represents the contribution to the METR of each tax item. Elimination of sales or capital taxes may not reduce the METR by the amount shown because of interactions with the rest of the tax system.

² Includes stamp duties in Italy.

Panel B: Economic Depreciation Rate Less CCA Rate¹



¹ The comparison in Panel B isolates the relative impacts of CCA regimes on METRs by removing the statutory tax rates embedded in the net value of the CCA deduction presented in Panel A. Panel B presents the percentage-point difference between the average economic depreciation rates and the average CCA rates adjusted for the effect of inflation and converted to declining-balance equivalents when appropriate.



Canada and the US are the only G7 countries that levy capital taxes.¹⁵ By 2011, capital taxes will be levied in only four Canadian provinces—Ontario,¹⁶ Quebec, Nova Scotia and Manitoba. These capital taxes increase the national METR by 1½ percentage points. In the US, about a third of the states now levy capital taxes and no changes have been announced. Similarly, in the G7, only Canadian provinces and US states impose retail sales taxes that apply to capital goods. In Canada, the five provinces that levy retail sales taxes generally offer some exemptions for capital inputs, particularly for machinery and equipment used in manufacturing, that substantially reduce the effective sales tax rate on capital goods in the manufacturing sector. As a result, retail sales taxes raise the Canadian METR by approximately 2½ percentage points, compared to the 9 percentage points that would prevail in the absence of any exemptions. In the absence of provincial taxes on both capital and retail sales, the Canadian manufacturing METR would be the second lowest in the G7, just half a percentage point higher than in Italy.

In the US, state governments also offer exemptions that reduce the impact of retail sales taxes on the price of capital goods. Many US states levying retail sales taxes provide investment tax credits (ITCs) that further attenuate the impact of retail sales taxes on the METR, as can be seen from the downward arrow in Chart 2.¹⁷ While several of the smaller Canadian provinces offer ITCs, the largest effect comes from the federal credit for investment in the Atlantic provinces.

Comparison With Smaller Developed Economies

A comparison of the tax treatment of business investment in other smaller developed economies is of interest not only because some are direct competitors with Canada for FDI, but also because the comparison provides a perspective on alternative corporate tax strategies undertaken by countries that have some similarities with Canada.

Canada taxes manufacturing investment at the second highest rate among the 17 countries that are included in the comparison (Chart 3). All of the key elements of the tax system contribute to Canada's relatively poor performance in this group, with the biggest impacts coming from the statutory tax rate, sales taxes on capital inputs and capital taxes. Canada's statutory tax rate is the third highest in the group, behind Belgium and New Zealand.

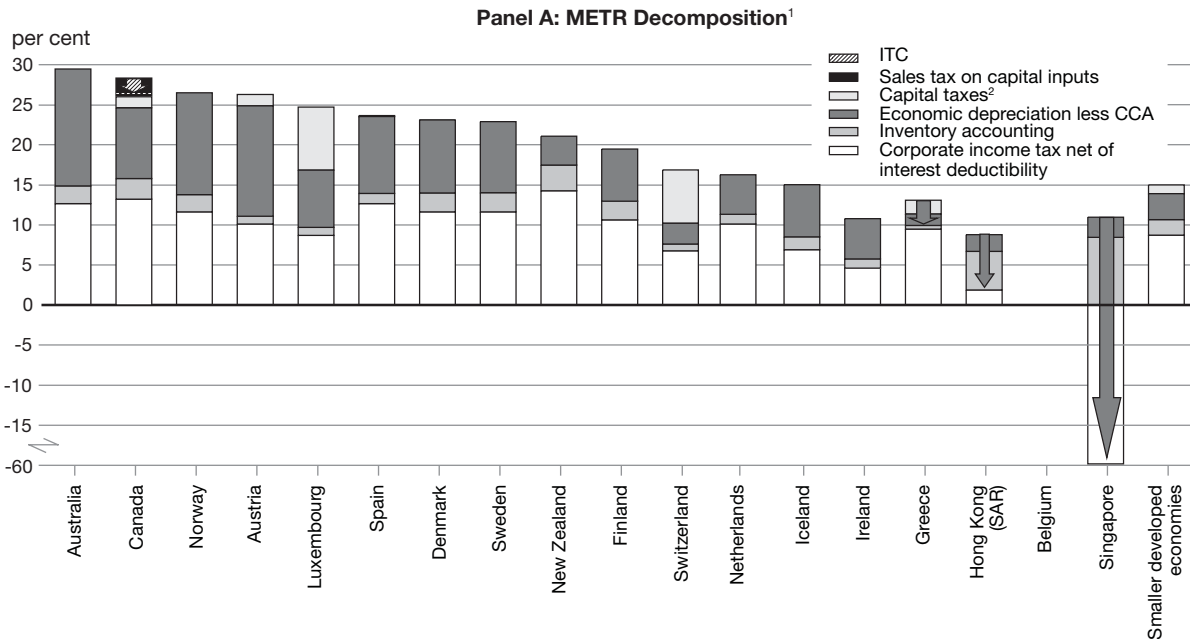
¹⁵ Stamp taxes, which are one-time charges on additions to equity or debt by a firm, are levied on equity in Italy but have a negligible impact on the METR.

¹⁶ Ontario has tabled legislation to eliminate capital taxes by 2012, and will eliminate them by 2010 if the province's fiscal situation permits.

¹⁷ A retail sales tax and an ITC set at the same rate have no net impact on the METR since the retail sales tax increases the price of a capital good while an ITC lowers it.



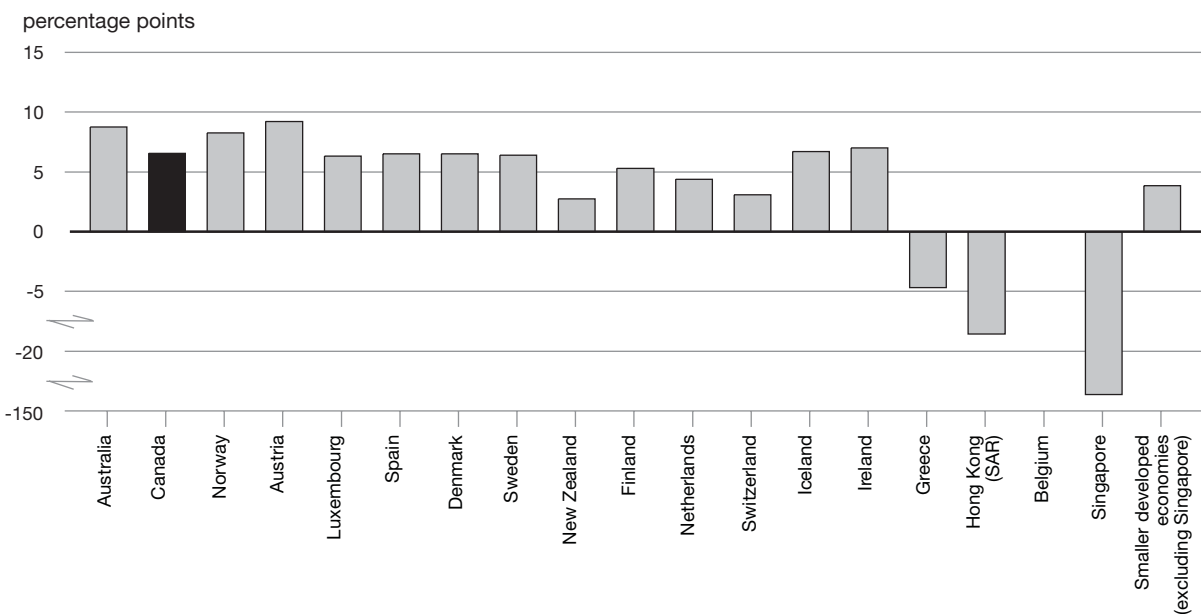
Chart 3
METR Comparison—Smaller Developed Economies
(Manufacturing Sector, 2011)



¹ Represents the contribution to the METR of each tax item. Elimination of sales or capital taxes may not reduce the METR by the amount shown because of interactions with the rest of the tax system.

² Includes stamp duties in Austria, Spain, Greece and Switzerland.

Panel B: Economic Depreciation Rate Less CCA Rate¹



¹ The comparison in Panel B isolates the relative impacts of CCA regimes on METRs by removing the statutory tax rates embedded in the net value of the CCA deduction presented in Panel A. Panel B presents the percentage-point difference between the average economic depreciation rates and the average CCA rates adjusted for the effect of inflation and converted to declining-balance equivalents when appropriate.



No countries in the comparison group impose sales taxes on capital inputs and only Luxembourg and Switzerland (at the canton level) levy capital taxes.¹⁸ In the absence of provincial sales and capital taxes, Canada's METR on investment in the manufacturing sector would be the sixth highest in the group of smaller developed economies. Canada's CCA regime is less generous than the average (Chart 3, Panel B), largely due to a relatively low CCA rate for manufacturing plants (Chart A3-1 in Annex 3). Increasing the CCA rate on manufacturing plants to align it with economic depreciation would trim approximately 4 percentage points from the Canadian METR.

The CCA regimes add an unusually large amount to the METRs in Austria, Australia and Norway. Firms in Austria are able to specify the service life of assets for tax purposes but must use straight-line depreciation; this restriction severely reduces the value of deductions for depreciation compared to the declining-balance method, which allows greater deductions early in the life of the asset.¹⁹ As a result, Austria has the third most restrictive CCA regime among the 36 countries examined. Firms in Australia are allowed to use their own service life estimates for machinery and equipment, but most choose those specified by the Commissioner of Taxation, which are reasonably well aligned with useful lives. The specification of CCA rates, however, leaves firms with a substantial undepreciated balance at the end of the useful life of an asset.

The CCA regimes in Singapore, Hong Kong (SAR) and Greece are more than adequate to cover economic depreciation, as indicated by the descending arrows in Chart 3. In Singapore, tax depreciation exceeds economic depreciation by such a large margin that the overall manufacturing METR is substantially negative—the tax system is providing a large subsidy to investment.

The METR is zero in Belgium, allowing, as of 2006, a deduction for a notional return on equity in order to provide similar tax treatment for debt and equity financing.²⁰ This new measure reduces the METR by almost 20 percentage points.

Comparison With Emerging and Transition Economies

The typical emerging economy²¹ has the lowest METR and, by a small margin, the lowest statutory rate in the three comparison groups (Table 3). The Canadian METR is higher than in all countries in this group except China, Brazil and India (Chart 4, Panel A), while the Canadian statutory rate is the third highest, behind Brazil and India.

¹⁸ Stamp duties are levied in Switzerland, adding 3 percentage points to the METR; in Austria and Greece, raising the METR about 1½ percentage points; and in Spain, with a negligible impact on the METR.

