

Public pensions and work

Ted Wannell

Do I have enough money to retire? is a question that older workers have been trained to ask themselves as they consider the transition out of the workplace. The financial tally includes employer pension plans, registered savings plans and other investments, as well as entitlement to public pension benefits—the Canada and Quebec Pension Plans (C/QPP) and Old Age Security/Guaranteed Income Supplement (OAS/GIS). These resources are balanced against projected spending and other considerations, such as health, family demands and leisure activities.

Do I really want to retire? is the question that more and more employers and policy analysts may want workers to consider. With tight labour markets and baby boomers entering the transitional years, impediments to remaining on the job are receiving increased attention. Mandatory retirement is largely being written out of provincial labour codes, and the federal government is proposing adjustments to registered pension plan legislation that would facilitate phased retirement. Labour market factors may also influence employers to adopt more senior-friendly policies, such as leave for eldercare and flexible working hours.

Indeed, a long-term trend toward earlier retirement faltered in the late 1990s and the median retirement age began to inch upward. Similarly, the labour market participation rates of older men turned a corner in the mid 1990s, while the participation rates of older women continued to climb unabated. Apparently changes are afoot.

Although research on the retirement process is growing by leaps and bounds, some gaps in knowledge persist. Studies that integrate the many factors involved in the retirement process are hampered by the lack of a dedicated aging survey in Canada. Several proposals are currently with funding agencies to fill that gap. Yet

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Data source and definitions

The **Longitudinal Administrative Databank (LAD)** is based on a 20% sample of T1 tax records covering a 22-year period ending in 2004 at the time of this analysis. Records are linked over time for individuals, and each year's information is used to ascertain the current family structure.

The study uses three-year mini-panels. Each panel consists of a start year identifying those with employment or RPP income, a mid-year to track take-up of C/QPP benefits, and a following year to capture new income patterns. More precisely, the mini-panels are selected according to the following criteria:

- aged 60 to 69 in the middle year
- no C/QPP benefits in the start year
- positive employment or RPP income in the start year
- no disability deduction in the first two years
- C/QPP and RPP receipts do not fall between the second and third years

Three mini-panels were drawn to examine long-term trends: 1994 to 1996, 1999 to 2001, and 2002 to 2004.

even a dedicated survey may not be the best instrument to examine some issues. Sample surveys typically cannot provide consistent estimates of relatively rare events, such as taking up a pension, for small populations. However, both public and employer pension plans have features that are best assessed by examining single years of age: take-up rates at initial eligibility or interaction effects between public and private pensions.

This study uses a large sample of tax data to examine the take-up rate of C/QPP benefits, the co-receipt of C/QPP and other benefits, and employment following benefit take-up. The focus will be on taxfilers in their 60s, since this is the age range of eligibility for C/QPP retirement benefits. The first goal is to establish take-up patterns by age and to determine whether the patterns have changed over time. The database also follows individuals over time, allowing post-pension work patterns to be inferred by receipt of employ-

ment or self-employment income. Since work patterns should vary according to the trajectory into retirement and may be affected by features of the pension programs themselves, the population is divided into groups whose behaviour should vary.

Public pensions

Economists use life-cycle models to explain work patterns by age. In the absence of pension plans and with a preference for leisure over work, individuals save from earnings until their accumulated wealth can support projected lifetime expenditures; then they retire. Since people differ in earnings, spending and savings rates, retirement should be spread out smoothly across the older age ranges.

In reality, much of the saving takes place in employer and government pension plans. Collection of benefits is based on formulas that tend to concentrate retirement at specific points determined by eligibility requirements. For example, a previous study on registered pension plan (RPP) take-up among workers in their 50s found a distinct peak at age 55, the age at which several large plans begin to offer unreduced benefits (Wannell 2007). These early pensioners had much higher than average pre-pension earnings and low-intensity paid work patterns following receipt of pension benefits. These results suggest that RPP eligibility rules create a pent-up demand for retirement, particularly among high-earnings workers. Overall, roughly one-fifth of workers begin to collect RPP benefits before they become eligible for C/QPP retirement benefits at age 60.

