
Top-End Progressivity and Federal Tax Preferences in Canada: Estimates from Personal Income Tax Data

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PRÉCIS

Cet article présente un premier pas dans l'examen de l'effet que les traitements fiscaux préférentiels peuvent avoir sur la progressivité du régime fédéral de l'impôt sur le revenu du Canada à l'extrémité supérieure de l'échelle des revenus. Les auteurs examinent 60 dépenses fiscales reconnues par le ministère des Finances et utilisent les données des déclarants pour attribuer les parts aux bénéficiaires de revenus qui se classent dans les 1 pour cent, 0,1 pour cent et 0,01 pour cent des personnes touchant les revenus les plus élevés. Les estimations du ministère des Finances reposent sur l'hypothèse qu'il n'y a pas de changement dans le comportement. Les auteurs modifient légèrement cette hypothèse en présument que le changement de comportement ne varie pas par tranche de revenus. Ils définissent un traitement fiscal préférentiel comme « progressif pour les revenus les plus élevés » si la part des avantages que les bénéficiaires des revenus les plus élevés tirent du traitement préférentiel est inférieure à leur part de revenus. Il est estimé que la plupart des dépenses fiscales sont progressives pour les revenus les plus élevés, à l'exception, comme on peut s'y attendre, des dépenses liées au revenu du capital et aux options d'achat d'actions. Des résultats semblables s'appliquent à une définition de rechange de « progressif pour les revenus les plus élevés » reposant sur les paiements d'impôts. Les résultats sont comparables à ceux pour les États-Unis obtenus par Nguyen, Nunns, Toder et Williams (2012) et par Brown, Gale et Looney (2012).

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ABSTRACT

This article presents a first step toward consideration of how tax preferences may affect the progressivity of the Canadian federal personal income tax system at the top end. The authors consider 60 tax expenditures listed by the Department of Finance and use taxfiler data to attribute the shares to the top 1 percent, top 0.1 percent, and top 0.01 percent of income recipients. The Department of Finance estimates are made under the assumption of no behavioural change. The authors relax this slightly by assuming that behavioural change does not vary by income group. They define a tax preference as top-end progressive if the share of the preference's benefits received by top income recipients is less than their income share. Most tax expenditures are estimated to be top-end progressive except, as expected, those involving capital income and stock options. Similar findings hold for an alternative definition of top-end progressive based on tax payments. The results are consistent with those for the United States by Nguyen, Nunns, Toder, and Williams (2012) and Brown, Gale, and Looney (2012).

KEYWORDS: TAX EXPENDITURES ■ INCOME DISTRIBUTION ■ TAX DEDUCTIONS ■ INCOME TAX CREDITS ■ PROGRESSIVITY ■ INCOME INEQUALITY

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INTRODUCTION

Studies by Murphy et al.,¹ Fortin et al.,² and Veall³ have found that much of increased income inequality in Canada is due to increased top income shares. The latter two articles note that a frequently suggested policy response is raising tax rates for individuals with high incomes (perhaps using the funds for redistribution), but that existing estimates of behavioural responses for Canada leave open the possibility that higher marginal tax rates may not raise personal income tax revenues substantially, if at all. Another familiar suggestion in this context has been to instead

1 Brian Murphy, Paul Roberts, and Michael Wolfson, "High Income Canadians" [September 2007] *Perspectives on Labour and Income* 5-17 (www.statcan.gc.ca/pub/75-001-x/2007109/article/10350-eng.pdf).

2 Nicole Fortin, David A. Green, Thomas Lemieux, Kevin Milligan, and W. Craig Riddell, "Canadian Inequality: Recent Developments and Policy Options" (2012) 38:2 *Canadian Public Policy* 121-45.

3 Michael R. Veall, "Top Income Shares in Canada: Recent Trends and Policy Implications" (2012) 45:4 *Canadian Journal of Economics* 1247-72.

cut tax preferences that disproportionately benefit individuals with high incomes.⁴ This study attempts to inform discussion by estimating the top-end distributional incidence of 60 Canadian, federal, individual personal income tax preferences listed in the Department of Finance tax expenditure report for 2011.⁵ The Department of Finance examines the overall incidence of deductions and credits but does not provide estimates of the incidence of any individual deductions or credits.⁶

Because we consider so many preferences, we do not study any one preference in detail. But to preview our findings, our approximations indicate that most of the tax expenditures that we can study from the Department of Finance list are *top-end progressive*; that is, it is estimated that at the margin they benefit individuals at the top 1 percent or higher of the income range *proportionately less* than they benefit those with lower incomes. Some exceptions are the charitable donations tax credit and the employee stock option credit. Other important exceptions apply to capital income—for example, the dividend gross-up and credit (which attempts to integrate the personal and corporate income tax systems) and the partial inclusion of capital gains (which effectively results in a lower tax rate for capital gains). The last two

4 Veall, *ibid.*, considers this suggestion. Ragan comments, “The Canadian income tax system is replete with billions of dollars of ‘tax expenditures’—the complex web of credits, deductions and exemptions. While some of these are sensible, many others needlessly complicate the income tax system and increase *the growing perception of unfairness*. I challenge the government to commit to eliminating \$2-billion to \$3-billion of tax expenditures each year for the next three years. Once achieved, the stage would be set for a small overall reduction in tax rates.” Christopher Ragan, “Budget 2014: Economy Lab’s Wish List,” *Globe and Mail Online*, February 11, 2014 (emphasis added) (www.ccsd.ca/index.php/news/217-budget-2014-economy-lab-s-wish-list). Milligan argues for “cleaning the tax base” of ineffective tax expenditures but couples this with direct discussion of capital income taxation, consistent with our finding discussed below that most of the tax expenditures that differentially benefit those with top incomes involve income from capital: Kevin Milligan, *Tax Policy for a New Era: Promoting Economic Growth and Fairness*, C.D. Howe Institute Benefactors Lecture, 2014 (Toronto: C.D. Howe Institute, November 2014), at 23 (www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/benefactors_lecture_2014.pdf). Sheikh argues for closer evaluation of tax expenditures for a number of reasons, including unfairness that is sometimes related to the complexity of tax expenditures. Munir A. Sheikh, *Estimating the True Size of Government: Adjusting for Tax Expenditures* (Ottawa: Macdonald-Laurier Institute, February 2014). Consistent with our discussion below, Sheikh draws attention to the distributional impact of non-refundable tax credit tax expenditures, as does Boadway: Robin Boadway, “Policy Forum: Piecemeal Tax Reform Ideas for Canada—Lessons from Principles and Practice” (2014) 62:4 *Canadian Tax Journal* 1029-59. We focus on the top 1 percent for brevity because, as noted, that has been the part of the income distribution where there has been the largest recent change and because tax preferences that favour the affluent are a common topic of public policy discussion.

5 Canada, Department of Finance, *Tax Expenditures and Evaluations 2011* (Ottawa: Department of Finance, 2012).

6 See “Distributional Impact of the Federal Personal Income Tax System and Refundable Credits: Analysis by Income, Sex, Age and Family Status,” *ibid.*, at 31-47.

examples make it clear that any discussion of cutting preferences that benefit the affluent is intertwined with the debate regarding the appropriate rates at which to tax capital income, a debate that has been ongoing in Canada since at least the Carter commission.⁷

We emphasize that the purpose of this study is not to advocate that any particular top-end regressive tax preference should be curtailed or that any top-end progressive preference should be preserved. To take such a position would require a separate study of that measure in the context of its public policy purpose, including its costs and benefits (and their distribution) relative to any policy alternatives.⁸

The discussion that follows begins with a description of the data. We then consider two alternative ways in which a tax expenditure might be described as regressive or progressive. We discuss the calculations and present the results, and conclude with a summary and brief comment on our findings.

