Several studies show that many Canadians who ‘retire’ from employment (often with a pension) subsequently return to the labour market (Singh and Verma 2001, Pyper and Giles 2002, Schellenberg et al. 2005, and Wannell 2007a and 2007b). If ‘retirement’ is the complete cessation of paid work, it is no longer clear when the process of retiring actually begins. The length of this process can also vary substantially, and may involve either a gradual reduction in time spent working or exiting from, and returning to, the labour force one or more times prior to the complete cessation of paid work.

What is bridge employment?

‘Bridge employment’ refers to any paid work after an individual retires or starts receiving a pension (Ruhm 1990). Bridge employment can provide extra income for those who do not have enough pension income or savings in their later years. It can also help older workers balance work and leisure time while remaining engaged in economically and socially productive activities. Bridge employment can therefore contribute to the well-being of individuals and their families. Many U.S. studies (for example, Quinn and Kozy 1995, Kim and Feldman 2000, and Cahill et al. 2005) have examined bridge employment and the transition to retirement, but the subject has not been extensively researched in Canada. Given population aging and reduced labour force growth, understanding the transition to retirement becomes even more important.

This study first presents cross-sectional analyses using the Survey of Labour and Income Dynamics to show the prevalence of bridge employment among Canadians age 50 to 69 between 1999 and 2004. Then, longitudinal examination of a group of older workers over the same period shows transitions into and out of bridge employment and retirement. The study examines when individuals are more likely to enter bridge employment, who is more likely to choose bridge employment over retirement and how long those individuals typically remain in bridge employment, and the likelihood of entering bridge employment for those who retired (see Data source and definitions).
Bridge employment

How common is bridge employment?

The proportion of individuals age 50 to 69 in bridge employment averaged about 9% over the 1999 to 2004 period, going from 7.9% in 1999 to 9.7% in 2004 (Chart A). However, the numbers of those in bridge employment increased by more than 40% (from 461,000 to 654,000) over the period as the size of this age group increased due to aging of the baby-boom cohorts (the first boomers turned 50 in 1997). Not surprisingly, the prevalence of bridge employment varied greatly by age, ranging from a low of 2% among those 50 to 54 to a peak of 18% for those 65 to 69 in 2004 (Chart B).

From career employment...

Longitudinal analysis shows that the probability of remaining in a career job declines steadily as age increases (Chart C). The estimated ‘survival rate’ (Kaplan-Meier estimate) between ages 52 and 66 for those in career employment at age 51 declined steadily up to age 59 with a sharper drop at age 60—the minimum age for early benefits under the Canada Pension Plan (CPP) and Quebec Pension Plan (QPP). The probability of remaining in career employment was about 70% at age 59 and dropped to 57% at age 60.1 It then declined more steeply, with only 25% remaining in career employment at age 64. When workers reached 65—the age for full entitlement to CPP, QPP, Old Age Security (OAS) and the Guaranteed Income Supplement (GIS), as well as mandatory retirement in some jurisdictions—the probability of remaining in career employment was less than 3%.2

...to bridge employment or retirement

While the prevalence of bridge employment among persons age 50 to 69 was about 9%, the conditional probability (that is, the probability of a transition at a given age, conditional on not having had this transition previously) of experiencing an episode of bridge employment varied widely with age (Chart D).

The conditional probability was higher for entering bridge employment than for entering retirement at each age (the reverse is likely true past age 66, but the SLID data do not allow verification). As could be expected in light of the survival rates, the conditional

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**Chart B** The prevalence of bridge employment doubles after age 60

![Chart B](chart_b.png)


**Chart C** The probability of remaining in career employment drops markedly at age 60, even more so at age 65

![Chart C](chart_c.png)

The conditional probability of bridge employment consistently exceeds that of retirement. The probability of entering bridge employment or retirement was very low before age 55 and increased slightly between the ages of 55 and 59 (approximately 4% for bridge employment and 2% for retirement). Both probabilities increased at age 60. Between ages 60 and 64, the conditional probability of entering bridge employment ranged between 11% and 14%, while for retirement it varied between 4% and 8%. At age 65, the probability of moving to bridge employment rose dramatically to 76%, while the conditional probability of retirement increased to 18%. In other words, the relatively few individuals still in career employment when they reached age 65 were very likely to transition in that year. The probability of entering bridge employment decreased at age 66 but remained high, while the probability of retirement increased further to 26%. These results are roughly in line with the CPP/QPP take-up rates by age based on tax records (Wannell 2007b).