The Canada and Quebec Pension Plans are mandatory for almost all employees and are funded by employer and employee contributions. C/QPP contributions and benefits are designed to replace up to 25% of a benchmark earnings indicator—the average industrial wage—assuming retirement at age 65 and an adequate contribution history. The earnings replacement rate for those earning more than this benchmark—\$41,100 in January 2005—would thus be less than 25% (Social Development Canada 2005a).

C/QPP changes in 1987 gave contributors more choice in timing their retirement. Although 65 remains the benchmark age for benefit calculation, benefits can be commenced earlier or later, with penalties or premiums designed to equalize the lifetime value of benefits received. Contributors can collect benefits as soon as 60 with a 30% penalty or as late as age 70 with a 30% premium.

Given the healthy financial situation of typical young RPP recipients and their weak attachment to the workforce, they should have a high take-up rate of C/QPP at age 60 and further reduce their paid work. Workers with RPPs who did not retire in their 50s should also have higher early take-up rates and subsequently work less than similar workers without RPPs because of the wealth locked in their employer pensions.¹

However, another program effect of the C/QPP may be an impediment to post-benefit work. Unlike RPPs, the C/QPP requires contributors aged 60 to 64 not to work at any job during the month in which they first collect benefits. Although this provision does not apply to those who earn less than the monthly maximum benefit, this period of unemployment may help some pensioners sever ties to the job market.² So all else equal, workers retiring with C/QPP benefits may be less likely to re-enter the job market compared with those receiving RPP benefits only.

Old Age Security and the Guaranteed Income Supplement constitute the other public pillar of income support for seniors. OAS benefits are based on length of residence in Canada, while the GIS is specifically targeted at low-income seniors. For well-paid workers with a lengthy contribution record to the C/QPP, the GIS will not come into play, and the OAS entitlement is equivalent to a significant boost in wealth. This adds another powerful incentive for these workers to further reduce their labour market participation at age 65.

Other features of the OAS and GIS may have more specific effects for high- and low-income seniors. Unlike the C/QPP, both programs are means-tested—benefits are clawed back when income exceeds set thresholds (Social Development Canada 2005b). GIS benefits are reduced by 50 cents for every dollar of income above the threshold (\$13,464 for singles in the last quarter of 2004). OAS benefits are clawed back at 15 cents for every dollar past its threshold (\$59,790 for singles in 2004). These features increase the effective tax rate on employment earnings for those in the shoulder ranges, likely reducing their work incentive relative to other seniors.

Interaction between the C/QPP and the GIS could hasten the retirement of older, low-income workers (Guillemette 2004). For some workers, extending their C/QPP contribution period past age 60 could reduce their eventual GIS entitlement. For this group, continuing to work adds little to their lifetime income relative to previous work. Thus some may choose to

retire even though it does result in an immediate and ongoing drop in income. Since co-receipt of C/QPP benefits and the GIS is fairly common, this effect is potentially non-trivial.

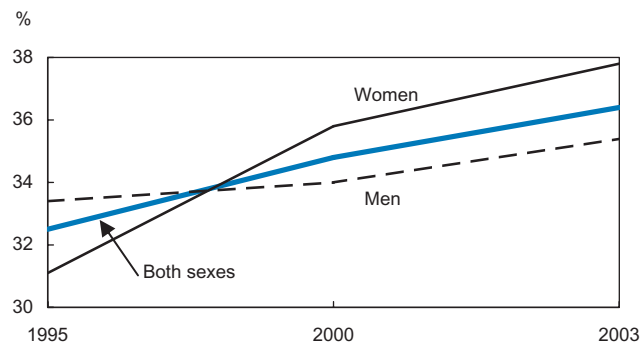
The retirement decision is obviously complex. Studies that explore the program effects mentioned above typically use simulation studies of hypothetical individuals (Pollock and Sargent 2004) or models based on estimated pension/wealth accrual (Baker, Gruber and Milligan 2001). The intention of this paper is not to formally test such program effects. Rather, it describes the uptake and receipt of program benefits by various individual characteristics, as well as employment earnings following benefit receipt.

The focus is on take-up of C/QPP benefits by four groups for whom take-up incentives should differ: those with RPP income only, RPP and employment income, employment income only and current RPP coverage, and employment income only and no current RPP coverage.

