

**EQUITY ASPECTS OF TAX  
PREFERENCES**

by

Maxime Fougère, Guiseppe Ruggeri

and

Carole Vincent

Working Paper Series 2000-06



**DEPARTMENT OF ECONOMICS  
THE UNIVERSITY OF NEW BRUNSWICK  
FREDERICTON, CANADA**

# **EQUITY ASPECTS OF TAX PREFERENCES**

**Maxime Fougère**

Human Resources Development Canada

**Giuseppe Ruggeri**

University of New Brunswick

**Carole Vincent**

Institute for Research on Public Policy

**September 2000**

## I. Introduction

The personal income tax (PIT) has been a major battleground of redistributive policy throughout its life. Lower income groups favour the income tax because they view it as a more equitable instrument for raising revenue than consumption or property taxes. Higher income groups have generally opposed it primarily because of its redistributive effects and because, in their view, it would be a disincentive to productive activity. The opposition of the higher income classes, which dominated the political structure, was so strong that it took the need to finance a world war to justify its introduction by the federal government, on a temporary basis, in Canada. Earlier efforts to introduce an income tax in the US in 1894 met with failure as the tax was found to be unconstitutional by the Supreme Court.

In the US, the class struggle for the PIT did not end with its reintroduction in 1913, but it took a different route. As pointed out by Eisenstein (1961), the business class, which is largely identified with the higher income class, *"is grimly concerned with the survival of investment and production. Its function is to shield private enterprise from destruction through progressive taxes on income and wealth. This significant service may be performed in two ways. One method...is to obtain a rate reduction for those in the upper brackets. The other method is a special dispensation for a particular class, group or interest group whose incentives are dangerously barred or deterred. The distinctive advantage of this second method is that it leaves the progressive rate structure intact. As a result, taxpayers in the lower brackets continue to suppose that the pain above is much greater, while various taxpayers in the upper brackets are pleasantly aware that their suffering is exaggerated"* (pp. 92-93). The efforts with the second method have been so successful that Simons (1938) could characterize the income tax as a *"ludicrous business of dipping deeply into great incomes with a sieve"* (p. 219).

Despite the numerous policy changes to personal income taxes since Simons' writing, their structure still includes a large number of special provisions aimed at reducing the tax burden on selected income sources (estimates for selected OECD countries are found in Ruggeri and Vincent (1997)). The widespread use of these special provisions and their aggregate revenue loss is known. What is not known is the extent of their redistributive effect. It is the purpose of this paper to fill this information gap by providing estimates of their effects on both vertical and horizontal equity. Although the estimates are based on the Canadian personal income tax system, the results shed some light on the US personal income tax system because of the similarities between the PITs of the two countries.

The paper is organized as follows. Section II discusses the major methodological issues (more details are contained in the appendix), section III presents the results for all families, section IV presents the results disaggregated by family type, and section V provides some concluding remarks.

### **III. Methodological Issues**

#### *A. Tax Preferences*

In many industrialized countries, the personal income tax system contains a variety of special provisions aimed at encouraging certain kinds of behaviour or activities - such as stimulating saving and investment - or recognizing taxpayers in special circumstances - such as the aged or the disabled. They are generally referred to as "tax expenditures" and represent a departure from a comprehensive income tax base where income from all sources is taxed. Following the classification of tax expenditures recently proposed by Ruggeri and Vincent (1997), we make a distinction between pure tax expenditures and tax preferences. *Pure tax expenditures* are defined as tax provisions whose benefits can be easily delivered to targeted individuals through a spending program. An example of a pure tax expenditure is the non-taxation of certain income-tested transfers payments such as social assistance in Canada. *Tax*

*preferences* are tax expenditures that cannot be delivered through the spending side. For example, this is the case for the partial inclusion of capital gains: the program could not be delivered as a universal or selective demogrant since the recipients of capital gains change from year to year, as do the sources of those gains. Moreover, since it is effectively a deduction from comprehensive income, the tax benefit from the partial exclusion of capital gains differs among taxpayers depending on the marginal tax rates applicable to that exclusion for each taxpayer.

The above distinction has important implications for the analysis of reforms involving the personal income tax base. Delivering pure tax expenditures directly as spending programs would increase income tax revenues but would leave the budget balance unchanged. Therefore, this policy shift would not allow a reduction in personal income tax rates and would not change the distributional effect of the budget. The elimination of tax preferences would increase PIT revenues without generating offsetting increases in spending. In this case, revenue- neutrality would have to be accompanied by offsetting reductions in tax rates.

We view pure tax preferences as spending programs which deliver redistribution on the spending side of the budget. In this paper we focus on the revenue side and, therefore, confine our analysis to tax preferences which are incorporated in the structure of the personal income tax. As shown by Ruggeri and Vincent (1997), in Canada tax preferences represent the overwhelming share of tax expenditures (80 %) and tax preferences with economic policy objectives represent over 90% of total tax preferences in terms of revenue foregone. The list of tax preferences used in our calculations is shown in table 1.