Conditional probabilities indicate when transitions are more or less likely to occur overall, but they are not adjusted for individual characteristics that may affect the timing of such transitions. In order to assess how such characteristics influence the likelihood of transitioning to bridge employment or retirement, statistical methods are used to control for these characteristics. The examination of transitions into and out of bridge employment used a longitudinal sample of 3,000 respondents age 51 to 65 in a career job in 1999, assuming they had never retired or entered bridge employment previously. This age range was chosen because transitions occurring at earlier ages are rare (and most likely related to special situations), and because the assumption of continued career employment before 1999 appeared questionable for those over 65.

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**Data source and definitions**

**Survey of Labour and Income Dynamics (SLID)** covers roughly 97% of the Canadian population, excluding those in the territories, in institutions, on First Nations reserves or in military barracks. Each panel of respondents, approximately 15,000 households or 30,000 adults, is surveyed every three consecutive years. A new panel is introduced every three years, so two panels always overlap. This study uses the third panel of the SLID, which followed respondents from 1999 to 2004. Cross-sectional respondents age 50 to 69 were categorized in career employment, bridge employment, or retirement for each year.

**Career employment** means having employment income or Employment Insurance (EI) benefits, no pension income and not reporting retirement as the major activity.

**Bridge employment** means having employment income or EI benefits, pension income or reporting retirement as the major activity, and not out of the labour force for more than six consecutive months at the end of the year.

**Retirement** means having pension income or self-identifying as retired with no employment income or EI benefits, or having pension income or self-identifying as retired with employment income or EI benefits, but out of the labour force for more than six consecutive months at the end of the year.

Individuals with no earnings or pension benefits and whose self-reported major activity was not working, looking for work or retired were categorized as other.

The probability of entering bridge employment or retirement was very low before age 55 and increased slightly between the ages of 55 and 59 (approximately 4% for bridge employment and 2% for retirement). Both probabilities increased at age 60. Between ages 60 and 64, the conditional probability of entering bridge employment ranged between 11% and 14%, while for retirement it varied between 4% and 8%. At age 65, the probability of moving to bridge employment rose dramatically to 76%, while the conditional probability of retirement increased to 18%. In other words, the relatively few individuals still in career employment when they reached age 65 were very likely to transition in that year. The probability of entering bridge employment decreased at age 66 but remained high, while the probability of retirement increased further to 26%. These results are roughly in line with the CPP/QPP take-up rates by age based on tax records (Wannell 2007b).

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**Chart D** The conditional probability of bridge employment consistently exceeds that of retirement.

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to retirement, a discrete-time event-history model was used. Bridge employment and retirement were treated as competing outcomes (see *Discrete-time event-history analysis*). The main findings from the final model may be summarized as follows (Table 1):

- Several studies suggest that the timing of retirement (as measured by the average age of retirement, for example) is different for women than men. However, among the group of older workers followed in this study, women and men had roughly equal probabilities of entering bridge employment or retirement after controlling for other factors.²

- Compared with singles and individuals with an employed spouse, older workers whose spouse was not working were more likely to leave career employment. For this group, the conditional probabilities of leaving career employment for bridge employment or retirement were 1.8 and 2.3 times higher respectively.

- Individuals with a university education were almost twice as likely as those with less than a high school education to enter bridge employment. However, the probability of entering retirement did not seem to vary by education.

- Health and functional limitations have previously been identified as important determinants of the transition to retirement.³ In this study, however, after controlling for employment-related characteristics, the conditional probability of entering bridge employment or retirement did not vary significantly with self-reported health status or disability status.

- The number of hours worked in the previous year was related to the probability of transition at a given age, which suggests that individuals may prepare for their transition. Compared with those working 1,501 to 2,500 hours (corresponding to full-time, full-year employment), individuals who worked between 501 and 1,500 hours were twice as likely to enter bridge employment and those who worked 500 hours or less were seven times more likely to enter retirement.

- The likelihood of bridge employment increased with the previous year’s hourly earnings. Results suggest a 3% increase in the conditional probability for each additional dollar in hourly earnings. Thus, workers with higher earnings appear more likely to leave their career job, activate pension benefits, and continue to work in bridge employment.

- Individuals with an employer-sponsored pension plan (in the job they held in the previous year) were more likely to leave career employment than those without such a plan, consistent with results from previous studies. The effect was more important for retirement (where the conditional probability more than tripled) than for bridge employment (where the probability did not quite double). This is likely because employer-sponsored pension plans usually require individuals to leave their position in order to start receiving pension benefits.

- Older workers in the bottom fifth of the income distribution (adjusted household income⁶) were over three times more likely than those in the middle 20% to leave career employment for retirement.