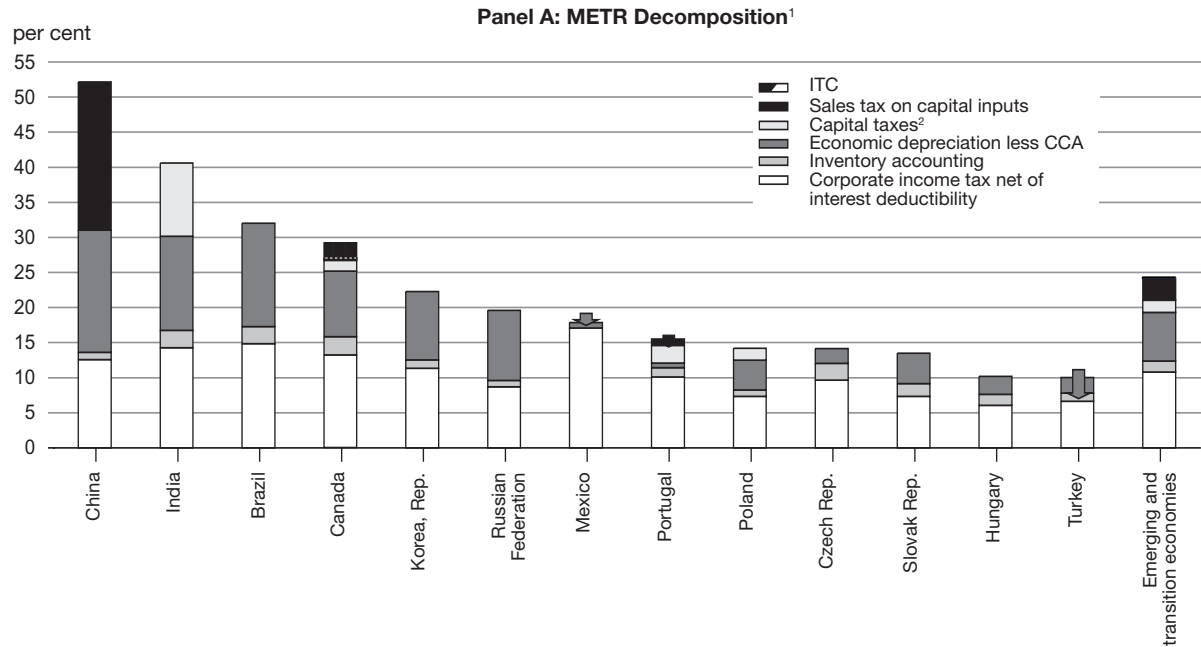
¹⁹ Under the straight-line method, the annual depreciation expense is equal over the life of the asset. Under the declining-balance method, the annual deduction for depreciation is a constant fraction of the remaining value of the asset. As a result, the annual depreciation deduction is largest in the early years of the asset's life under the declining-balance method.

²⁰ The measure allows a deduction based on the risk-free return to equity determined by applying a risk-free interest rate to the book value of equity. Since the METR is developed assuming investments earn this minimum rate of return, in the absence of the capital taxes, stamp duties or sales taxes on investment goods, the deduction reduces the income tax METR to zero. Note that returns above this minimum rate are taxed at the statutory rate of incomes tax.

²¹ As measured by the median.



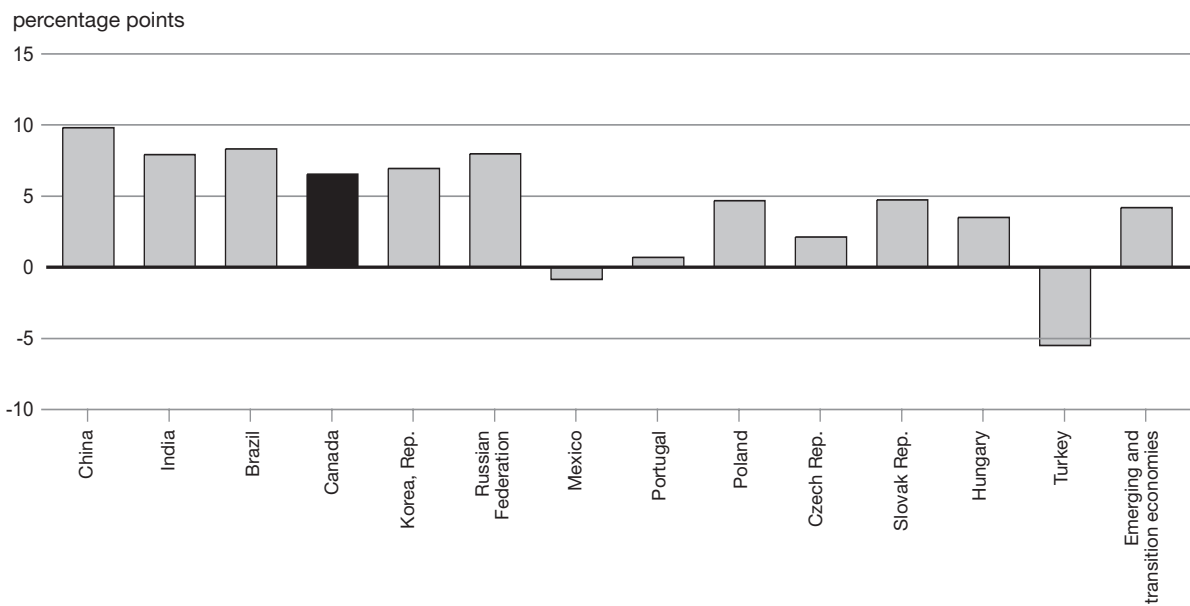
Chart 4
METR Comparison—Emerging and Transition Economies
(Manufacturing Sector, 2011)



¹ Represents the contribution to the METR of each tax item. Elimination of sales or capital taxes may not reduce the METR by the amount shown because of interactions with the rest of the tax system.

² Includes stamp duties in Portugal and Poland.

Panel B: Economic Depreciation Rate Less CCA Rate¹



¹ The comparison in Panel B isolates the relative impacts of CCA regimes on METRs by removing the statutory tax rates embedded in the net value of the CCA deduction presented in Panel A. Panel B presents the percentage-point difference between the average economic depreciation rates and the average CCA rates adjusted for the effect of inflation and converted to declining-balance equivalents when appropriate.



Among these emerging economies, only India imposes a capital tax²² and only China imposes sales taxes on capital goods. Portugal is the only country in the comparison group that offers an investment tax credit. A 5 per cent investment tax credit is available on most investment in machinery and equipment exceeding the average investment of the previous two years, which reduces the METR by 1 percentage point, as indicated by the descending arrow in Panel A of Chart 4.

China has, by a substantial margin, the highest METR of all 36 countries, reflecting a restrictive CCA regime (Chart 4, Panel B) as well as the impact of sales taxes on capital goods. China has a value-added tax (VAT), but does not allow input tax credits for investment in machinery and equipment, which adds almost 21 percentage points to the METR.²³ Brazil's tax system is characterized by a relatively high statutory tax rate and a relatively restrictive CCA regime, particularly for machinery and equipment. Straight-line depreciation must be used for all assets, and the useful lives for machinery and equipment are longer than in most other countries in the comparison group. India also has a relatively high statutory rate. Its CCA regime is also more restrictive than the average for the group of emerging economies, largely due to the 2005 budget, which scaled back the CCA rate for machinery and equipment, from 25 per cent straight-line to 15 per cent.

Mexico, which competes with Canada for inbound FDI, is the only country of the 36 to fully index its tax system for inflation.²⁴ Relatively high straight-line CCA rates are available for machinery and equipment, which, when combined with inflation adjustment, results in a CCA regime that comes close to compensating for economic depreciation. Turkey has the lowest METR in the group, due to a relatively low statutory tax rate and depreciation allowances that more than compensate for economic depreciation.

²² Stamp duties are levied in Portugal and Poland, raising the METR 3.1 and 1.6 percentage points respectively.

²³ China has expressed interest in implementing a full VAT system, but has no specific plans to do so. The government has been experimenting with such a system in three northern provinces since 1999 where tax credits are offered to foreign enterprises, which account for less than 1 per cent of total investment. The government recently extended the VAT credit program to the central-western region but limited the measure to the purchase of domestically made machinery and equipment, which again accounts for a small share of total investment.

²⁴ Portugal allows depreciation allowances to be revalued to account for inflation, but only 60 per cent of the revaluation is deductible. As explained in Annex 3, this restriction provides an offset to the effects of inflation on interest deductibility.



Conclusion

This paper compares manufacturing METRs in Canada, the US and 34 other countries in order to assess Canada's ability to attract and retain the substantial volume of internationally mobile capital. The focus is on manufacturing because it represents a large share of Canada's inbound foreign direct investment and because manufacturing investment is particularly sensitive to international differences in rates of return.

Federal business tax reductions announced in 2006, along with provincial initiatives, will give Canada an overall tax advantage in manufacturing over the US, which is the major source of inbound foreign direct investment and the most important destination for Canada's outbound investment. Canada will also have an advantage over other G7 countries, except the UK and Italy. But Canada is competing against many other countries for internationally mobile capital, and even with the measures announced in 2006 the tax burden on investment in manufacturing is higher in Canada than in almost all other smaller developed economies. Provincial sales tax reform and elimination of capital taxes would substantially improve Canada's tax competitiveness.

The ability to attract and retain internationally mobile capital is not, however, the only reason to be concerned about the competitiveness of Canada's tax system. A relatively high tax burden on business investment will reduce the amount of capital per worker in firms operating in Canada, and this will put downward pressure on relative levels of productivity and wages in Canada. This issue is more appropriately addressed through an international comparison of economy-wide METRs, which also indicates that Canada places a greater tax burden on business investment than most other countries.