DATA

We employ Statistics Canada's longitudinal administrative databank (LAD), a one-fifth anonymized sample of all tax files with almost 5 million records in 2011. The tax return data are provided to Statistics Canada by the Canada Revenue Agency (CRA). Only calculations aggregated in a way to preserve confidentiality are permitted.

7 Canada, *Report of the Royal Commission on Taxation* (Ottawa: Queen's Printer, 1966). For the United States, see Hang Nguyen, James Nunns, Eric Toder, and Robertson Williams, *How Hard Is It To Cut Tax Preferences To Pay for Lower Tax Rates?* (Washington, DC: Tax Policy Center, July 10, 2012) (www.taxpolicycenter.org/publications/url.cfm?ID=412608); and Samuel Brown, William G. Gale, and Adam Looney, *On the Distributional Effects of Base-Broadening Income Tax Reform* (Washington, DC: Tax Policy Center, August 1, 2012) (www.taxpolicycenter.org/publications/url.cfm?ID=1001628). The authors of the US studies consider related matters in the context of proposals to lower top personal income tax rates while reducing tax preferences. Similarly to our findings for Canada, they find broadly that tax preferences that do not involve special treatment of income from capital have a distributional incidence that is more progressive than the tax-rate schedule. For example, Brown et al. consider a cut in top marginal tax rates coupled with complete elimination of a set of tax preferences only for those above a threshold at the top end of the distribution, with the threshold moved low enough that the tax cut/preference elimination package is revenue-neutral as a whole. (In their central case, they assume no behavioural effects.) They find that if the tax preferences eliminated do not include those affecting investment or capital income, the loss of progressivity from the reduction in top marginal tax rates is not offset by the gain from cutting tax preferences at the top. The overall tax system becomes less progressive. However, if the tax preferences eliminated can include those affecting investment or capital income, they find that it is possible to maintain tax system income progressivity with this type of change.

8 Moreover, if desired, a measure could often be cut "progressively" (that is, phased out for taxpayers above a certain income threshold), although we note that that would increase the marginal effective tax rate on income in that range. And, again if desired, overall progressivity could be enhanced by cutting any tax preference and replacing it with a tax preference, transfer or expenditure that is more progressive. Finally, there is the possibility (which we do not engage in this study) that reductions in tax preferences could change the behavioural response to marginal tax rates by reducing tax-avoidance possibilities.

The LAD provides data on individual usage of some tax preferences. The next two sections of the article explain how we use these data to estimate a user's share of the total estimated tax expenditure (the forgone tax revenue associated with its use) taken from the Department of Finance's 2011 tax expenditure estimates.⁹ Finance estimates are more recently available for the 2012 taxation year,¹⁰ but we use the earlier version to match the year of the LAD tax data.

We consider only those expenditures that correspond directly to personal income tax filing items and do not consider tax preferences associated with the corporate income tax or the goods and services tax. Our data do not allow estimates regarding transactions unreported within the personal income tax system, such as employee health and dental benefits, capital gains on principal residences, or the implicit rent from owner-occupied housing.¹¹

Excluding the above, the Department of Finance presents estimates for 105 tax expenditures in 2011. The LAD provides information that allows for at least approximate allocations by income class for 60 of these. The remaining 45 tax expenditures do not have corresponding LAD data, in some cases because of confidentiality suppressions and in others because of insufficient detail (relating, for example, to items aggregated as "other income"). Of these 45, 14 correspond to cases that the Department of Finance lists as "S," meaning that the tax expenditure is judged to be less than \$2.5 million, and a further 8 correspond to tax expenditures that the department estimates at less than \$10 million. See further discussion of some of the remaining cases under "Results" below.

TAX EXPENDITURES AND TOP-END PROGRESSIVITY

The basic premise for the concept of tax expenditures is that there is a "benchmark" tax system, which is designed purely to raise revenue based on individual annual income, broadly defined, using some set schedule of marginal tax rates. Any departure from this benchmark tax system is considered a "tax preference" (or "tax expenditure"). These terms derive from the idea that the particular tax provision is intended to give preferential treatment to a specific activity (such as private donations to charity), but that purpose might also be accomplished by a direct government expenditure (for example, by providing a percentage matching government grant for

9 *Tax Expenditures and Evaluations 2011*, supra note 5.

10 Canada, Department of Finance, *Tax Expenditures and Evaluations 2014* (Ottawa: Department of Finance, 2015).

11 These are significant omissions. As listed in the appendix to this article, the Department of Finance estimates non-taxation of business-paid health and dental benefits and the exemption of capital gains on principal residences as tax expenditures of \$3.1 billion and \$4.2 billion respectively. See *Tax Expenditures and Evaluations 2011*, supra note 5, table 1, at 17-18.

individuals' direct payments to the charity). The value of each tax expenditure is, in principle, the increase in revenue that the government would receive if the specific tax provision were eliminated. There are, of course, many complexities and subtleties in practice when estimating the value of tax expenditures; these are discussed in the Department of Finance tax expenditure report for 2009,¹² with further discussion in the reports for 2010, 2011, and 2012.¹³ For our first-step approach, we do not take a stance on what should be in or out as tax expenditures or how they should be calculated, but rather employ the department's list and its dollar value estimates, which are made under the assumption of no behavioural change.

We classify a tax preference as "top-end progressive" if we estimate that top income recipients receive a share of the preference's benefits that is less than their income share. Given the assumption of no behavioural change,¹⁴ this is equivalent to defining a preference as top-end progressive if its removal would increase the after-tax income share of top income earners.¹⁵ Hence, the thought experiment that underlies this definition is not a balanced-budget exercise: the removal of the tax preference would increase total tax revenues.

If we consider the balanced-budget exercise of removing the tax preference with simultaneous offsetting tax-rate cuts to each income group such that the proportion of total federal personal income tax revenues from each income group remains unchanged, we can derive an alternative definition. Under this definition, a preference will be classified as "top-end progressive" if we estimate that top income recipients receive a share of the preference's benefits that is less than their share of total federal personal income tax payments.

12 Canada, Department of Finance, *Tax Expenditures and Evaluations 2009* (Ottawa: Department of Finance, 2010).

13 Canada, Department of Finance, *Tax Expenditures and Evaluations 2010* (Ottawa: Department of Finance, 2011); *Tax Expenditures and Evaluations 2011*, supra note 5; and *Tax Expenditures and Evaluations 2012* (Ottawa: Department of Finance, 2013).

14 We can relax this slightly to the assumption that any behavioural changes are the same proportionate to after-tax income across income categories and hence do not affect the after-tax income share of top income earners.

15 Note that this definition of progressivity is equivalent to the widely accepted concept that a progressive tax change reduces after-tax income inequality, which in turn is defined as moving the Lorenz curve for after-tax income closer to the 45° line.

