Pensions and retirement savings of families

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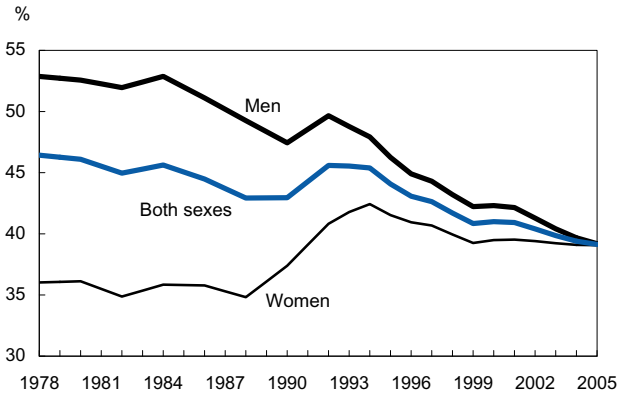
Are Canadian families better prepared for retirement today than in the past? Since the late 1970s, the proportion of employees covered by a registered pension plan (RPP) has dropped (Chart A)—the decline in coverage by defined-benefit RPPs more than offsetting growth in coverage by defined-contribution plans. Over the 1978 to 2005 period, male employees saw their RPP coverage decrease by almost 15 percentage points while female employees enjoyed little growth in coverage. However, the stagnation for women masks two opposing trends. Between the mid-1980s and the mid-1990s, RPP coverage fell slightly among women aged 25 to 34 but rose among those aged 35 to 54 (Morissette and Drolet 2001).

However, the individual-level data cannot be used to assess whether families are better prepared for retirement now than in the past. That depends, among other things, on changes in the degree to which men and women with high earnings and good RPP coverage marry each other. For instance, the share of couples with at least one RPP might not have fallen over the last two decades if some men who experienced a drop in RPP coverage married women who experienced the opposite.

This notion is more than a remote possibility. Decades ago, women married to high-income men typically did not work outside the home, while those married to lower-income men often did so to alleviate very tight family budgets.

In the 1970s, women married to higher income men increasingly began to enter the labour market. Since most of them were highly educated and since highly educated workers generally have relatively good pension coverage, the entry of these women into the labour market may have increased RPP coverage among wives of high-income males. This in turn may have partly offset the decline in pension coverage experienced by some higher-income men.

Chart A Pension coverage of men and women has converged



Source: Statistics Canada, Pension Plans in Canada

While changes in women's labour market participation may have affected the degree to which families prepare for retirement, changes in the distribution of family earnings likely played an important role as well. Since the early 1980s, family earnings inequality rose in Canada, as families at the top of the earnings distribution enjoyed much greater increases in employment income than those at the bottom (Frenette, Green and Picot 2006). In the absence of behavioural changes in savings rates, these changes in the distribution of family employment income likely changed the distribution of retirement savings.

This paper documents the evolution of pension coverage and retirement savings of families between 1986 and 2004 (see *Data sources and definitions*).

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Table 1 Pension coverage of men and women

	Employees with an RPP[1]				Taxfilers contributing to an RPP[2]			
	Men		Women		Men		Women	
	25 to 34	35 to 54	25 to 34	35 to 54	25 to 34	35 to 54	25 to 34	35 to 54
	%							
1984	54.2	69.3	46.7	45.7	..	..	..	..
1986	49.8	66.8	43.4	46.9	27.7	41.5	28.4	33.4
1987	48.6	67.1	41.9	46.5	27.1	40.7	28.1	33.8
1988	49.2	67.0	42.9	49.8	27.0	40.6	28.6	35.5
1989	50.2	68.0	43.7	50.1	26.2	39.9	28.2	36.1
1990	48.5	67.6	43.8	50.2	26.0	39.7	28.6	36.8
1991	..	..	..	..	25.5	39.2	28.7	37.6
1992	..	..	..	..	25.3	39.1	29.3	38.6
1993	46.6	68.2	46.3	52.3	24.8	39.1	29.0	39.0
1994	47.0	70.2	46.0	55.0	23.6	38.2	28.2	39.0
1995	42.6	67.6	40.9	52.9	22.7	37.5	27.4	38.9
1996	43.1	63.8	41.2	52.2	21.7	36.7	26.3	38.6
1997	42.0	63.0	41.0	51.9	21.1	35.9	25.2	37.6
1998	40.5	60.8	39.7	51.7	20.7	34.8	25.0	36.8
1999	43.2	64.1	42.0	53.1	19.7	33.0	24.7	35.8
2000	48.2	63.6	45.6	55.7	19.5	32.1	25.2	35.7
2001	48.2	62.8	44.8	55.6	19.5	31.5	25.4	35.6
2002	45.0	58.2	44.0	50.8	19.9	31.3	26.2	35.9
2003	45.1	60.3	45.5	54.9	21.1	32.8	28.3	38.1
2004	45.4	59.1	42.4	54.8	21.4	32.8	28.8	38.3

1 Main job held by paid workers in May (LMAS and SLID) or December (SUM).
2 Taxfilers with annual wages and salaries of at least $1,000 (1994 dollars).
Sources: Statistics Canada, Survey of Union Membership, 1984; Labour Market Activity Survey, 1986 to 1990; Survey of Labour and Income Dynamics, 1993 to 2004; Longitudinal Administrative Databank, 1986 to 2004

Declining RPP coverage for men

Trends since the mid-1980s

Over the 1984 to 2004 period, LMAS and SLID indicate that, between 1986 and 1997, the percentage of employees covered by an RPP fell significantly among young men (aged 25 to 34) and prime-aged men (35 to 54), dropped slightly among young women and rose among prime-aged women (Table 1). Similar qualitative patterns are found with LAD, based on the percentage of tax filers contributing to an RPP.[3]

Both SLID and LAD suggest that pension coverage of prime-aged men fell and that pension coverage of young women rose between 1997 and 2004. However, SLID paints a more optimistic picture for young men and prime-aged women. It suggests that RPP coverage rose slightly for these two groups, while LAD indicates it remained virtually unchanged.