Annex 1

Impact of Country-Specific Inflation Rates

	2% Inflation		Country-Specific Inflation			Difference in rank
	METR (%)	Rank	Rate (%)	METR (%)	Rank	
China	52.2	1	1.0	51.3	1	0
Japan	41.7	2	0.3	36.9	3	1
India	40.6	3	6.7	45.8	2	-1
Brazil	32.0	4	3.8	36.1	4	0
Germany	31.4	5	1.7	30.7	7	2
France	30.7	6	1.9	30.4	8	2
US	30.0	7	4.1	32.3	6	-1
Australia	29.5	8	4.0	33.0	5	-3
Canada	27.0	9	2.0	27.0	9	0
Norway	26.5	10	2.2	26.8	10	0
Austria	26.3	11	1.5	25.4	13	2
UK	24.7	13	2.4	25.5	12	-1
Luxembourg	24.7	12	2.9	25.4	14	2
Spain	23.6	14	4.0	25.7	11	-3
Denmark	23.1	15	2.0	23.1	18	3
Sweden	22.9	16	1.7	22.2	20	4
Italy	22.5	17	2.2	22.8	19	2
Korea, Rep.	22.3	18	2.9	23.2	17	-1
New Zealand	21.1	19	4.0	24.7	15	-4
Russian Federation	19.6	20	9.7	24.4	16	-4
Finland	19.5	21	1.9	19.3	21	0
Mexico	17.1	22	3.1	16.8	24	2
Switzerland	16.8	23	1.4	16.5	25	2
Netherlands	16.3	24	1.4	15.6	26	2
Iceland	15.0	25	8.6	17.9	22	-3
Portugal	14.6	26	2.3	14.4	28	2
Poland	14.2	27	1.1	13.6	29	2
Czech Rep.	14.1	28	2.9	15.3	27	-1
Slovak Rep.	13.5	29	5.0	17.2	23	-6
Ireland	10.8	30	4.2	12.9	30	0
Hungary	10.2	31	3.0	10.7	31	0
Greece	9.5	32	3.5	9.7	32	0
Turkey	6.6	33	10.3	9.5	33	0
Hong Kong (SAR)	1.9	34	2.3	1.8	34	0
Belgium	0.0	35	1.6	0.0	35	0
Singapore	-59.8	36	1.1	-60.9	36	0



Annex 2

Comparison of Manufacturing and Economy-Wide METRs

The METR for manufacturing in most countries is lower than in other sectors (Table A2-1). This is occasionally the result of tax provisions targeting the manufacturing sector, but in most cases it is the result of preferential treatment of investment in machinery and equipment (M&E). The manufacturing sector benefits disproportionately from this policy approach because it makes particularly intensive use of M&E. The international rankings are not very sensitive to comparing economy-wide METRs instead of manufacturing METRs: only three countries experience a change in rank of four positions or more. Canada's ranking deteriorates from ninth highest to seventh highest when economy-wide METRs are compared.

The US is the only country to have a special low tax rate for manufacturing income at the national level. A federal corporate income deduction for production activities of up to 9 per cent will be available by 2010, and so far 27 states have followed the federal government in granting the deduction. In Canada, there used to be a lower statutory tax rate for manufacturing but now the federal statutory rate is equal for all businesses. A number of provinces such as Ontario have retained a preferential rate on manufacturing income. In no other countries do sub-national governments vary income tax rates by sector.

In addition to special income tax rates, Canada and the United States provide investment tax credits and exemptions from retail sales taxes that target the manufacturing sector. For example, all service sector industries are excluded from the Atlantic investment tax credit. The only other country providing an investment tax credit is Portugal, which is available for incremental investment in M&E.

Eight countries vary capital cost allowance (CCA) rates for assets by industry of use, but only Hong Kong (SAR) targets the manufacturing sector. In recognition of higher economic depreciation, most countries have higher CCA rates for manufacturing plants than for other types of buildings. But only seven of these countries give preferential treatment to manufacturing plants as measured by the gap between economic depreciation and CCA rates for manufacturing plants compared to other buildings. In contrast, most countries give preferential treatment to M&E, wherever it is used, by aligning CCA rates more closely with useful lives for M&E than for structures. Countries adopting this approach have lower manufacturing METRs than in other sectors because M&E makes up over 60 per cent of depreciable capital assets in the manufacturing sector compared to about 40 per cent in other sectors. Italy allows firms to deduct two times the normal depreciation allowance for the first three years. This approach provides a bigger benefit to assets with a relatively short useful life. Since these assets are used disproportionately in the manufacturing sector, the METR is lower than in other sectors.

The METR for manufacturing is higher than the economy-wide METR in 10 of the 36 countries. However, the difference is significant only for the Slovak Republic, where the METR for manufacturing is 20 per cent higher than that for all sectors as a result of more generous CCA for commercial buildings and for some types of M&E used in the service sector, such as computers.



Table A2-1

International METRs in 2011: Manufacturing—All-Sector Comparison

	Manufacturing (%)	Rank	All sectors (%)	Rank	Difference (%-pts)	Difference in rank
China	52.2	1	51.2	1	-1.0	0
Japan ¹	41.7	2	43.4	3	1.7	1
India ³	40.6	3	43.9	2	3.3	-1
Brazil	32.0	4	31.9	6	-0.1	2
Germany ¹	31.4	5	32.7	5	1.3	0
France	30.7	6	29.6	8	-1.1	2
US ^{1,2}	30.0	7	34.4	4	4.4	-3
Australia ¹	29.5	8	29.0	10	-0.4	2
Canada ²	27.0	9	31.1	7	4.1	-2
Norway	26.5	10	27.4	11	0.9	1
Austria	26.3	11	25.7	13	-0.6	2
Luxembourg	24.7	12	24.5	15	-0.2	3
UK ³	24.7	13	29.3	9	4.6	-4
Spain	23.6	14	24.6	14	1.0	0
Denmark	23.1	15	22.1	19	-1.0	4
Sweden	22.9	16	23.6	16	0.7	0
Italy	22.5	17	26.5	12	4.0	-5
Korea, Rep. ¹	22.3	18	22.8	17	0.5	-1
New Zealand ^{1,3}	21.1	19	22.6	18	1.5	-1
Russian Federation	19.6	20	18.7	21	-0.9	1
Finland	19.5	21	20.3	20	0.8	-1
Mexico ¹	17.1	22	16.7	25	-0.4	3
Switzerland	16.8	23	17.9	24	1.1	1
Netherlands	16.3	24	18.7	22	2.5	-2
Iceland	15.0	25	16.3	27	1.3	2
Portugal ³	14.6	26	18.7	23	4.1	-3
Poland	14.2	27	16.3	26	2.1	-1
Czech Rep.	14.1	28	14.7	28	0.5	0
Slovak Rep.	13.5	29	11.2	32	-2.3	3
Ireland ³	10.8	30	12.6	29	1.8	-1
Hungary	10.2	31	11.2	31	1.0	0
Greece	9.5	32	12.0	30	2.5	-2
Turkey	6.6	33	8.0	33	1.3	0
Hong Kong (SAR) ^{3,4}	1.9	34	7.4	34	5.5	0
Belgium	0	35	0	35	0	0
Singapore ³	-59.8	36	-23.6	36	36.2	0

¹ CCA rates vary by industry of asset use, but manufacturing is not targeted.

² Corporate income tax rate, retail sales taxes and investment tax credits vary by industry.

³ Higher CCA rates for manufacturing plants than for other buildings.

⁴ Accelerated CCA is available for all tangible assets used in manufacturing.

Annex 3

Capital Cost Allowances and Inflation

In most countries examined in this study, capital cost allowances (CCA) do not adequately recognize for tax purposes the expense resulting from the depreciation of a capital asset over its useful life. CCA rates are applied to the book value of assets with no adjustment for increases in prices. With inflation, CCA rates will therefore be inadequate even if they are set equal to economic depreciation rates, which will put upward pressure on the METR. Simply adjusting CCA for inflation would, however, leave intact another inflation-related bias that reduces the METR on fixed capital investment.

Firms finance capital acquisitions in part by issuing debt, and the interest paid is a tax-deductible expense. In an inflationary environment, the interest expense consists of a payment to compensate the lender for the declining real value of the principal amount (the “inflation premium”) and a payment to compensate the lender for use of the principal. The inflation premium is effectively an early repayment of principal, which is not normally a deductible expense. Allowing a deduction for the inflation premium therefore puts downward pressure on the METR, cushioning the impact of inflation on the real value of CCA. The offset is incomplete since on average in Canada capital acquisitions are financed with 40 per cent debt and 60 per cent equity.

In a fully indexed tax system, the CCA system would be adjusted to reflect inflation, and only the real value of interest payments would be a deductible expense, along with a number of other adjustments.²⁵ This result could be approximated by setting CCA rates that compensate exactly for economic depreciation less the benefit from nominal interest deductibility.²⁶ This approach to calculating a neutral CCA rate is presented in Table A3-1.

Table A3-1

Calculation of a “Neutral” CCA Rate

	Economic depreciation rate		Penalty for nominal CCA		Inflation-adjusted CCA rate		Benefit from nominal interest deductibility		Neutral CCA rate
Manufacturing plants	10.0%	+	5.4%	=	15.4%	-	2.2%	=	13.2%
Automated manufacturing and processing equipment	21.0%	+	10.0%	=	31.0%	-	4.8%	=	26.2%

Note: Calculations assume a 2% inflation rate and 40% debt/asset ratio. Under 100% debt financing, the neutral CCA rate would be 3 percentage points lower for manufacturing plants and 6.5 percentage points lower for machinery and equipment.

As pointed out in the text, CCA rates in most countries are inadequate to compensate for depreciation expense measured in real terms. This shortfall is illustrated in Chart A3-1 for manufacturing plants, which shows that CCA rates in most countries, including Canada, are in fact below the economic depreciation rate. CCA rates are above the neutral rate in 11 countries.

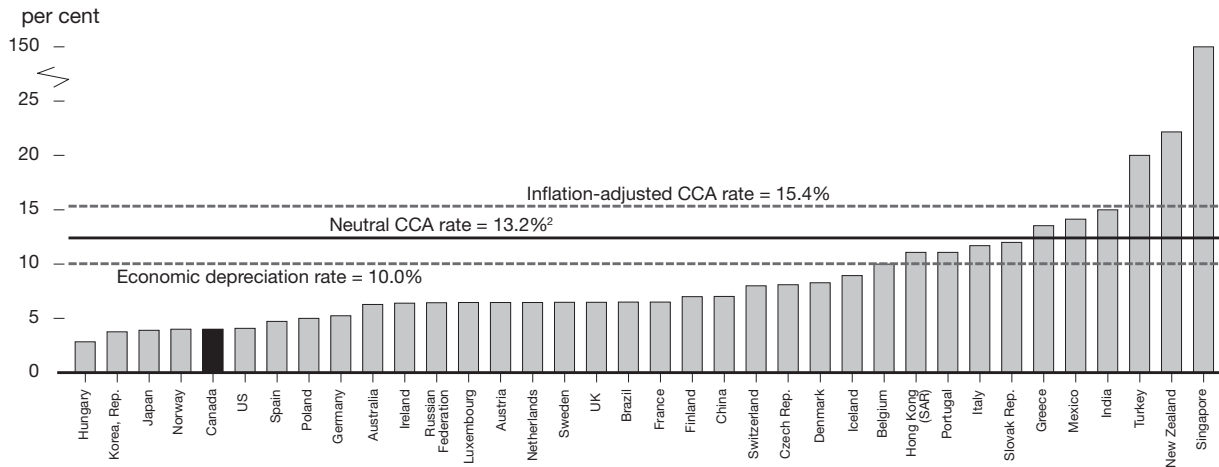
²⁵ The most important of these other adjustments is to allow firms to use last-in, first-out inventory accounting, which prevents inflation-related gains on inventories from being included in taxable income.