CALCULATIONS

We focus here on the top 1 percent, 0.1 percent, and 0.01 percent of recipients of total income (including capital gains).¹⁶ Because the benchmark Canadian income tax system is based on individual filing, our analysis is done on that basis.¹⁷

Table 1 provides a starting point by presenting some 2011 aggregate statistics for these income groups. There are two key sets of values. For our “income” definition of tax progressivity, the key values are the top income shares. For example, as shown in the table, the top 1 percent of recipients received about 11.7 percent of all income. If the estimated share of a tax preference’s benefits going to the top 1 percent of income recipients is less than 11.7 percent, we will classify that preference as top-end progressive. If the share is greater than 11.7 percent, it is top-end regressive. For our alternative “tax payment” definition of progressivity, the key values are the shares of net federal income tax payable. For example, again as shown in the table, the share of net federal income tax payable by the top 1 percent of income recipients was 21.4 percent. If the estimated share of the tax benefits of a tax preference that goes to the top 1 percent of income recipients is less than 21.4 percent, the tax preference is considered to be top-end progressive. If the share is greater than 21.4 percent, it is top-end regressive.

There are two broad types of preferences: tax credits, which are reductions in the amount of tax otherwise payable; and tax deductions (including conceptually preferential tax rates or exemptions), which are amounts subtracted from total income in calculating taxable income.

16 While we will refer to the top 1 percent, top 0.1 percent, and top 0.01 percent of income recipients for brevity, we mean throughout the top 1 percent, top 0.1 percent, and top 0.01 percent of filers by income. Our “total income” definition includes all market income including all capital gains as well as all taxable and untaxable transfer income as reported in the LAD such as social assistance, workers’ compensation, and the guaranteed income supplement. While realized capital gains are somewhat different from other types of income in that they can be the consequence of accrual over a number of years, they are included because realized capital gains are taxable, albeit at reduced rates.

For comparison purposes, we construct analogues to some of our calculations with published CRA income statistics—for example, Canada Revenue Agency, *Preliminary Statistics—2013 Edition (2011 Tax Year)* (Ottawa: CRA, 2013). However, the CRA uses (1) a different definition of total income, including only taxable capital gains, taxable rather than actual dividends, and no non-taxable transfer payments; and (2) a top category of \$250,000+, which is roughly the top 3/4 of 1 percent, and cannot provide accurate information regarding the top 0.1 percent or the top 0.01 percent.

17 See Veall, *supra* note 3; Emmanuel Saez and Michael R. Veall, “The Evolution of High Incomes in Northern America: Lessons from Canadian Evidence” (2005) 95:3 *American Economic Review* 831-49; and E. Saez and M.R. Veall, “The Evolution of High Incomes in Canada, 1920-2000,” in A.B. Atkinson and T. Piketty, eds., *Top Incomes over the Twentieth Century: A Contrast Between Continental European and English-Speaking Countries* (Oxford: Oxford University Press, 2007), 226-308. These studies find that the surge in top incomes using individual taxfiler data corresponds to a similar surge in top family incomes.

TABLE 1 Reported Income, Federal Income Tax, and Payroll Taxes—
Estimated Share for the Top 1 Percent, 0.1 Percent, and
0.01 Percent of Taxfilers, 2011

	Amount (\$ billions)	Taxfilers' share of total		
		Top 1%	Top 0.1%	Top 0.01%
Total income (including net capital gains)	1,115	0.117	0.043	0.015
Wage and salary income	740	0.095	0.033	0.012
Self-employment income	49	0.270	0.059	0.007
Professional income ^a	19	0.553	0.110	0.002
Net dividend income	41	0.361	0.100	0.053
Investment and interest income	15	0.207	0.089	0.028
Rental income	4	0.248	0.087	0.031
Net capital gains	32	0.618	0.326	0.134
Other income ^b	18	0.247	0.087	0.025
Government transfers	134	0.010	0.001	nil
Net federal income tax payable	115	0.214	0.081	0.027
Payroll taxes paid	32	0.019	0.002	nil

Notes: Personal income taxes paid include social benefits repayable and provincial income taxes. Credits converted from the amounts given in LAD (see the source note below) are reasonable but not perfect matches in aggregate to the comparable values cited as preliminary in Canada Revenue Agency, *Preliminary Statistics—2013 Edition (2011 Tax Year)* (Ottawa: CRA, 2013).

^a Included in self-employment income.

^b From line 130 of the personal income tax T1 taxfiler form; includes such items as scholarships, artists' grants, research grants less expenses, certain annuities, and retiring allowances.

Source: Authors' calculations based on Statistics Canada's longitudinal administrative databank (LAD).

The tax credits that we discuss below are non-refundable and hence have no effect *at the margin* for someone who already has zero taxes. Because there is no means of calculating taxes counterfactually within the LAD, we calculate the usage of a non-refundable tax credit by income group from the microdata for those with positive taxes payable. This is tantamount to assuming that those with zero taxes did not require any of the tax credit at all. However, for all the credits used significantly by high-income individuals, the estimated shares by income category for those who use the credit are not very different whether the calculations are done on a taxpayer or a taxfiler basis. Hence, this assumption does not drive our results. All our calculations are based on considering each tax preference separately.¹⁸

18 Our focus is on high-income individuals and the tax preferences that make a significant difference to their taxes. This minimizes our concern with a related issue—that for an individual who has claimed a number of tax preferences, not all of which are entirely required to reduce taxes to zero, each single tax preference may appear as if it has low or zero value but the collective value of all the preferences can be larger.

Unlike a tax credit, a tax deduction has a greater value for a taxpayer with a higher marginal tax rate. Accordingly, estimation of the value of the corresponding tax expenditures requires a somewhat more complicated approach.

First, we use the LAD to estimate the average statutory marginal federal tax rates (less the Quebec abatement for residents of Quebec) (t_i) for our 13 income categories ($i = 1, \dots, 13$)—the first 10 being the income deciles in ascending order and the last 3 being the top 1 percent, 0.1 percent, and 0.01 percent. (The calculations were confirmed using Statistics Canada's social policy simulation database and model [SPSD/M].)¹⁹ We report these average tax rates, along with the percentage of taxfilers in each income category that pay positive taxes, in table 2.

We then let u_i be the percentage of the usage of the deduction in question by taxfilers in income category i and multiply it by the estimate of the average marginal tax rate to yield $t_i \times u_i$, which we could call the tax-adjusted usage. We then normalize the tax-adjusted usages

$$tau_i = \frac{t_i \times u_i}{\sum_{j=1}^{10} t_j \times u_j}, \quad i = 1, \dots, 13,$$

where j indexes deciles. The tax-adjusted usage tau_i in percentage form is our estimate of the direct tax savings of the tax preference that go to income group i .

Like the underlying Department of Finance estimates (and the core estimates in the US studies),²⁰ our dollar-amount distributional calculations are based on the assumption that the preferences lead to no behavioural change by taxfilers or, where relevant, their employers. For the share estimates we focus on, the assumption need only be that any behavioural response does not vary disproportionately with after-tax income. Regardless, such estimates can only be regarded as a first step, designed to provide an overall impression while suggesting priorities for examination in future research.