- Workers living in rural areas or small communities were almost twice as likely as those living in large urban centres to enter bridge employment.

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**From bridge employment to retirement, and vice versa**

How long do individuals remain in bridge employment before entering retirement? And how likely are those who went from career employment to retirement to subsequently enter bridge employment? Analysis of these questions was limited for two reasons. First, the smaller samples (i.e. the subgroup of individuals who entered bridge employment or retirement during the survey period) allowed measuring transitions between bridge employment and retirement, but prevented a multivariate analysis of the characteristics affecting the likelihood of these transitions. Secondly, while it is possible that some individuals alternate more than once between bridge employment and retirement, sufficient information was available only for the first transition (follow-up data are available for a maximum of four years after a first transition and sample sizes decrease with the number of transitions). Hence, the following estimates pertain to a first episode of bridge employment or retirement, and they are not adjusted for individual characteristics.

On the whole, older workers were more likely to transition to bridge employment than to retirement, but bridge employment is a transitory state, not a permanent one. Regardless of their age, 66% of older workers entering bridge employment during the survey period were still there one year later, while the rest had retired. The proportion remaining in bridge employp-
Table 1: Factors affecting transition from career employment to bridge employment or retirement: Estimates from discrete-time competing-risks model

<table>
<thead>
<tr>
<th></th>
<th>Bridge employment</th>
<th>Retirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.364*</td>
<td>0.108</td>
</tr>
<tr>
<td>Age²</td>
<td>-0.111*</td>
<td>0.030</td>
</tr>
<tr>
<td>Age³</td>
<td>-0.118</td>
<td>0.012</td>
</tr>
<tr>
<td>Age⁴</td>
<td>0.006*</td>
<td>0.001</td>
</tr>
<tr>
<td>Age⁵</td>
<td>0.001*</td>
<td>0.000</td>
</tr>
<tr>
<td>Women (ref. men)</td>
<td>0.322</td>
<td>0.177</td>
</tr>
<tr>
<td><strong>Spouse/partner</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No spouse/partner</td>
<td>0.010</td>
<td>0.229</td>
</tr>
<tr>
<td>Spouse/partner not working</td>
<td>0.605*</td>
<td>0.166</td>
</tr>
<tr>
<td><strong>Health status</strong></td>
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<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>-0.276</td>
<td>0.199</td>
</tr>
<tr>
<td>Good</td>
<td>-0.178</td>
<td>0.188</td>
</tr>
<tr>
<td>Fair or poor</td>
<td>0.099</td>
<td>0.265</td>
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<tr>
<td><strong>Stress level</strong></td>
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<tr>
<td>Very stressful</td>
<td>0.185</td>
<td>0.208</td>
</tr>
<tr>
<td>Not very stressful</td>
<td>0.528*</td>
<td>0.165</td>
</tr>
<tr>
<td>Not at all/no opinion</td>
<td>0.160</td>
<td>0.272</td>
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<td><strong>Education</strong></td>
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<tr>
<td>High school</td>
<td>0.341</td>
<td>0.220</td>
</tr>
<tr>
<td>Postsecondary certificate</td>
<td>0.270</td>
<td>0.196</td>
</tr>
<tr>
<td>University degree</td>
<td>0.629*</td>
<td>0.225</td>
</tr>
<tr>
<td>Unknown</td>
<td>-0.156</td>
<td>1.243</td>
</tr>
<tr>
<td><strong>Years (≥ 6 months) worked full-time</strong> (ref. 21 to 35)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 20</td>
<td>-0.318</td>
<td>0.235</td>
</tr>
<tr>
<td>Over 35</td>
<td>-0.038</td>
<td>0.195</td>
</tr>
<tr>
<td>Unknown</td>
<td>0.048</td>
<td>0.219</td>
</tr>
<tr>
<td><strong>Annual work hours t-1</strong> (ref. 1,501 to 2,500)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 500</td>
<td>0.516</td>
<td>0.454</td>
</tr>
<tr>
<td>501 to 1,500</td>
<td>0.733*</td>
<td>0.186</td>
</tr>
<tr>
<td>Over 2,500</td>
<td>0.174</td>
<td>0.275</td>
</tr>
<tr>
<td>Hourly wage rate</td>
<td>0.027*</td>
<td>0.007</td>
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<tr>
<td><strong>Income quintile</strong></td>
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<td></td>
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<tr>
<td>Lowest</td>
<td>0.009</td>
<td>0.379</td>
</tr>
<tr>
<td>Second</td>
<td>0.380</td>
<td>0.232</td>
</tr>
<tr>
<td>Fourth</td>
<td>0.159</td>
<td>0.217</td>
</tr>
<tr>
<td>Highest</td>
<td>0.341</td>
<td>0.219</td>
</tr>
<tr>
<td>Employer pension plan (ref. no)</td>
<td>0.531*</td>
<td>0.159</td>
</tr>
<tr>
<td><strong>Urban area</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 29,999</td>
<td>0.613*</td>
<td>0.233</td>
</tr>
<tr>
<td>30,000 to 99,999</td>
<td>0.305</td>
<td>0.272</td>
</tr>
<tr>
<td>100,000 to 499,999</td>
<td>0.291</td>
<td>0.203</td>
</tr>
<tr>
<td>Rural area</td>
<td>0.661*</td>
<td>0.202</td>
</tr>
<tr>
<td>Constant</td>
<td>-4.300*</td>
<td>0.365</td>
</tr>
</tbody>
</table>

