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Later Retirement: the Win-Win Solution

Retirement ages in Canada are on an upward trend, and should significantly reduce the dire impacts of population aging on the economy and living standards that many forecast. How should policymakers respond?

Peter Hicks

About The Author

Peter Hicks
is a former Assistant Deputy Minister in several federal government departments, mainly in the area of social and labour market policies. He also worked for the OECD in Paris, coordinating work on the policy implications of population aging.

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Finn Poschmann
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The Study In Brief

Over the coming two decades people are likely to stay in the workforce much longer – by about five years. There will be a strong trend towards later retirement as a result of social and economic pressures, without any policy action. The results will be largely positive and should therefore be supported by policy whenever possible.

For example, the trend towards later retirement will significantly reduce, although not entirely offset, the much-discussed negative macro-economic and labour-market effects of population aging. This suggests that compensating policy reforms are still needed but can be less draconian than has often been thought to be necessary.

The employment rates of older workers have been on an upward trend since the mid-1990s, while demographic aging suggests continuing strong labour-market demand for future older workers who will be much better educated than their predecessors. Babyboomers have different preferences and expectations for work and leisure in retirement. Finally, financial pressures arising from existing public and private pension plan funding arrangements and looming government budgetary troubles here and abroad will likely keep the pressure on for policy changes that encourage later retirements, in line with longer life expectancy.

Delaying work-retirement transitions by five years would have large, positive economic and fiscal effects, reducing pressures on growth, government finances and pension funding. Other gains in social well-being appear likely, if harder to quantify.

While there is no immediate crisis to be addressed, a key reform will be to gradually increase the standard age of pension eligibility in order to bring it more in line with increases in longevity. Fortunately, the needed changes are not large. They can be introduced gradually, with little risk of negative side effects. Such reforms should involve gradually raising the age band at which one could receive C/QPP. Similar changes to the Old Age Security (OAS) would provide consistency in signals about retirement ages.

A well-designed reform process could help re-connect pension policy with the emerging social, labour market and demographic realities that are shaping our lives and our society.

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Much existing policy analysis is based on the assumption that retirement ages will remain unchanged in the coming years. This is a highly unlikely scenario, giving rise to misleading conclusions about the future welfare of Canadians. The paper proposes a more reasonable assumption about future trends in retirement ages that would result in better policy choices.

This paper reviews evidence, based on recent trends, suggesting that over the coming two decades people are likely to stay in the workforce much longer – by about five years. The employment rates of older workers have been on an upward trend since the mid-1990s, while demographic aging suggests continuing strong labour market demand for future older workers, who will be much better educated than their predecessors. Babyboomers have different preferences and expectations for work and leisure in retirement. Finally, financial pressures arising from existing public and private pension-plan funding arrangements and looming government budgetary troubles here and abroad will likely keep the pressure on for policy changes that encourage later retirements, in line with longer life expectancy.

Delaying work-retirement transitions by five years would have large, positive economic and fiscal effects, significantly reducing the much-discussed negative effects of population aging on growth and pension funding. Other gains in social well-being appear likely, if harder to quantify.

The next section examines the factors that are likely to affect the growth of employment rates and average retirement ages between now and 2031. Most of these factors point to large gains in employment rates among older workers over this period, with average retirement ages increasing especially rapidly in the next decade and then leveling off.

Then, the following section develops a reasonable scenario for average retirement ages in 2031. A five-year increase in average retirement ages is consistent with the criteria used.

Consequences for the economy and government policy are explored in a subsequent section. There will be a particularly large impact in offsetting many of the potentially negative effects of population aging, in maintaining the size of the workforce and in reducing the need for retirement savings. Social well-being will also increase, both at the individual and societal levels.

While there is no immediate crisis to be addressed, a key reform will be to gradually increase the standard age of pension eligibility in order to bring it more in line with increases in longevity. Fortunately, the needed changes are not large. They can be introduced gradually, with little risk of negative side effects. In these circumstances, a well-designed reform process could help re-connect pension policy with the emerging social, labour market and demographic realities that are shaping our lives and our society.

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Why The Next Generation of Retirees Will Work Longer

Employment rates among older people have been growing quite sharply in Canada since the mid-90s, and there are many factors that are likely to sustain trends towards working longer and retiring later over the next 20 years.

We will see a very large increase in the size of the pool of potential older workers and in their skills. Financial market pressures are likely to further increase work incentives. The older babyboomers seem likely to have stronger preferences for later retirement, possibly very different from those of the generation that preceded them. The narrowing of the gender gap in labour-force participation will also result in later average retirement ages. Some economic factors that now push people towards delaying retirement are likely to persist. Finally, potential policy responses to increasing funding and fiscal pressures are likely to lead people to, on average, remain in the workforce for many more years.

Looking Back

An examination of recent trends provides a useful starting point for projecting future retirement patterns.

The average age of retirement is the traditional marker for measuring the boundary between work and retirement. Trends in average retirement ages in turn reflect two components:

- the employment rates of people in different age groups;
- the number of people in each of those age groups which, in this time period, is largely driven by the aging of the babyboomers.

In Canada and many other countries, employment rates in the older age groups when work-retirement transitions take place – i.e., 55 to 69 years old – have been increasing quite sharply since the mid-90s (Figure 1). There were also increases in the employment rates of people age 50 to 54 and among those who are 70 and over, but these were not as large.

Average retirement ages dropped by about four years during the 20-year period from the mid-70s to the mid-90s, from age 65 to age 61 (Figure 2). This was a period when the supply of labour was large and growing for demographic reasons; i.e., the babyboom generation was of working age and female participation was growing.

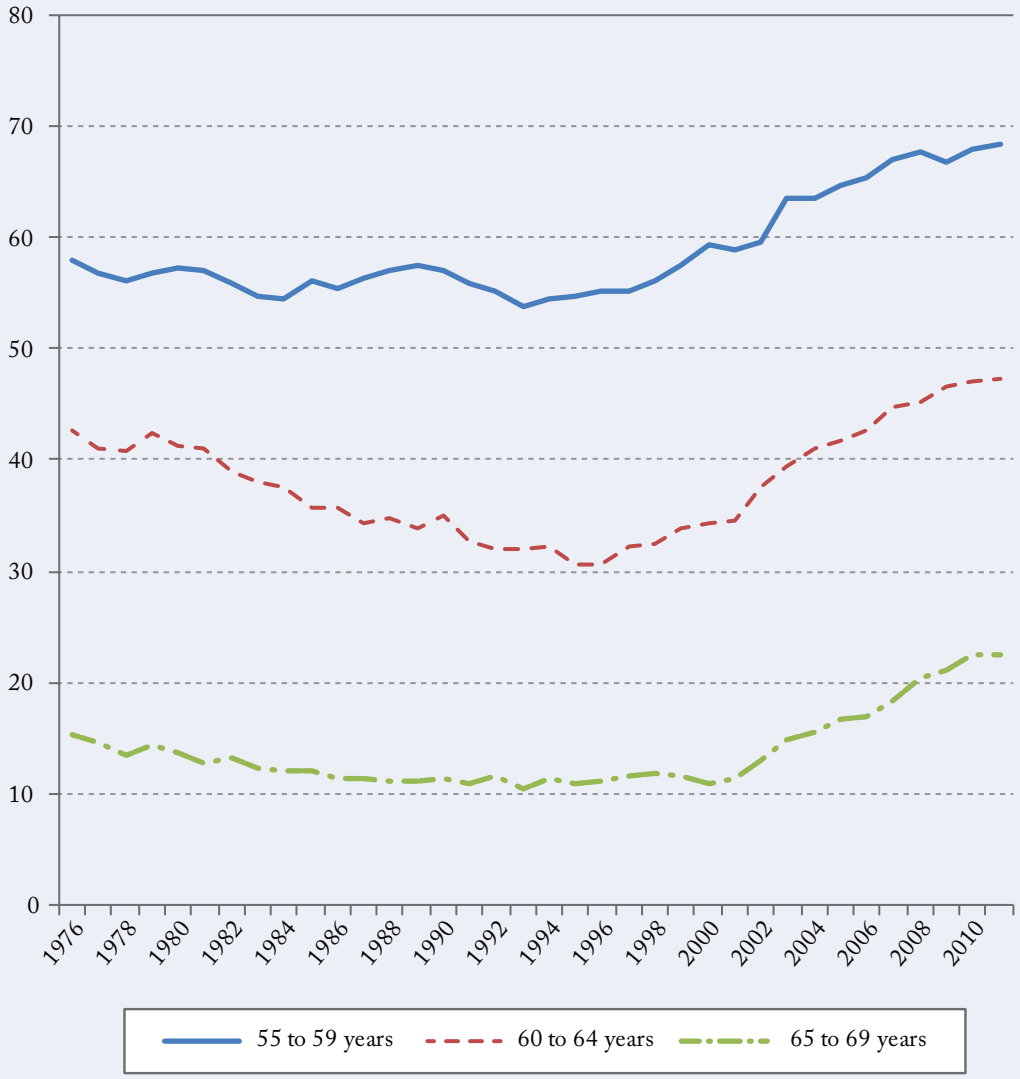
The mid-1990s marked a reversal of trends towards declining retirement ages in Canada. Retirement ages plateaued and are now on an upward trend but, at least until now, have not been rising as quickly as they fell in the period from the mid-70s (Figure 2).