C/QPP early take-up rates increasing

The changes to the C/QPP in 1987 allowed more flexibility in the timing of retirement. An increasing proportion of workers are choosing to take their benefits at age 60, the earliest possible. From 1995 to 2003, take-up at age 60 increased by almost 4 percentage points, from 32.5% to 36.4% (Table 1). The increase was greater for women (6.7 percentage points) than for men (2.0) (Chart A).

Chart A More women taking up C/QPP benefits at age 60



Source: Statistics Canada, Longitudinal Administrative Databank

Although the single-year retirement rate is still highest at age 65, the base population in each cohort has been greatly diminished by retirement between 60 and 64. As a result, more than twice as many people retired at age 60 in 2003 as retired at age 65 (data not shown).³

The take-up rates at older ages generally declined over the period, although there was a distinct dip in 2000 for nearly every subgroup, followed by a partial recovery by 2003.⁴

Single-year take-up rates can also be used to calculate the cumulative proportion of a cohort that would take up benefits if exposed to the period-specific rates as they aged. This is similar to the method of constructing life expectancy based on cross-sectional mortality rates (see Wannell 2007). Since the trough in single-year take-up rates creates a corresponding dip in the cumulative rates, 1995 to 2003 changes should be more indicative of long-term trends. These data indicate that the trend to retirement at age 60 has been offset by lower take-up rates at ages 61 to 64, such that a smaller proportion had retired by age 65 in 2003 than in 1995 (Chart B). This suggests a polarization in C/QPP take-up, whereby an increasing proportion are col-

Table 1 C/QPP take-up rates by age and sex

Age	1995			2000			2003		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
	%								
60	32.5	33.4	31.1	34.8	34.0	35.8	36.4	35.4	37.8
61	19.3	18.8	19.9	14.0	13.2	15.1	17.9	17.4	18.7
62	16.1	15.7	16.6	12.0	11.2	13.3	12.8	12.3	13.4
63	17.0	17.0	17.0	11.4	10.6	12.6	12.4	12.1	12.8
64	17.7	17.5	18.0	12.6	12.1	13.7	13.3	12.9	13.9
65	80.2	83.5	75.2	76.8	78.1	75.0	78.0	78.4	77.3
66	46.0	57.8	35.0	15.6	17.6	14.6	42.7	48.5	36.6

Note: Had employment or RPP earnings in previous year.
Source: Statistics Canada, Longitudinal Administrative Databank

lecting benefits at age 60 while a much smaller, but growing proportion is delaying take-up until after age 65.

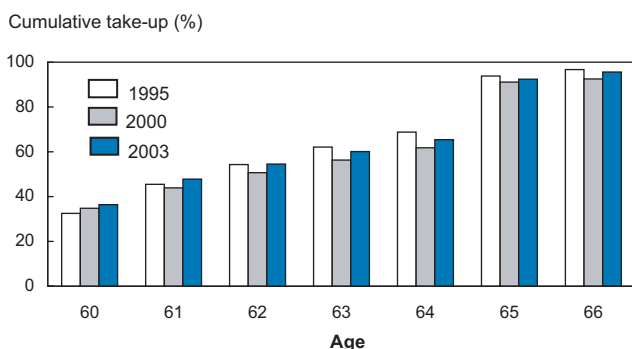
Despite the premium for delaying C/QPP take-up past age 65, less than 1 in 10 do so. Apparently the effect of other forms of wealth accumulation (RPPs, OAS/GIS eligibility, RRSP savings) has a greater impact on the retirement decision than the C/QPP late retirement premium.

Private pension benefits increase early C/QPP take-up

The hypothesis that having RPP income generates a pent-up demand for early C/QPP take-up receives strong support from the data. Nearly 4 in 5 RPP beneficiaries with no employment in 2002 began receiving C/QPP benefits at age 60 in 2003—the highest rate of all the groups (Chart C). This was also the only group where the take-up rate at age 60 exceeded the rate at age 65 (data not shown). The proportion was somewhat less among those combining work and RPP benefits: 3 in 5 began collecting C/QPP at age 60.

