Labor-Market Effects of Canadian and U.S. Pension Tax Policy

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By providing favorable tax treatment to pensions, as compared with other assets, Canadian and U.S. tax policies encourage firms to offer pension plans. Such tax policy is common among countries in the Organization for Economic Cooperation and Development. All countries with well-developed pension systems grant tax preferences to saving through pensions (Turner and Watanabe 1995).

The tax treatment of pensions results from compromises legislators make between competing political goals. Those goals include interpersonal equity in tax deductions and deferrals, as well as minimization of revenue loss from foregone taxes. While the broad goals of governments concerning pension tax policy are similar across developed countries, major differences occur within this framework.

In this regard, Canada and the United States are particularly interesting to compare. The two countries are similar enough to make comparisons of differences useful: both have social security systems with moderate benefit levels that leave room for a private pension system to develop and both have voluntary private pension systems.

The level of family income in Canada and the United States is roughly equivalent. While average family income is slightly higher (by 2.2 percent) in the United States, median family income is slightly lower (by 4.4 percent), reflecting the greater income inequality in the United States (Wolfson and Murphy 1994).
The elderly in the United States, however, have considerably higher income than their counterparts in Canada—19 percent higher for couples aged 65 to 74. The mix of income among the elderly also differs. Social security benefits are higher in Canada—6 percent higher for couples aged 65 to 74, accounting for 40 percent of the income of that group—in comparison with 31 percent for U.S. couples of that age. Income from private sources (earnings from working, pensions, and savings) is higher in the United States (Wolfson and Murphy 1994). In both countries, workers in unions, manufacturing, large firms, and the public sector are more likely to be covered by a pension plan than are other workers. In the United States, the percentage of the private sector workforce that is unionized has declined considerably, to about 11 percent in the late 1990s. In Canada, the percentage is roughly the same or perhaps slightly higher. Public sector employment is more important in Canada than in the United States.

Because of their proximity and similar income and culture, one might think that the two neighbors would have similar tax policy toward pensions. In fact, important differences exist that may have caused differences in their private pension systems. Insights can be gained into the tax treatment of pensions in both countries by examining the differences.

The tax codes in both Canada and the United States place requirements on pension plans to qualify for favorable tax treatment. These include the requirement that the pension benefits of plan members must vest within a minimum number of years. These requirements have a strictly regulatory function, rather than being a revenue-raising aspect of tax policy. While regulations influence or determine some features of pension plans, we choose to ignore regulatory aspects of the tax code. We analyze instead how marginal tax rates affect pensions as a form of employee compensation.

OVERVIEW

Employer contributions to pension plans in Canada and the United States are treated similarly to wages—both are tax deductible under the
corporate income tax. Book reserve financing, where an employer could receive a tax deduction without having made a contribution, is not allowed. Investment earnings in pension funds accumulate tax free, and pension assets and liabilities are not taxed.

Workers are not taxed at the time their employer contributes to a pension fund; however, all distributions from pension funds to workers are taxable under the personal income tax. In Canada, retirees receive a tax credit for the first Can$1,000 of pension income. Pension distributions in both countries are not subject to the social security payroll tax. Worker contributions are treated differently in the two countries and are discussed later. Both countries also offer workers individual plans not tied to a particular employer: Registered Retirement Savings Plans (RRSPs) in Canada and Individual Retirement Accounts (IRAs) in the United States.

The tax system affects the role of pensions in the compensation of workers. We examine how the tax treatment of pensions affects four pension policy issues: 1) pension coverage rates, 2) the generosity of pension benefits, 3) employer versus employee contributions, and 4) defined-benefit versus defined-contribution plans.

PENSION COVERAGE

The pension coverage rate is the percentage of the workforce covered by a pension. Although the concept is simple, the coverage rate is measured in considerably different ways, producing a range of statistics.

Empirical comparisons of private sector workers in Canada and the United States, such as the earlier comparison of the percentage of unionized workers, are difficult because the distinction between the private and public sector is less clear in Canada than it is in the United States. It appears that some public sector Canadian workers who work for institutions such as universities, hospitals, and public corporations (such as Air Canada), rather than traditional government bureaucracies, respond in household surveys that they are private sector workers. Because of this, Canadian data for the entire workforce are much more reliable than are data that attempt to distinguish between the public and
private sectors. Because the public sector is relatively larger in Canada, however, and because pension coverage rates are considerably higher in the public than the private sector, empirical comparisons across the two countries are difficult. The coverage rate for the entire workforce has the advantage that it indicates the percentage of the workforce in the two countries that has an employer-provided pension that supplements social security. It has the disadvantage that the rate is influenced by government policy concerning the relative size of the public sector.