It might be thought that trends in employment in the older age groups would be similar to trends in average retirement ages. Box 1 explains why this is not the case and why statistics on average retirement ages are not a good guide to future trends in retirement-age behaviour.

Using analytic techniques that circumvent some of these problems with crude average-retirement-age statistics, Carrière and Galarneau (2011) have shown that delayed retirements have resulted in a significant increase in working life. In 2008, a 50-year-old Canadian could expect to work for 16 more years, 3.5 more years than in 1994. However, the expected length of retirement has stabilized since the mid-90s – with increasing years spent in employment keeping more or less in line with increasing life expectancy.[1]

1 An important area for future study would be an examination of the interplay among expected years of life spent in education, in work and in retirement. For example, would (or should) a longer period of schooling imply a relatively shortened period of life spent in work, or a relatively shortened period of retirement? If the timing of entry to working life is becoming more heterogeneous, should this have an effect, for example, on the determination of the criteria for pension eligibility?

Figure 1: Employment Rates, Older Age Groups, Both Sexes, 1976-2011



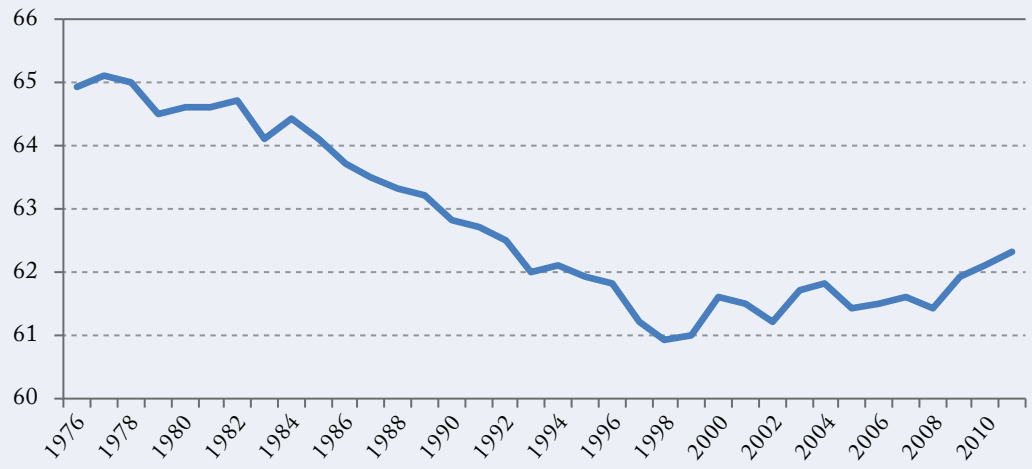
Source: Cansim Table 282-0002.

Strong Demand for Labour in the Future

Future labour-market demand will obviously play a key role in determining future employment rates for older workers. Long-term labour demand predictions are difficult because they are influenced by a wide range of economic, social and fiscal factors, such as business cycles, changing needs for workers depending on skills or occupations or geographic areas, and the ways in which employers organize their activities in order to attract new sources of labour supply or retain existing ones.

We know that the global economy had been exceptionally strong for much of the period since the mid-1990s. Consequently, the growth of employment rates among older workers seen during that period may not continue unchecked until 2031. However, at any level of demand, the reduction in future labour supply that will be caused

Figure 2: Average Retirement Age (Statistics Canada Calculations), 1976-2011



Source: Cansim Table 282-0051.

by demographic factors – mainly the babyboomers moving into their retirement ages and the reduced room for growth in female employment – will almost certainly put upward pressures on the employment rates of older workers. These factors will likely encourage many older workers to remain in the labour force for a few more years.

Previous studies (e.g., OECD 2006, Banerjee and Robson 2009) have made it clear that later retirement would be the only large source of new labour supply that could respond to demographically induced labour shortages. Other sources, such as reduced unemployment or increased immigration might play a supporting, but smaller role. Statistics Canada labour-force projections (Martel et al. 2011) show that different demographic assumptions do make a difference when projected out to 2031, but these are still small relative to the effects of older worker employment rates.

The Skills of Older Workers Will Increase Dramatically in the Future

We already know a lot about tomorrow's older workers: they will be simply today's middle age workers, but with more experience. Forecasting labour supply is, therefore, relatively easy. As well, estimating the future skills and individual productivity of those older people is equally straightforward.

Future retirees – babyboomers and subsequent generations – will be much better educated than the generations that preceded the boomers. The 2006 Census tells us that among people age 45 to 54, 84 percent had some form of degree or certificate (including secondary graduation) and only 16 percent did not. Among those 65 to 74 (pre-boomers) there were twice as many people without any certificate (32 percent) and only 68 percent with a certificate. This rise in educational attainment will result in a comparable gain in the educational attainment levels of older people (compared with today's older workers) as a result of the simple aging of cohorts.

Increased educational attainment and more experience should lead to higher productivity and earnings among tomorrow's older workers, again compared with those of today. Skills do deteriorate

Box 1: How Average Retirement Ages Are Calculated

Unless otherwise stated, the international definition of average retirement age is used in this paper. Following is the OECD definition: *The average age of retirement is the sum of each year of age weighted by the proportion of all withdrawals from the labour force occurring at that year of age*. (OECD, 2011a).

Statistics Canada uses the same underlying concept but calculates it in a different way, making use of a question about self-perceived retirement on the Labour Force Survey. Hicks (2011) provides detailed definitions.

These definitions result in a seeming inconsistency between trends in employment rates and average retirement ages, as described in the text. In part, this reflects the fact that the average retirement-age data are driven to a large extend by the simple aging of the babyboomers as well as by changes in actual behaviour.

As well, average retirement age statistics are more sensitive to early retirements than delayed retirements. Carrière and Galarneau (2011) use the following example. Take the most extreme case where, in a given year, only one person retired and all other employed individuals postponed their retirements. In this case, the average retirement age would be the age of that single retiree. The average retirement age would eventually reflect the later retirements, but not until a number of years after the changes in retirement behaviour of the employed individuals had occurred.

At the end of the day, any data about average retirement ages will be ambiguous since there is no underlying agreed definition of what 'retirement' means – is it the end of a 'career job', or complete cessation of all work, or receipt of a pension, or some mix?

Average retirement age measures are based on the increasingly obsolete concept that there is a single marker in people's lives called 'retirement' that separates life in work from subsequent life in outside of work.

This is far from the real world where people often have extended transitions from work to full-retirement and where there are many gray zones between retirement, unemployment and poor health. Micro data that trace individuals over time have shown much heterogeneity in the paths that people follow in moving from participation in the labour force in the middle portions of their lives to full withdrawal often quite late in life (PRI 2005).