²⁶ For a more detailed explanation see Chen, Duanjie, and Jack Mintz, “Canadian Pipeline Construction Cost Considerations For Capital Cost Allowances,” (2005).



CCA is substantially more generous for automated manufacturing and processing equipment, which accounts for about a third of machinery and equipment used in manufacturing, more than compensating for real depreciation in about a third of the countries studied. (Chart A3-2). In this case CCA exceeds the neutral rate in half of the countries, including Canada.

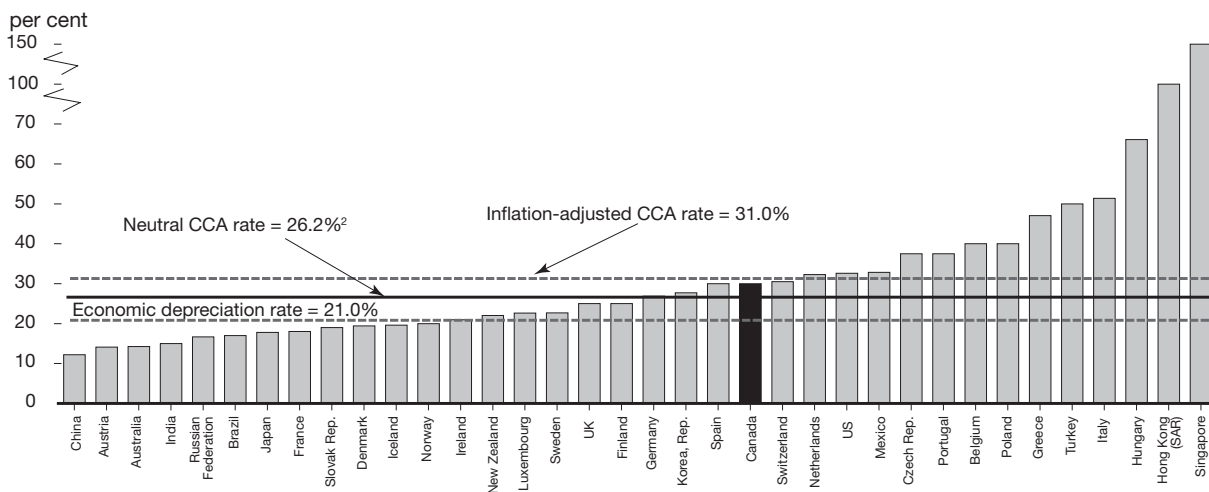
Chart A3-1
CCA Rate¹ for Manufacturing Plants



¹ In order to have countries on a comparable base, equivalent declining-balance rates were calculated for CCA regimes using linear or other types of schedules.

² The neutral CCA rate offsets economic depreciation and the penalty from using a nominal instead of a real CCA system less the benefit from deducting nominal instead of real interest payments.

Chart A3-2
CCA Rate¹ for Automated Manufacturing and Processing Equipment



¹ In order to have countries on a comparable base, equivalent declining-balance rates were calculated for CCA regimes using linear or other types of schedules.

² The neutral CCA rate offsets economic depreciation and the penalty from using a nominal instead of a real CCA system less the benefit from deducting nominal instead of real interest payments.

INVESTING IN POST-SECONDARY EDUCATION:
THE IMPACT OF THE INCOME TAX SYSTEM



Introduction

The decision to undertake post-secondary education (PSE) is one of the most important that most Canadians make. That choice is influenced by many factors, including personal aptitude and preferences, cost implications, and its impact on financial prospects. Society also has a stake in the decision to invest in higher education since a well-educated population is more productive, innovative and adaptable as well as more engaged in public issues. As a result, the Government supports education through a variety of spending programs and tax measures, raising the private return to investment in PSE in order to encourage greater participation.

This paper examines the impact of taxes on decisions regarding participation in post-secondary education. In particular, it evaluates how the income tax system's cost recognition features, such as the education, tuition, textbook, and student loan interest tax credits, reflect the cost of a post-secondary education to students and their families. The document also examines how these tax support measures compare to the additional taxes that will be generated from higher incomes resulting from that investment in education.

The paper begins by setting the evaluation context, describing:

- how an individual's decision to embark on higher education can be considered an investment;
- why governments get involved in that decision; and
- the effective tax rate framework, which is a commonly used tool for analyzing how the tax system affects the financial return to an investment.

It proceeds by examining the costs typically incurred by post-secondary students, and assesses how well those costs are recognized by the income tax system.

The analysis concludes that the private costs incurred by most post-secondary students when they invest in education are more than adequately recognized by the income tax system. Effective tax rates on investments in higher education are nevertheless found to be positive, indicating that, even with the tax support measures, the tax system makes investment in higher education less attractive. These positive effective tax rates arise from a fundamental feature of the Canadian income tax system—graduated rates, which cause the incremental earnings of post-secondary graduates to be taxed at a higher marginal income tax rate.

The disincentive effects created by the tax system must, however, be assessed in the context of the overall level of support given to post-secondary education and how it can best be delivered. Government spending is strongly supportive of higher education, substantially reducing private costs and more than offsetting the small amount of net additional tax arising from the tax system. Taken together, the tax and spending measures provide a substantial incentive to undertake post-secondary education, while maintaining a degree of progressivity in the tax system.



Education as an Investment

Taxes affect many decisions, and evaluation of the impact of taxes is consequently very important. This is particularly true when it comes to investment decisions.

Investments can be broadly defined to include all activities where costs are incurred today with the expectation of receiving benefits in the future. Education and training decisions clearly fit within this definition. When individuals decide to go to college or university, or to undertake other types of training, they must both pay the out-of-pocket costs of their education and give up the income they might have obtained if they had decided to enter the workforce immediately instead of going to school. Individuals who opt for additional education opportunities do so for a variety of reasons, but an important one is to improve their economic prospects once their education is complete. They recognize that additional education will increase their chances of obtaining steadier employment in a higher-paying line of work.

Education is thus a classic investment, since it involves incurring costs now in order to reap a reward later. A term often used in connection with education—human capital—draws out this education-investment link. Just as a business invests in physical capital by building a factory, buying machinery, or discovering and developing a mineral deposit, a student or apprentice invests in human capital by pursuing education or training opportunities (see Box 1).

Government Involvement in the Investment-in-Education Decision

Students receive a large financial return from investing in post-secondary education, and presumably would be motivated to invest in education without extra inducement from the Government. Nevertheless, governments have traditionally supported students and post-secondary institutions through both direct spending programs and tax measures. One justification for this involvement is that the benefits of higher education flow beyond the student and spill over to society at large.¹ Reviews of the literature suggest that these spillover effects, or externalities, result from a number of factors.

Highly educated employees are on average more productive. Their extra productivity often exceeds the additional remuneration they command. Employers may therefore earn higher profits if their employees are more educated. Co-workers may also be more productive and more generously remunerated in the presence of educated colleagues. Employers and fellow employees therefore reap some of the payoff of a student's decision to get an education.

New ideas that benefit businesses and society at large often come from well-educated people. A more educated workforce may also adapt more easily to changes in technology. These innovation channels can also generate externalities from individual decisions to invest in higher education.

People with more education may make less use of social programs, to the benefit of their fellow citizens, and contribute more in terms of tax levels. Persons with higher education generally have more stable patterns of employment and are consequently less prone to require government income and social support. With their higher incomes, they pay more taxes.

¹ See Davies, Jim, "Empirical Evidence on Human Capital Externalities," Department of Finance Working Paper 2003-11 (2003).



Box 1: Education: Earnings Premia, Costs and Rate of Return

Canadians with post-secondary education earn considerably more on average than those who complete high school only. “Earnings premia”:

- are higher for university than for college or trades training;
- are generally higher for women than for men; and
- were on an upward trend between 1980 and 2000.

Per Cent Difference in Weekly Earnings Compared to High School Completers—2000

	Trades Education	College	Bachelor's
Males	18	19	51
Females	16	20	62

Source: Boothby, Daniel, and Torben Drewes, “Post-Secondary Education in Canada: Returns to University, College and Trades Education,” *Canadian Public Policy*, XXXII:1, 1-21 (2006).

To obtain these payoffs, students pursuing post-secondary education incur a variety of costs, both direct costs (tuition, books, etc.) and opportunity costs, in terms of forgone earnings. As discussed later in this paper (see the section “Education Costs Incurred by Post-Secondary Students”), the magnitude of these costs varies considerably from student to student, but \$21,000 roughly approximates the typical before-tax cost (including forgone earnings) of a year of post-secondary education, implying an \$84,000 investment for a four-year degree.

The payoff from a post-secondary education can be weighed against the cost of obtaining it by computing a rate of return. The prospective student may then decide whether the rate of return is high enough to make education a good financial investment.

A recent C.D. Howe Institute Commentary (see footnote 3) summarized various studies of rates of return to first-degree university study over the 1970s, 1980s and 1990s. It found that over that period, the after-tax rate of return was 11-12 per cent for males and 15-16 per cent for females.

Casting the externality net even further, it can be argued that education also imparts “civic virtues” that make society function well, such as awareness and involvement in public issues, community participation and volunteerism.

The presence of these spillover benefits means that government subsidization of investments in education improves the well-being of Canadians. Government spending on education and tax measures targeted at students can encourage individuals to engage in more education than they would if they were driven only by internal, personal rewards.

A second reason put forth for government involvement in education investment decisions is to offset limitations in financial markets. Students may be financially constrained from acting on educational opportunities if lenders will not extend credit to them based on their increased income prospects. The Government may have a role in correcting such credit market failures by becoming directly involved in lending to students.



Effective Tax Rate Framework

The tax system can modify the attractiveness of investing in education, either by making the upfront costs less onerous or by increasing the net reward by reducing taxes on the resulting earnings. The effective tax rate framework is a helpful tool in analyzing the impact of the tax system on incentives to make such investment.

Consider the situation of individuals deciding whether or not to take part in post-secondary education. They can compute a rate of return on the investment, which measures how much more they will expect to earn over a lifetime in comparison to the direct costs (tuition, books, etc.) and income forgone during the study years. The rate of return can be computed on both a pre-tax and an after-tax basis. The proportional difference between the pre-tax and the after-tax rates of return shows the degree to which taxes alter the financial incentives to invest in education. This wedge between the pre-tax and after-tax rate of return is known as the effective tax rate on such investments (see Box 2).