The divergence appears to arise because the SLID question used to measure pension coverage was more inclusive in 2000 than in 1998. This would explain why pension coverage of women aged 35 to 54 rose fully 4 percentage points between 1998 and 2000 (using SLID) while the percentage of female tax filers contributing to an RPP fell by one percentage point (using LAD). Changes in SLID question wording appear to have generated other spurious changes in pension coverage. Among prime-aged men and women, pension coverage fell by roughly 5 percentage points between 2001 and 2002 and then rose between 2002 and 2003. In contrast, LAD indicates a fairly stable percentage between 2001 and 2003 (Table 2). The combined results suggest that analyzing trends in RPP coverage with SLID is problematic after 1998. The remainder of this paper relies on LAD or PPIC to make inferences on RPP coverage for the 1998 to 2004 period.

Nevertheless, it is clear that, between 1986 and 2004, RPP coverage fell for young men and prime-aged men, changed little for young women (falling between 1986 and 1997 and then rising between 1997 and 2004), and rose for prime-aged women.

Table 2 Taxfilers[1] with a positive pension adjustment

	Men		Women	
	25 to 34	35 to 54	25 to 34	35 to 54
	%			
1991	37.8	54.7	35.5	43.8
1996	32.9	51.5	33.4	46.0
2001	32.7	47.9	34.4	45.7
2002	32.3	46.6	34.6	45.2
2003	33.0	47.0	36.1	46.3
2004	32.7	46.3	36.2	46.2

1 Annual earnings of at least $1,000 (1994 dollars).
Source: Statistics Canada, Longitudinal Administrative Databank

Regardless of the measure used, the proportion of men with an RPP fell for the married and unmarried (Table 3). For instance, 34% of married men aged 35 to 54 contributed to an RPP in 2004, compared with 43% in 1986. In contrast, RPP coverage dropped slightly among unmarried women but rose substantially among the married. In 2004, 38% of married women aged 35 to 54 contributed to an RPP, up from 31% in 1986. As a result, the mid-1980s gap in pension coverage between the two (with unmarried women being covered by a pension plan much more often than married women in 1986) had completely disappeared by 2004.

The growth in the incidence of RPPs among prime-aged married women likely reflects both increased labour force participation and their RPP coverage. It suggests that focusing solely on the decline in the proportion of husbands with an RPP may lead one to overestimate the decline in the percentage of couples with at least one RPP.

Cross-cohort convergence for women

One important issue is whether the drop in RPP coverage of young men led to a downward shift in their age-coverage profile. In other words, has the decline in their RPP coverage upon entering the labour force been fully offset by relatively fast growth in coverage in subsequent years?

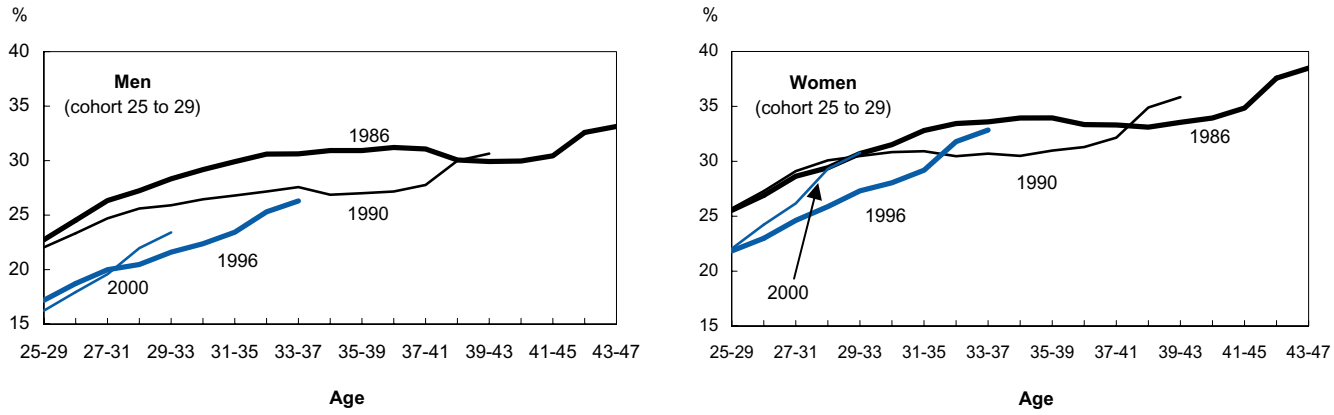
To investigate this question, four cohorts of young men and women, from 1986, 1990, 1996 and 2000 were examined to see what percentage contributed to an RPP between 1986 and 2004 (cohort aged 25 to 29 in 1986), 1990 and 2004 (the 1990 cohort), 1996 and 2004 (the 1996 cohort), and 2000 and 2004 (the 2000 cohort).

Table 3 Taxfilers[1] with an RPP, by age, sex and marital status

	Men				Women			
	25 to 34		35 to 54		25 to 34		35 to 54	
	Unmarried	Married[2]	Unmarried	Married[2]	Unmarried	Married[2]	Unmarried	Married[2]
				%				
Contributing to RPP								
1986	21.5	31.4	35.9	42.8	29.0	28.0	41.5	30.7
1991	20.8	28.7	33.9	40.5	28.0	29.1	42.4	36.0
1996	16.9	25.0	31.8	37.9	23.0	28.0	41.2	37.7
2001	16.3	21.9	27.9	32.5	23.0	26.9	36.4	35.3
2004	17.9	24.0	29.3	33.9	25.8	30.7	38.4	38.3
With positive pension adjustment								
1991	30.7	42.6	46.6	56.6	34.4	36.1	49.2	42.0
1996	26.2	37.4	44.4	53.3	29.7	35.3	48.7	45.0
2001	27.9	36.2	42.2	49.6	31.6	36.1	46.4	45.4
2004	28.0	36.2	41.4	47.7	32.7	38.3	46.5	46.1

1 Annual earnings of at least $1,000 (1994 dollars)
2 Includes common-law relationships
Source: Statistics Canada, Longitudinal Administrative Databank

Chart B Pension coverage has declined for all new labour force entrants, and for men the gap persists



Source: Statistics Canada, Longitudinal Administrative Databank

The 1996 cohort of young men entered the labour market with a 5 percentage-point lower RPP coverage than the 1986 cohort (Chart B). Eight years later, a gap of about 4 percentage points was still observed. Thus, the decline in RPP coverage experienced by the 1996 cohort of young men at entry (compared with the 1986 cohort) was not fully offset by relatively fast growth in coverage in subsequent years. A different story emerges for young women. While fewer members of the 1996 cohort contributed to an RPP when they entered the labour market (compared with the 1986 cohort), the incidence of RPP contributions almost fully converged during the subsequent eight years. (Part of the convergence observed in the last few years may have reflected the fairly rapid growth in coverage observed for all cohorts between 2002 and 2004.)