Dailey and Turner (1992) attempted to comparably measure private pension coverage for Canada and the United States. They found that, for many years, the private pension coverage rate was about 50 percent higher in the United States than in Canada. Since 1975, the pension coverage rate for full-time private sector workers has varied between 28 and 30 percent in Canada and between 44 and 46 percent in the United States.

Several problems caused those figures to overstate the difference in private sector coverage rates between Canada and the United States. In 1990, Statistics Canada determined it was impossible to accurately determine private sector pension coverage rates because of difficulties in determining who was in the private sector, and that previous figures underestimated pension coverage. The U.S. figures are overstated relative to those of Canada because the Canadian figures include the unemployed as part of the labor force, while the U.S. figures include only wage and salary workers, not the unemployed. After adjusting for these factors based on a somewhat subjective assessment of the magnitude of their effects, it still appears that the private sector pension coverage rate was at least 5 percentage points higher in the United States than it was in Canada.

By contrast, when examining pension coverage provided by both private and public sector employers, the coverage rates by income for all workers are higher in Canada for all income levels except the lowest, where the rate is slightly lower (Table 1). The coverage rates are 10 to 20 percentage points higher in the middle income categories; in the highest income category, the difference is only 4 percentage points.

Because one goal of pension tax policy is to encourage pension coverage, an important pension policy issue is the extent to which differences in pension coverage in Canada and the United States arise
### Table 1 Pension Coverage Rates by Income, All Workers

<table>
<thead>
<tr>
<th>Earnings (U.S.$)</th>
<th>Canada (%) 1989</th>
<th>United States (%) 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 14,999</td>
<td>27</td>
<td>28</td>
</tr>
<tr>
<td>15,000 - 22,499</td>
<td>59</td>
<td>48</td>
</tr>
<tr>
<td>22,500 - 29,999</td>
<td>72</td>
<td>52</td>
</tr>
<tr>
<td>30,000 - 44,999</td>
<td>82</td>
<td>62</td>
</tr>
<tr>
<td>45,000 or more</td>
<td>73</td>
<td>69</td>
</tr>
</tbody>
</table>


because of differences in the tax treatment of pensions. In both Canada and the United States, the tax system encourages employers to offer pensions. Workers reduce their total lifetime taxes when they receive some compensation as a pension rather than taking all compensation as wages. In both countries, pension coverage rates increase with income, presumably at least partially because tax rates increase with income.

### Marginal Income Tax Rates

If an individual's marginal income tax rate is the same in the preretirement and postretirement periods, the individual earns the pretax rate of return on pension saving in both Canada and the United States. This occurs because the investment earnings on pension funds are untaxed. The incentive that the tax system provides for participating in a pension is thus higher with higher marginal income tax rates. The "wedge" between the pretax and the after-tax rate of return is higher in Canada for most workers because income tax rates are higher in Canada and the top rates are reached at much lower levels of income.

Provincial tax rates differ in Canada but to a lesser extent than do state income tax rates (Alpert, Shoven, and Whalley 1992). About 40 percent of Canadian employees work in the province of Ontario, and thus Ontario is a major component of the Canadian experience. In 1996, the maximum tax rate—federal plus provincial—was 53 percent in Ontario (Table 2). This maximum rate was reached at a taxable
Table 2 Marginal Federal Plus Provincial or State Income Tax Rates in Canada and the United States

<table>
<thead>
<tr>
<th>Family taxable income (U.S.$)</th>
<th>Canada (%)</th>
<th>United States (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 22,749</td>
<td>(up to) 27</td>
<td>19</td>
</tr>
<tr>
<td>22,750 – 55,099</td>
<td>(up to) 53</td>
<td>33</td>
</tr>
<tr>
<td>55,100 – 114,999</td>
<td>53</td>
<td>36</td>
</tr>
<tr>
<td>115,000 – 249,999</td>
<td>53</td>
<td>42</td>
</tr>
<tr>
<td>250,000 and up</td>
<td>53</td>
<td>46</td>
</tr>
</tbody>
</table>

NOTE: Data for Canada are from the Province of Ontario; data for the United States represents a national average. Provincial income tax rates are much higher in Canada than are state income tax rates in the United States. The average state income tax rates are calculated from the Current Population Survey Special Pension Supplement, April 1993 for the tax year 1992. For the income brackets in the table, they are, respectively, 3.8%, 4.6%, 5.1%, 5.9% and 5.9%. Because of top coding of income in the data, there is no income reported greater than $250,000. The average state income tax rate for the preceding category is used for the top income category in this table.