RESULTS

The appendix to this article includes the complete list of the included tax expenditures (with dollar amounts) for 2011 from the Department of Finance²¹ with our estimated share of the total benefits accruing to the top 1 percent, 0.1 percent, and 0.01 percent, using the methods we describe above. We also include as a check calculations based on publicly available data from the CRA²² for the share of the total number of users of a preference and the share of total dollar use (unadjusted for

19 See Michael Bordt, Grant J. Cameron, Stephen F. Gribble, Brian B. Murphy, Geoff T. Rowe, and Michael C. Wolfson, "The Social Policy Simulation Database and Model: An Integrated Tool for Tax/Transfer Policy Analysis" (1990) 38:1 *Canadian Tax Journal* 48-65; and Statistics Canada, "The Social Policy Simulation Database and Model (SPSD/M)" (www.statcan.gc.ca/microsimulation/spsdm-bdmmps/spsdm-bdmmps-eng.htm).

20 See the US studies by Nguyen et al. and Brown et al., supra note 7.

21 *Tax Expenditures and Evaluations 2011*, supra note 5.

22 *Preliminary Statistics—2013 Edition*, supra note 16.

TABLE 2 Estimated Share of Taxfilers with Strictly Positive Net Federal Tax and Average Federal Marginal Tax Rates by Income Category, 2011

Income category	Share of taxfilers with net federal tax > 0	Average federal marginal tax rate (%)
Decile		
1st (lowest)	0.046	14.9
2d	0.069	14.8
3d	0.256	14.7
4th	0.423	14.6
5th	0.717	14.6
6th	0.868	14.6
7th	0.941	16.8
8th	0.974	20.2
9th	0.988	21.2
10th (highest)	0.991	25.5
Top		
5%	0.991	26.5
1%	0.992	27.7
0.1%	0.994	28.2
0.01%	0.990	28.4

Note: Federal marginal tax rates are net of the Quebec abatement.

Source: Authors' calculations based on Statistics Canada's longitudinal administrative databank (LAD).

differential tax rates) by taxfilers with annual income of \$250,000 or more.²³ Finally, we include the estimated dollar amount of the tax savings accruing to the top 1 percent calculated from our LAD data estimates and the Department of Finance tax expenditures.

Table 3 extracts from the appendix the estimated tax savings allocation for those items that we would classify as top-end regressive—that is, preferences for which the estimates of tax savings to the top 1 percent are greater than the top 1 percent share of total income of 11.7 percent. For brevity, we do not discuss the Quebec abatement. We also do not discuss tax expenditures associated either directly with expenses incurred in earning income and/or with carryovers—specifically, the deduction of other employment expenses, the deduction of carrying charges incurred to earn income, the deduction of allowable business investment losses, and the capital loss and non-capital loss carryovers. Strikingly, there are only a handful of preferences that remain. The charitable donations tax credit is a large tax preference and is defined as regressive by our criterion. (The tax credit has the policy purpose of encouraging gifts to charity, though the use of private charitable foundations need not be entirely for charitable objects; again we emphasize that we are not evaluating these tax expenditures, but merely beginning the exploration of their

23 Although recall the comparability shortcomings described in note 14, *supra*.

TABLE 3 Estimated Share of Benefits from Tax Expenditures for the Top 1 Percent, 0.1 Percent, and 0.01 Percent of Taxfilers, Personal Income Tax System, 2011

Tax expenditure item ^a	Amount (\$ millions)	Taxfilers' estimated share of tax expenditure			Estimated tax benefit to top 1% (\$ millions)
		Top 1%	Top 0.1%	Top 0.01%	
Items largely not related to capital income					
Charitable donations tax credit ^b (excluding donations of assets subject to a reduced inclusion rate for capital gains)	2,280	0.347	0.193	0.010	791
Political contribution tax credit	32	0.176	0.042	0.008	6
Deduction of home relocation loans	S	0.199	X	X	S
Deduction of other employment expenses	1,055	0.155	0.023	0.001	164
Treatment of alimony and maintenance payments	100	0.392	0.083	0.018	39
Employee stock option deduction ^c	725	1.006	0.765	0.462	730
Quebec abatement	3,810	0.212	0.064	0.018	808
Items related to capital income					
Deduction of carrying charges incurred to earn income	1,020	0.414	0.180	0.067	423
Investment tax credits	16	0.743	0.399	0.145	12
Partial inclusion of capital gains	3,605	0.874	0.304	0.023	3,152
Lifetime capital gains exemption for small business shares ^d	560	0.800	0.472	0.146	448
Deduction of allowable business investment losses	30	0.390	0.181	X	11
Registered retirement savings plans ^e	9,910	0.150	0.020	0.002	1,491
Memorandum items ^f					
Dividend gross-up and credit	3,745	0.478	0.221	0.076	1,731
Capital loss carryovers	405	0.451	0.162	0.038	183
Non-capital loss carryovers	55	0.547	0.376	X	30

Notes: There are many explanatory notes in the appendix to this article pertaining to individual items. Here "S" is the report made by *Tax Expenditures and Evaluations 2011* when the estimated tax expenditure is less than \$2.5 million. X means that the results were not available owing to confidentiality suppression.

^a Tax expenditures listed in the Department of Finance *Tax Expenditures and Evaluations 2011* for which we estimated that the direct tax savings to the top 1 percent of income recipients exceeded that group's income share of 11.7 percent. See the appendix to this article for further details.

(The table is concluded on the next page.)

TABLE 3 Concluded

- ^b The total tax expenditure associated with the charitable donation tax credit and related tax preferences for charity (involving gifts of listed securities, ecologically sensitive land, and cultural properties and the special treatment of capital gains associated with same) is some \$183 million more. See the appendix for details. These estimates do not include the tax expenditures corresponding to income generated within charitable foundations.
- ^c The allocation of slightly over 100 percent of the benefit of the employee stock option deduction to the top 1 percent is an artefact of approximations used in the estimation. However, note that raw usage (with no adjustment for the higher tax rates in these categories) is 92 percent, 69 percent, and 42 percent for the top 1 percent, the top 0.1 percent, and the top 0.01 percent, respectively.
- ^d The data do not include usage of this item by income group, so it has been allocated by the distribution by income of the variable “Total proceeds of disposition of qualified small business corporation shares—capital gains (or losses)” in the LAD (see the source note below). In the year of the sale of a business, the individual may have uncharacteristically high annual income.
- ^e The Department of Finance estimates this expenditure as the forgone tax on registered retirement savings plan (RRSP) deductions and RRSP investment income less the tax on RRSP withdrawals. Our allocation is based on the distribution of registered pension plan contributions by income category, and because such contributions are a tax deduction, there is an adjustment for different marginal tax rates. Using current contributions is an imperfect proxy given that benefits accrue over a lifetime.
- ^f *Tax Expenditures and Evaluations 2011* provides the following explanation of this category: “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 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.”
- Sources: Authors’ calculations based on tax expenditure data in Canada, Department of Finance, *Tax Expenditures and Evaluations 2011* (Ottawa: Department of Finance, 2012), and taxfilers data for the 2011 tax year contained in Statistics Canada’s longitudinal administrative databank (LAD).

distributional consequences.) The treatment of alimony and maintenance payments is categorized as a tax expenditure by the Department of Finance since some of these payments are deducted by the payer and reported as income by the recipient, where the payer is in the higher tax bracket. This provision is therefore more advantageous to a high-income payer, likely explaining in part why it has a relatively high top income share.