Why did RPP coverage fall?

Analysts have put forward a number of explanations to account for the decline in RPP coverage over the last two decades. First, increases in competition—from abroad or within industries—may have induced existing firms to cut labour costs by terminating some pension plans. New firms entering a market may also have avoided offering plans to maximize their chances of survival during their first few years of operation. Second, increases in employers' contributions to CPP/QPP may have played a role (Frenken 1996). Third, any increase in administrative costs (like an increase in hourly fees for actuarial services in defined-benefit plans) may have reduced the incentive to provide RPPs and led firms either to move to group RRSPs or to offer no retirement plans at all. Fourth, legislative changes introduced during the 1980s and early 1990s regarding vesting, locking in and cost sharing may have increased the costs of providing pension plans. (Many pension experts also cite court decisions that forced sponsors to share fund surpluses with beneficiaries.) Fifth, holding employees' rates of contributions and rates of return in financial markets constant, increases in workers' life expectancy made defined-benefit plans more costly for employers. Sixth, in recent years, low long-term interest rates have also increased the costs of offering defined-benefit RPPs. Seventh, it has sometimes been argued that employers have responded to the (assumed) greater 'tastes for mobility' of today's workers by offering alternative non-wage benefits, like group RRSPs, rather than conventional defined-benefit RPPs.

Two additional explanations are possible for RPP coverage decline since the mid-1980s. Employment moved towards low-coverage industries, and unionized jobs (many of which offer RPPs) became relatively less important as Canada's unionization rate fell (Morissette and Drolet 2001). Using the 1986 LMAS

Data sources and definitions

Pension Plans in Canada (PPIC) data come from the federal and provincial pension supervisory authorities. All pension plans registered with these authorities are included in the database. While PPIC provides a wealth of information on each pension plan (for example, employee contribution formula, benefit formula, and indexing of defined benefits and defined contribution benefits), as well as on the sex and province of residence of RPP members, it lacks information on important worker and job characteristics such as age, education, occupation, union status and firm size. As a result, it cannot be used to calculate coverage rates for workers of, say, different ages.

The Survey of Union Membership of 1984 (SUM), the Labour Market Activity Surveys of 1986-1990 (LMAS), and the Survey of Labour and Income Dynamics of 1993-2004 (SLID) combine information on RPP coverage, worker attributes and job characteristics.

One limitation of these household surveys is that the questions used to measure pension coverage change somewhat over time, thereby making inferences about the evolution of RPP coverage difficult for some groups, especially after 1998.

The Longitudinal Administrative Databank (LAD) of Statistics Canada overcomes this limitation. It provides two consistent measures of RPP coverage throughout the 1986 to 2004 period. Along with the household surveys, LAD can provide pension coverage for different age-sex categories. However, because it is based on tax records, it cannot be used to analyze RPP coverage by education, occupation, union status or industry.

All these data sets can be used to document trends in RPP coverage at the individual level. However, PPIC, SUM and LMAS do not contain family identifiers, so they cannot be used to document trends at the family level. With its large sample size, LAD allows an examination of the evolution of pension coverage of couples, lone-parents and unattached individuals over the 1986 to 2004 period.

Between 1984 and 1998, SUM, LMAS and SLID measured pension plan coverage by asking employees:

"Are you covered by a pension plan connected with this job (do not count, CPP/QPP, deferred profit-sharing plans or personal savings plans for retirement)?"

In 1999, 2000 and 2001, the question in SLID was changed to:

"In your job with this employer, did you have an employer pension plan?"

Additional questions were asked to assess whether respondents contributed to their pension plans, participated in a group RRSP or had their employer contribute to their group RRSP.

In 2002, the SLID question was changed once more:

"In your job with this employer, did you have an employer pension plan *not* including a group RRSP?"

The additional questions regarding employees' contributions to their pension plans, participation in a group RRSP and employers' contributions to a group RRSP remained intact. Then, in 2003 and 2004, SLID went back to the wording used from 1999 to 2001. The questions regarding employees' contributions to their pension plans and employers' contributions to a group RRSP remained unchanged while the question regarding employees' participation in a group RRSP was modified.

These changes in wording may have affected the trends in pension coverage that one can derive from SLID. Because the third version explicitly excludes group RRSPs while the second does not do so, some respondents interviewed in 1999 to 2001 or 2003 to 2004 may have reported their participation in a group RRSP. If so, pension coverage, as measured in SLID, should artificially drop between 2001 and 2002 and then increase between 2002 and 2003. Indeed, this spurious U-shaped pattern is observed for men and women aged 35 to 54.

LAD provides the percentage of tax filers participating in a contributory RPP and the percentage of tax filers with a positive pension adjustment and thus, most likely an RPP.[1] The first measure, which covers roughly three-quarters of all RPP members, is available back to 1986. The second is available only back to 1991. These two measures allow a comparison of trends in pension coverage at the individual level with those derived from LMAS and SLID.

LAD contains information on individuals' contributions to both RPPs and to registered retirement savings plan (RRSPs).[2] Using these two variables, it is possible to assess whether retirement savings of individuals and families have grown since the mid-1980s. Since these two variables do not reflect employers' contributions to RPPs, they provide only a partial assessment of Canadians' preparedness for retirement. Employer contributions to RPPs are captured through the pension adjustment variable.

and 1997 SLID and performing Oaxaca-Blinder decompositions on age/sex-specific models show that these two factors can account for at least three-quarters of the decline in RPP coverage for men and young women between 1986 and 1997. More precisely, the decline in unionization can account for at least 40% of the decline in RPP coverage for these groups.