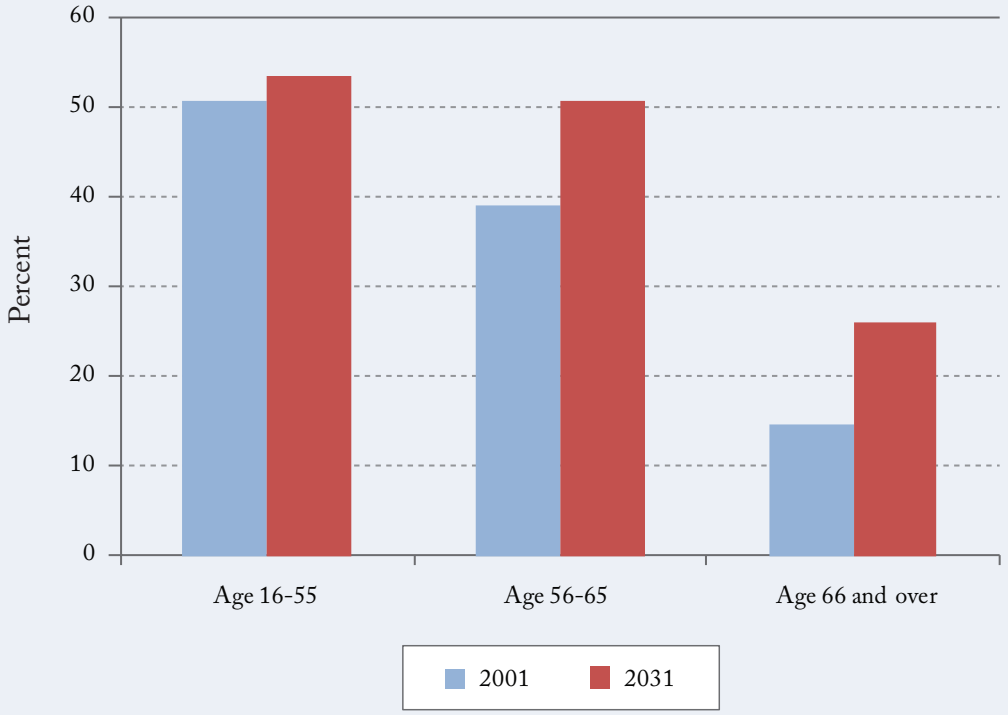
Despite these caveats, the concept is still useful for the purpose of this paper. We can reasonably assume that changes over time in the overall employment rates between successive ages in average retirement rates is a good proxy for changes in the whole array of complex work-retirement transitions that are actually taking place. The biggest concern would be if there were a decrease (or increase) in the average hours worked by older people during the retirement transition. This possibility is addressed in the main text of the paper.

later in life, but to a lower degree than the gains associated with increased experience and higher educational attainment until well past the ages in question here – when people are in their late 50s and their 60s.[2]

That is, in the future labour force there will not be the large education and skills gap between younger and older workers that began when the highly educated boomers entered the labour force. The new generation of younger workers will

2 The literature on the relationship among age, earnings and productivity is not conclusive. Sharpe (2011) reviews the international literature on the relation between age and productivity and concludes that the effects are quite small and, even if negative, can be overcome by factors such as training and education. He argues that there is certainly nothing in the international or Canadian literature that suggests that individual productivity factors should work against a policy of encouraging later retirement.

Figure 3: Percent of People with Literacy Skills that Are Acceptable or Higher, Age Groups, 2001 and 2031



Source: Data Angel.

have educational profiles that are much more similar to those of their parents. Given anticipated increased demand for labour, the future should see opportunities for both younger and older workers.

Adult literacy surveys provide some direct measures of skills by age. One of these relates to reading comprehension – a basic 'learning to learn' skill that is one of the foundations of an adaptable labour force.

Figure 3 shows the percentage of people in different age groups who possessed at least an 'acceptable' level of reading comprehension skills;[3] i.e., those needed for people to fully function in today's knowledge society and economy. The figure shows the growth in these skill levels by age, revealing:

- a small increase in reading comprehension skills between 2001 and 2031 among people aged 16 to 55, the ages that have traditionally made up the bulk of the workforce;
- a large jump in reading comprehension scores for people in the traditional work-to-retirement

3 Calculations by Data Angel. Data Angel is the sole proprietorship consulting firm of Scott Murray. For further information he can be reached at dataangel@me.com. See Hicks (2011) for a description of the methodology that was used, including the way in which data for 2001 and 2031 were generated.

transition years of 56 to 65. In 2001, the scores of people in this age group were significantly below those of younger workers. By 2031, the scores will be almost the same; and

- a very large relative increase in the generic skills of people over the age of 65.

Financial Market Considerations

Upward pressure on employment rates among older workers will be reinforced by financial market trends that are likely to see the returns to capital fall relative to wage growth. For example, in recent decades a portfolio containing both stocks and bonds would have had returns that exceeded average annual wage growth by 6 percent or more. Looking ahead, for CPP purposes, the Chief Actuary predicts that assets managed by the Canada Pension Plan Investment Board (CPPIB) will exceed wage growth by a relatively small 2.9 percent.

These lower comparative returns to capital encourage higher labour supply, while lower financial returns in general will affect the level of retirement wealth accumulation, possibly requiring longer periods in employment.

Changes in Preferences for Work and Retirement

In 2011, we came to an important demographic turning point, with the first wave of the babyboomers becoming eligible for Old Age Security. It is worth considering the impact they have left in their wake.

Our conceptions of what constituted normal participation in school, work and family changed radically with the maturing of the babyboomers. Completion of secondary school and participation in post-secondary education became the norm, not the exception. The nature of work evolved extremely rapidly with the spread of the knowledge economy. Two-earner families became the norm; gender equality improved in the education system (greatly) and in the workforce. Health improved with the prospect of further gains in life expectancy.

In other words, the aging of the babyboom generation was associated with profound changes in our economic and social structures. In looking ahead to the period when the babyboomers enter their older years, it would seem reasonable to anticipate equally large changes in the nature of retirement. We should anticipate that the babyboomers and their successors are likely to have quite different preferences and expectations for work and leisure than the generations that preceded them.

The notion of what constitutes a normal age to retire becomes entrenched in the culture through a variety of means: pension eligibility criteria, workplace practices and media attention. The normal age evolves over time in response to change in these underlying factors.

Looking back, the 1980s saw a movement towards lowering the normal age of retirement. 'Freedom 55' advertising for private retirement savings received wide media attention. In 1987, changes were made so that the CPP was available at age 60 on an actuarially adjusted basis.

Looking ahead, we can see many signs of a shift towards a later normal retirement age, as well as a continuation of flexibility around that norm. Media attention has shifted toward the inevitability of working longer. In answering surveys, the babyboom generation indicates they expect to retire later. For example, Schellenberg and Ostrovsky (2008) compare data on retirement intentions for 1991, 2002 and 2007 for three age groups: aged 45 to 49, 50 to 54 and 55 to 59. Among the youngest of these age groups (which contains many babyboomers) there was a significant rise in the age of expected retirement over this period. For example, in 1991 only 20 percent of those aged 45 to 49 thought they would retire at age 65 or older. By 2007, this had risen to over 27 percent.

Modest pension reforms in the direction of later retirement have already been introduced in Canada (e.g., an increasing actuarial adjustment in the CPP for working longer and removal of work cessation provisions) and, as discussed below, the much

deeper changes that are underway in other countries are likely to influence Canadian expectations.

In about five years, we will be able to start examining the actual retirement patterns of the leading edge of the boomers. Until then, there will be much uncertainty about the age at which the boomers will begin to make the transition to retirement, the length of that transition and the hours worked during the transition. For planning purposes, we can only rely on existing evidence about the boomers' current expectations, which suggest that they will choose to retire later than the current generation of pre-boomer retirees.

The Effects of the Closing Gender Gap

Work-retirement trends have been, and will continue to be, influenced not only by changing decisions on when to retire, but also by the closing of the gender gap in labour-market participation.

There are important gender differences in employment rates and hence in average retirement ages. There have been significant upward trends in female employment rates since the mid-90s in each of the three age groups where retirement transitions are concentrated (ages 55-59, 60-64 and 65-69):

- The growth in female employment rates during this period was much higher than among men for those age 55 to 59, somewhat higher than among men for those age 60 to 65, and about the same as for men among those 65 to 69;
- For women 55 to 59, the more recent growth was simply an extension of trends that go back for some decades, while employment rates for women 60 to 65 and 65 to 69 were quite flat prior to the mid-90s.

In other words, the longer-term rise in the overall participation of women in the labour market can be seen in the youngest of our three 'retirement age' groups, but not yet in the two older groups. Given the inevitable aging of cohorts, we might expect even larger increases in the employment rates of older women in their 60s in the coming decades, but a declining rate of growth among those 55 to 59 as their employment rates are already nearing those of men.

That is, there is lots of room for future employment growth among women entering their 60s, particularly when one takes into account the exceptionally large growth in educational levels and skills that characterize older women of these ages. Gains in educational attainment have been an important factor in the increasing employment of older men in the period since the mid-90s (Schirle 2008) and we can anticipate a similar effect for women in future years.