**Table 1. Personal Income Tax Preferences with Economic Policy Objectives**

| <i>Investment/Saving/Housing</i>   | <i>Specific Businesses</i>                    | <i>Cost of Earning Income</i>              |
|--|---|--|
| Tax-assisted Retired Saving Plans  | Relief for Small Businesses                   | Relief for Child Care Expenses             |
| Relief for Limited Partnership Losses  | Relief for farm Properties                    | Relief for Employment Income Earned Abroad |
| Preferential Treatment of Capital gains                                      | Relief for Certain Business Investment Losses | Relief for Union and Professional Dues     |
| Relief from Double Taxation of Dividends                                     | Relief for Meals and Entertainment            | Relief for Moving Expenses                 |
| Other Assistance for Investment  |   | Relief for Other Employment Expenses       |
| Relief for Amounts Invested in Labour-Sponsored Venture Capital Corporations |   |  |

*B. Data*

The data source used is SPSD/M, a microdatabase and model designed by Statistics to analyse the distribution of income among individuals and families, and the redistributive effects of changes in the personal tax and cash transfer system. It consists of two integrated parts: SPSD and SPSM. SPSD is a non-confidential, statistically representative database of 100,000 individuals examined within their family context. It contains detailed information on family structure, individual social characteristics, market income, government transfers and income taxes. SPSM is a static accounting model which processes each individual and family on SPSD and calculates taxes and transfers using algorithms that simulate legislated or proposed programs.

### *C. Presentation of Results*

The distributional effects of tax preferences may be presented in a variety of ways. For example, we can show how the total value of the tax benefit from tax preferences is allocated among different income groups, individual taxpayers, total families and by family types. Alternatively, we can show the average tax benefit per taxpayer or family expressed either in dollar amount or as a ratio to total individual or family income. The latter calculation measures the changes in the effective tax rate due to the tax preferences and provides an indication of the change in progressivity of the personal income tax.

In this paper, we present the tax benefits as a percentage of total family income and the shares of total benefits by family type. In order to examine the incidence of tax preferences among families by family type and income level, we present the distribution of benefits by percentile. Also, to take account of the family size, the family income classes are converted to income per adult equivalent in the family, by applying a weight of 1 to the first person in the family, 0.4 to the second person (an adult or a child) and 0.3 to each additional child in the family.

### **III. Distributional Impact: Estimates of the Combined Effect**

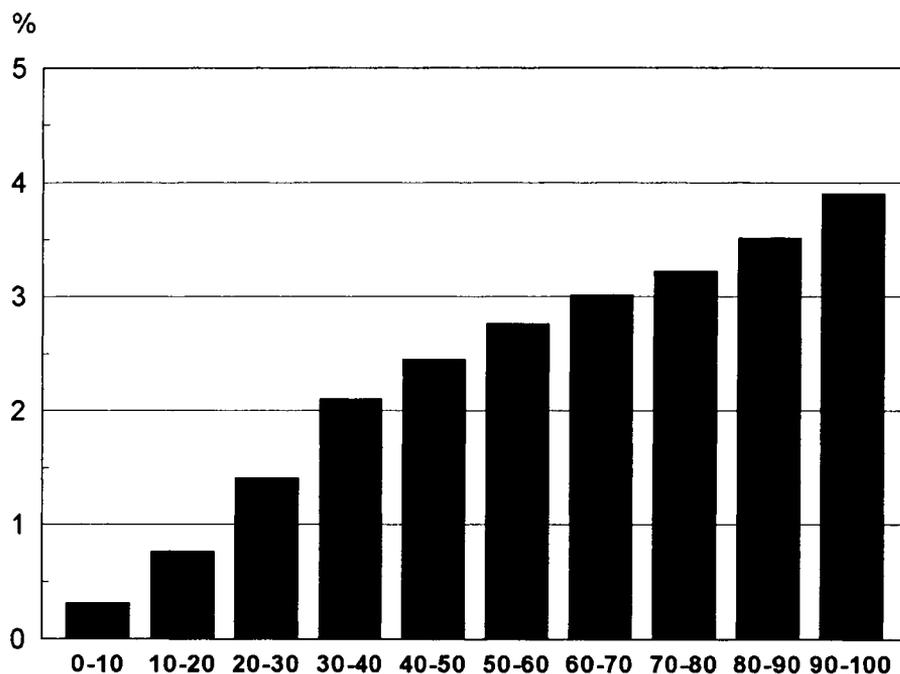
In this section we present the simulation results of the combined effect of major tax preferences with economic policy objectives on the distribution of income. The results include the associated change in the federal refundable tax credits.

#### *1. All Families*

In 1992 the tax preferences with economic policy objectives generated \$15.5 billion in revenue loss for the federal government, or about 26 per cent of personal income tax revenue. Also, according to our calculations, tax preferences increased the amount of

refundable tax credits by \$465 million or more than 9 per cent of total federal refundable credits. Chart 1 shows the tax benefit from the above tax preferences expressed as a percentage of family income. These values indicate the percentage point reduction in effective tax rates resulting from those tax preferences. It is evident from Chart 1 that the distribution of the tax reduction from the tax preferences with economic policy objectives increases with the level of income, implying that their benefits reduce the progressivity of the personal income tax system.

**Chart 1**  
**Major Tax Preferences with Economic Policy Objectives**  
**as a Percentage of Total Income**



Additional information on the redistributive impact of tax preferences is provided by table 2. Columns 2 and 3 show the percent distribution of total income and benefits of tax preferences for all families by percentile. Columns 4 and 5 present the distribution of benefits as a percent of family income and the amount of benefit per family. The results indicate that the benefits of tax preferences are unequally distributed among families. In

1992, the first 10 per cent of families received 2.4 per cent of income but only 0.3 per cent of the benefits from tax preferences. The first 50 per cent of families received 24.8 per cent of income and 12.9 per cent of the benefits. On the other hand, the top 5 per cent of families received 17 per cent of income and 23.9 per cent of the benefits. Expressed as a percent of family income, tax preferences represented 0.3 per cent of income for the first 10 per cent of families compared to about 4 per cent for the top 5 per cent. This is 13 times that of the bottom decile.