To provide additional evidence on the importance of inter-industry employment shifts and de-unionization in RPP coverage decline, microdata from the 1986 LMAS and 1997 SLID can be pooled to estimate individual-level regressions (where controls for industry or union status are added to a constant term and a binary indicator that equals 1 for 1997 data, 0 other-

wise) (Table 4). Models with no controls (including only a constant term and the aforementioned binary indicator) indicate that RPP coverage of men aged 25 to 54 fell by 5.3 percentage points during the 1986 to 1997 period. Adding a control for (2-digit) industry reduces this decline to 2.2 points while adding a control variable for union status reduces it even more to 1.5 percentage points. When both controls are added, the decline almost vanishes, suggesting—as did Morissette and Drolet 2001—that employment shifts toward low-coverage industries and de-unionization accounted for a large share of the drop in men's RPP coverage.[4] Similar qualitative conclusions hold when findings for men and women are combined.

Arguably, the decline in unionization occurred in conjunction with several potential confounders: increases in competition between firms, increases in workers' life expectancy, increases in employers' contributions to CPP/QPP and legislative changes. Since the individual-level regressions do not control for these potential confounders, they might overestimate the impact of de-unionization. One extreme view is that de-unionization might simply be a proxy for unmeasured factors that reduced RPP coverage uniformly in all industries. While increases in competition between firms might have differed across industries, it is reasonable to assume that increases in workers' life expectancy, increases in employers' contributions to CPP/QPP and legislative changes tended to affect RPP coverage to the same degree in all industries.

Under this assumption, the hypothesis that de-unionization is simply a proxy for unmeasured factors that reduced RPP coverage uniformly in all industries can be tested using the following equation:

$$(1)\quad Y_{jt} = a_j + \beta U_{jt} + \alpha_t + \varepsilon_{jt}$$

where a_j is an industry-specific fixed effect, Y_{jt} and U_{jt} denote the percentage of workers covered by an RPP and the percentage of unionized workers in industry j in year t, respectively, and ε_{jt} is an error term. The term α_t captures the influence of unmeasured factors that influence RPP coverage in an undifferentiated manner in all industries. First-differencing the equation leads to the following model:

$$(2)\quad \Delta Y_j = \beta \Delta U_j + \alpha' + \Delta \varepsilon_j$$

where changes in industry-level RPP coverage over the 1986 to 1997 period, ΔY_j, are related to changes in the unionization rate in various industries, ΔU_j, and where $\alpha' \equiv \alpha \bullet 11$. If de-unionization is simply a proxy for unmeasured factors that reduced RPP coverage uniformly in all industries, then β should equal zero when estimating equation (2).

Conversely, if de-unionization reduced RPP coverage, industries that experienced declines in unionization should also have experienced declines in RPP coverage. Under this second scenario, β would be positive.

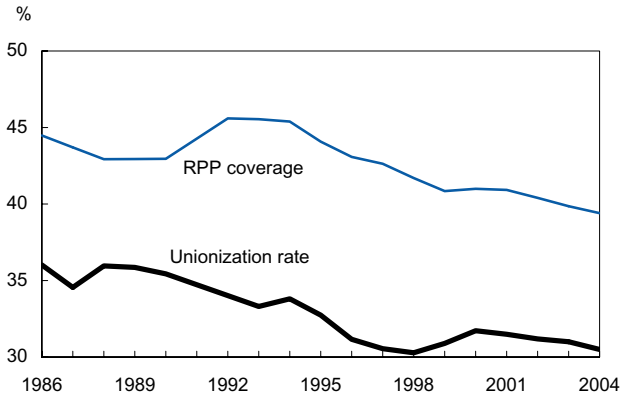
The numbers strongly support the notion that de-unionization tended to reduce RPP coverage. Whichever samples are used, equation (2) βs range between 0.39 and 0.75, suggesting that industries that experienced an extra 10 percentage-point decline in unionization also experienced at least an extra 4-point decline in RPP coverage. Furthermore, these estimates of the impact of de-unionization are very similar to those from individual-level regressions—between 0.35 and 0.51. Therefore, unless industries that experienced sharp declines in unionization also experienced strong increases in competition, the numbers suggest that de-unionization had a sizeable impact on workers' RPP coverage during the 1986 to 1997 period.

Table 4 Unionization and RPP coverage, 1986 to 1997

	Both sexes	Men	Women
		% point	
Individual-level regressions[1]			
No controls	-2.5	-5.3	1.3
Industry	0.0	-2.2	2.9
Union status	0.3	-1.5	2.7
β value	(0.48)	(0.44)	(0.51)
Industry and union status	1.5	-0.1	3.4
β value	(0.39)	(0.35)	(0.42)
Industry-level regressions[2]			
Weighted, β value	(0.56)	(0.39)	(0.75)
Unweighted, β value	(0.45)	(0.60)	(0.56)

1 Paid workers aged 25 to 54 and employed in their main job in December 1986 or December 1997.
2 The dependent variable is the change in the percentage of workers covered by an RPP in a given industry over the 1986 to 1997 period.
Note: In both regressions, the union status variable is statistically significant at the 5% level (two-tailed test).
Sources: Statistics Canada, Labour Market Activity Survey, 1986; Survey of Labour and Income Dynamics, 1997; authors' calculations

Chart C The influence of unionization on RPP coverage has waned



Sources: Statistics Canada, Pension Plan in Canada; Labour Market Activity Survey, 1986 to 1990; Survey of Labour and Income Dynamics, 1993 to 2004

The influence of unionization on RPP coverage is likely to have waned after 1997, since RPP coverage kept falling, even though the unionization rate changed very little between 1998 and 2004 (Chart C). In contrast, employment shifts toward low-coverage industries appear to have persisted. This can be seen by applying the 2004 distribution of employment by industry (4-digit NAICS codes) to the 1997 vector of industry-specific values of RPP coverage (obtained from SLID 1997): RPP coverage in the aggregate drops by roughly 1.5 percentage points from 1997 values.[5] Since PPIC data suggest that RPP coverage fell by about 3 percentage points between 1998 and 2005 (Table 5), inter-industry employment shifts seem to have been an important contributor both during the 1986 to 1997 period and subsequently.