Analysis of data in Canada, the United States and the United Kingdom (Schirle 2008) has also shown an interesting family dynamic. The increase in the employment of women has been an important factor in the increasing employment rates of married men since the mid-90s. Since women are typically the younger partner in a marriage, men may choose to delay their retirement in order that leisure time is shared by both spouses. Schirle concludes that future increases in the employment of women could further increase the employment rates of men.

The calculation of future retirement-age trends in the next section finds, however, that taking account of these two trends (towards gender equality in employment rates and towards later retirement) does not greatly affect future retirement age projections at the aggregate level. A sensitivity analysis, where women's employment rates in older age groups were assumed to equal those of men by 2031, did not have a large effect on trends in overall retirement ages.

Under-Saving and Incomplete Pension Coverage

Much attention has been placed in the recent literature on the effect of financial pressures on later retirement. Some people need to delay retirement because they lack the financial resources to support themselves adequately in retirement (Wolfson 2011). While this is driven in part by the business cycle, the structural trend towards later entry into

the labour market with relatively fewer years to save for retirement, especially an early retirement, may create ongoing pressures to work longer. Low savings rates and declining workplace pension coverage are other factors, as is the greater use of defined-contribution plans.

The Effects of Possible Policy Changes

Between now and 2031, reforms will likely be introduced that will have the effect of shortening retirement durations – bringing them more into line with social, economic and demographic realities. There have been many such reforms in recent years in most OECD countries and more are on the horizon.

About half of OECD countries have introduced reforms to tie pension benefits directly to life expectancy. This has been accomplished through greater use of defined-contribution schemes in both public and private pensions, as well as by introducing direct links between benefit levels and life expectancy. The basic logic is that if people live longer, they will receive less benefit unless they work longer. However, the OECD itself (OECD 2011) sees drawbacks with this kind of approach, particularly for low-income workers.

Linking pension eligibility more closely to life expectancy is a better route, the OECD argues. Half of OECD countries are already increasing statutory pension ages or will do so in the coming decades. However, in all but five countries (Hungary, Italy, Korea, Turkey and the United Kingdom) projected gains in life expectancy over the next four decades will outstrip prospective increases in pension ages.

Although work disincentives are currently not high in Canadian public pensions, the concluding section of this paper argues there is also an important need for similar age-of-entitlement reforms here.

Other reforms affecting the private sector may work in the same direction. An example would be regulations to encourage employers to retain older workers instead of replacing them with younger workers. Another example might be legislation governing tax-assisted private pension plans that affect their standard age for benefit entitlement or the conversion of RRSPs to RRIFs.

On the other hand, some future policy reforms might result in some modest changes that would work in offsetting directions. For example, new private pension arrangements, called Pooled Registered Pension Plans, are currently being proposed that would be more suited to the needs of those who are not adequately covered by existing RPPs and RRSPs. These reforms have potential for eventually reducing the numbers of people who now delay retirement because of inadequate savings. However, the effects would be small in the time-frame considered here; most proposals would take many years to become mature.

In the private sector more generally, we also see retrenchment in the coverage and benefit levels of private pensions, a trend which is unlikely to reverse at least in the near future and which is likely to create pressures for working longer that are even stronger than those originating in the public sector.

On balance, policy changes in the coming decades will almost certainly work in the direction of encouraging later retirement.

Future Retirees Are Likely to Work at Least Five Years Longer on Average

The purpose of this section is to develop an estimate of average retirement ages in 2031 (and of the employment rates on which average retirement ages are based) in order to illustrate some of the resulting implications for public policy.

Recent trends in employment rates, together with middle-ground population projections, provide a useful starting point to estimate the extent to which the average retirement age is likely to increase in the next 20 years. Our calculations suggest that average retirement ages are likely to rise a little over five years by 2031 when compared with the 2010 figure.

Of this rise, almost two years is induced by shifting demographics while a little over three years is the result of upward-trending employment rates for those nearing retirement.

The Calculations

Average retirement ages reflect changes in the numbers of people in the traditional work-to-retirement age groups and their employment rates. The obvious starting point in making calculations about the future would be to extend recent trends in employment rates, in conjunction with Statistics Canada's population projections. This is the approach taken, for example, in Statistics Canada's recent projections of the size of the labour force out to 2031 (Martel and others, 2011).

Existing employment rate trends for older workers cannot, however, be simply projected out on a linear basis to 2031 without some adjustments. For some age groups, linear projections make little sense. For example, the very high increase in the employment rates of those aged 55 to59 since the mid-90s, as seen in Figure 1, obviously cannot continue indefinitely at the present rate. That would result in employment rates of over 90 percent by 2031. Clearly, some maximum will be reached between then and now. On the other hand, linear projections for other older age groups, such as for people aged 65 to 69, seem highly conservative given the factors discussed in the previous section, especially for women.

After consultations with policy departments and experts, the Statistics Canada labour-force projections (Martel and others 2011) addressed the problem by simply capping the growth in employment rates at their 2018 estimated level.[4]

For a longer-term scenario that goes to 2031, not 2018, a more realistic alternative would assume that the employment rates for men and women over age 55 in 2031 would be equal to the current level for men and women in the preceding age cohort; i.e., five years younger on average. For example, the employment rate of a man who was age 65 in 2031 would be set to equal that of a male age 60 in 2011. This assumption is ultimately arbitrary and based on a trial and error process whose goal was to produce a reasonable scenario for 2031 that met the following criteria:

- Overall projections between now and 2031 that are roughly consistent with trends since 1995 in older worker employment and that (unlike the Statistics Canada variation discussed above) also make sense by single year of age and gender, right through to 2031;
- Consistency with the likely changes in individual preferences, market factors and policy directions that were discussed in the preceding section, which suggest that the pressures toward later retirement will likely increase, on balance, in the coming years.
- Replicability using easily accessible data, in order to allow other analysts to explore different implications of the scenario or make different assumptions about its construction.

Box 2 shows how the calculations were made.

These calculations resulted in an average retirement age of 68.2 in 2031, up by 5.3 years from the 2011 figure of 62.8 years – our reasonable projection of delayed retirement of about 5 years.

4 The Statistics Canada projections are based on labour force and participation rates, not employment and employment rates as in this paper. In order to provide a lower projection, Statistics Canada also constructs an estimate based on participation rate trends that goes back prior to the mid-90s. This makes sense given the design of their study, but ignores the reality of the major turning point in retirement ages that exists in most developed countries since the mid-90s. Crude polynomial trend lines that can capture changes in the direction of trends show an even more extreme future growth in employment rates in most older age groups.

Box 2: How the Scenarios Were Calculated

All the data used in the calculations in this paper are from Statistics Canada's CANSIM base:

- The employment and hours data from 1976 to 2011 are from the labour force survey.
- Population projections from 2012 to 2031 are Statistics Canada's middle-ground M2 projections.

In both scenarios, the employment rate projections for older workers:

- Are calculated by single year of age, imputed from the five-year Labour Force Survey averages, but with no clustering of retirement decisions at specific ages;
- Assume a smooth trend from 2012 to 2031;
- Assume that no one retires before the age of 55 and that everyone has left the workforce by age 76.
- Are separately calculated by gender.

In both scenarios, the employment rate projections for those under age 55 assume that 2011 rates hold constant until 2031.

- In the 'no change' scenario, the employment rates for each age between 55 and 75 were assumed to remain at their 2011 level.
- In the 'reasonable change' scenario, the 2031 employment rate for each age between 55 and 75 was set to equal the employment rate for those five years younger in 2011.

Average retirement ages were calculated using these projected employment rates and the M2 population projections and following the OECD methodology outlined in Box 1.

Average hours (used in the calculations in Section 4) are assumed to remain unchanged from their 2031 levels. The hours data are based on the labour force survey but have been roughly adjusted (using data from the 1998 and 2010 Time Use surveys) in order to get consistent data for age groups.