In both Canada and the United States, marginal federal income tax rates were reduced during the 1980s. In Canada, they were reduced from 65 percent in 1980 to 29 percent in 1987. It should be noted, however, that provincial income tax rates are much higher than state income tax rates. For this reason, comparing only marginal federal tax rates is misleading because the federal/provincial split of income tax is far different than the federal/state split in the United States.

In the United States, the Tax Reform Act of 1986 reduced the top federal rate on the highest-income households to 28 percent. The highest rate was 33 percent, which applied for some middle income taxpayers. The top rate in 1980 had been 70 percent. Marginal tax rates have since risen. The highest marginal federal income tax rate in 1994, applied to families with income above $250,000, was 39.6 percent (Table 2). In addition, taxpayers are liable for state income tax, which in some states reaches as high as 11 percent. Thus, the highest mar-
ginal income tax rate in the United States (state plus federal rates) is currently 51 percent, but only the top few percent of families pay that rate. Workers with family income of $50,000 would pay, on average, a marginal tax rate (federal plus state) of about 33 percent and thus have marginal tax rates about 20 percentage points lower than in Canada.9

These comparisons do not include social security taxes. Social security is largely funded through general revenues in Canada, while it is funded by a payroll tax in the United States. When social security taxes are included, the share of social security and personal income taxes in GNP in 1987 was 18.0 percent in Canada and 19.5 percent in the United States (Wilson 1992). The social security payroll tax rate in Canada in 1993 was 5 percent, shared equally by employers and employees. This compares to 12.4 percent shared equally by employers and employees in the United States (U.S. Department of Health and Human Services, Social Security Administration 1994). In both cases, it is presumed that employees bear the incidence of the payroll tax. However, to the extent social security benefits are related to earnings, some workers may view the true social security tax rate as being lower than the statutory rate (Burkhauser and Turner 1985).

Empirical studies in the United States have shown that higher marginal income tax rates encourage the provision of pensions. In their study of pension coverage in 1979, 1988, and 1993, Reagan and Turner (2000) found that, on average, a 1 percentage point increase in marginal income tax rates increases pension coverage rates by 0.4 percentage points.10 This finding suggests that, based solely on marginal income tax rates, pension coverage would be roughly 5 to 7 percentage points higher in Canada than in the United States.

Income Tax Progressivity

As well as being affected by the level of marginal income tax rates, the tax incentive for pensions is greater with a greater progressivity of the tax system. Workers generally have lower income in retirement than while working. The more progressive the tax system, the more their reduced income during retirement will lower the marginal tax rate they pay on their pension benefits.

Because the highest marginal rate starts at a much lower income in Canada, marginal rates are more "compressed," so that it might appear
that higher income Canadians are less likely than Americans to face lower marginal rates in their retirement years than while working.

In the United States, however, the tax system is also not very progressive but for a different reason. The top marginal bracket begins at a high income level, and a single marginal rate covers a wide range of the distribution of income. Reagan and Turner (2000) found that, in their regression sample of males aged 21 to 55, the marginal tax rate (federal plus state) in 1979 was 32 percent, with a standard deviation of 13 percentage points. These figures had declined in 1993 to a marginal rate of 25 percent with a standard deviation of 9 percentage points. Thus, it appears that neither the Canadian nor the U.S. tax system is very progressive, and differences in the progressivity of the income tax systems cannot explain the lower pension coverage rates for private sector workers in Canada.

Tax Subsidies for High-Income Workers

To further examine coverage rate differences between the two countries, we focus separately on the tax treatment of high- and low-income workers. The centerpiece of tax reform in Canada in the early 1990s was the establishment of a comprehensive limit to tax-assisted pension saving. All workers are permitted to contribute the lesser of 18 percent of their earned income (in the previous calendar year) or a maximum dollar amount (if lower) to an RRSP. In 1995, this dollar amount equalled $11,625, or 18 percent of $64,550. The latter is the level of earned income above which there is no tax-assisted pension saving for members of defined-benefit pension plans.

For individuals with relatively high incomes, the tax assistance provided to pension savings is considerably higher in the United States. In the United States, from 1993 to 1996, the maximum compensation that could be used for calculating pension benefits that receive preferential tax treatment was $150,000, with this figure being raised to $160,000 in 1997.11

Some benefits consultants have argued that a low ceiling on compensation used for calculating pension benefits reduces the incentive for employers to provide pensions because the personal benefit to high-income employers is reduced. This argument is most likely to be valid for the owners of successful small firms, where the owner may weigh
the amount that he or she can accumulate in a pension versus the cost of providing pensions to his or her employees. If this argument is valid, it may partly explain why pension coverage appears to be lower in the private sector in Canada.