Why did RPP coverage fall since the mid-1980s? This was likely in response to a wide variety of factors. Since the impact of some factors—for example, growing competition between firms and increases in workers' life expectancy—is difficult to quantify, a complete decomposition of the sources is virtually impossible. Nevertheless, evidence strongly suggests that both de-unionization and employment shifts toward low-coverage sectors played important roles. And, while the decline in RPP coverage since the mid-1980s likely reflects a wide variety of factors, the influence of some—such as, unionization and low long-term interest rates—has clearly changed over time.

Modest decline in family RPP coverage

The proportion of families with at least one RPP depends on the proportion of RPP holders among men and women of working age as well as the degree to which those with an RPP marry each other. The proportion of RPP holders in year t is given by the equation:

$$(3)\ RPP_t/POP_t = [RPP_t/L_t] * [L_t/LF_t] * [LF_t/POP_t]$$

where RPP_t, L_t, LF_t and POP_t all refer to individuals aged 15 and over and denote the number of RPP members, the number of employees (including incorporated self-employed individuals), the labour force and the working-age population, respectively.[6] Clearly,

Table 5 Individuals with an RPP[1]

	Men				Women			
	RPP/L	L/LF	LF/POP	RPP/POP	RPP/L	L/LF	LF/POP	RPP/POP
	%							
1978	52.9	83.0	77.6	34.1	36.0	83.5	46.5	14.0
1984	52.9	77.9	76.9	31.6	35.8	81.2	53.0	15.4
1988	49.3	81.6	76.8	30.9	34.8	83.6	56.5	16.4
1994	47.9	77.4	73.3	27.2	42.4	81.3	57.7	19.9
1998	43.2	79.4	72.2	24.8	39.9	81.8	57.8	18.9
2003	40.4	81.9	73.0	24.2	39.2	85.0	60.9	20.3
2005	39.2	82.5	73.2	23.7	39.1	85.7	62.0	20.8

1 Individuals 15 and over.
Sources: Statistics Canada, Labour Force Survey; Pension Plans in Canada

the proportion of RPP holders among individuals of working age depends on three factors: the RPP coverage of employees [RPP_t/L_t], the proportion of employees among labour market participants [L_t/LF_t], and the participation rate [LF_t/POP_t]. Thus, a decline in pension coverage of employees does not necessarily lead to a decrease in the proportion of individuals with an RPP. For instance, the proportion of women with an RPP could increase over time if increases in women's participation rates more than offset any decrease in their pension coverage.

The decline in men's RPP coverage between 1978 and 2005, combined with a slight decrease in their participation rates, led to a 10 percentage-point decline in the proportion of men with an RPP. In contrast, the percentage of women with an RPP rose, the result of a strong increase in labour market involvement and a slight increase in RPP coverage. In 2005, 21% of women of working age had an RPP, compared with only 14% in 1978. The growing incidence of RPPs among women almost fully offset the decline in the proportion of men with an RPP. As a result, the overall percentage of those with an RPP changed very little, from 24% in 1978 to 22% in 2005. Dividing RPP_t by the number of individuals aged 15 to 64 yields corresponding estimates of 27% and 26% for 1978 and 2005, respectively (data not shown). Taken together, these numbers suggest that the percentage of couples with at least one RPP may not have changed much over the last two decades.

About one half of young couples and almost two-thirds of prime-aged couples had at least one RPP in 2004 (Table 6). More importantly, couples did not experience a massive decline in pension coverage over the last two decades. While the percentage of couples with at least one RPP did fall, the drop was moderate—only 3 to 5 percentage points.

This was the case because the growth in the proportion of wives with an RPP helped mitigate a substantial decline in the proportion of husbands with an RPP. For instance, RPP membership among husbands aged 35 to 54 fell substantially, from 56.7% in 1991 to 47.7% in 2004. In contrast, participation in an RPP rose by over 5 percentage points among their wives. Part of the increase benefited couples in which both partners had an RPP (0.8 percentage point). The net result was that the proportion of prime-aged couples with at least one RPP fell less than 5 percentage points (from 66.5% to 61.9%), about half the 9-point decline for prime-aged husbands with an RPP. The growing proportion of wives with an RPP also constrained the decline in RPP coverage among young couples.[7]

Table 6 Couples[1] with RPPs

	Husband[2] 25 to 34				Husband[2] 35 to 54			
	None	Husband only	Wife only	Both	None	Husband only	Wife only	Both
	%							
Contributing to RPP								
1986	57.9	23.2	10.7	8.2	48.5	31.6	8.6	11.3
1991	58.8	19.9	12.5	8.9	47.9	26.4	11.5	14.2
1996	62.7	17.1	12.3	7.8	49.5	23.9	12.7	13.9
2001	64.6	14.7	13.1	7.5	53.5	20.0	14.0	12.5
2004	60.9	14.9	14.8	9.4	51.0	19.7	15.1	14.2
Positive pension adjustment								
1991	45.0	28.5	12.3	14.2	33.5	36.2	9.8	20.5
1996	49.7	24.6	12.9	12.8	35.5	32.4	11.4	20.7
2001	49.3	22.7	14.1	13.9	37.2	28.4	13.2	21.2
2004	48.4	21.4	15.3	14.9	38.1	26.4	14.2	21.3

1 Includes common-law relationships.
2 Husband has annual wages and salaries of at least $1,000 (1994 dollars).
Source: Statistics Canada, Longitudinal Administrative Databank

Table 7 Prime-aged couples with RPP, by earnings[1]

	1991	1996	2001	2004
With positive pension adjustment		%		
Bottom 20%				
None	73.1	76.2	75.3	75.6
Husband	20.4	17.1	16.7	15.4
Wife	5.1	5.3	6.2	7.1
Both	1.4	1.3	1.8	1.9
Middle 20%				
None	23.3	24.3	26.6	27.9
Husband	49.1	45.0	37.7	34.7
Wife	11.7	14.0	16.0	17.3
Both	15.9	16.7	19.7	20.1
Top 20%				
None	16.7	18.2	21.9	22.4
Husband	26.1	23.7	22.2	21.1
Wife	10.0	11.9	14.4	15.3
Both	47.1	46.2	41.4	41.2