* significantly different from a reference group (ref.) or zero at the 0.05 level

Note: Age (centered on the mean) and its powers (Age² to Age⁵) are used to model a linear and various non-linear relationships between age and the conditional probability of entering bridge employment or retirement (see Data source and definitions). Initial sample size was 2,985. Standard errors were estimated by the bootstrap method.

## Discrete-time event-history analysis

Longitudinal respondents in the third panel of the SLID were surveyed annually over the period 1999 to 2004. For those age 51 to 65 and in career employment in 1999, the following variable was defined:

\[
y_t = \begin{cases} 
0 & \text{in career employment (or censored) at age } t \\
1 & \text{entered bridge employment at age } t \\
2 & \text{entered retirement at age } t 
\end{cases}
\]

Respondents who were in career employment in 1999 were assumed to have neither retired nor entered bridge employment previously, and were included in the group at risk of leaving career employment starting at the age they were in 2000. Because the categories career employment, bridge employment and retirement were defined on an annual basis, transitions could only be measured in one-year intervals.

The conditional probability (or risk/hazard) of leaving career employment for bridge employment at age \( t \) is the probability of entering bridge employment at \( t \) conditional on having been in career employment up to \( t-1 \):

\[
h_{\text{B}}(t) = P(y_{t+1} = 2 | y_{t-1} = 1, \ldots, y_2 = 0)
\]

Similarly, the risk of leaving career employment for retirement is:

\[
h_{\text{R}}(t) = P(y_{t+1} = 3 | y_{t-1} = 1, \ldots, y_2 = 0)
\]

This leaves \( 1-h_{\text{B}}-h_{\text{R}} \) as the risk of remaining in career employment at age \( t \). With the assumption of independent outcomes, \( h_{\text{B}} \) and \( h_{\text{R}} \) can be estimated via maximum likelihood in a standard multinomial logit model (Fahrmeir and Tutz 2001):

\[
h_{\text{B}}(t) = \frac{\exp(f_{\text{B}}(t) + x\beta_{\text{B}})}{1 + \exp(f_{\text{B}}(t) + x\beta_{\text{B}}) + \exp(f_{\text{R}}(t) + x\beta_{\text{R}})}
\]

\[
h_{\text{R}}(t) = \frac{\exp(f_{\text{R}}(t) + x\beta_{\text{R}})}{1 + \exp(f_{\text{B}}(t) + x\beta_{\text{B}}) + \exp(f_{\text{R}}(t) + x\beta_{\text{R}})}
\]

Two functions of age, \( f_{\text{B}} \) and \( f_{\text{R}} \), account for time-dependence, \( x \) is a set of personal, household and employment-related characteristics (either time-constant or time-varying), and \( \beta_{\text{B}} \) and \( \beta_{\text{R}} \) are sets of coefficients representing the effects of variables in \( x \) on \( h_{\text{B}} \) and \( h_{\text{R}} \) respectively.

It is usual in discrete-time event history analysis to model time-dependence with a set of binary indicators (one for each \( t \), minus one). Estimated baseline risks obtained with such indicators are shown in Chart D. Some of the binary indicators were subject to multi-collinearity problems in specifications of the model that included other independent variables. For this reason, the whole set of indicators was replaced with a polynomial function of age of degree 5:

\[
f_{\text{B}}(t) = \gamma_{\text{B}}t + \sum_{i=2}^{5} \gamma_{i}(t - i)\]

A similarly defined \( f_{\text{R}} \) was also used. In the equation, the \( \gamma \)'s are coefficients to be estimated. In contrast to other functions tested (e.g. polynomials of lower or higher degree, and linear spline functions), the aforementioned polynomial functions rendered a good approximation of the baseline risks obtained with the binary indicators. The estimates of \( \beta_{\text{B}} \) and \( \beta_{\text{R}} \) do not change much under these different parameterizations of \( f_{\text{B}} \) and \( f_{\text{R}} \).