In the United States since 1984, some higher income taxpayers have faced an implicit tax on their pension benefits in addition to the personal income tax. Up to 50 percent of social security benefits could be included in taxable income for persons with adjusted gross income plus certain nontaxable income above $25,000 for individuals and $32,000 for married couples. Under the 1993 Omnibus Budget Reconciliation Act, a two-tier tax liability was established, so that the taxable proportion of social security benefits for retirees with income in the second-tier range was increased to 85 percent. Thus, for some workers at the margin, increases in pension benefits are taxed at the worker’s marginal tax rate and cause the worker’s social security benefits to become taxable. Eighteen percent of families with social security benefits pay taxes on those benefits, but more than half of families in the eighth, ninth, and tenth deciles are taxed (Pattison 1994). The net result is that many higher income workers pay an implicit tax on pension benefits of 20 to 40 percent due to the taxation of their social security benefits.

**Housing as an Alternative Investment for High-Income Workers**

Housing ownership is taxed differently in the two countries (Porterba 1992). In Canada, mortgage interest is not tax deductible, but capital gains are not taxed. In the United States, mortgage interest is tax deductible, but capital gains are taxed when a person sells their residence and does not purchase a residence of equal or greater value. The tax liability is subject to a lifetime exclusion of $150,000. Since Canadians must pay the before-tax rate of interest on their mortgages, they can in effect receive the before-tax rate of return by paying down their mortgage. Thus, housing provides an alternative vehicle for investing at the before-tax rate of return. In the United States, home-owners in effect pay the after-tax rate of return on their mortgages because they can deduct their mortgage interest payments. Thus, it is relatively more favorable to finance housing with debt than equity in the United States, making pension investments relatively more favor-
able in the United States. This is especially true for high-income workers with high tax rates.

Two-thirds of Canadian elderly own their own homes and 86 percent of those have homes that are mortgage free (Chappell 1990). The comparable figure for the United States is 70 percent home ownership, 57 percent of which are mortgage free (Struyk, Turner, and Ueno 1988). Thus, it appears that the different tax treatment of mortgages causes elderly Americans to be much more likely to have one.

In sum, high-income workers in Canada face a greater tax incentive to invest in tax-sheltered assets than they do in the United States. However, the amount they can shelter through pensions is lower, and housing is relatively more favorable an equity investment in Canada.

**Implicit Taxes on Low-Income Workers**

In addition to explicit taxes, implicit taxes may also reduce the net receipt of pension benefits. For Canadians with low lifetime earnings, the income-tested component of the social security system discourages participation in an employer-sponsored pension plan. All Canadians aged 65 and over, independent of their work history, receive a flat-rate Old Age Security (OAS) benefit. As of January 1, 1994, these benefits were worth $3,472 per year. Canadians with no other source of income also receive income-tested benefits from the Guaranteed Income Supplement (GIS), worth a maximum of $4,127 per year. For each dollar of retirement income in excess of the flat rate OAS benefits, GIS benefits are reduced by 50 cents.

The maximum pension payable from the earnings-related component of Canada's public retirement system, the Canada Pension Plan (CPP) was $6,250 as of January 1, 1994. The maximum Canada Pension Plan benefit would be received by individuals whose lifetime earnings (in 1994 dollars) average $25,800 per year. Thus, an individual who receives the maximum CPP benefit would still qualify for partial GIS benefits if the individual had no other retirement income than the flat-rate OAS benefits. So, too, would individuals not entitled to the maximum CPP benefit.

The net result is that Canadians with low lifetime earnings face a 50 percent tax rate on private pension income during retirement, this rate being in addition to federal and provincial income taxes. These
public pension provisions, in effect since 1966, thus discourage low-income workers from participating in an employer-sponsored pension plan. A similar disincentive exists in the United States because of the income testing for eligibility for Supplemental Security Income, but that program only affects very low income workers.

**Individual Pension Plans**

The Canadian government has set contribution limits for defined-contribution plans—money-purchase plans and RRSPs—equivalent to the limits for defined-benefit plans. Also, the federal tax rules treat employer and employee contributions the same, regardless of the type of pension plan.

A primary objective of the Canadian tax treatment of pensions is to provide equitable tax assistance for retirement, regardless of whether a worker participates in a company-sponsored pension plan or in an individual account pension plan. In Canada, workers who set up a RRSP can access the same amount of tax assistance as do workers who participate in an employer-provided plan.

Registered Retirement Savings Plans also enjoy other advantages over IRAs. Since Canadian tax reform in 1990, failure to contribute to a RRSP by the deadline does not cause the deduction to be lost. Unused contribution amounts, subject to a seven-year limit, may be carried forward and deducted later when made. No such carry-forward provision exists for IRAs in the United States.