**Table 2**  
**Distribution of Income and Benefits of Tax Preferences for all Families**

| <b>Percentile</b> | <b>Share of Income</b> | <b>Share of Benefit</b> | <b>Benefit as a % of Income</b> | <b>Benefit per Family</b> |
|-------------------|------------------------|-------------------------|---------------------------------|---------------------------|
| 0-10              | 2.42%                  | 0.28%                   | 0.31%                           | 27                        |
| 10-20             | 3.46%                  | 0.93%                   | 0.76%                           | 114                       |
| 20-30             | 4.51%                  | 1.93%                   | 1.41%                           | 307                       |
| 30-40             | 5.80%                  | 3.52%                   | 2.10%                           | 581                       |
| 40-50             | 8.58%                  | 6.27%                   | 2.45%                           | 846                       |
| 50-60             | 9.25%                  | 8.04%                   | 2.76%                           | 1164                      |
| 60-70             | 11.23%                 | 11.19%                  | 3.01%                           | 1486                      |
| 70-80             | 12.27%                 | 13.32%                  | 3.22%                           | 1890                      |
| 80-90             | 16.54%                 | 19.76%                  | 3.51%                           | 2490                      |
| 90-95             | 8.45%                  | 10.81%                  | 3.75%                           | 3362                      |
| 95-99             | 9.64%                  | 13.44%                  | 4.09%                           | 5019                      |
| 99-100            | 7.85%                  | 10.50%                  | 3.92%                           | 12059                     |
| Total             | 100%                   | 100%                    | 3.02%                           | 1336                      |

## 2. Result by Family Type

Table 3 shows the benefits of tax preferences as a % of total income and as a % of total benefits, by family type. The family types are divided as follow: non-senior singles, single parents, one income families, two income families and seniors.

According to our results, the reduction in the tax burden due to the tax preferences is larger among non-seniors than seniors in each decile, 3.2 per cent of income on average for non-seniors compared to 1.7 per cent for seniors. This difference is largely due to the fact that a large portion of tax preferences is made of tax assistance to retirement saving plans. Contributions to these plans are usually made during pre-retirement years. Among non-seniors, the benefits represent a greater share of income, on average, for two-income and one-income families (3.5 and 3.2 per cent respectively) than for singles and single parents (2.6 and 2.5 per cent respectively).

Tax preferences are particularly beneficial to two income families. Of the \$15.5 billion in tax preferences, 61.7 per cent were received by two-income families, although they accounted for only 34 per cent of all families. Non-senior singles and one-income families received 13.2 per cent and 12.3 per cent respectively; seniors received only 8.6 per cent of the benefits and single parents only 4.2 per cent.

**Table 3**  
**Tax Preferences with Economic Policy Objectives**  
**Tax Benefit as a % of Total Income (a) and Total Benefit (b)**

| Percentile | Singles |       | Single Parents |      | One Income |       | Two Income |       | Total Non-Seniors |       | Seniors |      | Total |
|------------|---------|-------|----------------|------|------------|-------|------------|-------|-------------------|-------|---------|------|-------|
|            | (a)     | (b)   | (a)            | (b)  | (a)        | (b)   | (a)        | (b)   | (a)               | (b)   | (a)     | (b)  | (a)   |
| 0-10       | 0.4%    | 0.1%  | 0.1%           | 0.0% | 0.8%       | 0.1%  | 0.7%       | 0.0%  | 0.4%              | 0.2%  | 0.1%    | 0.1% | 0.3%  |
| 10-20      | 0.8%    | 0.2%  | 0.4%           | 0.1% | 1.2%       | 0.2%  | 1.5%       | 0.2%  | 1.0%              | 0.6%  | 0.5%    | 0.3% | 0.8%  |
| 20-30      | 0.9%    | 0.2%  | 0.8%           | 0.1% | 2.1%       | 0.5%  | 2.0%       | 0.6%  | 1.6%              | 1.5%  | 1.0%    | 0.4% | 1.4%  |
| 30-40      | 1.2%    | 0.4%  | 1.6%           | 0.3% | 3.0%       | 1.0%  | 2.6%       | 1.3%  | 2.3%              | 3.1%  | 1.3%    | 0.5% | 2.1%  |
| 40-50      | 1.5%    | 0.7%  | 2.4%           | 0.4% | 3.1%       | 1.5%  | 2.8%       | 3.0%  | 2.6%              | 5.6%  | 1.6%    | 0.7% | 2.5%  |
| 50-60      | 1.8%    | 0.8%  | 2.8%           | 0.4% | 3.4%       | 1.7%  | 3.1%       | 4.7%  | 2.9%              | 7.5%  | 1.5%    | 0.5% | 2.8%  |
| 60-70      | 2.8%    | 1.5%  | 3.2%           | 0.6% | 3.5%       | 1.5%  | 3.2%       | 6.9%  | 3.2%              | 10.4% | 1.9%    | 0.8% | 3.0%  |
| 70-80      | 3.0%    | 1.6%  | 3.9%           | 0.6% | 3.6%       | 1.3%  | 3.4%       | 8.9%  | 3.4%              | 12.5% | 1.8%    | 0.8% | 3.2%  |
| 80-90      | 3.6%    | 3.1%  | 3.8%           | 0.6% | 3.0%       | 1.2%  | 3.8%       | 13.7% | 3.7%              | 18.6% | 2.0%    | 1.2% | 3.5%  |
| 90-95      | 3.8%    | 1.4%  | 3.2%           | 0.2% | 3.6%       | 0.6%  | 4.1%       | 7.9%  | 4.0%              | 10.1% | 2.2%    | 0.7% | 3.8%  |
| 95-99      | 4.6%    | 1.8%  | 3.8%           | 0.4% | 4.5%       | 1.0%  | 4.2%       | 8.8%  | 4.3%              | 12.0% | 3.0%    | 1.5% | 4.1%  |
| 99-100     | 3.8%    | 1.2%  | 3.6%           | 0.5% | 4.3%       | 1.7%  | 3.9%       | 5.5%  | 3.9%              | 9.2%  | 3.8%    | 1.3% | 3.9%  |
| All        | 2.6%    | 13.2% | 2.5%           | 4.2% | 3.2%       | 12.3% | 3.5%       | 61.7% | 3.2%              | 91.4% | 1.7%    | 8.6% | 3.0%  |