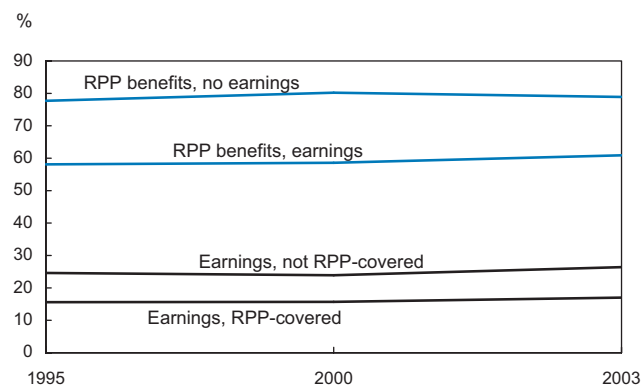
Those who were working and not collecting RPP benefits were much less likely to commence their C/QPP benefits at age 60. Somewhat surprisingly, those without RPP coverage in their current job were more likely to start benefits at age 60 than those with RPP coverage: 26.4% compared with 17.0%. This result is most likely related to selection effects.⁵ For example, those with a preference for leisure, with greater wealth, or

Chart B C/QPP take-up at age 60 has gone up, but so has take-up after 65



Note: Had employment or RPP earnings in previous year.
Source: Statistics Canada, Longitudinal Administrative Databank

Chart C C/QPP take-up at age 60 more than double for those with RPP benefits



Source: Statistics Canada, Longitudinal Administrative Databank

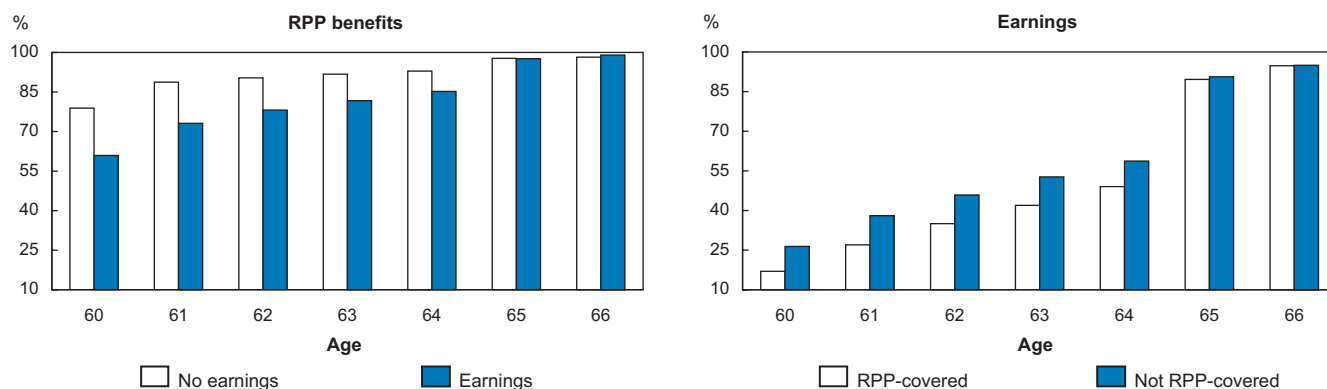
with accumulated pension benefits would have commenced RPP benefits before their 60th birthday, leaving those relatively less likely to retire for these reasons in the workplace.

The increasing trend to collect C/QPP benefits at age 60 was dampened by those with earnings but no RPP benefits. The proportion in each group grew by 1 or 2 percentage points between 1995 and 2003. Because of the much higher incidence of C/QPP take-up at age 60, the cumulative C/QPP take-up for those already receiving RPP benefits remained much higher than for those without RPP income until age 64 (Chart D). High take-up rates among all groups at ages 65 and 66 significantly narrowed but did not close the gap. By age 66, less than 1 in 50 RPP beneficiaries had not begun receiving C/QPP compared with about 1 in 20 non-beneficiaries.

Widespread increases in employment among 60-somethings

As noted earlier, the Labour Force Survey has documented a trend to increasing labour market participation among older workers beginning in the late 1990s. The LAD data verify this trend using earnings-based measures of labour market participation. The data also indicate that the increase in paid work occurred in all groups—before or after starting C/QPP payments, with or without RPP benefits.