Participation in RRSPs has increased greatly in Canada. In 1970, 2 percent of the total population aged 18 to 70 contributed to a RRSP. By 1988, 25 percent of all tax filers contributed to a RRSP, with an average contribution of Can$3,545 (Venti and Wise 1995).

Since 1990, the tax treatment of RRSPs has meant there is no tax advantage to participating in an employer-provided plan since an equal amount could be contributed to either type of plan. This change should cause a reduction in pension coverage rates in Canada. However, a study of data prior to the change found no negative relationship between the amount of employer-provided pension assets held by an individual and their RRSP assets (Venti and Wise 1994). In 1987, for example, 37 percent of tax filers who contributed to a pension plan also...
contributed to a RRSP, versus only 16 percent of tax filers who did not contribute to a pension plan (Franken 1990).

In the United States, no attempt has been made to equalize the treatment between employer-sponsored plans and individual plans. Employers in the United States have a near monopoly in the provision of tax-favored pension benefits. Since 1981, the maximum an individual can deduct for contributions to an IRA has been frozen at $2,000. Inflation has reduced the real value of the tax deduction for IRAs by more than half since 1981.

Summary and Other Explanations

The higher marginal income tax rates in Canada would—other things equal—cause pension coverage rates to be roughly 5 to 7 percentage points higher in Canada than in the United States. This effect may be offset somewhat by higher social security tax rates in the United States. An explanation for relatively lower pension coverage rates at lower income levels in Canada is that the income-tested provisions of the Canadian social security system place an implicit tax of 50 percent on the pension benefits of workers with low lifetime earnings.

Other factors besides taxes affect pension coverage. While it is beyond the scope of this chapter to fully investigate other possible factors, several are mentioned that would cause pension coverage rates to be lower in Canada than in the United States. Social security is moderately more generous in Canada than it is in the United States, which would lower pension benefit levels and probably also pension coverage rates in Canada. The United States, through nondiscrimination rules, requires employers that offer pensions to offer them to most of their employees. This regulation is one way that public policy attempts to expand coverage. Canada has no such regulation.

In Canada, pension benefits are locked in after vesting, and workers cannot access them until retirement. In the United States, workers can often take a lump-sum distribution from their pension plan when they change jobs. Some U.S. policy analysts have argued that prohibiting preretirement lump-sum distributions would reduce pension coverage because it would reduce the flexibility that workers have to use those funds for various purposes. These locking-in provisions, which
are contained in provincial legislation, have been in effect in most provinces since only 1987.

THE GENEROSITY OF PENSION PLANS

While pension coverage measures one dimension of the extent to which pension plans are provided, the generosity of pension plans measures another. One measure of pension plan generosity is the level of pension benefits being paid to current retirees. The level of pension benefits, however, does not directly measure the generosity of pension benefit formulas because other factors also affect benefit levels. For example, if a pension system is immature, workers having participated in it for less than their full career, it will pay lower retirement benefits than an equally generous system that is fully mature. While it is not evident that the Canadian and U.S. pension systems differ in their maturity, such a difference could cause average benefits to differ.

Canadian private pension plans are slightly less generous than U.S private plans in the level of benefits they provide. Canadian pensions in the late 1980s provided slightly less and U.S. pensions provided slightly more than $6,000 in annual benefits (Dailey and Turner 1992).

Canada and the United States differ considerably in the maximum amount that a worker can save through the pension system. In Canada, the maximum percentage of earnings that a worker can save is lower and, as indicated earlier, the maximum earnings that can be used in determining pension benefits is much lower.

The maximum limit in Canada for contributions to a defined-contribution plan is 18 percent of worker earnings, based on the previous year’s earnings. In Canada, the maximum benefit for a defined-benefit plan is the lesser of $45,185 per year or 70 percent of the participant’s earnings in the three highest years.

Both the defined-contribution and defined-benefit limits are higher in the United States. The maximum contributions to a defined-contribution plan in 1997 are the lesser of 25 percent of earnings or $30,000 a year. For a defined-benefit plan, the maximum benefit is the lesser of $125,000 a year or 100 percent of the participant’s average compensation for his or her three highest earnings years. For high-income work-
ers, the maximum pension benefit in Canada is about half of that in the United States.

The lower maximum contributions and benefits, however, may be of little economic significance if few workers are constrained by the limits. The difference is most likely to be constraining for older workers and higher income workers who, because of the ceiling on social security benefits, are more likely to wish to save a relatively large fraction of their income for retirement.

If the 18 percent maximum is not a binding constraint, the higher marginal income tax rates in Canada would encourage middle income workers to save more in pensions than they do in the United States.