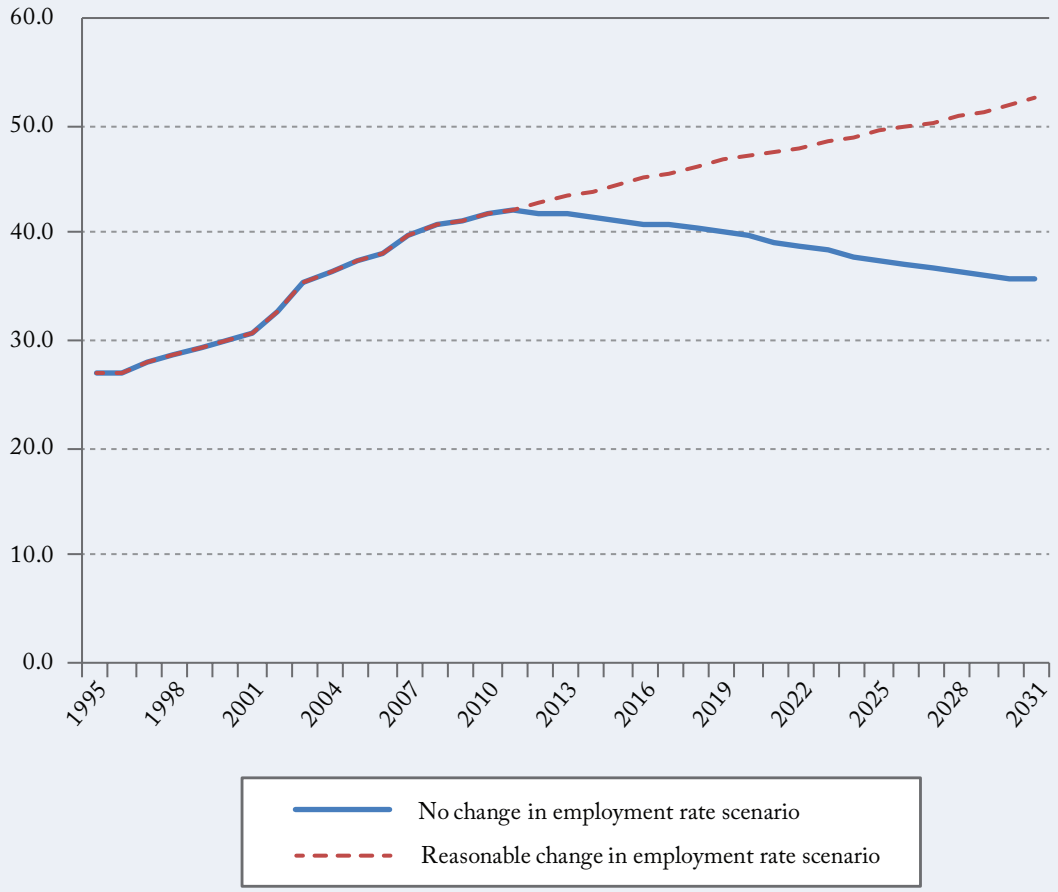
Figures 4 and 5 show the resulting calculations of employment rates for older workers and average retirement ages projected to 2031. The 'reasonable change' projections are compared with a 'no change' scenario where employment rates among older workers at each age between 55 and 75 are assumed, unrealistically, to remain unchanged from their 2011 levels.

Figure 4 shows that, in the 'no change' scenario, employment rates among older workers taken as a whole will fall quite steadily until 2031 even though we hold the rates constant for each separate year of age. This is the result of the growth in the numbers of older people and the fact that employment rates still decline by age. However, in the 'reasonable change' scenario, employment rates among workers age 55 to 75 continue to increase at about the rate we have seen in the recent past.

Figure 5 shows a strong increase in average retirement ages in the coming decade and then levels off. This illustrates the importance of demographic factors. Large numbers of babyboomers will reach the traditional retirement ages over the next decade and then move into their post-working years in the 2020s. (The calculations have arbitrarily assumed that everyone retires by age 75.) The result of the interplay between employment rates and demographic factors is that retirement ages increase rapidly to about 2020 and then start to level off. This occurs even in the 'no change' scenario. In the 'reasonable change' scenario, the levelling-off occurs a little later and the increase in retirement ages is much greater.

In other words, average retirement ages would rise by 1.8 years between 2010 and 2031 simply as a result of demographic factors, with no change in employment rates. The comparable increase of 5.3 years in the reasonable scenario therefore

Figure 4: Employment Rates Among Workers Aged 55-75, 1995 to 2011 and Two Scenarios to 2031



Source: See Box 2.

really consists of 3.6 years as a result of changes in employment behaviour and 1.8 years as a result of inevitable changes in the age structure of the population.

Looking Behind the Averages

Here we examine two potentially important limitations on the use of our projections:

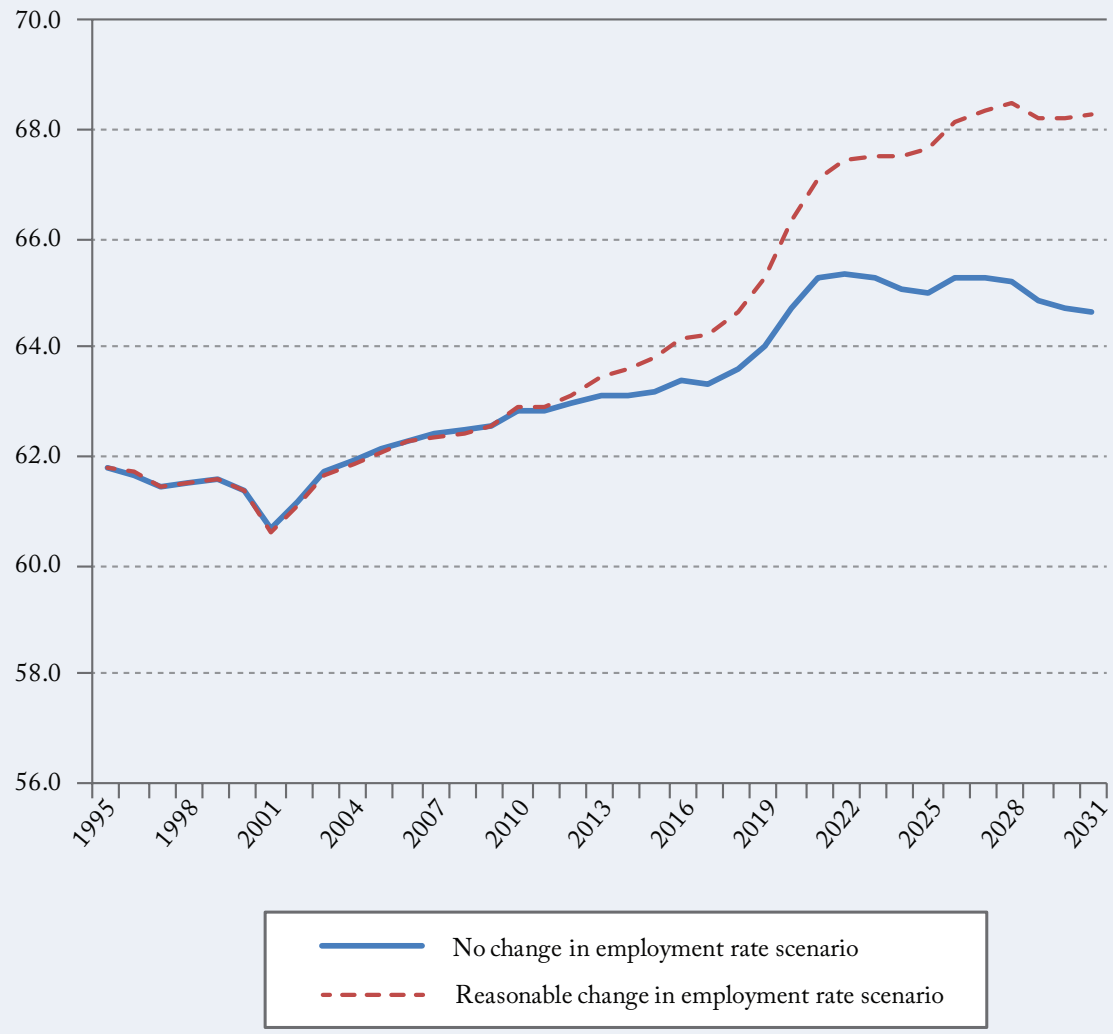
- Hours of work and productivity might decline with age;
- There are people who may not be able to work longer, or would prefer not to do so.