1 Husband has annual earnings of at least $1,000 (1994 dollars) and aged 35 to 54.
Source: Statistics Canada, Longitudinal Administrative Databank

While the proportion of couples with at least one RPP fell slightly, the fraction where both partners hold an RPP changed very little. Both in 1991 and 2004, about 15% of young couples and one-fifth of prime-aged couples held two RPPs.[8]

Trends similar across earnings levels

These averages potentially mask significant differences across segments of the earnings distribution. High-income couples have—as expected—much better RPP coverage than their lower-paid counterparts (Table 7). Throughout the 1991 to 2004 period, roughly 80% of prime-aged couples in the top fifth of the earnings distribution had at least one RPP and at least 40% of them had two RPPs. In contrast, only one-quarter of their counterparts in the bottom fifth had at least one RPP and very few (2% at most) held two RPPs. Did the percentage of couples with at least one RPP fall more among couples at the lower end than among those in the upper end? No—between 1991 and 2004, the proportion of prime-aged couples with at least one RPP fell by roughly 3, 5 and 6 percentage points in the bottom, middle and top fifths, respectively. Meanwhile, the proportion with two RPPs fell by 6 points at the top but rose by 4 points in the middle. Hence, participation in RPPs became more polarized among 'middle-class' couples, as they became more likely not only to have no RPPs but also to have two.

Uneven growth in retirement savings

While pension coverage provides useful information on an important component of workers' total compensation and of families' retirement packages, it is silent on the extent to which Canadian families prepare themselves for retirement. One way to address this issue is to examine how contributions to tax-assisted retirement savings programs have evolved over time.[9]

On average, Canadian couples appear to be better prepared for retirement now than two decades ago: average retirement savings of couples grew during the 1986 to 2004 period. Combined, RPP and RRSP contributions grew from $2,000 in 1986 to $3,300 in 2004 among young couples (Table 8). Likewise, prime-aged couples saw their RPP and RRSP contributions rise from $3,900 in 1986 to $5,400 in 2004. For both young and prime-aged couples, most of the increase in total contributions came from an increase in husbands' RRSP contributions. In both cases, husbands' RPP contributions fell, on average. However, that drop was more than offset by husbands' and wives' growing RRSP contributions. Summing pension adjustments and RRSP contributions also implies that retirement savings of two-parent families grew over the 1991 to 2004 period. However, with this broader measure, more than half of the increase in retirement savings can be attributed to wives' growing pension adjustments and RRSP contributions.

The increase in total contributions differed markedly across segments of the earnings distribution. Young and prime-aged couples in the top fifth of their earnings distributions enjoyed increases in combined RRSP and RPP contributions of $3,500 and $4,000, respectively, between 1986 and 2004 (Table 9).[10] Those in the middle fifth also experienced significant growth. In contrast, their counterparts at the bottom saw the sum of their RRSP and RPP contributions stagnate, although some increase was observed during the second half of the 1990s among prime-aged couples.[11] Similar qualitative conclusions can be drawn from the sum of pension adjustments and RRSP contributions.

Table 8 Average RPP and RRSP contributions and pension adjustment of couples[1]

	Husband 25 to 34				Husband 35 to 54			
	Husband		Wife		Husband		Wife	
	RPP/PA	RRSP	RPP/PA	RRSP	RPP/PA	RRSP	RPP/PA	RRSP
	$							
RPP and RRSP contributions								
1986	600	800	300	300	1,200	1,700	400	600
1991	600	1,000	300	400	1,100	2,000	500	800
1996	500	2,000	300	900	1,000	3,300	500	1,400
2001	400	1,900	300	900	800	2,900	500	1,300
2004	500	1,600	400	800	1,000	2,600	600	1,200
RRSP contributions and pension adjustment[2]								
1991	1,600	1,000	700	400	3,100	2,000	1,000	800
1996	1,400	2,000	700	900	2,900	3,300	1,100	1,400
2001	1,500	1,900	900	900	3,000	2,900	1,400	1,300
2004	1,600	1,600	1,000	800	3,000	2,600	1,500	1,200

1 Husband has annual earnings of at least $1,000 (1994 dollars).
2 In 2002 dollars.
Source: Statistics Canada, Longitudinal Administrative Databank

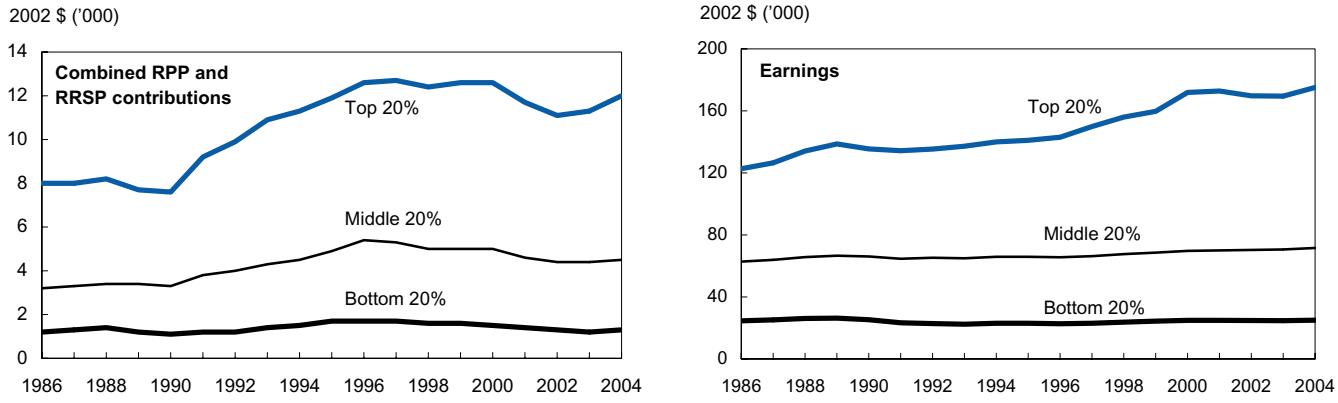
Table 9 Pension contributions of couples by earnings[1]