The effective tax rate will be affected by a variety of factors, both tax and non-tax. Anything that alters the before-tax rate of return, such as the cost and duration of an education, the earnings premium from an education, or the time pattern of earnings with and without education, can have an impact. Holding these influences constant, tax variables such as tax rates, credit rates and deductibility rules have an effect as well.

Tax policy analysis uses the effective tax rate framework to determine the extent to which existing or proposed tax measures modify the financial attractiveness of an investment. If all of the costs of investing in education are recognized for tax purposes (i.e. fully deductible/creditable and used in the year they occur) and the incremental income earned is taxed at the same rate as the initial reference level, the effective tax rate will be zero, signalling that the tax system is not altering incentives.² Progressivity is, however, a fundamental feature of Canada's personal income tax system, so the incremental income arising from the investment will be taxed at a higher rate, making it highly likely that the effective tax rate will be greater than zero. On the other hand, as will be seen below, government spending is strongly supportive of post-secondary education, and the net effect of the two policies is to encourage educational investment while preserving an element of progressivity in the tax system.

² Most students, if they are taxable, face the lowest marginal tax rate; hence credits are roughly equivalent to deductions for this income group (see Box 4 for a more detailed discussion).



Box 2: Rates of Return and Effective Tax Rates

The table below lays out a simple, stylized example of the financial consequences facing someone contemplating an investment in post-secondary education. It assumes:

- investing in higher education leads to four in-school years of zero earnings followed by earnings of \$40,000 per year over a 40-year career;
- direct costs of four years of post-secondary education are \$30,000; and
- not investing in higher education leads to earnings of \$20,000 per year over a 44-year career.

Before Tax	Education Period (Age 18-21)	Working Period (Age 22-61)
	(\$)	(\$millions)
1. Earnings as a PSE graduate	0	1.6
2. Costs		
Direct (tuition, books, etc.)	30,000	0.0
Forgone earnings = earnings as a high school graduate	80,000	0.8
3. Net extra earnings (1. – 2.)	-110,000	0.8

Investing in higher education costs \$110,000 during the school years in this example and, after graduation, returns \$0.8 million in extra earnings. The investment occurs upfront and the reward is received later. The rate of return calculation takes the “time value of money” into account by discounting future amounts at the internal rate of return. In this example, the before-tax rate of return is calculated as 14.6 per cent.

Now introduce taxes. Taxes on earnings reduce take-home pay for both those who undertake post-secondary education and those who do not. Tax deductions or credits available during the school years reduce the cost of education.

The numbers in the table below assume that:

- the tax rate on income up to \$20,000 per year, the amount earned by the high school graduate, is 15 per cent;
- the tax rate on income above \$20,000 is 25 per cent; and
- a 15 per cent tax credit is available on amounts spent on direct costs of post-secondary education.

After Tax	Education Period (Age 18-21)	Working Period (Age 22-61)
	(\$)	(\$millions)
1. Earnings as a PSE graduate	0	1.28
2. Costs		
Direct (tuition, books, etc.)	25,500	0.00
Forgone earnings = earnings as a high school graduate	68,000	0.68
3. Net extra earnings (1. – 2.)	-93,500	0.60

In this example, investing in higher education costs \$93,500, after tax, during the school years. After graduation, it returns \$0.6 million in additional after-tax income. Based on these figures, the after-tax rate of return is 13.1 per cent. The effective tax rate is the proportional difference between the before- and after-tax rates of return. In this example, the effective tax rate is 10 per cent, calculated as $(14.6-13.1)/14.6$.



Education Costs Incurred by Post-Secondary Students

Forgone Earnings

One of the largest costs borne by those who decide to invest in education results from the fact that students have less opportunity to work for pay.

Data show that individuals with high school degrees who do not participate in post-secondary education earned, at the median, around \$20,000 per year during the time they would otherwise be going to university (i.e. ages 19 to 22).³ Assuming a typical full-time student works during the summer, going to school therefore “costs” post-secondary students roughly \$15,000 per year in forgone earnings.⁴ Of course, the median or average figures may not be too revealing of the forgone earnings of students in particular situations. The range of earnings of high school graduates is quite broad. An individual student might have found a \$20,000-per-year job if he or she had not gone on for post-secondary education, or might have found one that paid much more, or might have found no job at all. A student with a scholarship as well as part-time and summer earnings might have done as well financially by going to school as with a \$20,000-per-year full-time job. Indeed, the concept of forgone earnings is rather subjective, since it is based on a calculation involving a student’s best guess as to “what might have been.”

Direct Costs

It is important to distinguish outlays of post-secondary students that can truly be considered as their costs of choosing to invest in education in contrast to spending that would have taken place in any case, in or out of school. A good number of outlays are made by both students and non-students alike. When calculating the financial ramifications of investing in education, it is only the incremental costs associated with going to school that are relevant.

³ Collins, Kirk A., and James B. Davies, “Carrots & Sticks: The Effect of Recent Spending and Tax Changes on the Incentive to Attend University,” C.D. Howe Institute Commentary No. 220 (October 2005). The authors estimated forgone (before-tax) earnings in 2003 of \$14,715. University students are assumed to work during the summer months and earn one-third of the yearly, median income for full-time, full-year workers (\$20,066), less 20 per cent to capture summer employment search time.

Not adjusting for wage growth or inflation, median male and female high school graduates at 23 years of age earned \$23,000 and \$18,200, respectively, in 1997. See Collins, Kirk A., and James B. Davies, “Tax Treatment of Human Capital in Canada and the United States: An Overview and Examination of the Case of University Graduates,” *North American Linkages: Opportunities and Challenges for Canada*, The Industry Canada Research Series, edited by Richard G. Harris. Calgary: University of Calgary Press (2003).

⁴ EKOS Research Associates, *Investing in Their Future: A Survey of Student and Parental Support for Learning* (2006). In 2003–04, summer employment earnings were \$4,847 on average among students who worked, or \$3,461 on average for all students, including those without summer earnings. Earnings from jobs while at school were \$6,612 on average for all students who worked (\$4,881 for full-time students with part-time jobs). It is debatable whether pay from part-time jobs while at school should enter the calculation of forgone earnings. On the one hand, it clearly does narrow the in-school/not-in-school earnings gap. On the other hand, students only realize these earnings by working beyond normal hours, assuming normal working hours and normal study hours are similar. Students with part-time jobs are forgoing the earnings that non-students make during normal working hours, plus the free time that non-students enjoy after working hours. The wages students receive for part-time work is compensation for the sacrifice of free time and, it can be argued, does not affect the calculation of forgone, normal working hour, earnings.



A number of expenses are inarguably incremental. Tuition fees, for example, are clearly something that students incur and non-students avoid, as are compulsory school fees. Similarly, there is no doubt that purchases of textbooks and school supplies are education costs. Another example of expenses that are indisputably educational are interest payments on student loans.

There is similar certainty about costs that are borne by both students and non-students. Both students and non-students must eat and have a roof over their heads. These costs are independent of the going-to-school decision. Indeed, if fewer non-students live with their parents in order to benefit from free accommodation and food, it may be said that these are incremental direct “benefits” of investing in education in that they reduce the reference cost level.

There are also some grey areas. Students may have a greater need for a computer and ancillary equipment than non-students. However, it could be argued that more and more these days, non-students also need a computer. Outside the classroom, the lifestyle of students and non-students may differ and bring with it differences in certain costs, such as increased entertainment expenses for students. However, these would not normally be considered costs associated with acquiring an education. More post-secondary students may live away from their hometown than non-students of the same age group, so travel from home to school and back may be regarded as an educational expense, broadly defined. On the other hand, daily commuting expenses may be higher for the working individual since a good number of students live on campus or nearby.

The list below provides some information of the quantitative importance of educational and quasi-educational expenses.

Tuition Fees

Statistics Canada data⁵ show that annual university undergraduate tuition fees will average \$4,347 in 2006–07, ranging from \$1,916 in Quebec to \$6,571 in Nova Scotia.

Tuition fees also differ by faculty, with a year of study in a faculty of education costing on average about one-quarter as much as a year of study in dentistry (\$3,334 versus \$13,463). Graduate programs are generally more expensive, with tuition averaging \$6,479.

In a survey⁶ of over 7,500 post-secondary students, EKOS Research Associates estimated similar results for 2003–04—average tuition of \$4,134 (\$4,415 in 2006 dollars).

As part of the needs assessment work undertaken to determine the adequacy of loans provided under the Canada Student Loans Program (CSLP), information is collected from applicants regarding their expenditures.⁷ In 2003–04, the nearly 400,000 applicants reported average tuition fees of \$4,782 (\$5,107 in 2006 dollars). The 10 per cent of applicants with the highest tuition costs spent \$13,331 on average (\$13,962 in 2006 dollars).

⁵ Statistics Canada, “University Tuition Fees,” *The Daily* (September 1, 2006).

⁶ EKOS Research Associates, *Investing in Their Future: A Survey of Student and Parental Support for Learning* (2006).

⁷ Analysis provided by Human Resources and Social Development Canada based on needs assessment data from Canada Student Loan applicants.



Other Fees

According to Statistics Canada,⁸ compulsory student fees will add another \$619 to post-secondary expenses in 2006–07, varying from \$341 in New Brunswick to \$719 in Ontario. These additional fees include recreation and athletics, student health services and student association fees, which are not eligible for the tuition tax credit.

Books, Equipment and Supplies

EKOS reported that in 2003–04, post-secondary students spent on average \$967 (\$1,032 in 2006 dollars) on books and educational supplies.

The CSLP needs assessment data put books and supplies spending at a similar \$936 on average for 2003–04 (\$1,000 in 2006 dollars). The provincial variation in average books and supplies expenditures was relatively narrow, ranging from about \$900 to \$1,100, with the exception of Newfoundland and Labrador, where students got by with less than \$500 worth of books and supplies. The data also showed that the top 10 per cent paid out \$2,122 each on books and supplies.

Statistics Canada conducted a survey of post-secondary students and their families based on their 2001–02 experience.⁹ Respondents were asked about their total education costs (tuition, books, supplies) rather than amounts spent on individual categories of expenditures. University students reported education costs of \$5,200 during the year, compared to \$3,200 for college students (\$5,674 and \$3,492 in 2006 dollars). These numbers, while not as detailed and from an earlier year, are consistent with those obtained from Statistics Canada's tuition report, the CSLP needs assessment and the EKOS survey.

Loan Expenses

Post-secondary students generally have higher expenses and lower incomes than those who enter the workforce immediately after high school. Consequently, they must often borrow to cover the gap between their financial needs and resources during their study years. Statistics Canada found that about half of college and university (bachelor) graduates left school owing money they had borrowed for their education.¹⁰ Most of the debt was incurred through government student loan programs.