## **IV. Distributional Impact by Type of Tax Preference**

In this section we present the microsimulation results of individual groups of tax preferences with economic policy objectives. For convenience, we divided the individual tax provisions into four groups. The first group is tax assistance to retirement saving plans. The second group combines the partial exclusion of realized capital gains (excluding capital gains on principal residence) and the double taxation relief for dividends. The third is the non-taxation of realized capital gains on principal residence. The fourth group incorporates special provisions to compensate for the cost of earning income and measures to promote investment.

### *1. Tax Assistance to Retirement Saving Plans*

Tax Assistance to Retirement Saving Plans include Registered Retirement Saving Plans (RRSP) and Registered Pension Plans (RPP). The RRSP is a voluntary retirement plan for employed and self-employed workers and the RPP is a compulsory retirement program available only to employees of organisations that choose to sponsor the plans. Under the current system, contributions to RRSPs and RPPs are limited to 18 per cent of earned income for the preceding taxation year. Also, for the RRSP, there is a ceiling of annual contribution of \$12,500 minus the amount contributed to a RPP. Employers can also deduct their RPP contributions from the corporate income tax.

In our calculations, the tax benefit associated with RPPs takes into account both the contribution of employees and employers, and assume that the value of the deduction from corporate income taxes received by the employers is fully shifted to employees. For the employer contribution to RPPs, we used the average effective corporate income tax rate of 21 per cent. The benefits shifted to employees were allocated to individuals who contributed to an RPP in 1992. The results on the distribution of benefits for all families and by family type are shown in Table 4.

**Table 4**  
**Tax Assistance to Retirement Saving Plans**  
**Tax Benefit as a % of Total Income (a) and Total Benefit (b)**

| Percentile | Singles |       | Single Parents |      | One Income |       | Two Income |       | Total Non-Seniors |       | Seniors |      | Total |
|------------|---------|-------|----------------|------|------------|-------|------------|-------|-------------------|-------|---------|------|-------|
|            | (a)     | (b)   | (a)            | (b)  | (a)        | (b)   | (a)        | (b)   | (a)               | (b)   | (a)     | (b)  | (a)   |
| 0-10       | 0.1%    | 0.0%  | 0.0%           | 0.0% | 0.2%       | 0.0%  | 0.2%       | 0.0%  | 0.1%              | 0.1%  | 0.0%    | 0.0% | 0.1%  |
| 10-20      | 0.2%    | 0.1%  | 0.2%           | 0.0% | 0.4%       | 0.1%  | 0.6%       | 0.1%  | 0.3%              | 0.4%  | 0.0%    | 0.0% | 0.2%  |
| 20-30      | 0.3%    | 0.1%  | 0.4%           | 0.2% | 0.8%       | 0.4%  | 0.7%       | 0.5%  | 0.6%              | 1.2%  | 0.1%    | 0.1% | 0.4%  |
| 30-40      | 0.6%    | 0.4%  | 0.8%           | 0.3% | 1.4%       | 1.0%  | 1.1%       | 1.1%  | 1.0%              | 2.9%  | 0.3%    | 0.2% | 0.9%  |
| 40-50      | 0.9%    | 0.9%  | 1.1%           | 0.4% | 1.6%       | 1.6%  | 1.3%       | 2.9%  | 1.3%              | 5.8%  | 0.4%    | 0.3% | 1.1%  |
| 50-60      | 0.9%    | 0.8%  | 1.5%           | 0.4% | 1.7%       | 1.8%  | 1.6%       | 5.0%  | 1.5%              | 8.1%  | 0.4%    | 0.3% | 1.4%  |
| 60-70      | 1.8%    | 1.9%  | 1.8%           | 0.6% | 1.8%       | 1.6%  | 1.7%       | 7.5%  | 1.7%              | 11.7% | 0.5%    | 0.4% | 1.6%  |
| 70-80      | 1.9%    | 2.2%  | 2.3%           | 0.8% | 1.8%       | 1.4%  | 1.9%       | 10.5% | 1.9%              | 14.8% | 0.6%    | 0.5% | 1.8%  |
| 80-90      | 2.5%    | 4.5%  | 1.9%           | 0.7% | 1.4%       | 1.1%  | 2.2%       | 16.4% | 2.2%              | 22.7% | 0.7%    | 0.8% | 2.0%  |
| 90-95      | 2.3%    | 1.7%  | 1.6%           | 0.2% | 1.4%       | 0.5%  | 2.3%       | 9.1%  | 2.2%              | 11.6% | 0.7%    | 0.5% | 2.0%  |
| 95-99      | 1.9%    | 1.6%  | 1.7%           | 0.3% | 1.6%       | 0.7%  | 2.1%       | 8.9%  | 2.0%              | 11.5% | 0.9%    | 0.9% | 1.8%  |
| 99-100     | 0.9%    | 0.6%  | 0.7%           | 0.2% | 0.7%       | 0.6%  | 1.0%       | 3.1%  | 0.9%              | 4.5%  | 1.0%    | 0.7% | 0.9%  |
| All        | 1.4%    | 14.9% | 1.2%           | 4.2% | 1.4%       | 10.9% | 1.8%       | 65.2% | 1.6%              | 95.2% | 0.5%    | 4.8% | 1.5%  |