Hours of Work and Productivity in the Transition to Retirement

Our simple reliance on employment rates could be misleading if there were a decline in the hours worked by older people in the future, for example if more older workers shifted to part-time work as part of their transition to retirement. There might well be a greater number of older workers, but they might not be doing the same amount of work. However, labour-force survey data do not support such a concern.

First, trends over the past decades in average hours worked have been quite stable for most age

Figure 5: Average Retirement Ages, 1995 to 2011 with Two Scenarios to 2031



Source: Author's calculations. See Box 2.

groups. There has been a slight decline for both men and women age 65 and over. However, the trend for those 55 to 64 (and for those 25 to 54) has shown little change. It seems reasonable to assume that average hours will remain unchanged into the future.[5]

5 It has sometimes been argued that babyboomers have an underlying preference for more choice both in the timing of retirement and in the hours worked during the retirement transition. Such changes in preferences are not yet fully reflected in actual behaviour because institutional arrangements are still relatively inflexible, for example as to part-time work. However, the situation could change as employers gradually adapt their workplace to the needs of the older boomers. This is a plausible hypothesis that needs to be explored in the coming years once we can examine the actual behaviour of boomers during their retirement transitions. At present, there is not enough data to anticipate the extent of such trends or whether they would, on balance, increase or decrease the volume of work that is undertaken by older people.

Second, in the period since the mid-1990s, the proportion of older workers who work part-time has remained quite steady. The percentage of part-time work among women employees in older age groups has actually declined.

A deeper look suggests that our assumption about unchanged hours is likely conservative. For example, Carrière and Galarneau (2011) use working-life tables to show that delayed retirement has had a *large positive* impact on total annual hours. There have been declines in average weekly hours but this is due to the changing industrial and occupational composition of the workforce.

A similar concern would exist if older workers were less productive. However, again the evidence suggests this is not true, for reasons that are discussed later.

People Who Cannot, or Do Not Want To, Postpone Retirement

Another problem, at least at the level of perception, relates to people who cannot work, or do not want to work, longer in life. Some older workers simply do not have the needed skills or health.

Distributional issues are important in many kinds of analysis. Social well-being is, at the end of day, measured in a relative manner. In a world where, on average, people work longer, the well-being of those who cannot do so may fall relatively, if only temporarily. In some cases, this may result in higher off-loading pressures on social programs. Many countries find that their disability or unemployment programs become a substitute, and costly, form of transition from work to retirement.

Such concerns are important, but they are not directly relevant to the analysis here. Average retirement ages will be higher but will continue to reflect a heterogeneous range of retirement patterns. An increase of five years in retirement patterns on average does not mean that everyone will work five more years, or will be expected to do so.

However, potential problems could arise if the additional years of work took place when health and skills were declining; if there were concomitant, significant increases in the skill-requirements of jobs or in their health requirements for employees; or if there were a sharp cultural shift in work-leisure preferences in a way that increased the proportion of older people who place a high priority on leisure in retirement.

None of these conditions exist, however. Healthy life expectancy is increasing, with most retirement transitions being among people in their late 50s and 60s – well before declines in health become common. As well, the skills of people in the affected age ranges will be higher in the coming decades than they are today. On the demand side, physically demanding manual work is shrinking as a portion of the workforce and knowledge work is increasing; and, although it is still too early to be sure about this, babyboomers may have a preference for later and possibly more flexible pathways to retirement.

The largest problem may be among a relatively small number of people those who cannot work longer and who might be negatively affected by, for example, the age of pension entitlement gradually being shifted to keep in line with longevity changes. However, as will be argued in the concluding section, a gradual reform process could readily include compensating adjustments if they are needed.

Why Changes in Retirement Behaviour Are Potentially Important

Later average retirement ages could have far-reaching effects on issues of policy interest. Longer work lives would increase the supply of labour, thus reducing the negative economic effects of population aging, and reducing the pressures on public pensions and the need for retirement savings. Positive effects on health and individual well-being are also probable.

Effects on Old Age Dependency

Dependency ratios based only on age structures once dominated policy narratives about the effects of population aging. For example, they compared the number of people aged 20 to 64 (working ages) with the number of people 65 and over (seniors to be supported by those of working age). Newer and more useful measures take account of the combined effects of population aging and actual employment behaviour. A comprehensive measure is an hours-based 'producer-consumer' ratio: the time actually spent at work producing the goods, services and income needed to support all the activities of life outside of work. More specifically, the ratio is computed as the total number of hours worked in an average week by the whole population as a percentage of the total amount of time that is not worked during that week by people of all ages.

Looking backward, one might think that as babyboomers were entering the labour market in the late 1970s and the 1980s, the producer-consumer ratio would show pronounced growth. In reality, the ratio moved up and down considerably during this period, mainly in line with the business cycle, showing only a relatively small upward trend (Figure 6). Positive demographic effects were partially offset by trends among males towards early retirement (until the mid-1990s) and by increasing longevity. In other words, the economic gains that resulted from the favourable demography and productivity gains of those years were used, in part, to fund ever-longer periods outside of work, in retirement.

Looking forward, if there are no changes in retirement behaviour we can expect a clear downward trend in the producer-consumer ratio (Figure 6). On the other hand, our 'reasonable change' projection, incorporating longer working-life durations, greatly reduces the downfall in the ratio, thereby considerably easing economic problems associated with population aging.

The data used in Figure 6 can recalculated to illustrate the relationship between producers and consumers in an even more direct way. In 2011, every hour of work provided the goods and services needed to support 9.0 hours of the time spent by all Canadians outside of work. By 2031, our reasonable projections show that this same hour of work would need to support 9.3 hours outside of work, a slight increase. (In the no-change scenario, this hour would be need to support 10.2 hours outside of work, a considerably larger number, although perhaps not as dramatic as is often portrayed in the population aging literature.)

Living standards would therefore still likely fall. However, economic performance that was somewhat stronger than expected could go a long way in compensating for any demographically induced fall in living standards. So would an increase in average retirement ages beyond those assumed in the projections. For example, an increase in the employment of older workers that is, say, 25 percent higher than our 'reasonable change' projection would completely offset the negative economic effects of population aging, at least over the next two decades.

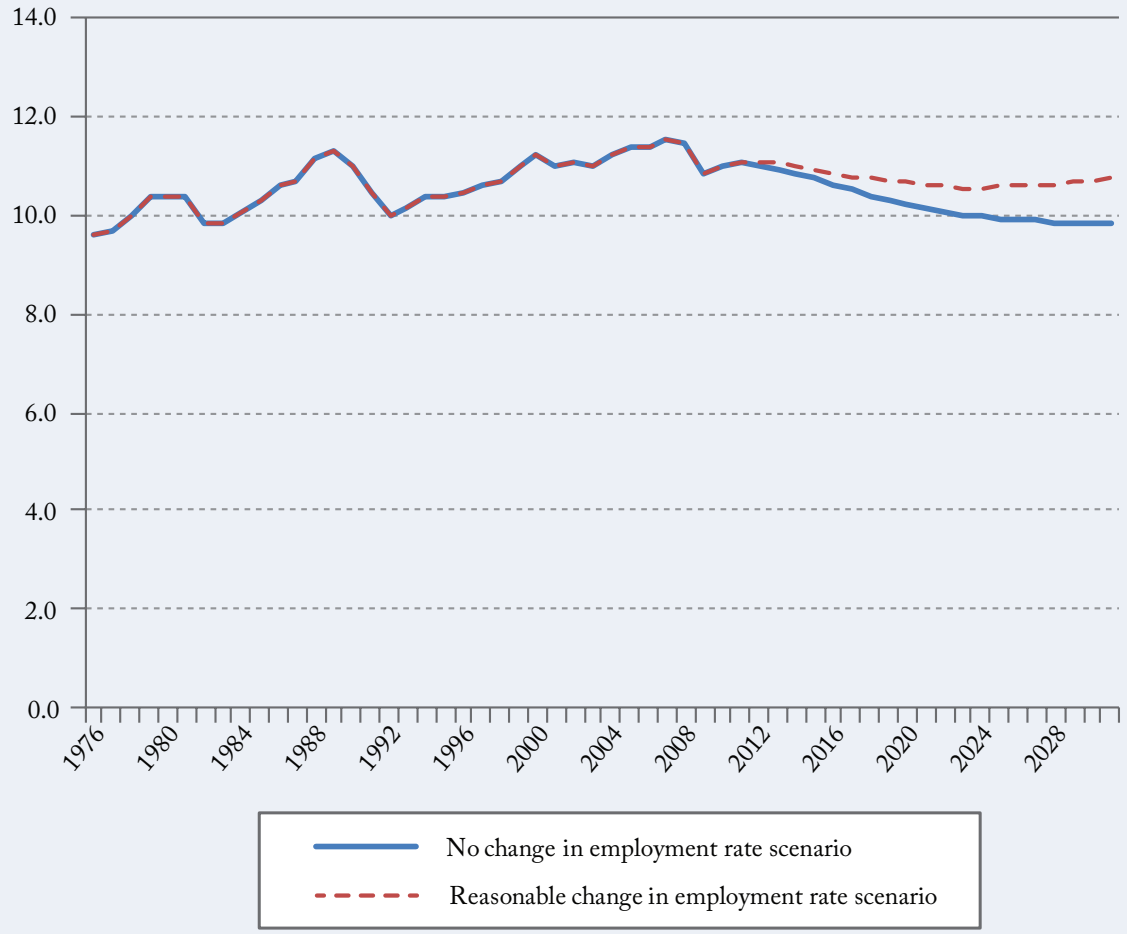
Labour Market Effects

Figure 7 shows the effect of later retirement on the size of the total workforce (employees of all ages):