There are three tax expenditures that are regressive according to our income definition but not according to our alternative tax payment definition. (That is, we estimate that the benefits of the tax expenditure to the top 1 percent of income recipients exceed 11.7 percent but are less than 21.4 percent.) The political contribution tax credit and the deduction of home relocation loans are relatively small. The registered retirement savings plan (RRSP) provision corresponds to a very large tax

expenditure of close to \$10 billion, 15 percent of which is attributed to the top 1 percent of income recipients. This is one of the tax expenditures involving capital income, which will be discussed further below.

The employee stock option deduction is essentially a 50 percent deduction of stock option income, calculated at the time of exercise, with an additional deferral advantage available in some cases for options from Canadian-controlled private corporations. It has been criticized by Sandler,²⁴ Tedds et al.,²⁵ and Milligan.²⁶ Not surprisingly, we find that the tax savings from the deduction accrue to the top end of the income distribution. (Indeed, our method of approximation estimated the benefits to the top 1 percent as just over 100 percent; without our adjustment for the difference in marginal tax rates, the share of this total deduction used by the top 1 percent would be about 92 percent.) Our methods allocate about 46 percent of the stock option tax expenditure to the top 0.01 percent of income recipients.

Turning to items involving capital income, the tax expenditure associated with investment tax credits is comparatively small at \$16 million. The estimates associated with RRSPs, the partial inclusion of capital gains, the dividend gross-up and credit (intended to integrate the personal income tax and corporate tax system),²⁷ and the lifetime capital gains exemption for small business shares are quite large. In this study, we will not comment on the merit of the differential tax treatment for capital income, simply noting that a large share of the resulting tax expenditure, as would be expected, accrues to those with high incomes. The most striking example of this in table 3 is the partial inclusion of capital gains tax expenditure of \$3.6 billion, about 90 percent of which accrues to the top 1 percent.

Because of recent interest in tax-free savings accounts (TFSA),²⁸ we mention that our approach would classify their *current* effects as top-end progressive (and hence they do not meet the criteria for inclusion in table 3). The Department of Finance estimates the corresponding 2011 tax expenditure as \$220 million.²⁹ If we use the

24 Daniel Sandler, "The Tax Treatment of Employee Stock Options: Generous to a Fault" (2001) 49:2 *Canadian Tax Journal* 259-319.

25 Lindsay Tedds, Daniel Sandler, and Ryan Compton, "A Simple Way To Tax the Rich," *Globe and Mail Online*, March 9, 2012.

26 Milligan, *supra* note 4.

27 The dividend tax credit is often thought of as a method of integrating the corporate income tax system with the personal income tax system, a view that would question this tax expenditure. See Robin Boadway and Jean-François Tremblay, *Corporate Tax Reform: Issues and Prospects for Canada* (Toronto: Mowat Centre, April 2014) for an alternative view. The Department of Finance lists the dividend gross-up and credit as a memorandum item. (See the notes to table 3.)

28 See, for example, Kevin Milligan, "Policy Forum: The Tax-Free Savings Account—Introduction and Simulations of Potential Revenue Costs" (2012) 60:2 *Canadian Tax Journal* 355-60; and Boadway, *supra* note 4, at 1047-48.

29 *Tax Expenditures and Evaluations 2011*, *supra* note 5. The labour-sponsored venture capital corporations credit (now discontinued) also did not meet the criteria for table 3 since it is of relatively small value to the top 1 percent (who received just over 1 percent of the benefits).

relationship of annual contributions to annual income to allocate the tax expenditure, we estimate the percentages of the total benefits for the top 1 percent, top 0.1 percent, and top 0.01 percent to be 5.3 percent, 0.8 percent, and 0.2 percent respectively.³⁰ Slightly over 40 percent of the top 1 percent, the top 0.1 percent, and the top 0.01 percent contributed to TFSAs during this period. By way of comparison, over 60 percent of each of these groups contributed to RRSPs.

As mentioned, our data do not permit us to estimate the distribution of benefits for some tax expenditures. Such tax expenditures with amounts over \$100 million include the carry-forward of education, textbook, and tuition tax credits (2011 tax expenditure of \$535 million); non-taxation of veterans' disability pensions and support for dependants (\$140 million); registered education savings plans (\$185 million); the lifetime capital gains exemption for farming and fishing properties (\$330 million); flowthrough share deductions (\$280 million); the mineral exploration tax credit for flowthrough share investors (\$125 million); and the partial deduction for meals and expenses (\$180 million).³¹

SUMMARY AND CONCLUSIONS

Much of the increase in inequality in the Canadian income distribution over the last 30 years is due to increases in top income shares. Consequently it is of interest to consider how the personal income tax system treats those at the top end of the income distribution. We provide direct-effect estimates of current tax savings to the top 1 percent, 0.1 percent, and 0.01 percent of income recipients from 60 tax preferences embedded in tax deductions and credits in the federal personal income tax system. We do not argue for or against the removal of any particular tax preferences, since taking such a position would require much more detailed study.

We find few surprises. For example, tax preferences related to capital income tend to be more beneficial to those with current incomes in the top 1 percent, 0.1 percent, and 0.01 percent than to those with lower current incomes. The employee stock option deduction, which the Department of Finance estimated for 2011 to be a tax expenditure of \$725 million, yields close to 100 percent of its direct

30 The respective shares of 2011 contributions from the lowest to the highest deciles are 4.4 percent, 5.2 percent, 6.7 percent, 8.4 percent, 9.7 percent, 10.4 percent, 11.2 percent, 12.3 percent, 13.5 percent, and 18.3 percent, with the top 5 percent share being 10.6 percent.

31 In response to a referee, we estimate an overall top-end distributional impact of all the Department of Finance tax expenditures by uncritically adding all our estimated benefits to the top 1 percent of income recipients and dividing that by the total of the corresponding total of tax expenditures. That value is 12 percent, not far from the 11.7 percent that is the top 1 percent share of income. We note that this is consistent with the broader finding of the Department of Finance: "The other credits, deductions and rules that make up the tax system have a small distributional impact" (*Tax Expenditures and Evaluations 2011*, supra note 5, at 45). Our results emphasize that this is an average of different types of tax preferences—those that favour capital income, which by our measure are largely top-end regressive, and other tax preferences, which are largely top-end progressive.

tax savings to the top 1 percent of income recipients and close to 50 percent to the top 0.01 percent.

Our main finding is that almost all of the tax preferences in the federal Canadian personal income tax system that do not involve capital income, stock options, or charitable contributions provide estimated direct tax savings to those in the top 1 percent that are less than that group's share of total income (and a fortiori less than that group's share of personal federal income tax). The direct-effect estimates therefore suggest that these measures increase progressivity of the personal income tax system at the very top of the income spectrum.