The direct loss in federal government revenue from the deductibility of contributions to RRSPs and RPPs amounted to \$7.5 billion in 1992, or 12.7 per cent of personal income tax revenue. As shown in Table 4, the benefits of these tax provisions are primarily received by middle and high income families. The reduction in the effective tax rate also tends to increase with the level of income. The first 10 per cent of families received virtually no benefit from tax assisted saving plans. Families between the 30th and 50th percentile received benefits corresponding to 1% of their income and families between the 70th and 99th percentile received the largest share of benefits and largest reduction in the effective tax rate, 1.8 per cent and 2 per cent. Finally, because of contribution limits, the reduction in the effective tax rate for the top percentile falls to 0.9 per cent.

As expected, the benefits associated with the deduction of contributions are received almost entirely by non-seniors, although some are received by seniors. In Canada, senior couples can contribute to RRSPs, if one member is less than 65 and still working, or if a senior is self-employed or receives earned income as defined for purposes of the RRSP

program. Seniors can also contribute to an RPP as long as they have been working for less than 35 years.

Among family types, two-income families enjoy the greatest reduction in their effective tax rate. They are followed by one-income families, non-senior singles, single parents and seniors. Also, about 65 per cent of direct benefits are received by two-income families, 14.9 per cent by non-senior singles, 10.9 per cent by one-income families, 5 per cent by seniors and only 4.2 per cent by single parents.

## *2. Preferential Treatment of Capital Gains and Double Taxation Relief for Dividends*

Before the 1987 tax reform, only 50 per cent of realized capital gains were taxable in Canada. This proportion, commonly known as the inclusion rate, was increased to two thirds in 1988 and to 75 per cent in 1990. Also in Canada, firms pay dividends to their shareholders after payments of the corporate income tax. Although dividends are distributed out of after-corporate-tax profits, they do not bear the full cost of corporate taxation. This is because the personal and corporate income tax systems are partially integrated through the mechanism of the dividend gross-up and dividend tax credit. In filing a personal income tax return, the investor pays personal income tax on the grossed-up value of the dividend (cash dividend plus approximation of CIT paid), but receives a credit equal to the amount of gross-up.

The revenue loss to the federal government from these two tax preferences amounted to \$1.4 billion in 1992, or more than 2 per cent of personal income tax revenue. About 54 per cent of the revenue loss is due to the partial inclusion of capital gains.

As shown in Table 5, high income families largely benefit from these two tax preferences, as 81.6 per cent of the benefits are received by families of the 10th decile. The families between the 95th and 99th percentiles enjoy a 0.6 per cent reduction in their effective

tax rate, compared to 1.7 per cent for the families of the last percentile. On the other hand, the families below the 90th percentile receive virtually no benefit as a per cent of income.

**Table 5**  
**Preferential Treatment of Capital Gains and Double Taxation Relief for Dividends**  
**Tax Benefit as a % of Total Income (a) and Total Benefit (b)**

| Percentile | Singles |       | Single Parents |      | One Income |       | Two Income |       | Total Non-Seniors |       | Seniors |       | Total |      |
|------------|---------|-------|----------------|------|------------|-------|------------|-------|-------------------|-------|---------|-------|-------|------|
|            | (a)     | (b)   | (a)            | (b)  | (a)        | (b)   | (a)        | (b)   | (a)               | (b)   | (a)     | (b)   | (a)   |      |
| 0-10       | 0.0%    | 0.0%  | 0.0%           | 0.0% | 0.0%       | 0.0%  | 0.0%       | 0.0%  | 0.0%              | 0.0%  | 0.0%    | 0.0%  | 0.0%  | 0.0% |
| 10-20      | 0.0%    | 0.1%  | 0.0%           | 0.0% | 0.0%       | 0.0%  | 0.0%       | 0.0%  | 0.0%              | 0.1%  | 0.0%    | 0.0%  | 0.0%  | 0.0% |
| 20-30      | 0.0%    | 0.1%  | 0.0%           | 0.0% | 0.0%       | 0.0%  | 0.0%       | 0.2%  | 0.0%              | 0.3%  | 0.0%    | 0.2%  | 0.0%  | 0.0% |
| 30-40      | 0.0%    | 0.1%  | 0.0%           | 0.0% | 0.1%       | 0.3%  | 0.0%       | 0.1%  | 0.0%              | 0.5%  | 0.1%    | 0.3%  | 0.0%  | 0.0% |
| 40-50      | 0.0%    | 0.1%  | 0.1%           | 0.1% | 0.0%       | 0.1%  | 0.0%       | 0.3%  | 0.0%              | 0.7%  | 0.1%    | 0.4%  | 0.0%  | 0.0% |
| 50-60      | 0.0%    | 0.2%  | 0.0%           | 0.1% | 0.0%       | 0.2%  | 0.0%       | 0.6%  | 0.0%              | 1.0%  | 0.1%    | 0.5%  | 0.0%  | 0.0% |
| 60-70      | 0.1%    | 0.4%  | 0.1%           | 0.1% | 0.1%       | 0.5%  | 0.0%       | 0.8%  | 0.1%              | 1.9%  | 0.1%    | 0.7%  | 0.1%  | 0.1% |
| 70-80      | 0.1%    | 0.3%  | 0.1%           | 0.1% | 0.1%       | 0.4%  | 0.0%       | 1.3%  | 0.1%              | 2.2%  | 0.2%    | 1.2%  | 0.1%  | 0.1% |
| 80-90      | 0.1%    | 1.3%  | 0.1%           | 0.1% | 0.3%       | 1.2%  | 0.1%       | 3.8%  | 0.1%              | 6.4%  | 0.3%    | 2.0%  | 0.1%  | 0.1% |
| 90-95      | 0.3%    | 1.2%  | 0.2%           | 0.1% | 0.7%       | 1.2%  | 0.2%       | 3.6%  | 0.2%              | 6.1%  | 0.6%    | 2.2%  | 0.3%  | 0.3% |
| 95-99      | 0.6%    | 2.6%  | 0.7%           | 0.7% | 0.9%       | 2.2%  | 0.5%       | 11.9% | 0.6%              | 17.4% | 0.8%    | 4.4%  | 0.6%  | 0.6% |
| 99-100     | 1.7%    | 6.2%  | 1.7%           | 2.7% | 2.2%       | 9.6%  | 1.6%       | 26.2% | 1.7%              | 44.6% | 1.8%    | 6.9%  | 1.7%  | 1.7% |
| All        | 0.2%    | 12.5% | 0.2%           | 4.1% | 0.3%       | 15.8% | 0.2%       | 48.7% | 0.3%              | 81.2% | 0.3%    | 18.8% | 0.3%  | 0.3% |