Eventually, usually after graduation, those loans must be repaid. In terms of measuring loan costs of investments in education, it is important to distinguish the repayment of principal from the payment of interest.

⁸ Statistics Canada, "University Tuition Fees," *The Daily* (September 1, 2006).

⁹ Ouellette, Sylvie, "How Students Fund Their Postsecondary Education: Findings from the Postsecondary Education Participation Survey," Statistics Canada, Catalogue No. 81-595-MIE2006042 (2006).

¹⁰ Allen, Mary, and Chantal Vaillancourt, "Class of 2000: Profile of Postsecondary Graduates and Student Debt," Statistics Canada, Catalogue No. 81-595-MIE2004016 (2004).



A loan is taken out to help cover a student's expenses. Including both the original expenses and the repayment of loan principal as separate costs would result in double counting. A student who takes out a \$5,000 loan to pay a year's tuition fee and who later repays the \$5,000 to the lender does not have \$10,000 in costs. If expenses (tuition fees, books, etc.) have already been included, the repayment of loan principal should be ignored in computing the costs of investing in education.

Interest payments are conceptually a different, more complicated matter.

- It could be argued that interest payments are an expense that arises only because of a decision to invest in education. Students typically borrow money and incur interest costs simply because they decide to go to school, so interest payments, following this line of reasoning, are clearly a cost of investing in education.
- When it comes to designating the costs that should be recognized for tax purposes, the case for interest payments is less compelling. If taxpayers, whether students or businesses, are allowed to deduct the full cost of an investment at the time it takes place (i.e. to use cash-flow accounting), it is not necessary to also allow deductions for interest payments on loans used to finance the investment. For example, contributions to a registered retirement savings plan are allowed as a deduction, so interest paid on money borrowed to make the contributions is not deductible.

Leaving this conceptual debate aside, arriving at an empirical estimate of typical interest payments on student debt is no simple matter.

There is wide variation among students in amount of debt, repayment schedules and interest rates attached to loans. Statistics Canada reports that graduates in 2000 who had debts two years after graduation owed on average \$12,600 (college) and \$19,500 (university with a bachelor's degree),¹¹ for an overall average of about \$15,000 of debt. But about half of the graduates had no debt two years after graduation, implying average indebtedness of all class of 2000 graduates of about \$7,500 in 2002. EKOS reports a similar figure (\$7,000) for average debt for all students in 2003–04. At a 7-per-cent interest rate, interest payments on debts of this magnitude would be around \$500 per year.

Averages such as these are often deceptive, particularly in the case of student debt. Given all the factors at play—amount of debt, the interest rate, the repayment schedule, government relief measures—it is difficult to say what a “typical” case might be.

Travel Costs

Travel is one of the grey areas in terms of education costs. Post-secondary students attending school away from their hometown have to travel to school at the beginning of the academic year, usually returning home again at the end of the year, and typically make one or more trips during the school year. However, their counterparts in the workforce whose jobs are in another town may also return to their parents' home several times per year. To the extent that students return home more often, their extra travel costs may be offset by rent savings if they stay with their parents during the summer.

¹¹ Unfortunately, Statistics Canada's survey on student debt (see footnote 9) did not deal with repayment. The figures on debt load cited here refer to the total debt (government and non-government), two years after graduation, of graduates who pursued no further education. Only graduates who had some government debt are included in this calculation.



Even if travel expenses were judged to be legitimate education costs, it would be difficult, as a practical matter, to estimate their magnitude. Travel costs, which vary with distance, mode of transportation and number of trips, would differ considerably from student to student. Unfortunately, none of the information sources cited above deal specifically with student travel costs.

Moving Expenses

There is considerable overlap between travel and moving expenses. It is not important here to delve into their finer definitional nuances. It is worth pointing out, however, that the same debate over whether travel expenses are true costs of investment in education pertains to moving expenses as well. Resolving that debate would leave the empirical problem of obtaining information on student moving costs unresolved. Readings on actual moving costs of post-secondary students are as difficult to come by as are their travel outlays.

Summary of Costs

In acquiring a post-secondary degree, undergraduate students forgo some earnings, pay tuition and other fees, and purchase textbooks and other supplies for their coursework. Costs for a typical student total approximately \$21,000 per year of study, based on available data sources.

Annual Cost of Undergraduate Study

Forgone earnings	\$15,000
Tuition	\$4,347
Additional fees	\$619
Books and supplies	\$1,000
Total	\$20,966

Tax Recognition of Costs

Students, who invest in post-secondary education, increase their earning power, and their extra earnings mean extra income taxes. However, the income tax system recognizes the costs of investing in post-secondary education by allowing students a tax credit or a tax deduction for expenses incurred (tax credits versus tax deductions are discussed in Box 4). If all costs are recognized fully in the year that they occur, only net extra earnings are subject to tax.

This section looks at different types of education costs and how they are reflected in the income tax system.

Forgone Earnings

The tax system provides no explicit deduction for the cost of forgone earnings. Deductions are designed to remove from the ambit of taxation certain amounts of income that would otherwise be subject to tax. Since the forgone income was not taxed in the first place, there is no need for an explicit deduction.



Tuition Tax Credit

Students attending universities, colleges or other post-secondary educational institutions certified by Human Resources and Social Development Canada are entitled to a federal tax credit on the eligible tuition fees they pay.¹² The amount of tuition is multiplied by the lowest tax bracket rate (15.5 per cent as of July 1, 2006) to calculate the value of the credit. Provincial credits are also available, with the rates varying from province to province. Unused portions of this credit can be transferred to supporting family members or carried forward by the student.

In 2003 (the latest year for which data are available, when the credit rate was 16 per cent), over 2 million students claimed federal tuition tax credits in respect of fees of nearly \$4.8 billion. The average tuition amount reported was about \$2,200.

If all \$4.8 billion of these tuition payments had been used to generate credits to reduce 2003 tax payments (either those of the student or of a supporting person to whom they were transferred), the cost to the federal government would have been over \$750 million (16 per cent of \$4.8 billion). It is not always possible, however, for the student to claim the credit in the year it is earned because he or she may have insufficient taxable income. In these cases the credit can be transferred to a supporting person, or carried forward to reduce taxes in a future year.

Education Tax Credit

This credit is designed to recognize the direct costs of investing in higher education, apart from tuition. The federal tax system uses a standard monthly amount (\$400 for full-time students and \$120 for part-time students) to reflect these costs. Students in a qualifying educational program at a designated educational institution are entitled to a tax credit based on the number of months they are enrolled.¹³ The federal credit amount is multiplied by the lowest tax bracket rate (15.5 per cent as of July 1, 2006) to calculate the value of the credit. Provinces have similar provisions.

As with the tuition tax credit, unused portions of this credit can be transferred to supporting family members or carried forward by the student.

¹² Eligible tuition fees include admission fees, charges for library and laboratory facilities, exam fees, application fees, charges for certificates, and membership or seminar fees related to programs. Some fees are specifically identified as ineligible—social and athletic, medical care or health services, transportation and parking, board and lodging, cost of goods of enduring value retained by students (e.g. microscope, uniform), initiation into professional organizations and penalties. For students taking correspondence courses, the eligible course fees may include books, cassettes, CDs, etc., that the students are required to buy. For students at flight training schools, the cost of flying time may be eligible. (Canada Revenue Agency, Interpretation Bulletin IT-516R2, *Tuition Tax Credit*).

¹³ Designated educational institutions include universities, colleges and other post-secondary institutions. A qualifying program must involve at least 10 hours of instruction or work per week for the duration of the program. Full-time students are enrolled in 60 per cent or more of the usual course load. (Canada Revenue Agency, Interpretation Bulletin IT-516R2, *Tuition Tax Credit*).

Part-time students who qualify for the disability amount or were enrolled part-time due to mental or physical impairment can claim the full-time education tax credit amount for each month of study. Under the medical expense tax credit, people with disabilities are also able to claim expenses related to education and employment, such as tutoring, note-taking services and talking textbooks.



In 2003 (the latest year for which data are available), 1.5 million students claimed the federal education tax credit for full-time study and nearly 700,000 for part-time study. There may be some overlap in these numbers, as some students likely engaged in full-time study for some months of the year and part-time study for others. There is no duplication, however, in the total amount claimed (\$4.3 billion). The average education tax credit amount for full-time study was about \$2,600, or 6½ months of study at \$400 per month. For part-time study, the average claim was for just under \$600, or roughly 5 months of study at \$120 per month.

Assuming that the entire \$4.3 billion was used in 2003, the education tax credit would have cost the federal government some \$700 million in reduced taxes that year (16 per cent of \$4.3 billion). But the same proviso made in the case of the tuition tax credit, that some credits are not used to reduce taxes in the year that they are earned, also applies to the education tax credit.

Information on carry-forwards and transfers is not available separately for the tuition and education tax credits. In 2003, the total amount used for these two credits, including transfers and amounts brought forward from earlier years, is estimated at \$1.2 billion.

Textbook Tax Credit

A federal textbook tax credit amount of \$65 per month for full-time students and \$20 for part-time students was introduced in the May 2006 budget. The credit amount is multiplied by the lowest tax bracket rate (15.5 per cent as of July 1, 2006) to calculate the credit. Unused portions of this credit, like the education and tuition tax credits, may be transferred to supporting family members or carried forward by the student.

The 2006 budget estimated that the cost of this new credit would be \$135 million in 2006–07 and \$125 million in 2007–08.

Summary of Tuition, Education and Textbook Tax Credits

In terms of cost recognition, the tuition tax credit amount covers the entire amount the student pays in tuition, without restriction. The education and textbook tax credit amounts are designed to cover the typical non-tuition costs of post-secondary education. For a full-time student attending school for eight months a year, the combined education and textbook tax credit amount is \$3,720 (see Box 3). Data show that, on average, students spend about \$1,600 on textbooks, supplies, equipment and compulsory fees not eligible for the tuition tax credit. Extending the definition of education costs to allow for grey-area items such as home-to-campus travel and moving expenses would not change the conclusion that the tax provisions are ample to cover the outlays of average post-secondary students.



Box 3: Impact of the Tuition, Education and Textbook Tax Credits

A student attending a full-time program at a Canadian university for eight months of full-time study, paying tuition of \$4,000, is entitled to the tax credits described in the table below. For the purposes of this table, provinces are assumed to offer credits equal to half the value of the federal education and tuition tax credits.