The initial model specification included many personal, household and employment-related characteristics, a number of which were removed from subsequent specifications because they were not statistically significant. Personal and household characteristics were sex, presence of a spouse (and labour force status of that person), an interaction between sex and presence of a spouse, immigrant status, visible minority status, health status, disability status, homeownership, household composition (living with children, living with parents/other relatives), adjusted household income quintile, education, size of area of residence, and region. Employment-related characteristics were occupation, industry, annual hours of work, composite hourly earnings, number of years worked full time for at least six months in a given year, type of job (permanent, non-permanent or self-employed), an indicator for supervisory responsibilities, indicators for employer-provided benefits (dental, medical, or life/disability insurance), an indicator for employer-sponsored pension plan, and a private/public sector indicator. Binary indicators for survey year (to account for possible period effects) were also part of this initial specification. Variables marked with an obelisk (†) were lagged by one year to ensure that transitions and possible antecedents were ordered in time. All variables (except sex) could vary over time.

## Bridge employment

ment declined (at a decreasing rate) in the following years and, after four years, about 42% were still in bridge employment. A rough estimate of the median time in bridge employment is two to three years. The conditional probability of leaving bridge employment for retirement decreased as the time spent in bridge employment increased, going from about 35% in the first year to 8% in the fourth year. Longer-term trends could not be examined, but it is plausible that the probability increases after a few more years. Furthermore, these estimates were not adjusted for individual characteristics. In particular, the conditional probability likely evolves differently depending on the age of workers when they entered bridge employment—being higher for older individuals in the short term.

For those who entered retirement directly after career employment, the ‘survival rate’ in retirement was estimated at 61% after one year, which was lower than the probability of remaining in bridge employment for...
a similar amount of time, but it declined less rapidly afterwards. After four years, 47% of those who left career employment for retirement remained in retirement.

The conditional probability of leaving retirement was highest in the first year, reaching almost 40%, and was 10% or less from the second year to the fourth year. Thus, consistent with other studies, retirees returning to the labour market appeared more likely to do so in the first year following their retirement. Past the first year, the likelihood of a return to work seemed much lower, at least up to the fourth year. Again, these estimates were not adjusted for individual characteristics—in the short term, younger retirees may have a higher return probability.

Conclusion

Overall, the results in this study support the notion of retirement as a process rather than a discrete event. Many older workers who start receiving a pension stay in the labour market in some capacity for roughly two to three years before they completely cease employment. As well, many of those who cease paid work at one point subsequently return to the labour market, especially in the first year following retirement. Therefore, it could be argued that conceiving of work and retirement as separate stages in the course of life does not accurately mirror reality for a substantial proportion of older adults.

Given some of the characteristics (higher earnings, university education and an employer-sponsored pension plan) associated with a greater probability of leaving career employment for bridge employment, it would appear that for individuals making this transition it may well be a choice rather than a necessity. Given the data limitations, it was not possible to assess whether this also held true for those who returned to the labour market after a period of retirement. However, a previous study found that financial issues were an important reason for retirees to return to the labour market, particularly for those who had retired because of downsizing, unemployment or health problems (Schellenberg et al. 2005).

Notes

1. In principle, the sample allowed an examination of transitions out of career employment occurring between ages 52 and 70, but no transitions were seen after age 66.

2. Because of small sample sizes, estimates pertaining to ages 65 and 66 should be used with caution.

3. Other studies that examine the timing of the transition to retirement or the timing of pension benefit take-up in Canada include Baker et al. (2001), Compton (2001), Waslander (2003) and Schirle (2007). Because of different definitions and samples, their results are not directly comparable to estimates presented here.

4. For this study, women and men were assumed at first to have different baseline conditional probabilities of entering bridge employment or retirement, but the preliminary results did not support that hypothesis.


6. The adjusted household income is the total household income adjusted for family size and composition based on the family equivalence scale, which is the sum of the equivalences for each family member. The oldest person in the household receives an equivalence of 1.0 and the second oldest person 0.4. Other family members age 16 and older receive an equivalence of 0.4 and those under 16 receive 0.3. This adjustment enables comparison of incomes for all families.

7. More specifically, this estimate is for the first episode of bridge employment.

References