	Husband 25 to 34			Husband 35 to 54		
	Bottom 20%	Middle 20%	Top 20%	Bottom 20%	Middle 20%	Top 20%
	$					
Combined RRSP and RPP						
1986	400	1,600	4,600	1,200	3,200	8,000
1991	400	1,800	5,400	1,200	3,800	9,200
1996	600	3,000	8,800	1,700	5,400	12,600
2001	500	2,600	8,600	1,400	4,600	11,700
2004	400	2,400	8,100	1,300	4,500	12,000
Combined RRSP and pension adjustment						
1991	500	3,000	8,900	1,500	6,000	14,600
1996	700	4,000	12,100	2,000	7,600	18,200
2001	600	3,900	12,600	1,800	7,400	18,100
2004	600	3,800	12,100	1,600	7,200	18,000

1 Husband has annual earnings of at least $1,000 (1994 dollars).
Source: Statistics Canada, Longitudinal Administrative Databank

Hence the distribution of retirement savings became more unequal. In 1986, combined RRSP and RPP contributions made by couples at the top were at least $4,200 (or at least 6.7 times) greater, on average, than those made by their counterparts at the bottom. By 2004, combined contributions by the former were at least $7,700 (or at least 9.2 times) greater, on average, than those by the latter. Similar patterns are observed from 1991 to 2004 with the broader measure of retirement savings. Part of this increase in inequality in retirement savings is no doubt associated with the growth in family earnings inequality that took place between 1986 and 2004 (Chart D). Prime-aged couples in the top fifth saw their average earn-

Chart D The increase in retirement savings inequality mirrored the increase in earnings inequality



Source: Statistics Canada, Longitudinal Administrative Databank

ings rise from $122,700 (in 2002 dollars) to $175,100. In contrast, their counterparts at the bottom experienced virtually no growth in employment income ($24,600 in 1986 and $25,000 in 2004).[12]

Among prime-aged couples, retirement savings of women remain below those of men, reflecting in part their lower participation rates (Table 10). However, as a result of their growing labour market participation, retirement savings have generally increased more among women than men over the 1991 to 2004 period. For instance, among prime-aged couples in the top fifth, women's retirement savings rose by $1,900. In the middle fifth, women's savings rose by $900. In contrast, men's retirement savings increased by $1,300 and $300. As a result, wives' share of savings increased.

Summary

Since the late 1970s, the proportion of employees covered by RPPs fell as employers moved away from defined-benefit plans to a greater extent than they increased the supply of defined-contribution RPPs. While increases in competition between firms, increases in workers' life expectancy, increases in employer contributions to CPP/QPP and EI, legislative changes in the 1980s, and low long-term interest rates in recent years may all have contributed, employment shifts toward low-coverage industries and de-unionization

Table 10 Pension adjustment and RRSP contributions of husbands and wives, by earnings, prime-aged couples[1]

	1991	1996	2001	2004
			$	
Bottom 20%				
Husband				
PA	400	300	400	400
RRSP	800	1,200	900	800
Wife				
PA	100	100	100	100
RRSP	200	400	400	300
Middle 20%				
Husband				
PA	3,000	2,900	2,900	2,900
RRSP	1,800	2,900	2,500	2,200
Wife				
PA	600	800	1,100	1,200
RRSP	600	1,000	1,000	900
Top 20%				
Husband				
PA	6,100	5,800	5,600	5,600
RRSP	3,800	6,200	5,900	5,600
Wife				
PA	2,900	3,000	3,400	3,700
RRSP	1,900	3,200	3,200	3,000

1 Husband has annual earnings of at least $1,000 (1994 dollars).
Source: Statistics Canada, Longitudinal Administrative Databank

Appendix

The following table replicates Table 5 but redefines RPP_t as the number of RPP members in defined-benefit plans. The percentage of men with a defined-benefit RPP fell from 32% in 1978 to 19% in 2005, the percentage of women with a defined-benefit RPP rose from 13% to 17% during that period, and the percentage of individuals with a defined-benefit RPP fell from 22% to 18%. Using the number of individuals aged 15 to 64 as a denominator, the percentage of individuals with a defined-benefit RPP falls from 25% to 21%.

Individuals with a defined-benefit RPP[1]

	Men				Women			
	RPP/L	L/LF	LF/POP	RPP/POP	RPP/L	L/LF	LF/POP	RPP/POP
				%				
1978	48.9	83.0	77.6	31.5	34.5	83.5	46.5	13.4
1984	48.9	77.9	76.9	29.2	33.7	81.2	53.0	14.5
1988	44.9	81.6	76.8	28.1	32.0	83.6	56.5	15.1
1994	42.3	77.4	73.3	24.0	38.3	81.3	57.7	17.9
1998	36.5	79.4	72.2	20.9	35.1	81.8	57.8	16.6
2003	32.5	81.9	73.0	19.4	33.1	85.0	60.9	17.1
2005	30.9	82.5	73.2	18.7	32.7	85.7	62.0	17.4

1 Individuals aged 15 and over.
Sources: Statistics Canada, Labour Force Survey; Pension Plans in Canada

appear to have been key factors underlying the decline in RPP coverage between the mid-1980s and the late 1990s.

While sharp declines in RPP coverage of men and slight declines in their overall labour force participation caused a substantial decrease in the proportion holding RPPs, the substantial growth in women's labour force participation and, to a lesser extent, the slight increase in their aggregate coverage rate, almost fully offset these trends. The net result was that the overall percentage of RPP holders among individuals of working age changed very little between 1978 and 2005. In both years, roughly one quarter of Canadians aged 15 to 64 had an RPP.

Abstracting from potential substitution effects between men and women of different ages and skills, the growing labour market involvement of wives had a positive impact on families' RPP coverage. Specifically, because wives of prime-aged husbands increased both their labour force participation and their RPP coverage, the proportion of prime-aged couples with at least one RPP fell much less than the proportion of prime-aged husbands with RPPs. As a result, Canadian couples experienced only a moderate (rather than a substantial) decline in RPP coverage over the past two decades.