The distribution of tax benefits is similar for seniors and non-seniors, 0.3 per cent of income, on average. Also, the distribution of benefits is not much different among the family types. Finally, 48.7 per cent of the benefits are received by two-income families, 18.8 per cent by seniors, 15.8 per cent by one-income families, 12.5 per cent by non-senior singles, and 4.1 per cent by single parents.

### 3. Non-Taxation of Capital Gains on Principal Residence

Capital gains realized on the disposition of a taxpayer's principal residence are non-taxable. The SPSPD/M does not contain direct information on realized capital gains on residential property. It does however, have information of the market value of homes. Ruggeri, Vincent and Fougère (1996) have estimated that the non-taxation of realized capital gains on principal residence reduced the federal income tax base by \$18.6 billion in 1992. We

allocated this total to families represented in SPSPD/M in proportion to the market value of their home.

According to our calculations, the non-taxation of capital gains on principal residence generated a loss of about \$4 billion in federal tax revenue, or 6.7 per cent of personal income tax revenue. The results on the distribution of benefits for all families and by family type are presented in Table 6. Above the second decile, the benefits of this tax preference are distributed proportionally among the families, representing 0.9 per cent of income, on average. The families in the first 2 deciles and of the last percentile receive relatively less.

**Table 6**  
**Non-Taxation of Capital Gains on principale Residence**  
**Tax Benefit as a % of Total Income (a) and Total Benefit (b)**

| Percentile | Singles |       | Single Parents |      | One Income |       | Two Income |       | Total Non-Seniors |       | Seniors |       | Total |
|------------|---------|-------|----------------|------|------------|-------|------------|-------|-------------------|-------|---------|-------|-------|
|            | (a)     | (b)   | (a)            | (b)  | (a)        | (b)   | (a)        | (b)   | (a)               | (b)   | (a)     | (b)   |       |
| 0-10       | 0.2%    | 0.3%  | 0.1%           | 0.0% | 0.5%       | 0.2%  | 0.4%       | 0.1%  | 0.3%              | 0.6%  | 0.1%    | 0.2%  | 0.2%  |
| 10-20      | 0.5%    | 0.4%  | 0.2%           | 0.1% | 0.6%       | 0.4%  | 0.7%       | 0.3%  | 0.5%              | 1.2%  | 0.4%    | 1.0%  | 0.5%  |
| 20-30      | 0.5%    | 0.5%  | 0.3%           | 0.2% | 1.1%       | 1.0%  | 0.9%       | 0.9%  | 0.7%              | 2.5%  | 0.8%    | 1.3%  | 0.8%  |
| 30-40      | 0.4%    | 0.5%  | 0.5%           | 0.3% | 1.0%       | 1.3%  | 1.2%       | 2.1%  | 0.9%              | 4.2%  | 0.9%    | 1.2%  | 0.9%  |
| 40-50      | 0.4%    | 0.8%  | 0.8%           | 0.5% | 1.1%       | 2.0%  | 1.1%       | 4.0%  | 0.9%              | 7.3%  | 1.0%    | 1.6%  | 1.0%  |
| 50-60      | 0.6%    | 0.9%  | 0.8%           | 0.4% | 1.2%       | 2.2%  | 1.0%       | 5.4%  | 0.9%              | 8.9%  | 0.9%    | 1.2%  | 0.9%  |
| 60-70      | 0.7%    | 1.4%  | 0.9%           | 0.6% | 1.0%       | 1.7%  | 0.9%       | 7.7%  | 0.9%              | 11.3% | 1.0%    | 1.7%  | 0.9%  |
| 70-80      | 0.6%    | 1.2%  | 1.1%           | 0.7% | 1.0%       | 1.4%  | 0.9%       | 9.0%  | 0.9%              | 12.2% | 0.8%    | 1.4%  | 0.9%  |
| 80-90      | 0.6%    | 2.0%  | 0.9%           | 0.6% | 0.9%       | 1.4%  | 0.9%       | 13.1% | 0.9%              | 17.0% | 0.9%    | 1.9%  | 0.9%  |
| 90-95      | 0.7%    | 1.0%  | 1.1%           | 0.3% | 0.9%       | 0.6%  | 1.0%       | 7.4%  | 0.9%              | 9.2%  | 0.7%    | 0.9%  | 0.9%  |
| 95-99      | 0.6%    | 1.0%  | 0.9%           | 0.3% | 0.8%       | 0.7%  | 0.8%       | 6.0%  | 0.7%              | 8.0%  | 0.9%    | 1.6%  | 0.8%  |
| 99-100     | 0.3%    | 0.4%  | 0.2%           | 0.1% | 0.4%       | 0.5%  | 0.4%       | 2.0%  | 0.3%              | 3.1%  | 0.4%    | 0.5%  | 0.3%  |
| All        | 0.5%    | 10.2% | 0.7%           | 4.1% | 0.9%       | 13.2% | 0.9%       | 58.1% | 0.8%              | 85.6% | 0.8%    | 14.4% | 0.8%  |