Appendix Table Estimated Tax Expenditure by Top Income Category, 2011

	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)			
	Amount (\$ millions)	1%	0.1%	0.01%	1%	0.1%		0.01%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits
		0.004	0.000	0.347		0.193				
Charitable donations and political contributions										
Charitable donations tax credit (excluding donations of assets subject to a reduced inclusion rate for capital gains) ^a	2,280	0.033	0.004	0.000	0.347	0.193	0.010	0.026	0.279	791
Donations of publicly listed securities ^a										
Charitable donations tax credit	115	0.033	0.004	0.000	0.347	0.193	0.010	0.025	0.265	40
Reduced inclusion rate for capital gains	34	0.033	0.004	0.000	0.347	0.193	0.010	0.025	0.265	12
Total tax expenditure on donations of publicly listed securities (sum of previous two rows)	150	0.033	0.004	0.000	0.347	0.193	0.010	0.025	0.265	52
Donations of ecologically sensitive land^b										
Charitable donations tax credit	7	0.021	X	X	0.576	X	X	0.019	0.547	4
Reduced inclusion rate for capital gains	S	0.021	X	X	0.576	X	X	0.019	0.547	S
Total tax expenditure on donations of ecologically sensitive land (sum of previous two rows)	9	0.021	X	X	0.576	X	X	0.019	0.547	5
Donations of cultural property^b										
Charitable donations tax credit	18	0.021	X	X	0.576	X	X	0.019	0.547	10
Non-taxation of capital gains	6	0.021	X	X	0.576	X	X	0.019	0.547	3
Total tax expenditure on donations of cultural property (sum of previous two rows)	24	0.021	X	X	0.576	X	X	0.019	0.547	14
Political contribution tax credit	32	0.081	0.015	0.002	0.176	0.042	0.008	0.069	0.123	6

(The table is continued on the next page.)

Appendix Table Continued

	Amount (\$ millions)	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)	
		1%	0.1%	1%	0.1%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits		
		0.01%	0.001	0.009	0.001	0.040	0.054		
Culture									
Assistance for artists	S								S
Children's arts tax credit	100	0.055	0.005	0.001	0.097	0.009	0.001	0.040	9
Deduction for artists and musicians	S								S
Education									
Adult basic education—tax deduction for tuition assistance	5								
Apprentice vehicle mechanics' tools deduction	4								
Education tax credit ^c	210	0.004	0.000	X	0.009	0.001	X	0.002	2
Textbook tax credit ^c	41	0.004	0.000	X	0.009	0.001	X	0.002	0
Tuition tax credit ^c	280	0.004	0.000	X	0.009	0.001	X	0.002	3
Transfer of education, textbook, and tuition tax credits ^c	510	0.051	0.006	0.000	0.078	0.008	0.001	0.041	31
Carryforward of education, textbook, and tuition tax credits ^c	535								
Exemption of scholarship, fellowship, and bursary income ^c	43								
Registered education savings plans ^c	185								
Student loan interest credit	68	0.003	X	X	0.006	0.000	X	0.002	0
Employment									
Canada employment credit	2,025	0.015	0.002	0.000	0.016	0.002	0.000	0.010	32
Child-care expense deduction	810	0.007	0.000	X	0.015	0.001	X	0.004	12

(The table is continued on the next page.)

Appendix Table Continued

	Amount (\$ millions)	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)
		1%	0.1%	1%	0.1%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits	
		0.01%	0.01%	0.1%	0.01%			
Deduction for income earned by military and police deployed to high-risk international missions	38	X	X	X	X	0.004	0.004	X
Deduction of home relocation loans	S	0.176	X	0.199	X	0.158	0.163	S
Deduction of other employment expenses	1,055	0.039	0.003	0.000	0.155	0.023	0.100	164
Deduction for tradespersons' tool expenses	4							
Deduction of union and professional dues	795	0.008	0.001	0.000	0.014	0.001	0.008	11
Deferral of salary through leave of absence/sabbatical plans	na							na
Disability supports deduction	S	X	X	X	X	0.021	0.127	X
Employee benefit plans	na							na
Employee stock option deduction ^d	725	0.347	0.070	0.013	1.006	0.765	0.895	730
Moving expense deduction	135	0.011	X	X	0.056	X	0.006	8
Non-taxation of certain non-monetary employment benefits	na							na
Non-taxation of strike pay	na							na
Northern residents' deductions	165	0.029	0.001	X	0.036	0.001	0.016	6
Overseas employment credit	75							
Tax-free amount for emergency service volunteers	12							
Volunteer firefighters tax credit	15	0.003	X	X	0.005	X	0.002	0
Working income tax benefit	1,030	X	X	X	X	X	X	X

(The table is continued on the next page.)

Appendix Table Continued

	Amount (\$ millions)	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)		
		1%	0.1%	0.01%	1%	0.1%	0.01%		Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits
Family										
Adoption expense tax credit	S	X	X	X	0.034	X	0.029	0.038	X	
Caregiver credit	105	0.015	0.001	X	0.016	0.001	0.010	0.010	2	
Child tax credit	1,525	0.030	0.003	0.000	0.045	0.005	0.018	0.020	69	
Deferral of capital gains through transfers to a spouse, spousal trust, or family trust	na								na	
Family caregiver tax credit	na									
Infirm dependant credit	6	0.029	X	X	0.038	X	0.015	0.017	0	
Spouse or common-law partner credit	1,400	0.033	0.003	0.000	0.052	0.006	0.015	0.017	72	
Eligible dependant credit	805	0.009	0.001	X	0.013	0.001	0.004	0.003	11	
Inclusion of the universal child-care benefit in the income of an eligible dependant	5	X	X	X	X	X	X	X	X	
Farming and Fishing										
Lifetime capital gains exemption for farm and fishing property ^e	335	0.079	0.006	X	0.034	0.004	X	X	11	
Cash basis accounting	na								na	
Deferral of capital gains through intergenerational rollovers of family farms, family fishing businesses, and commercial woodlots	na								na	
Deferral of income from destruction of livestock	S								S	

(The table is continued on the next page.)

Appendix Table Continued

	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)	
	Amount (\$ millions)	1%	0.1%	0.01%	1%	0.1%		0.01%
Deferral of income from sale of livestock during drought, flood, or excessive moisture years.	na						na	
Deferral of income from grain sold through cash purchase tickets.	30						S	
Deferral through 10-year capital gain reserve	S						na	
Exemption from making quarterly tax instalment payments.	na						na	
AgriInvest (farm savings account).	15						na	
Agri-Québec (farm savings account).	5						na	
Flexibility in inventory accounting	na						na	
Tax treatment of the net income stabilization account								
Deferral of tax on government contributions	na							
Deferral of tax on bonus and interest income.	na							
Taxable withdrawals	na							
Federal-provincial financing arrangements								
Logging tax credit	S						S	
Quebec abatement ^f	3,810	0.012	0.001	0.000	0.212	0.064	808	
Transfer of income tax points to provinces.	18,195							

(The table is continued on the next page.)

Appendix Table Continued

	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)
	Amount (\$ millions)	1%	0.1%	0.01%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits	
		0.009	0.001	0.067			
General business and investment							
\$200 capital gains exemption on foreign exchange transactions	na						na
\$1,000 capital gains exemption on personal-use property	na						na
Accelerated deduction of capital costs	na						na
Deduction of carrying charges incurred to earn income	1,020	0.061	0.009	0.001	0.414	0.180	0.067
Deferral through use of billed-basis accounting by professionals	na				0.043	0.283	
Deferral through five-year capital gain reserve	10						na
Investment tax credits	16	0.303	0.066	0.009	0.743	0.399	0.145
Flowthrough share deductions	280				0.246	0.628	
Mineral exploration tax credit for flowthrough share investors ^g	125						12
Reclassification of expenses under flowthrough shares	-3						
Partial inclusion of capital gains ^h	3,605	0.336	0.068	0.006	0.874	0.304	0.023
Taxation of capital gains upon realization	na						3,152
Tax-free savings account (TFSA) ⁱ	220	0.027	0.003	0.000	0.053	0.008	0.002
Small business							
Lifetime capital gains exemption for small business shares ^j	560	0.333	0.091	0.008	0.800	0.472	0.146

(The table is continued on the next page.)