Chart D Cumulative C/QPP take-up rates in 2003 much higher for RPP recipients until age 64



Source: Statistics Canada, Longitudinal Administrative Databank

The mini-panels (see *Data source and definitions*) enable paid work in the third year (measured by the presence of employment income) to be related to characteristics or activities from the previous two years. The clearest distinction in work patterns is between those who did and did not begin collecting C/QPP in the middle year. Obviously, the decision to stop working and start collecting benefits should suppress subsequent labour market participation—and it does. Employment rates are nearly double among those who did not start C/QPP benefits the previous year compared with those who did (Chart E). Nevertheless, a substantial and increasing proportion of C/QPP beneficiaries are doing some work for pay the year following their

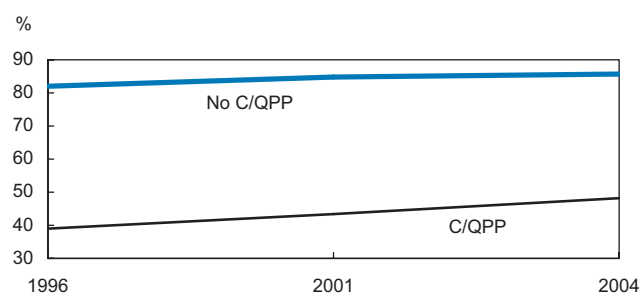
‘retirement.’ Indeed, the incidence of paid work increased much faster among C/QPP pensioners than among non-pensioners.

Women were less likely to work for pay than men in each group in each period (Table 2). Over time, the gap narrowed among non-beneficiaries. Among C/QPP recipients, rapid employment gains by men widened the gap even though employment gains were substantial for women as well.

Employment rate increasing regardless of RPP coverage

Among the three groups who were working and did not start C/QPP benefits in the reference year, employment levels remained very high the following year. The employment rate was highest among those

Chart E The incidence of earnings increased more among C/QPP recipients



Source: Statistics Canada, Longitudinal Administrative Databank

Table 2 Persons with earnings by C/QPP status

	1996	2001	2004
Men			
%			
Did not start C/QPP	85.7	88.0	87.8
Started C/QPP	39.8	45.4	49.9
Women			
Did not start C/QPP	76.8	80.3	82.8
Started C/QPP	37.7	40.7	45.8

Source: Statistics Canada, Longitudinal Administrative Databank

with RPP coverage in their current job, followed by those working without RPP coverage, and finally those combining earnings and RPP benefits. Each of these groups also showed some growth in employment rate between 1996 and 2004.

Very few workers who started a period with RPP benefits and no employment earnings were working at the end of the period. The movement into employment was greater among those who started to collect C/QPP, although the rate was also increasing for those with or without C/QPP benefits.

Among those who worked at the start of each period and began C/QPP benefits in the middle year, at least 4 in 10 continued with some level of employment in the third year. And this post-benefit employment increased by at least 10 percentage points between 1996 and 2004 (Chart F). The incidence of continuing employment was highest and increased the most for those without RPP benefits or RPP coverage in the first year. Their situation indicates relatively weak retirement resources, so it is not surprising that many continued to work after starting C/QPP benefits. What is perhaps more surprising is that by 2004, the majority of those who started the period in RPP-covered jobs or by combining work and RPP benefits continued to do some paid work while collecting C/QPP benefits. Even those with multiple sources of pension income are contributing to the trend to more paid work among 60-somethings.

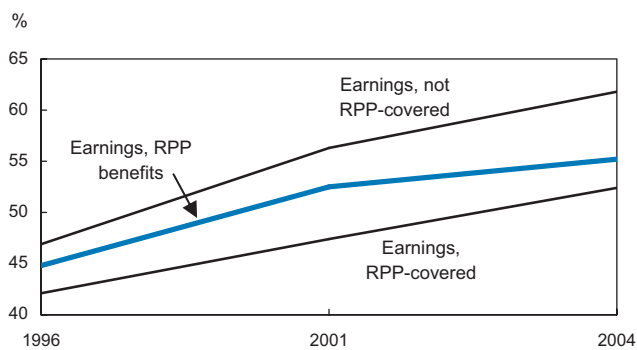
Work intensity of C/QPP recipients increasing

An earlier study found that more than half of those who began receiving RPP benefits in their 50s did some work the year following 'retirement,' but work intensity was relatively low (Wannell 2007). Although the incidence of work grew among this group from 1996 to 2004, most of the growth was at the lowest level of intensity (less than \$5,000).