Credit	Amount	Value of Tax Credit ¹		
		Federal	Provincial	Total
Education	\$400 * 8 months = \$3,200	\$3,200 * 15.5% = \$496	\$3,200 * 7.75% = \$248	\$744
Textbook	\$65 * 8 months = \$520	\$520 * 15.5% = \$80.60		\$80.60
Tuition	\$4,000	\$4,000 * 15.5% = \$620	\$4,000 * 7.75% = \$310	\$930
Total	\$7,720	\$1,196.60	\$558.00	\$1,754.60

¹ As of July 1, 2006.

As a result of these credits, a student's taxes (or that of his/her supporting family member) could be reduced by \$1,754.60.

Student Loan Interest Tax Credit

Interest paid on loans under the Canada Student Loans Act, the Canada Student Financial Assistance Act or similar provincial or territorial government laws for post-secondary student loans is eligible for a federal tax credit.

The credit is determined by multiplying the lowest tax bracket rate (15.5 per cent as of July 1, 2006) by the amount of interest paid.

The credit applies to interest paid on qualifying student loans. Unlike the education, textbook and tuition tax credits, the student loan interest tax credit cannot be transferred to another person. Unused portions of the credit can be carried forward for up to five years and used by the student in years when tax would otherwise be payable.

In 2003, 700,000 tax filers reported paying over \$400 million in interest on student loans, or about \$600 each on average. With a credit rate of 16 per cent that year, the federal tax relief provided by this measure was worth about \$70 million.

Moving Expense Deduction

Students are allowed to deduct moving expenses from salary, wages or self-employment income earned at their new location. In addition, they may deduct from scholarship, fellowship, research grant and similar award income moving expenses incurred in order to study at a post-secondary institution, although it should be noted that Budget 2006 fully exempts such income from tax effective for the 2006 and subsequent taxation years.



Child Care Expense Deduction

Child care expenses are deductible, generally against earned income, by tax filers who satisfy a list of criteria. One of these is that, when the child lives with both parents, the parent with the lower income must report the deduction. This parent is likely to be in a lower tax bracket, or not have any taxable income at all, making the deduction less valuable than if it were available to the higher-income parent. However, there is an exception: the parent with the higher income may claim the deduction if the other parent is a student. This provision may ease the financial burden of paying for child care while one parent works and the other goes to school. Parallel assistance is provided to single parents studying full time (or to two-parent families, where both adults are studying full time) by allowing them to claim the child care expense deduction against all types of income.

Tax Treatment of Income

Scholarship and Bursary Income Exemption

As planned in the 2006 budget, scholarship, fellowship and bursary income received by a post-secondary student will be fully exempt from tax for the 2006 and subsequent taxation years. Previously, the exemption covered only the first \$3,000 of annual income from these sources.

In 2003, when the \$3,000 cap was in effect, around 106,000 post-secondary students reported receiving scholarship-type income of some \$796 million; approximately \$319 million of that amount was exempted from taxation.

The 2006 budget placed the benefit to students of removing the cap at \$50 million of reduced federal tax payments in 2006–07 and \$45 million in 2007–08.

Registered Education Savings Plans

Parents and others may set up a registered education savings plan (RESP) to help pay for the cost of a beneficiary's post-secondary education. The contributor is not entitled to a tax deduction for amounts paid into an RESP, but the investment income generated within the RESP is not taxed until it is withdrawn, and then is taxed in the beneficiary's hands rather than the contributor's. The deferral of tax payments on the investment income and taxation in the hands of the RESP beneficiary, who is typically in a lower tax bracket, are both advantageous from the contributor's perspective.

RESPs are estimated to have saved contributors and beneficiaries \$130 million in taxes in 2003.¹⁴

The Government also provides matching contributions (Canada Education Savings Grants), and in some cases support that requires no matching (Canada Learning Bonds), making RESPs even more financially attractive as a means of financing post-secondary education.

¹⁴ Estimates appear in "Table 1—Personal Income Tax Expenditures" in Part 1 of this publication.



Box 4: Credits Versus Deductions

The tax credits described in this paper are all provided at the same rate at which taxes are imposed on income in the lowest tax bracket—15.5 per cent as of July 1, 2006. If a post-secondary graduate eventually earns income that places him or her in a higher tax bracket, that income will be taxed at more than 15.5 per cent. Taxing income at a higher rate than that used for recognizing costs raises the effective tax rate on investment in education.

However, allowing a deduction rather than a credit for education costs would not have much impact on the effective tax rate on investment in education. At the time they incur education costs, students generally have low incomes. They are generally in the lowest, 15.5 per cent, tax bracket. A deduction would generally be worth the same as a tax credit to them—15.5 per cent of the costs.

Unused deductions can be carried forward but, consistent with the cash-flow approach to taxing investment in education, accumulated deductions must be used in the earliest year in which the graduate would otherwise have to pay tax. A student's income (and tax bracket) in early post-graduation years is likely to be low compared to what the graduate will experience over a lifetime, so the impact of switching from credits to deductions would be small.

Transferring the deduction to a spouse or parent in a higher tax bracket would also reduce the effective tax rate on the investment, although not necessarily from the student's perspective. Furthermore, limits on transferability and the requirement to reduce the student's taxable income to zero before transfers of deductions are permitted would reduce the impact.

Graduated Rates

As discussed in Box 4, positive effective tax rates may result if the direct costs of an investment are incurred and recognized at one point in time and the income payoff from the investment is realized later. This phenomenon is particularly evident in tax systems with graduated rates.

Graduated rates introduce complications even in the absence of direct costs. Recall that one of the costs of an investment in education is the income forgone by going to school rather than working immediately after high school. The income of high school graduates, particularly in the first few years on the job, is typically lower than the income their post-secondary graduate counterparts earn after graduation, and is taxed at a lower rate in a progressive tax system. As a result, when it comes to comparing with-education and without-education income streams, there is a wedge between the pre-tax and post-tax comparisons. With graduated tax rates, the after-tax return on an investment in education will be lower than the pre-tax return.¹⁵

¹⁵ The impact of graduated tax rates would be attenuated if students were allowed to carry back some of their post-graduation income for tax purposes and report it in the years when they had been at school. The benefits in terms of reducing tax-induced distortions would have to be balanced against considerations of fairness as well as the increased complexity and administrative burden created.



The favourable recognition of costs through the education and textbook tax credits along with the tax treatment of scholarships and RESP investment income provide a partial offset, on average, to the impact of graduated rates, thereby contributing to a lower effective tax rate on investment in education.¹⁶

Summary of Tax Treatment

The income tax system recognizes all of the costs of investing in post-secondary education.

- Forgone earnings are implicitly recognized by the tax system. Earnings are taxed in the hands of the high school graduate comparator, while the post-secondary student who forgoes those earnings does not pay the associated taxes.
- Tuition costs are fully recognized under the tuition tax credit.
- Other educational expenses for the average post-secondary student total about \$1,600 to \$2,000 per year. The federal education and textbook tax credits are roughly twice as large, at \$3,720 for eight months of study. These credits can be used even when the student is not in a tax-paying position via transfers and carry forwards.
- A credit is available for an unlimited amount of student loan interest paid. For maximum flexibility, the credit can be carried forward up to five years.
- Certain types of income—scholarships and RESPs—used to finance investments in education receive favourable tax treatment

These tax features make the decision to go to college, university or trade school more financially attractive than it would be on a without-tax basis. However, there are offsetting effects flowing through the graduated rate structure of the tax system. Where the tax system comes out on balance is an empirical matter, one that will be explored in the next section.

Effective Tax Rates on Investments in Post-Secondary Education

The rate of return on an investment in post-secondary education can be computed before and after tax. The effective tax rate is the proportional difference between the before- and after-tax rates of return (see Box 2).

The mathematical process of computing a quantitative estimate of this rate is relatively manageable. The empirical process of doing so, based on real-world experience, is more complex. As a result, there is no simple answer to the question, “What is the effective tax rate on investments in post-secondary education?”

Situations facing potential post-secondary students vary greatly. As discussed earlier, the cost of education differs from program to program, from province to province, from institution to institution and from student to student. The income forgone during the in-school years depends on the alternative job opportunities open to the particular student. The income premium resulting from attaining a post-secondary education is again student-specific. Finally, the amount borrowed

¹⁶ Given that other education-related expenses are recognized as they are incurred, the credit for student loan interest could also be viewed as a preference that offsets the impact of rising marginal tax rates.



to pay for the education, the loan repayment profile and the interest rate applied to the loan are far from uniform. Each of these cost, income and borrowing factors interacts with the tax system and affects estimates of actual effective tax rates.

Existing Research on Undergraduate Effective Tax Rates

A recent study by Collins and Davies¹⁷ computed effective tax rates for many combinations of these factors. In their base case estimations, they looked at single students with no dependants, since changes in family status would have tax ramifications that would feed back into the computed effective tax rate. Similarly, they avoided the complications that would have been introduced by allowing for tax-favoured income sources—specifically assuming no income from scholarships or RESPs and no flows into or out of registered retirement savings plans or registered pension plans. They looked only at the federal and Ontario tax systems.

Collins and Davies estimated the median employment earnings of males and of females in various age categories with different educational attainments as portrayed in Statistics Canada's 1998 *Survey of Consumer Finances*. Their sample was restricted to people working full-time for the full year. Each of the 1998 earnings observations was escalated to 2003 by applying the growth rate in average earnings over the intervening period. A student's lifetime earnings path was proxied by the estimated median earnings of people of different ages in 2003.

Collins and Davies found that effective tax rates on investments in post-secondary education are positive, as the impact of graduated tax rates more than offsets the treatment of costs by the tax system.¹⁸ The Department of Finance has adapted the Collins and Davies methods to produce preliminary estimates of effective tax rates using 2006 tax parameters. As shown in Chart 1, the effective tax rate on education is, however, substantially less than the marginal effective tax rate on physical capital estimated by the Department.¹⁹

Differential tax treatment of human capital is appropriate given the ample evidence of externalities associated with investment in post-secondary education.²⁰ In contrast, with the exception of research and development investment, which is not included in the marginal effective tax rate shown in Chart 1, there is no consensus that investment in physical capital provides significant benefits to society that are not captured by the firms making the investment.

¹⁷ Collins, Kirk A., and James B. Davies, "Carrots & Sticks: The Effect of Recent Spending and Tax Changes on the Incentive to Attend University," C.D. Howe Institute Commentary No. 220 (October 2005). See also, by the same authors, "Measuring Effective Tax Rates on Human Capital: Methodology and an Application to Canada," *Measuring the Tax Burden on Capital and Labor*, edited by Peter Birch Sorensen. Cambridge, Mass.: MIT Press (2004).