The distribution of benefits associated with the non-taxation of capital gains on principal residence is roughly similar between seniors and non-seniors. By family type, one income and two income families received more benefits as a share of income, 0.9 per cent, on average, followed by seniors with 0.8 per cent, single parents with 0.7 per cent for and non-senior singles with 0.5 per cent.

#### 4. Other Tax Preferences

In the group “other tax preferences” we have combined other assistance to investment (including relief for limited partnership loss), the relief for child care expenses, employment income earned abroad, union and professional dues, moving expenses, meals and entertainment expenses and relief for other employment expenses. Other tax preferences accounted for \$2.4 billion in revenue loss for the federal government in 1992, or 4 per cent of personal income tax revenue. The results on the distribution of benefits for all families and by family type are presented in Table 7.

**Table 7**  
**Other Tax Preferences**  
**Tax Benefit as a % of Total Income (a) and Total Benefit (b)**

| Percentile | Singles |       | Single Parents |      | One Income |       | Two Income |       | Total Non-Seniors |       | Seniors |      | Total |
|------------|---------|-------|----------------|------|------------|-------|------------|-------|-------------------|-------|---------|------|-------|
|            | (a)     | (b)   | (a)            | (b)  | (a)        | (b)   | (a)        | (b)   | (a)               | (b)   | (a)     | (b)  | (a)   |
| 0-10       | 0.0%    | 0.0%  | 0.0%           | 0.0% | 0.0%       | 0.0%  | 0.1%       | 0.0%  | 0.0%              | 0.1%  | 0.0%    | 0.0% | 0.0%  |
| 10-20      | 0.1%    | 0.2%  | 0.1%           | 0.1% | 0.2%       | 0.2%  | 0.1%       | 0.2%  | 0.1%              | 0.6%  | 0.0%    | 0.0% | 0.1%  |
| 20-30      | 0.1%    | 0.2%  | 0.1%           | 0.1% | 0.2%       | 0.4%  | 0.2%       | 0.6%  | 0.2%              | 1.4%  | 0.0%    | 0.1% | 0.1%  |
| 30-40      | 0.2%    | 0.5%  | 0.3%           | 0.3% | 0.4%       | 0.9%  | 0.3%       | 1.3%  | 0.3%              | 3.0%  | 0.1%    | 0.2% | 0.3%  |
| 40-50      | 0.2%    | 0.6%  | 0.4%           | 0.4% | 0.4%       | 1.2%  | 0.4%       | 2.9%  | 0.4%              | 5.2%  | 0.1%    | 0.2% | 0.3%  |
| 50-60      | 0.3%    | 0.8%  | 0.4%           | 0.4% | 0.5%       | 1.4%  | 0.5%       | 4.8%  | 0.4%              | 7.4%  | 0.1%    | 0.1% | 0.4%  |
| 60-70      | 0.3%    | 0.8%  | 0.5%           | 0.5% | 0.5%       | 1.4%  | 0.5%       | 7.1%  | 0.5%              | 9.8%  | 0.1%    | 0.4% | 0.4%  |
| 70-80      | 0.5%    | 1.6%  | 0.4%           | 0.5% | 0.7%       | 1.6%  | 0.5%       | 8.4%  | 0.5%              | 12.1% | 0.1%    | 0.2% | 0.5%  |
| 80-90      | 0.4%    | 2.1%  | 0.8%           | 0.9% | 0.4%       | 0.9%  | 0.5%       | 12.0% | 0.5%              | 15.8% | 0.2%    | 0.6% | 0.5%  |
| 90-95      | 0.5%    | 1.1%  | 0.2%           | 0.1% | 0.5%       | 0.6%  | 0.6%       | 7.5%  | 0.6%              | 9.3%  | 0.2%    | 0.4% | 0.5%  |
| 95-99      | 1.3%    | 3.4%  | 0.5%           | 0.3% | 1.2%       | 1.8%  | 0.8%       | 11.0% | 0.9%              | 16.6% | 0.4%    | 1.2% | 0.8%  |
| 99-100     | 0.8%    | 1.7%  | 0.9%           | 0.8% | 0.9%       | 2.3%  | 0.9%       | 9.0%  | 0.9%              | 13.8% | 0.6%    | 1.4% | 0.9%  |
| All        | 0.4%    | 13.1% | 0.4%           | 4.3% | 0.5%       | 12.8% | 0.6%       | 64.9% | 0.5%              | 95.1% | 0.2%    | 4.9% | 0.5%  |

As shown in Table 7, most benefits goes to the middle and higher income classes. The reduction in the effective tax rate also increases with the level of income. The 3 bottom deciles receive virtually no benefit as a share of income, compared to 0.3 per cent for families around the median and 0.9 per cent for the families of the top percentile.