**EMPLOYER VERSUS EMPLOYEE CONTRIBUTIONS**

In Canada, a major tenet of pension policy is equal treatment of different options. This consideration has been considerably less important in the United States. One aspect of the policy of equal treatment is that employees in Canada can make tax-deductible contributions to both defined-benefit and defined-contribution plans. In the United States, employee contributions to defined-benefit plans and to most types of defined-contribution plans are not tax deductible.

In the United States, employee contributions are only tax deductible if made to a type of defined-contribution plan called a salary reduction plan. The most common type of salary reduction plan is the 401(k) plan.14 As a result of the tax rules, few employees contribute to pension plans other than 401(k) plans.

Even for 401(k) plans, however, employee contributions are taxed more heavily than employer contributions. Employee contributions are subject to the social security payroll tax, while employer contributions are not.15 Employee contributions are subject to the payroll tax on the grounds that to do otherwise would erode the payroll tax base, causing an increasingly small percentage of compensation to be subject to the payroll tax.

The feature permitting deductible employee contributions to 401(k) plans favors those plans relative to other types of plans, and they have grown considerably. Between 1984 and 1993, 401(k) plans
gained 15.6 million participants, while defined-benefit plans and all other types of defined-contribution plans lost participants (U.S. Department of Labor 1997).

Economic theory suggests that, due to compensating differentials, workers pay for employer contributions through reductions in wages and other compensation. While this theory has proven difficult to test empirically, some studies have found evidence supporting it (Montgomery, Shaw, and Bennedict 1992). If workers do pay for employer pension contributions through reduced wages, the distinction between employer and employee contributions is unimportant. Assuming labor markets adjust imperfectly, however, or workers have imperfect knowledge, there may be some effects. Benefits consultants frequently argue that workers undervalue employer pension contributions relative to their own contributions because they are less aware of, and thus tend to understate, the amount of employer contributions necessary to provide the benefits they will receive.

In spite of the argument that the distinction between employer and employee contributions is economically unimportant, provincial pension legislation throughout Canada, as well as pension legislation in the United States, treats employee contributions differently from employer contributions. In Canada, a universal provision in provincial pension regulation is that employer contributions must pay for at least 50 percent of the accrued value of defined-benefit pensions at the date of the employee’s termination, retirement, or death. Employee “excess” contributions may (depending upon the jurisdiction) be reimbursed, transferred, or used to increase benefits. To implement this provision, a minimum rate of interest is imputed to employee contributions, through regulation or statute.

Except for the flat benefit plans that predominate among unionized workers in the private sector, employees as well as employers contribute to most pension plans in Canada. Virtually all public sector plans are contributory, while about one-half of plan members in the private sector are in contributory plans.
DEFINED-BENEFIT VERSUS DEFINED-CONTRIBUTION PLANS

In the United States, there has been a major shift from defined-benefit plans towards defined-contribution plans. While the number of participants in defined-benefit plans was slightly lower in 1993 than in 1984, the number of participants in defined-contribution plans grew by 11 million over that period due to the growth of 401(k) plans (U.S. Department of Labor 1997). In Canada, there has also been a trend towards defined-contribution plans, but that trend has been much weaker. Between 1982 and 1995, for example, the percentage of pension participants who belonged to money-purchase plans rose from 5.3 percent to 10.0 percent, while the percentage who belonged to defined-benefit plans declined from 93.7 to 88.6 percent.16 This section examines the extent to which differences in tax policy can account for the much more pronounced trend towards defined-contribution plans in the United States.

Tax reform in Canada, implemented in 1990, seeks to "level the playing field" with regard to the tax assistance provided to pension saving in different types of plans. The maximum amount of tax assistance provided to members of employer-sponsored defined-benefit and defined-contribution plans, as well as to individual RRSPs, is intended to be equal. Further, through the introduction of new carry-forward provisions, individuals are provided with greater flexibility in the timing of RRSP contributions. These provisions were enacted because firms who sponsor defined-benefit plans can make retroactive enrichments in their plans.

In Canada, the 18 percent maximum allowable contribution to a defined-contribution plan was chosen because it is roughly equivalent to the defined-benefit limit. The defined-benefit limit is 2 percent of final earnings per year of service, with a maximum of 70 percent of highest earnings (Wyatt Company 1990).

In the United States, the defined-benefit limit does not vary with years of service, as it does in Canada. The maximum benefit that can be received from a defined-contribution plan, in both Canada and the United States, necessarily increases with service because the maximum benefit is based on the accumulation of contributions and investment
earnings over time. Because the U.S. limit does not vary with service, short-service workers in the United States can receive higher benefits through a defined-benefit plan than through a defined-contribution plan. For long-service workers, the situation is the reverse.

Within its lower contribution limits, Canada allows individuals greater flexibility in the timing of their contributions. In Canada, an individual's unused contribution allowance in each year is carried forward indefinitely for use in subsequent years, subject to certain dollar limits. Similarly, contributions not deductible in the year in which they are paid may be deducted in subsequent years.