¹⁸ Collins and Davies were obliged to simplify their representation of the tax system in order to have a manageable model for computing effective tax rates. Some of the measures they omitted would have reduced calculated effective rates. For example, Saskatchewan, Quebec, New Brunswick and Nova Scotia have tax rebate/credit schemes that either reduce taxes for, or provide grants to, new post-secondary graduates who work in the province.

¹⁹ The calculation for physical capital refers to an investment by a large firm that is small relative to its ongoing operations, hence the term "marginal effective tax rate." In the case of education, the investment is a four-year university degree, which represents a substantial fraction of all years of schooling and makes the expression "effective tax rate" more appropriate.

²⁰ See Davies, Jim, "Empirical Evidence on Human Capital Externalities," Department of Finance Working Paper 2003-11 (2003).



Government Expenditures: Effective Subsidy Rates

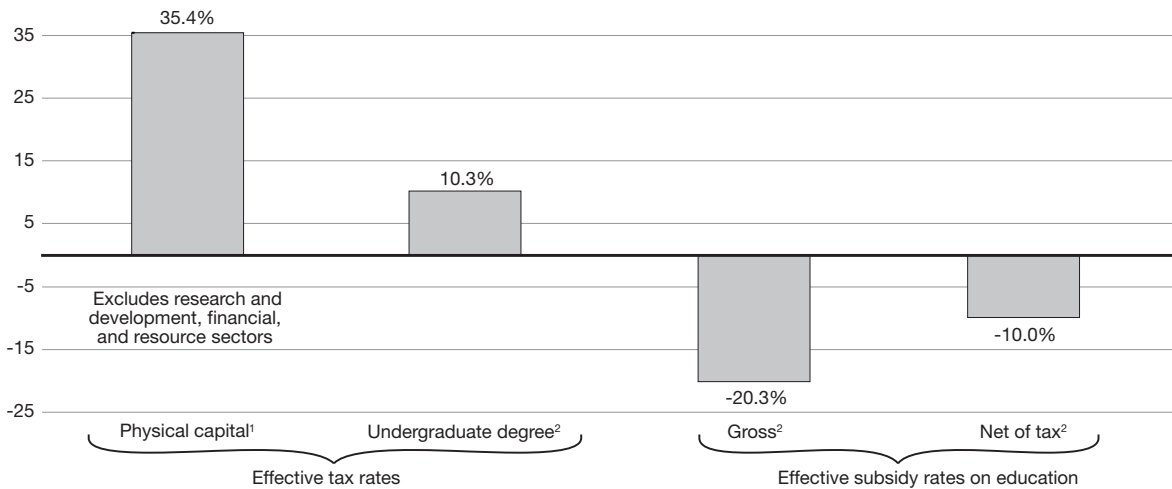
The finding of positive effective tax rates does not mean that government is discouraging investment in post-secondary education. Collins and Davies shed light on the overall impact of government actions when they investigate expenditure-side measures that raise the return to investments in education by reducing the cost to students. They find that once the impact of both the tax system and expenditure support is taken into account, the overall influence of government action is to encourage investment in post-secondary education. This conclusion is universal, for both males and females and across all fields of study.

For example, using preliminary Department of Finance estimates for 2006, the pre-tax effective subsidy rate (the impact of direct government funding to universities on rates of return) for bachelor-level graduates is just over 20 per cent. In other words, government spending on post-secondary students and institutions increases the rate of return that students get on their education by about 20 percentage points compared to what they would have received if they had borne all the costs themselves.

Chart 1

Effective Tax and Subsidy Rates on Investment in Physical Capital and Post-Secondary Education, 2006

per cent



¹ Department of Finance internal estimate for investments by large corporations.

² Preliminary estimates.



Net Effects of Taxes and Subsidies

Given an effective tax rate of approximately 10 per cent, government actions encourage participation in higher education by raising the return of those who chose to invest by about 10 percentage points (20.3 per cent minus 10.3 per cent). Subsidizing investment in human capital through government expenditures is an appropriate way of addressing externalities and market imperfections, in part because it allows the progressive nature of the tax system to be maintained. Ideally, the net subsidy would be equal to the spillover effects from investing in education plus a further amount to account for limitations in the credit market for students.²¹

Conclusions

Investments in higher education have been shown to be financially rewarding. Individuals deciding whether or not to attend college, university or trade school have a strong financial self-interest to do so.

Moreover, governments have good reasons for encouraging investment in education. First, society benefits from a more educated population beyond the rewards that accrue to the students themselves. Second, private lenders will not extend the optimal amount of credit to finance prospective students' investments in education, and governments have a role in helping overcome this market imperfection.

The income tax system alters financial incentives to invest in education. The effective tax rate on the return to education is a useful summary indicator of how the tax system is affecting the decision to invest. This study has presented evidence that, despite favourable recognition of costs incurred, the tax system reduces the return to education. This disincentive arises from a fundamental feature of the Canadian tax system—graduated tax rates—which results in the incremental return from education being taxed at a higher rate.

But taxes tell only part of the story. Government expenditures in support of post-secondary students and institutions provide strong financial encouragement for investing in higher education. Indeed, the same research that uncovers positive effective tax rates on investments in education finds an effective subsidy rate pulling strongly in the other direction. The supportive impact of expenditures exceeds the disincentive of taxes, leaving the Government with a pro-education stance overall. The net result of tax and spending programs is to encourage investment in post-secondary education while maintaining a progressive tax system.

²¹ See Davies, Jim, "Empirical Evidence on Human Capital Externalities," Department of Finance Working Paper 2003-11 (2003) for a review of the literature on the size of spillovers from investment in education.



Annex

Government Expenditures on Post-Secondary Education

The paper concentrates on government tax measures in support of post-secondary education. This annex provides a brief outline of government expenditures on post-secondary education.

Federal

The Government of Canada supports post-secondary education (PSE) primarily through transfers to provinces and territories. In 2006–07, the Government of Canada will provide approximately \$15.7 billion through the Canada Social Transfer, including \$8.5 billion in cash and \$7.2 billion in tax transfers for PSE, social assistance and social services, and early childhood development and early learning and child care.

In addition to the tax measures outlined in this publication, the Government of Canada also provides some \$3.9 billion annually in support for PSE in the form of direct spending:

- \$2.0 billion helps students deal with the costs of education, through grants, scholarships and student loan programs; and
- \$1.9 billion funds research and related activities in post-secondary institutions (granting councils, Canada Research Chairs, indirect costs of research).

This includes the Canada Millennium Scholarship Foundation (CMSF), which was created by the Government in 1999 with an endowment of \$2.5 billion (to be spent over 10 years) to provide bursaries and scholarships to students across Canada. Since 2000 the CMSF has distributed some \$300 million annually in bursaries and scholarships to approximately 95,000 PSE students.

Provincial

Provinces provide support for post-secondary education through:

- funding for post-secondary institutions;
- financial assistance (loans and grants) to post-secondary students; and
- tuition and education tax credits for students.

Several provinces (Saskatchewan, Quebec, New Brunswick and Nova Scotia) have introduced tax credits/rebates for post-secondary graduates who take a job in the province.



Federal Funding for Post-Secondary Education Programs²²

Support for PSE Institutions:

Canada Social Transfer ²³	<ul style="list-style-type: none"> • Transfer payments to provincial and territorial governments for PSE, social assistance and social services, and early childhood development and early learning and child care.
Post-Secondary Education Infrastructure Trust	<ul style="list-style-type: none"> • \$1 billion over two years for provinces and territories for infrastructure investments.

Direct Support for Students:

Canada Student Loans Program ²⁴	<ul style="list-style-type: none"> • Interest paid by government during study. • Interest at below-market rates. • Interest and principal relief for those in financial difficulty.
Canada Study Grants ²⁵	<ul style="list-style-type: none"> • Non-repayable financial assistance to PSE students with particularly high levels of need. • For students with permanent disabilities, students with dependants, high-needs part-time students, and females pursuing doctoral studies.
Canada Access Grant ²⁵	<ul style="list-style-type: none"> • Support for students from low-income families and with disabilities.
Canada Graduate Scholarship ²⁵	<ul style="list-style-type: none"> • Support for master's and doctoral students.
Canada Millennium Scholarship Foundation ²⁶	<ul style="list-style-type: none"> • Provides bursaries and scholarships to students across Canada demonstrating need and merit.
Apprenticeship Incentive Grant	<ul style="list-style-type: none"> • Announced in 2006 budget to be effective January 1, 2007. • Cash grant to apprentices in the first two years of an apprenticeship program. • Supplements the Apprenticeship Job Creation Tax Credit, also introduced in 2006 budget.

Support to Encourage Savings:

Canada Education Savings Grant ²⁷	<ul style="list-style-type: none"> • Proportional matching of registered education savings plan (RESP) contributions. • Government matching per dollar contributed varies with family income.
Canada Learning Bonds ²⁷	<ul style="list-style-type: none"> • Initial RESP contribution and ongoing payments.

²² The Government of Canada also provides support to help fund the post-secondary studies of Aboriginal students.

²³ Department of Finance, "Total Federal Support for Health, Post-Secondary Education, and Social Assistance and Social Services," www.fin.gc.ca/facts/tfsh2_e.html.

²⁴ Human Resources and Social Development Canada, "Canada Student Loans Program," www.hrsdc.gc.ca/en/gateways/nav/top_nav/program/cslp.shtml.

²⁵ CanLearn, Human Resources and Social Development Canada, "Canada Study Grants," www.canlearn.ca/cgi-bin/gateway/canlearn/template.asp?sc=pay/school/grants/index.shtml.

²⁶ Canadian Millennium Scholarship Foundation, www.millenniumscholarships.ca.

²⁷ Human Resources and Social Development Canada, "Canada Education Savings Grant," www.hrsdc.gc.ca/en/gateways/nav/top_nav/program/cesg.shtml.



Federal Funding for Post-Secondary Education Programs *(cont'd)*

Support for Research:

Granting Councils ²⁸	<ul style="list-style-type: none">• Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada.• Funding for research at universities, colleges and research hospitals.
Canada Research Chairs ²⁹	<ul style="list-style-type: none">• Federal funding for creation of university research fellowships.
Canada Foundation for Innovation ³⁰	<ul style="list-style-type: none">• Funding to strengthen the capacity of Canadian universities, colleges, research hospitals and non-profit research institutions.

²⁸ Canadian Institutes of Health Research, www.cihr-irsc.gc.ca/e/193.html;
Natural Sciences and Engineering Research Council of Canada, www.nserc.gc.ca/sf_e.asp?nav=sfnv;
Social Sciences and Humanities Research Council of Canada, www.sshrc.ca/web/home_e.asp.

²⁹ Canada Research Chairs, www.chairs.gc.ca/web/home_e.asp.

³⁰ Canada Foundation for Innovation, www.innovation.ca/index.cfm.