Since a large proportion of seniors are out of the labour force, the vast majority of benefits, 95 per cent, is distributed among non-seniors. Two-income families receive the largest share of benefits as a proportion of income and total benefits (0.6 per cent and 64.9 per cent respectively), followed by one-income families. Non-senior singles and single parents each receive 0.4 per cent of their income (0.5 and 12.8 per cent respectively), representing 13.1 and 4.3 per cent of total benefits.

## **V. Conclusion**

In this paper we evaluated the distributional effects of the major tax preferences with economic policy objective, which are primarily in the form of tax assistance for various forms of savings. Our findings lead to the following conclusions:

Tax preferences aimed at economic policy objectives provide benefits which are regressively distributed. They reduce the effective tax rate for the high income groups by 4 percentage points, on average, more than thirteen times the reduction for the low income groups.

Tax preferences have also important horizontal equity implications. The biggest beneficiaries of tax preferences are two-income families. They received 60% of benefits in 1992 although they represented 34% of all families and accounted for 53 per cent of total income.

Since they are largely aimed at economic policy objectives, tax preferences are expected to increase economic efficiency as well as to affect the distribution of after-tax income. A complete evaluation of those measures, therefore, requires a detailed analysis of their implications for both equity and efficiency. Although our analysis is confined to equity aspects only, its results still provide some useful insights for tax policy. Given their tendency

to increase the inequality of after-tax income, tax preferences may generate three possible equity-efficiency relationships.

Tax preferences operate in a perverse manner and reduce efficiency. This case offers the worst of both worlds where lower efficiency is associated with higher income inequality. There would no justification for tax preferences in this case.

Tax preferences have no effect on efficiency. In this case, all economic effects would be confined to distributional changes, whose magnitudes have been estimated in this paper. Since our results show that the benefits of tax preferences are regressively distributed, tax preferences would become the equivalent of transfer payments to the middle and high income groups. To put them into perspective, we recall that these implicit transfers (both federal and provincial) in 1992 amounted to approximately \$38 billion compared to \$12.7 billion spent on social assistance.

Tax preferences generate the efficiency gains for which they were designed. In this case, the revenue loss and the increase in income inequality are justified as a price to be paid for increased economic efficiency. This case highlights the fact that, at best, tax preferences involve a trade-off between equity and efficiency, which requires a solution through the political process.

The current widespread use of special provisions incorporated in the personal income tax system for the purpose of reducing the tax burden on selected activities or groups of taxpayers indicates that the “sieve” identified by Simons in 1938 has been preserved quite well. Proposals to flatten considerably the structure of statutory rates would lead to a personal income tax that, to paraphrase Simons, “would skim great incomes with a sieve.”

## **Appendix**

### *1. Definition of income*

The definition of income used in this paper is total money income, which includes total market income plus government transfers. In our calculations, we adjusted some of the components of market income and transfers from SPSD/M to conform more closely to either the *National Income and Expenditure Accounts* or the *Taxation Statistics*.

### *2. Annual Versus Lifetime Incidence*

One of the major methodological difficulties in measuring and comparing the incidence of various tax preferences is that some components exert their full effect during the year of analysis (e.g. the deduction for child care expenses), while some other components exert their effect over the lifetime of an individual. This is the case for tax-assisted saving plans, such as Individual Retirement Accounts (IRA) in the U.S., Registered Retirement Saving Plans (RRSPs) and Registered Pension Plans (RPPs) in Canada. The net benefit of RRSPs/RPPs over the lifetime not only includes the immediate tax relief related to the deductibility of contributions, but also incorporates the discounted value of the tax-free accumulation of earnings within the RRSP/RPP, net of the present value of taxes upon withdrawals at retirement.

Therefore, one of the important limitation of our analysis is that we can only evaluate the annual incidence of RRSP/RPPs. Since SPSD/M does not contain information about the stock of assets within RRSPs and RPPs, we cannot allocate accurately the benefit associated with the tax free accumulation of interest net of the tax on withdrawals; we can only assess the benefit associated with the immediate tax relief produced by the contribution. However, if the distribution of annual RRSP contributions does not change much over time, examining

the distribution of annual RRSP contributions should provide evidence regarding the lifetime incidence of RRSPs.

### *3. Calculation Method*

An important aspect of our analysis is the method used for estimating the revenue loss from tax expenditures. In calculating the revenue loss to the government from an individual tax provision one must take into account that tax expenditures may be interdependent. In this case, the effect on government revenue from a group of tax expenditures calculated individually may differ from the cost estimate of the same group of tax expenditures evaluated concurrently.

One reason is that the personal income tax system has a multi-rate tax structure. Therefore, the combined effect of taking advantage of a number of tax provisions could be to move a taxpayer to a lower tax bracket. Another reason is that there are interactions between the tax provisions and income-tested government transfers. For example, the elimination of a deduction to total income would affect the value of net income, which in turn could reduce the amount of income-tested refundable tax credits, such as provincial tax credits, the Goods and Services Tax (GST) credit and the Child Tax Benefit. They could also increase the amount of social benefit repayments.

SPSD/M is a valuable tool because the micro-simulation model can take account of these interactions. We can evaluate the benefits of the joint effect of the major tax preferences (incorporating the interactions of each measure with the change in the marginal tax rate and the impact on federal refundable tax credits and social benefits repayments).

It should be stressed that SPSPD/M does not take into account the possible behavioural responses from the short-term macroeconomic impacts or the long run response in the economy that result from a change in tax preferences. Our results only incorporate the

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