Appendix Table Continued

	Amount (\$ millions)	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)		
		1%	0.1%	1%	0.1%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits			
		0.01%	0.01%	0.1%	0.01%					
Deduction of allowable business investment losses	30	0.074	0.012	X	0.390	0.181	X	0.041	0.127	11
Deferral through 10-year capital gain reserve . . .	S									S
Labour-sponsored venture capital corporations credit	130	0.008	0.000	X	0.015	0.001	X	0.005	0.008	2
Non-taxation of provincial assistance for venture investments in small business	na									na
Rollovers of investments in small businesses	5									
Health										
Children's fitness tax credit	115	0.041	0.004	0.000	0.072	0.008	0.001	0.029	0.042	8
Disability tax credit	665	0.026	0.003	0.000	0.036	0.003	0.000	0.004	0.004	24
Medical expense tax credit	1,090	0.012	0.001	0.000	0.061	0.012	0.001	0.008	0.026	67
Non-taxation of business-paid health and dental benefits	3,155									
Refundable medical expense supplement	140	X	X	X	X	X	X			X
Income maintenance and retirement										
Age credit	2,260	0.001	0.000	X	0.001	0.000	X	0.000	0.000	2
Deferred profit-sharing plans	na									na
Non-taxation of certain amounts received as damages in respect of personal injury or death	22									
Non-taxation of guaranteed income supplement and allowance benefits	105	0.005	0.001	X	0.016	0.002	X			2

(The table is continued on the next page.)

Appendix Table Continued

	Amount (\$ millions)	Filers in top income categories who benefit as a fraction of all filers who benefit			Dollar benefit to filers in top income categories as a fraction of total benefits			Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)
		1%	0.1%	0.01%	1%	0.1%	0.01%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits	
Non-taxation of investment income from life insurance policies	na									na
Non-taxation of RCMP pensions/ compensation in respect of injury, disability, or death	na									na
Non-taxation of social assistance benefits	145	0.002	0.000	X	0.005	0.000	X			1
Non-taxation of up to \$10,000 of death benefits	na									na
Non-taxation of veterans' allowances, income support benefits, civilian war pensions and allowances, and other service pensions (including those from allied countries)	S									S
Non-taxation of veterans' disability pensions and support for dependants	140									
Non-taxation of veterans' disability awards	35									
Non-taxation of workers' compensation benefits	645	0.002	0.000	X	0.010	0.004	X	0.001	0.004	6
Registered disability savings plans	4									
Pension income credit	975	0.012	0.001	0.000	0.019	0.002	0.000	0.007	0.008	18
Pension income splitting ^a	925	0.018	0.002	0.000	0.044	0.002	0.000	0.011	0.024	44
Registered pension plans (RPPs) ^b										
Deduction for RPP contributions	11,860									
Non-taxation of RPP investment income . . .	11,155									
Taxation of RPP withdrawals	-7,390									

(The table is continued on the next page.)

Appendix Table Continued

	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)			
	Amount (\$ millions)	1%	0.1%	0.01%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits				
		0.01%	0.1%	0.01%						
RPPs: Net tax expenditure (sum of previous three rows)	15,625	0.010	0.001	0.000	0.033	0.004	0.002	0.007	0.020	511
Registered retirement savings plans (RRSPs) ^m										
Deduction for RRSP contributions	7,390									
Non-taxation of RRSP investment income....	7,645									
Taxation of RRSP withdrawals	-5,125									
RRSPs: Net tax expenditure associated (sum of previous three rows)	9,910	0.029	0.003	0.000	0.150	0.020	0.002	0.022	0.085	1,491
Supplementary information: present value of tax-assisted retirement savings plans.....	10,320									
Saskatchewan Pension Plan.....	S									S
Treatment of alimony and maintenance payments ^b	100	0.100	0.011	0.001	0.392	0.083	0.018			39
US social security benefits.....	S									S
Other items										
Deduction for certain contributions by individuals who have taken vows of perpetual poverty	S									S
Deduction for clergy residence	85	0.005	X	X	0.013	X	X	0.001	0.003	1
First-time home buyers' tax credit	115	0.005	0.000	X	0.009	X	0.000	0.003	0.003	1
Home renovation tax credit ^c	na									-

(The table is continued on the next page.)

Appendix Table Continued

	Amount (\$ millions)	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)	
		1%	0.1%	1%	0.1%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits		
		0.01%	0.01%	0.01%	0.01%				
Non-taxation of capital gains on principal residences	4,235								
Non-taxation of income from the Office of the Governor General	S							S	
Non-taxation of income of status Indians and Indian bands on reserve	na							na	
Special tax computation for certain retroactive lump-sum payments	S							S	
Public transit tax credit	150	0.012	0.001	X	0.020	0.002	0.000	0.006	3
Memorandum items									
Avoidance of double taxation									
Dividend gross-up and credit ^p	3,745	0.055	0.007	0.001	0.478	0.221	0.076	0.040	1,731
Foreign tax credit ^q	785							0.067	na
Non-taxation of capital dividends	na								na
Loss of offset provisions									
Capital loss carryovers ^r	405	0.081	0.011	0.001	0.451	0.162	0.038	0.059	183
Farm and fishing loss carryovers	15								
Non-capital loss carryovers ^s	55	0.310	0.008	X	0.547	0.376	X	0.012	30
Social and employment insurance programs									
Canada Pension Plan (CPP) and Quebec Pension Plan (QPP)									
Employee-paid contribution credit ^t	3,130	0.033	0.003	0.000	0.092	0.007	0.000	0.018	289

(The table is continued on the next page.)

Appendix Table Continued

	Filers in top income categories who benefit as a fraction of all filers who benefit		Dollar benefit to filers in top income categories as a fraction of total benefits		Filers with income of \$250,000 or more		Benefit to top 1% (\$ millions)			
	Amount (\$ millions)	1%	0.1%	0.01%	1%	0.1%		0.01%	Fraction of all filers who benefit	Dollar benefit as a fraction of total benefits
Non-taxation of employer-paid premiums ^u	5,030	0.016	0.002	0.000	0.028	0.003	0.000	0.010	0.045	143
Employment insurance and Quebec Parental Insurance Plan										
Employee-paid contribution credit ^v	1,075	X	X	X	X	X	X	0.018	0.045	na
Non-taxation of employer-paid premiums ^w	2,075	0.012	0.001	0.000	0.020	0.002	0.000	0.007	0.010	42
Other										
Basic personal amount	29,510	0.016	0.002	0.000	0.023	0.002	0.000	0.008	0.008	693
Deferral through capital gains rollovers	na									na
Non-taxation of lottery and gambling winnings	na									na
Non-taxation of allowances for diplomats and other government employees posted abroad	44									0
Partial deduction of meals and entertainment expenses	180									0

(The table is continued on the next page.)

Appendix Table Continued

Notes: The stub and first column are the name given to the tax expenditure and the estimated aggregate dollar amount of that tax expenditure for 2011, respectively, both taken from the Department of Finance *Tax Expenditures and Evaluations 2011* (see the source note below).