This flexibility for defined-contribution plans was introduced to bring them on equal footing with the flexibility that is available to employers for contributions to defined-benefit plans. This flexibility occurs, however, at the cost of increased complexity of administration of pension plans.

In the United States, contributions not deductible in the year paid are subject to a 10 percent excise tax. Before 1987, a credit carry-forward was available when an employer's contributions to a profit-sharing plan were less than the maximum allowed (McGill and Grubbs 1989, p. 652). That carryforward is no longer available. Flexibility is provided, however, by the higher limit on contributions, so it is not clear which system effectively provides the greater flexibility.

As indicated earlier, in the United States, employee contributions are only tax deductible for defined-contribution plans and then only for contributions to 401(k) plans. This feature of the tax code may favor defined-contribution plans. In Canada, employee contributions are tax deductible to defined-benefit plans.

The Tax Benefit of Overfunding Defined Benefit-Plans

In assessing the reasons why employers might prefer to sponsor defined-benefit plans rather than defined-contribution plans, financial economists (Tepper 1981) have drawn attention to the tax advantages to shareholders of overfunding such plans. In the United States, the Omnibus Reconciliation Act of 1987 (OBRA) reduced the desirability of defined-benefit plans relative to defined-contribution plans by reducing the amount that could be contributed to overfunded defined-benefit plans (Ippolito 1990).
Under the OBRA rules, employer contributions are not tax deductible if the plan is overfunded by 50 percent on a termination basis. This reduces the flexibility firms have in managing defined-benefit plans, and it reduces the amount that can be sheltered from tax. Termination liabilities are calculated as if the plan were to terminate immediately. For plans with a typical age structure of workers, these liabilities are considerably less than the liabilities calculated assuming that the plan will continue in existence. Those liabilities for ongoing plans recognize that currently accruing benefits are based on future wages, in final average pay plans. Under the OBRA rules, many defined-benefit plans cannot contribute sufficient amounts to a pension plan to cover the current accrual of liabilities. This creates a tax disadvantage for defined benefit plans because, by comparison, in defined contribution plans firms can contribute an amount equal to the full current accrual of liabilities.

In Canada, too, the tax authorities seek to limit the amount of overfunding in defined-benefit plans. However, the restrictions are less onerous than those now in effect in the United States. In Canada, employer contributions are tax deductible so long as the surplus in the plan is no more than 10 percent of actual plan liabilities or twice the annual value of current service contributions. However, the plan’s liabilities are not valued on a termination basis for the purpose of this calculation. Indeed, if the plan has a history of cost-of-living or similar adjustments, these may be taken into account in determining the plan’s liability if it is reasonable to assume that such adjustments will continue. These adjustments would include ad hoc increases for pensioners and increases in accrued benefits under career average earnings plans and flat benefit plans. In Canada, a potentially more important constraint on the extent of overfunding is the uncertainty that may exist as to the ownership of surplus assets.

Summary

In Canada, an effort has been made to equalize the treatment of defined-benefit and defined-contribution plans. As a result, employee contributions are tax deductible for both defined-benefit and defined-contribution plans, while they are only tax deductible to (one type of) defined-contribution plans in the United States. Defined-benefit plans
also receive more favorable tax treatment in Canada than in the United States in terms of allowable maximum funding. Greater flexibility is allowed for contributions to defined-contribution plans in Canada than in the United States, in order to try to equalize the degree of flexibility that employers and employees have to contribute to both types of plans. On balance, tax policy in Canada is relatively more favorable to defined-benefit plans than it is in the United States.

CONCLUSIONS

Major differences in the tax treatment of pensions in the United States and Canada may help explain differences in the pension systems in the two countries. They may account for differences in pension coverage and the prevalence of defined-benefit plans relative to defined-contribution plans.

In Canada, high marginal tax rates on income at upper income levels suggest that pension coverage should be higher among upper income workers in Canada than it is in the United States. However, the maximum benefit that an upper income worker can receive in Canada is much less than in the United States.

The high effective tax rates on private pension incomes of low-income retirees due to the earnings-testing of retirement benefits in Canada suggest that coverage rates should be lower in Canada than they are in the United States for low-income individuals.

Tax reform in Canada in 1990 sought to “level the playing field” with regard to the tax assistance provided pension savings. In particular, and unlike the United States, the self-employed and those not covered by an employer-provided pension plan are—through the vehicle of the Registered Retirement Savings Plan—provided with more equal access to tax assistance.