- In the no change scenario, which assumes that employment rates by age remain at their current levels, the rate of growth of total employment levels off significantly when compared to past history, with total number of employees in 2031 growing to about 14 percent higher than in 2011;
- Longer work durations on average – our reasonable change scenario – would see the workforce growing by only a little less than the historical trend, reaching 20.6 million employees in 2031, up by 19 percent from 2011.

These figures are in line with Statistics Canada's recent labour-force projections (Martell et al. 2011), once allowance is made for the fact that Statistics Canada projected higher participation rates among older workers only until 2018, not 2031 as we have done in our reasonable growth scenario.

Figure 6: Producer-Consumer Ratio, 1976 to 2010 with Two Scenarios to 2031



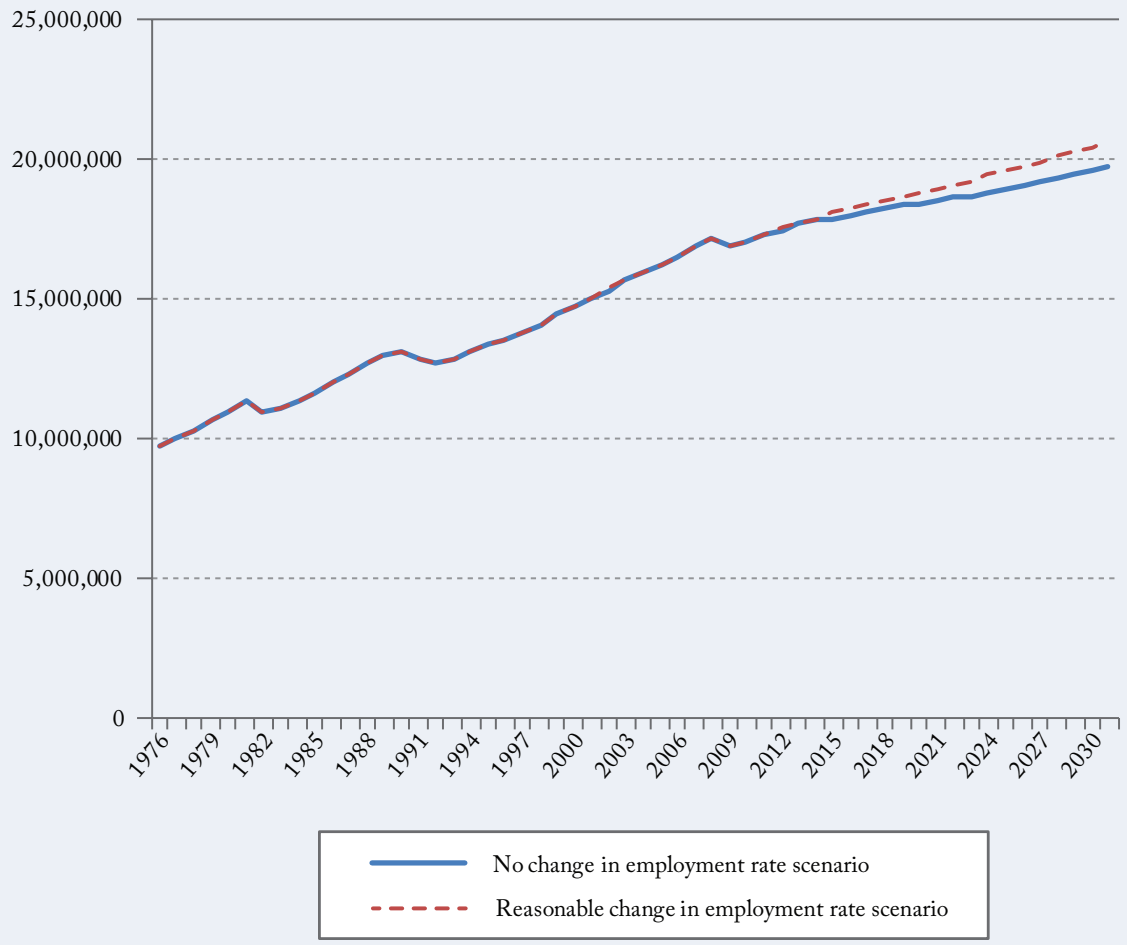
Source: Author's calculations. See Box 2.

Implications for Retirement Savings

The obvious payoff from delayed retirement would be a large reduction in the amount of savings needed for a comfortable retirement. Hicks (2011) provides numerous examples, including effects on public pensions. Dodge, Laurin and Busby (2010) show that a four-year delay in retirement can substantially reduce the need for retirement savings: for example, the required private savings rate for a median worker would be 17 percent of annual pre-tax earnings if he/she were to retire at age 63 but would drop to 10 percent if retirement is delayed to age 67.

Shorter retirement durations not only reduce the need for retirement savings, they also reduce income-related risks that may occur during the course of old age. Income risks in later life are best managed in a system with flexible retirement pathways and multiple sources of income during a person's older years. An important source of this desired diversity is the employment income that would result from later retirement. People adjust

Figure 7: Total Employment 1976 to 2011, with Two Scenarios to 2031



Source: Author's calculations. See Box 2.

their retirement age to reflect their ability to retire comfortably (Schellenberg and Ostrovsky 2008).

Spin-off Effects on Health and Well-being

Later retirement may also result in improvement in other dimensions of individual well-being (Hicks 2011). Some of these gains are associated with a related trend towards greater flexibility in retirement transitions and an associated increase in flexibility in allocating time to work, learning, leisure, care-giving and care-receiving over a lifetime. However, in this paper, we limit ourselves to describing the possible beneficial effects that would result directly from an increase in average retirement ages.

Unfortunately, there is little hard data that allows us to see causal links between retirement ages and well-being. Box 3 provides some illustrations of positive links among age, working, and measures of well-being such as job security, financial security, mental health and satisfaction in different domains of life. Unless otherwise noted, they are data drawn from the Statistics Canada's web site. It is important

Box 3: Examples of the Inter-relationships among Age, Work and Well-being

- Job tenure increases dramatically with age. In 2010, workers age 55+ average 190 months with their present or latest employer. The comparable figure for those 25-54 was 98 months.
- The once large gap in educational attainment between younger and older worker has shrunk enormously. In 1990, some 27% of people 25-54 had a PSE degree or certificate. By 2010 that figure grown to 36%. The growth for people age 55 to 64 has been much faster – from 17% to 33%, now almost as large as that for middle aged people.
- Unemployment rates for people aged 55+ are lower than for people in their middle years (age 25-54) and much lower than for young workers (age 15-24). The figures for 2010 are 6.4%, 6.9% and 14.8%, respectively.
- Family net worth increases dramatically depending on the age of the family head – up to the 55 to 64 age group.
  - In 2005, for those aged 35-44, net worth was $135,000.
  - For those 45-54 it was $232,000.
  - It reached $407,000 for those aged 55 to 64.
  - Even in the age group 65+, net worth was still $303,000 – higher than in the 45-54 age group.
- Working later will reduce the need for retirement savings in a quite dramatic fashion. The result could be increased material living standards in the pre-retirement period and greater financial risk in the retirement years. Examples are found in the text and in Hicks (2011).
- Statistics Canada's General Social Survey of 2005 found that people got more satisfaction from paid work activities than they did from most leisure and cultural activities (Wolfson 2011). Indeed, for people over the age of 65, paid work was at the top of the list of activities that people said they enjoyed the most.
- Retiring later makes us smarter! International evidence (Rohwedder and Willis 2010) shows that cognitive ability is higher among those who work longer, with obvious individual and social payoffs.
- Some jobs cause stress which is negatively linked to health and well-being. However, the balance of evidence suggests that maintaining a longer attachment to employment, one of the main institutions that provide structure in our society, is likely to result in a net improvement in individual life satisfaction and in health, including mental health (Kuhn et al. 2011, Behncke 2009).

to underline that these examples are highly selective and indicate correlations only, not causality. They suggest, but certainly do not prove, that a world where people work longer on average will be a happier world.