The overall incidence of work among new C/QPP recipients was somewhat lower than among their younger counterparts at each time point but was growing faster, particularly at higher levels of intensity (Chart G). Those earning more than \$20,000 accounted for just over a quarter of employed new C/QPP recipients in 1996. By 2004, they made up more than a third of a much larger pool of working pensioners. The 16.7% of new C/QPP pensioners who earned more than \$20,000 in 2004 nearly equalled the proportion of 50-something new RPP recipients (17.3%) who surpassed that benchmark.

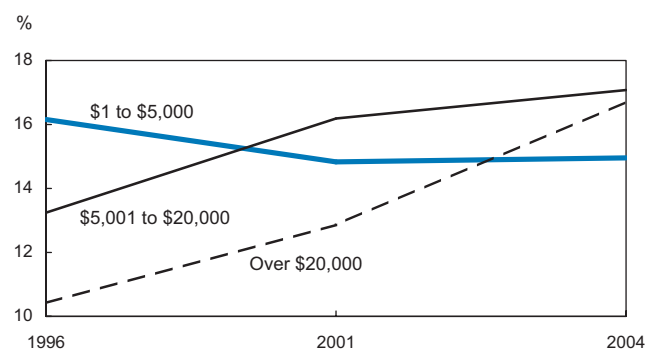
Prior receipt of RPP benefits had a large effect on work intensity among new C/QPP recipients (Chart H). Those who were already receiving RPP benefits were much less likely to be earning more than \$20,000 in 2004 (14.6%) than those who had been working in a job without RPP coverage (23.5%). Those who had worked at a job with RPP coverage were in the middle at 20.4%. Thus work intensity among C/QPP

Chart F The proportion of employed C/QPP pensioners has increased



Source: Statistics Canada, Longitudinal Administrative Databank

Chart G Work intensity has increased among C/QPP pensioners



Note: Zero earnings (not working) excluded.
Source: Statistics Canada, Longitudinal Administrative Databank

The Guaranteed Income Supplement and employment

The GIS is a means-tested social transfer for low-income seniors. Approximately one-third of those aged 66 to 70 receive at least some benefits. Once recipients pass a family income threshold based on the number, age and pension status of family members, benefits are clawed back at a rate of 50 cents for each dollar of additional income. Since other benefits for seniors (such as public-housing subsidies) may also be means-tested, additional income may result in very little additional spending power for GIS recipients (Shillington 2003). These clawbacks may well be a strong disincentive—except for those already near the upper limit—to seek paid work.

Among 66 to 70 year-olds, GIS recipients are only about one-third as likely to work for pay as those receiving other public pension benefits but no GIS. The work gap between GIS recipients and non-recipients is greater among women than men. As with most groups examined in this study, the incidence of paid work increased among GIS recipients from 1996 to 2004.

Paid employment among public pension recipients

	1996	2001	2004
%			
Men with earnings			
C/QPP and/or OAS, no GIS	25.8	28.8	31.9
Receiving GIS	8.9	10.8	11.2
Women with earnings			
C/QPP and/or OAS, no GIS	14.7	16.4	18.8
Receiving GIS	3.1	4.1	4.8

Note: Includes 66 to 70 year-olds not claiming the disability deduction.

Clawbacks are not the sole reason for the low employment rates of GIS recipients. Low education, declining health and an intermittent employment history may also contribute. For example, those who received the GIS at age 65 were less likely to be working at age 64 than other public pension recipients. Again the gap is greater among women.