Employee contributions to occupational pension plans in Canada are tax deductible, unlike the case for employee contributions to defined-benefit plans in the United States. In both countries, employee contributions are treated differently by pension law than are employer contributions. This fact, in turn, focuses attention on the issue of the ultimate incidence of employer contributions. Implicit in pension law
in Canada appears to be the assumption that the ultimate incidence of employer contributions does not fall upon employees.

Defined-benefit plans receive more favorable tax treatment in Canada than they do in the United States. In Canada, the tax treatment of defined-benefit plans is also more favorable relative to the tax treatment of defined-contribution plans. The move towards defined-benefit plans has been much weaker in Canada.

While assessment of the magnitude of the effects of these differences in tax policy is difficult, in part because the tax treatment of pensions differs in a number of ways, we believe that important insights concerning the possible range of the parameters of pension tax policy can be gained by comparing Canada and the United States.

Notes

The material in this chapter is the responsibility of the authors and does not represent the position of the institutions with which they are associated. Patricia Reagan has made valuable comments.

1. This study used the 1988 purchasing power parity of Can$1 equals U.S.$0.80. We use the slightly lower value of U.S.$0.72 for making comparisons.
2. The lower average Social Security benefits in the United States may arise in part because more older Americans are working and not receiving Social Security benefits.
3. It is difficult to determine a precise estimate of the private sector unionization rate in Canada because of difficulties in measuring the private sector workforce, a topic that is discussed later.
4. Such financing is allowed in Germany and Japan by simply recording the liability for the pension plan on the company's financial books.
5. In the United States, premium payments to the Pension Benefit Guaranty Corporation are based on the unfunded liabilities of pension plans. This is also true for the Guarantee Fund in Ontario. We are not considering these levies as taxes.
6. For a more complete discussion of taxation of pensions in Canada, see Jobin et al. (1991).
7. Generally, a tax policy affecting a workers' decisions distorts economic activity from what it would have been without taxes. However, in a system with multiple taxes, one aspect of taxation may correct distortions introduced by another aspect. The optimality of pension tax policy in terms of creating or correcting distortions is not discussed here (Ippolito 1990).
8. We thus do not discuss, for example, the effects of taxation of pensions on income distribution, government revenues, or the capital market.
9. The higher marginal personal income taxes in Canada are reflected in personal income taxes being about 25 percent larger as a percentage of GNP in Canada than they are in the United States (Wilson 1992).

10. The marginal effect is probably lower at higher tax rates. See also Woodbury (1983), Woodbury and Bettinger (1991), and Woodbury and Huang (1991).

11. An explanation for the more favorable tax treatment for pensions of high-income workers in the United States may be that with its higher income inequality, there are relatively more high-income workers in the United States, and they therefore presumably have more political power.

12. This issue has important implications, as well, for public policy. In Canada, the fact that pension coverage is far from universal is often cited by critics as proof of the inadequacy of the private pensions system and the need, therefore, to expand the public pension system or to mandate private pension coverage. (In 1990, 49.6 percent of males and 33.1 percent of females who participated in the labor force belonged to an occupational pension plan. [Statistics Canada 1990, Text Table D, page 8].) However, the absence of universal coverage is perhaps best seen as a statement about workers’ revealed preferences rather than as a “failure” of the private pension system.

The introduction of a mandatory private pension plan, inclusive of part-time as well as full-time workers, is likely to reduce the lifetime resources available to those with low lifetime earnings. The incidence of employer contributions to a mandatory private pension plan (if it is not retroactive) is likely to fall ultimately on the employee. Workers, including those with low lifetime earnings, will be required to allocate a larger fraction of their lifetime earnings to provide for their retirement years. On one hand, this will gradually reduce the likelihood of future claims on income-tested programs such as GIS. On the other hand, by forcing persons with low lifetime earnings to provide a larger share of their own retirement incomes, this proposal may redistribute income away from those with low lifetime earnings.

In this context, two facts merit note. First, persons whose current earnings are low are less likely to be members of occupational pension plans. To the extent that current earnings are positively correlated with lifetime earnings, this fact suggests that those with low lifetime earnings are less likely to be covered by an occupational pension plan. Second, Canadians with low current incomes generally choose not to contribute to RRSPs. Given the low value to them of the tax subsidy associated with RRSP contributions together with the likelihood that they would be substituting their own savings for retirement for benefits available from income-tested public programs, this decision is probably rational.

13. The amount is $2,500 for a worker whose spouse does not also contribute to an IRA.

14. These plans are named after the enabling section of the Internal Revenue Code.

15. Because both tax payments and future benefits are increased by increases in earnings, for some workers the payroll tax may not be a tax when viewed in a lifecycle setting (Burkhauser and Turner 1985).

16. These figures do not add to 100 percent due to the presence of “composite and other plans.”
References