On average, Canadian families are better prepared for retirement today than their counterparts were in the past. However, this scenario does not apply universally. Two-parent families located in the bottom 20% of the earnings distribution are not better prepared for retirement now than in the past. However, those located in the top 20% appear better prepared. Canadian families' contributions toward retirement, which were fairly unequal in the mid-1980s, have become even more unequal over the last two decades. To a large extent, the growth in inequality in retirement savings seems to reflect the large increase in family earnings inequality over the last two decades. This increase in family earnings inequality is in turn driven by a widening dispersion of the permanent component of family earnings, rather than by factors that are transitory in nature (Morissette and Ostrovsky 2005).

Several caveats should be noted. First, this study has examined the evolution of retirement preparedness since the mid-1980s, not the degree to which current retirement savings are adequate to maintain living

standards once retirement age is reached. Second, preparedness for retirement was measured using two different rubrics—the first measure used the sum of contributions to registered pension plans (RPPs) and registered retirement savings plans (RRSPs); the second used the pension adjustment variable, thus implicitly adding employer RPP contributions. However, neither the move from defined-benefit RPPs to defined-contribution RPPs (and its implications in terms of economic security for Canadian workers) nor the increased longevity of seniors was taken into account. These two factors will clearly influence families' living standards after retirement.

Recent research has shown that the maturation of the Canada and Quebec Pension Plans led to a substantial reduction in income inequality among the elderly between the early 1980s and the mid-1990s (Myles 2000). Part of this reduction in inequality may be lost in coming years, since growing inequality in contributions toward retirement among families could, in the absence of offsetting factors, make the distribution of family income among seniors more unequal.

Perspectives

Notes

1 The pension adjustment is the sum of credits for the year, if any, from deferred profit-sharing plans or benefit provisions of RPPs. Membership in deferred profit-sharing plans is very small compared with membership in RPPs: in 1993, the former represented only 7% of the latter (Frenken 1995). As a result, changes in the percentage of tax filers with positive pension adjustment should reflect mainly changes in the percentage of tax filers who are members of RPPs.

2 Information on individuals' contributions to RRSPs is available back to 1982 while individuals' contributions to RPPs are available back to 1986.

3 The percentages shown with LAD are smaller than those shown with the LMAS and SLID for two reasons. First, the denominator used (the number of tax filers with annual earnings of at least $1,000 in 1994 constant dollars, in LAD, versus the number of workers employed in May in their main job in the LMAS and SLID) is bigger in LAD than it is in the LMAS or SLID. Second, tax filers contributing to an RPP are only a subset of all RPP members.

4 Apart from industry and union status, Morissette and Drolet (2001) include controls for occupation, province, age and part-time status in their analysis.

5 Among employees for whom industries of employment are known (96% of the employees in the cross-sectional sample drawn from SLID 1997), aggregate RPP coverage in SLID drops from 46.3% to 44.7% with this standardization.

6 Ideally, one would like to define equation (3) for individuals aged 15 to 64. This is not possible since the Pension Plans in Canada database provides no information on age.

7 The percentage of young couples with at least one RPP fell by 3.4 percentage points between 1991 and 2004, less than the 6.4-point decline in the proportion of young married men with an RPP.

8 The percentage of prime-aged couples where both partners contribute to an RPP rose from 11% in 1986 to 14% in 2004.

9 RRSP contributions include contributions to group RRSPs in addition to individual RRSPs. Tax data do not distinguish the former from the latter.

10 The growth in husbands' RRSP contributions was the main factor underlying the increase in total contributions made by couples in the top fifth. The second most important factor was the growth in wives' RRSP contributions. For instance, among prime-aged couples, husbands' RRSP contributions increased by $2,400 between 1986 and 2004 while wives' RRSP contributions grew $1,500. In contrast, in the bottom fifth, husbands' RRSP contributions remained unchanged while wives' RRSP contributions grew a modest $200.

11 One potential explanation for the stagnation of retirement savings of families in the lowest levels of the earnings distribution is that some may have few incentives to save for retirement, given the current structure of the transfer programs targeted for seniors (for more details see Shillington 1999). Alternatively, the stagnation of their family earnings may also have constrained their retirement savings (Chart D).

12 Retirement savings rates changed very little among families in the bottom or top fifths. Among families in the middle fifth, rates rose slightly, from 5.1% in 1986 to 6.3% in 2004.

References

Frenette, Marc, David A. Green and Garnett Picot. 2006. "Rising Income Inequality in the 1990s: An exploration of Three Data Sources." *Dimensions of Inequality in Canada*. David A. Green and Jonathan R. Kesselman (eds.). Vancouver. University of British Columbia Press. Chapter 3.

Frenken, Hubert. 1996. "The Impact of Changes in the Canada Pension Plan on Private Pensions." *Canadian Business Economics*. Vol. 4, no. 4. Summer. p. 65-74.

Frenken, Hubert. 1995. "Tax Assistance for Pensions and RRSPs." *Perspectives on Labour and Income*. Vol. 7, No.4. Winter. Statistics Canada Catalogue no. 75-001-XPE. p. 9-13.

Morissette, René and Yuri Ostrovsky. 2005. "The Instability of Family Earnings and Family Income in Canada, 1986-1991 and 1996-2001." *Canadian Public Policy*. Vol. 31, no. 3, p. 273-302. ." Statistics Canada Catalogue no. 11F0019MIE2005265. Ottawa. Analytical Studies Branch Research Paper Series, no. 265.

Morissette, René and Marie Drolet. 2001. "Pension Coverage and Retirement Savings of Young and Prime-Aged Workers in Canada, 1986-1997." *Canadian Journal of Economics*. Vol. 34, issue 1. p. 100-119. Statistics Canada Catalogue no. 75F0002MIE2000009. Ottawa. Income Research Paper Series, no. 9.

Myles, John. 2000. "The Maturation of Canada's Retirement Income System: Income Levels, Income Inequality and Low-Income Among the Elderly." Statistics Canada Catalogue no. 11F0019MPE – No. 147. Ottawa. Analytical Studies Branch Research Paper Series, no. 147, 21 p.

Shillington, Richard. 1999. "The Dark Side of Targeting: Retirement Saving for Low-Income Canadians." C.D. Howe Institute Commentary, no. 130. September. 16 p.