The next column is calculated from the LAD data (see the source note below) as the number of users of the corresponding tax preference in the top 1 percent of income recipients (including transfers and capital gains) expressed as a share of the number of all taxfilers who use that preference. Because some taxfilers may not need all applicable preferences to reduce their tax to zero, for these calculations we use taxfilers who pay positive net federal tax. The next two columns are the corresponding numbers for the top 0.1 percent and the top 0.01 percent.

The next three columns correspond to the previous three columns except they contain the estimated shares of the total dollar benefit of the tax expenditure. In the case of a tax credit, the share is calculated using claims of that credit by taxpayers by income group. In the case of a tax deduction, this is calculated as the shares of the deduction claimed by taxpayers in different groups adjusted by the average marginal tax rate in each group.

The next column is the number of users of the corresponding tax credit or deduction who have incomes of \$250,000 or more as a fraction of the total number of users of that tax credit or deduction. The source of the data is the Canada Revenue Agency's (CRA) preliminary taxfiler statistics for the 2011 tax year (see the source note below). These are provided as a check based on publicly available data.

The next column is the total dollar usage of the corresponding tax credit or deduction by those who have incomes of \$250,000 or more as a fraction of the total dollar usage of that tax credit or deduction. There is no adjustment for different marginal tax rates. These data also are taken from the CRA's *Preliminary Statistics* referred to above.

Finally, the last column corresponds to the product of the second column and the sixth column: it is the estimated dollar benefit corresponding to the tax expenditure accruing to the top 1 percent of income recipients.

Empty cells mean that there are no applicable LAD or CRA data. "X" means there were fewer than 15 records in the cell leading to suppression for reasons of confidentiality. "S" is the report made by *Tax Expenditures and Evaluations 2011* when the estimated tax expenditure is less than \$2.5 million.

- ^a This allocation is based on the charitable donations tax credit by payers of net federal tax. In the case of publicly listed securities, this is because no separate data are available.
- ^b These allocations are based on the charitable donations tax credit for ecologically sensitive land and cultural property combined because separate data are not available in the LAD and because separate data on associated capital gains also are not available.
- ^c The currently available LAD data combine the education and tuition tax credits, so this allocation is used for the education tax credit, the textbook tax credit, and the tuition tax credit. Separate LAD information is used to allocate the transfer of these credits. Neither the LAD data nor the CRA's *Preliminary Statistics* include data on the carryforward of these credits, although by its nature the carryforward essentially applies exclusively to taxfilers with low current income and hence we would expect that it would not be of particular benefit to high-income taxpayers. Neither data source breaks out scholarship, fellowship, and bursary income from other income. Registered education savings plan contributions and income are not reported for personal income tax purposes.
- ^d This is allocated by the current usage (adjusted for different tax rates) of the employee stock option deduction. The allocation of over 100 percent of the benefit to the top 1 percent is an artefact of approximations used in the estimation. However, note that raw usage (with no adjustment for the higher tax rates in these categories) is 92 percent, 69 percent, and 42 percent for the top 1 percent, top 0.1 percent, and top 0.01 percent, respectively.
- ^e This is allocated according to farming and fishing income eligible for the capital gains deduction in 2011. The actual use of the lifetime capital gains exemption for farm and fishing property is not available in the LAD or in CRA data. However, if it were, it would likely have its benefits concentrated at the top end, because the lifetime exemption may largely be used when large capital gains have been realized. This proxy arguably may yield an estimate more closely related to the individual's annual income.

(The table notes are concluded on the next page.)

Appendix Table Concluded

- ^f The Quebec abatement is a 16.5 percent reduction of basic federal tax paid to residents of Quebec and corresponds to federal programs that the provincial government has elected not to join.
- ^g Neither the LAD nor the CRA's *Preliminary Statistics* includes data on the mineral exploration tax credit.
- ^h The benefit from partial inclusion of capital gains is treated as a deduction and is allocated by current receipt (adjusted for different tax rates) of net capital income.
- ⁱ This allocation is by current TFSA contributions (adjusted for different tax rates, by the same method used in the case of deductions), a data item in the LAD that is not in the CRA's *Preliminary Statistics*.
- ^j Neither the LAD nor the CRA's *Preliminary Statistics* includes data on the use of the lifetime capital gains exemption for small business shares by income. This has been allocated by the LAD variable "Total proceeds of disposition of qualified small business corporation shares—capital gains (or losses)." In the year of the sale of a business, the individual may have uncharacteristically high annual income.
- ^k Pension income splitting is a deduction and is treated as such in our framework, based on the income of the taxpayer making the deduction. Given that our framework is individual tax filing, this may lead to an underestimate or overestimate of the direct tax saving to high-income taxpayers.
- ^l The RPP tax expenditure is calculated as the tax expenditure associated with the deductibility of contributions plus the non-taxation of investment income within RPPs less taxes paid on RPP payments. Our allocation is based on the distribution of RPP contributions by income category and because such contributions are a tax deduction, there is an adjustment for different marginal tax rates. We experimented with incorporating the pension adjustment, which increased the estimated benefit shares of top income recipients, but only slightly. Using current contributions is an imperfect proxy given that benefits accrue over a lifetime.
- ^m The RRSP tax expenditure is calculated as the expenditure associated with the deductibility of contributions plus the non-taxation of investment income within RRSPs less taxes paid on payments from RRSPs. Our allocation is based on the distribution of RPP contributions by income category, and because such contributions are a tax deduction, there is an adjustment for different marginal tax rates. Using current contributions is an imperfect proxy given that benefits accrue over a lifetime.
- ⁿ Alimony and maintenance payments are treated on a deduction basis. See the text for some discussion.
- ^o The home renovation tax credit was only available in 2011 but is included because it remains in the 2011 tax expenditure table in *Tax Expenditures and Evaluations 2011*.
- ^p The dividend gross-up and tax credit is allocated using the usage by taxpayers of the dividend tax credit.
- ^q Usage of the foreign federal tax credit is not available in the LAD.
- ^r Capital loss carryovers are allocated using "net capital losses of other years" from the LAD data.
- ^s Non-capital loss carryovers are allocated using "non-capital losses of other years" from the LAD data.
- ^t The benefits from the employee-paid CPP/QPP tax credit are allocated using the distribution of contributions across income classes.
- ^u The benefits from the non-taxation of employer-paid CPP/QPP contributions are allocated using the distribution of contributions across income classes. We have experimented with incorporating the usage of the distribution of the deduction for CPP/QPP contributions on self-employment income into this calculation, but since these are about 6 percent of employee CPP/QPP contributions, doing so makes little difference.
- ^v The benefits from the tax credit for employee-paid employment insurance premiums are allocated using the distribution of premiums paid across income classes.
- ^w The benefits from the non-taxation of employer-paid employment insurance premiums are allocated using the distribution of employee-paid premiums paid across income classes. Employment insurance premiums paid on self-employed income are not included in the calculation but are very small.
- Sources: Authors' calculations based on tax expenditure data in Canada, Department of Finance, *Tax Expenditures and Evaluations 2011* (Ottawa: Department of Finance, 2012); taxfiler data for the 2011 tax year contained in Statistics Canada's longitudinal administrative database (LAD); and preliminary taxfiler data for the same year contained in Canada Revenue Agency, *Preliminary Statistics—2013 Edition (2011 Tax Year)* (Ottawa: CRA, 2013).