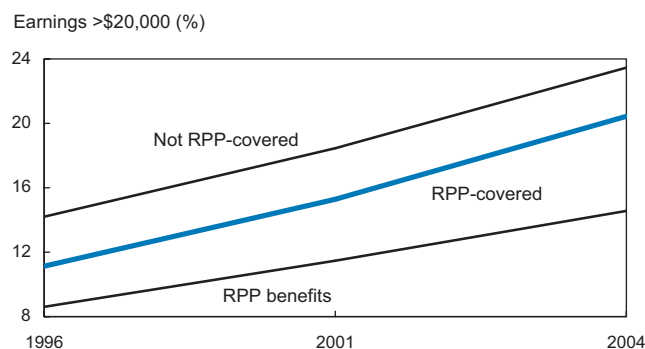
Clearly, a substantially smaller proportion of GIS recipients had recent work experience. Since the lack of recent experience may affect employability, the ratio of employment rates before and after age 65 may be a more valid comparison. Given employment at age 64, GIS recipients were still about half as likely as non-recipients to continue working after age 65. This gap was similar for men and women.

Who was working at age 64?

	1995	2000	2003
%			
Men, at age 65			
C/QPP and/or OAS, no GIS	50.0	47.9	50.0
Receiving GIS	28.1	27.7	27.7
Women, at age 65			
C/QPP and/or OAS, no GIS	35.3	33.3	34.9
Receiving GIS	13.7	12.7	14.3

Note: Includes 64 year-olds not claiming the disability deduction.

Chart H Work intensity among C/QPP recipients strongly influenced by private pension status



Source: Statistics Canada, Longitudinal Administrative Databank

recipients seems to be related to financial circumstances. Those without the financial backing of an RPP or those with an RPP who could not afford to retire early tended to work more.

Summary

The primary goal of this analysis was to document patterns in the take-up rate of C/QPP benefits and employment following C/QPP take-up. Antecedent receipt of RPP benefits was of particular interest since this potentially represents a pent-up demand for C/QPP benefits at age 60. The recent increase in labour force participation among older age groups makes these issues particularly timely.

About one-third of those working for pay at age 59 began to collect C/QPP benefits when they first became eligible at age 60. The take-up rate then drops for ages 61 to 64, spiking to a peak above 75% at age

65 when most people also become eligible for Old Age Security benefits. Despite this spike in the rate at age 65, more people, in absolute terms, began collecting C/QPP at age 60 since the eligible population was larger.

Two time trends are notable in relation to C/QPP take-up. First, the proportion beginning receipt at age 60 is increasing over time—more so for women than for men. Second, the cumulative proportion of a cohort that starts benefits by age 65 is edging down. This result is somewhat clouded by a trough in take-up rates at some ages in the year 2000.

The early take-up of C/QPP benefits is not evenly distributed. Those who were already receiving RPP benefits at age 59 were far more likely to start C/QPP benefits the following year, especially if they were not still working. Counter to expectations, those in jobs with RPP coverage were less likely to start their public pension benefits at 60 than those without RPP coverage. Still, this difference was small compared with the gulf that separated these two groups from those already receiving RPP benefits.

The rise in paid work among 60-somethings crosses all groups examined: men and women, before and after starting C/QPP benefits, and with and without RPP benefits. Even those who received RPP benefits at age 59 and did not work are increasingly finding their way back into paid jobs in their 60s. Paid work is most prevalent and intense for those not covered by an RPP in their last job before retiring, and it is also increasing significantly.

Overall, the supply and demand factors related to older workers seem to be moving in the direction desired by many commentators: toward longer careers. However, even with the large sample sizes from the LAD, the data quickly thin out when examining groups of particular interest to policy analysts. As such, multivariate methods would be much better suited to more closely assess the work incentives or disincentives of public pension programs.

Perspectives

Notes

1 Although workers without RPPs could compensate by saving more than those with RPPs, a recent study concluded that registered retirement savings did not differ between the two groups after controlling for income and personal characteristics (Palameta 2001).

2 Pollock and Sargent (2004) used simulation techniques to estimate that removal of the stop work requirement could extend working careers by two to four years.

3 Comparisons for the same birth year cohort reveal similar, though slightly dampened patterns—58% more 60 year-olds in 1995 than 65 year-olds in 2000 started receiving C/QPP benefits.

4 Rates for ages 67 to 69 have been suppressed because of small sample sizes.

5 Since membership in an RPP is derived from a non-zero pension adjustment (PA) on the tax file, individuals who extend their careers for more than a year beyond the contributory period of their RPP will be misclassified.

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