Following are some of the factors that are likely to contribute to increases in well-being if average retirement ages were to rise:

- For those who like their job, that satisfaction is spread over a longer period of life (and among those who dislike their jobs, many will simply leave the workforce early, as they do currently);
- The number of people who cannot work longer for health reasons is declining;
- A longer working life is likely to provide more opportunities for mid-career training and job-changing (Hicks 2011), which is likely to have positive effects on both productivity and individual satisfaction;
- For those who have low retirement savings, working longer provides greater opportunities to manage the risk of inadequate income in retirement, again with positive effects on individual well-being.

Conclusion: Policy Action Is Needed But Need Not Be Threatening

The policy implications of later retirements are large but are not accurately reflected in policy discussions in Canada. That suggests a failure in the interface between the research and policy communities, a failure that warrants deeper exploration than is possible in this paper.

For example, the policy community has received the message from the research community that, under the assumption of little change in retirement ages, a significant number of Canadians are not saving adequately for their retirement. They have also received the message that population aging will have large negative macro-economic and fiscal consequences in the coming decades. However, they have not received the message that, if more realistic assumptions about future retirement patterns are made, the negative economic effects of population aging will be greatly reduced and that, for example, there may be fewer problems of under-saving for retirement than are indicated by much of today's policy analysis.

In terms of general policy directions, the conclusions of the paper can be summarized as follows.

1: This paper argues that there will be a strong trend towards later retirement as a result of social and economic pressures, without any policy action. It also argues that the results will be largely positive and should therefore be supported by policy whenever possible. For example, the trend towards later retirement will significantly reduce, although not entirely offset, the much-discussed negative macro-economic and labour-market effects of population aging. This suggests that compensating policy reforms are still needed but can be less draconian than has often been thought to be necessary.

2: Many currently unknowable factors will determine what will actually happen in 2031. However, the assumptions used in this paper to develop a reasonable retirement scenario are much more in line with current trends and directions than is the unrealistic and equally arbitrary assumption that underlies most current policy analysis; namely that there will be no change in retirement patterns over the next 20 years.

3: In terms of specific pension reforms, the paper argues for increasing the age of receipt of public-pension benefits. This proposal might be questioned at a time when people often retire before the standard retirement age, when retirement ages are increasing in any event, and especially given that the direct effects of such policy changes are likely to be quite minor. However, the fact that there is no immediate crisis in Canada's public pensions provides a happy, unusual opportunity to make some relatively painless changes in the short-run in order to lay the ground for the more rational longer-term evolution of the retirement income system as a whole.

To expand on this last point, the paper points to the desirability of increasing the age of eligibility to public pensions in the longer run. Reforms along these lines would be important, but need not be large. The work disincentives in Canadian public pensions are relatively small – smaller than those in many private pensions (Fougère et al. 2009). In the coming decade or so, the needed extension of working lives will occur mainly as a result of market and societal forces alone. Reform to the age of public-pension eligibility would, no doubt, reinforce the changes that will take place in any event, but the main rationale for reform is not related to short-run impacts.

The goal would be to help shift the system away from the notion that there is a normal age of retirement based on a person's chronological age. It is important to understand that a fixed normal age of retirement is not neutral in its effects on the allocation of time to work and retirement. A fixed age, in conjunction with growing life expectancy, means that the proportion of life spent in retirement grows relative to the proportion of time spent in work, in learning and in leisure at other stages of life.

Reforms that increased the age of public-pension eligibility would convey the message that it is no longer appropriate for public policy to include provisions that could distort people's life-course decisions in a way that favours people spending shorter periods of their lives in work.

The reform process could be designed to provide a non-threatening opportunity for broader public discussion about retirement-age expectations more generally, including both in private pensions and in individual retirement planning.[6] Alternative concepts, such as linking pension eligibility to longevity, could be debated. As noted, the actual reforms themselves could be modest and without the large negative effects that have made pension debates so difficult in some countries. Not all the reforms would need to be introduced simultaneously; the implementation of some could be phased in over a quite lengthy period of time.

Gradual introduction would also provide an opportunity to examine the distributional effects of the changes. For example, there may be some people who cannot work longer and who, if the age of eligibility for pension benefits is increased without compensating changes made elsewhere in the system, may have to remain longer on other benefits or other income sources that are less generous than pensions. While the numbers of people in these situations will be small, there would be time to introduce compensating measures should this prove needed.

Very gradual increases in the age of public pension eligibility with lengthy advance warning, similar to the approach being used in the United States,[7] would seem to be a sensible reform route. Such reforms should involve gradually raising the age band at which one could receive C/QPP. Denton and Spencer (2010) provide practical examples of how this could be done and examine the consequences of different phase-in scenarios. Similar changes to the Old Age Security (OAS) would provide consistency in signals about retirement ages. Design options would need to take account of the possibility of actuarially adjusting the OAS to allow it to be taken earlier or later, along the lines of the C/QPP – and to ensure that there are no unintended negative effects on recipients of the Guaranteed Income Supplement.

An important goal of the reform process would be to help re-connect pension, and other retirement income policies, with emerging labour market, social and demographic realities. Later retirement can be a win-win situation, both for those retirees who choose it, and the policymakers who must adapt to it.

6 Based on a review of the Canadian literature and international experience, Hering and Klassen (2010) conclude that the public would react positively to gradually introduced, small changes in the context of a public debate that examined the alternatives. The public resistance seen in France and other countries, where much deeper reforms are indicated, would not occur if reforms were introduced along the American model.

7 In 1983, the United States passed legislation to gradually increase the age of eligibility for Social Security benefits. The changes did not start until 2003 and will be phased in by small increments until 2025 when the eligibility age will reach 67.

References

Banerjee, Robin, and William B.P. Robson. 2009. *Faster, Younger, Richer? The Fond Hope and Sobering Reality of Immigration's Impact on Canada's Demographic*. Commentary 291. Toronto: C.D. Howe Institute.

Behncke, Stefanie. 2009. "How Does Retirement Affect Health?" IZA Discussion Paper No. 4253. http://ssrn.com/abstract=1426740

Carrière, Yves, and Diane Galarneau, "Delayed Retirement: A New Trend," *Perspectives on Labour and Income*, Vol. 23, No. 4, 2011, Statistics Canada.

Denton, Frank T., Ross Finnie and Byron G Spencer. 2009. "Patterns of Retirement as Reflected in Income Tax Records for Older Workers," SEDAP Research Paper No. 257.

Denton, Frank T., Christine H Feaver, Byron G Spencer. 2010. "Cohort Working Life Tables for Older Canadians" *Canadian Studies in Population*, Vol. 37, No. 1-2, pp. 175-206, Spring/Summer.

Denton, Frank T., and Byron G Spencer. 2010 "Age of Pension Eligibility, Gains in Life Expectancy and Social Policy." SEDAP Research Paper No 276

Dodge, David A., Alexandre Laurin and Colin Busby. 2010. "The Piggy Bank Index: Matching Canadians' Saving Rates to Their Retirement Dreams." E-brief. Toronto: C.D Howe Institute.

Expert Panel on Older Workers. 2008. *Supporting and Engaging Older Workers in the New Economy*. http://www.hrsdc.gc.ca/eng/publications_resources/lmp/eow/2008/older_workers_2008.pdf

Fougère, M., S. Harvey, Y. Lan, A. Léonard, and B. Rainville. 2009. "Incentives for early retirement in Canada: an analysis with a dynamic life-cycle CGE model," in *Retirement Policy Issues in Canada*. M. G. Abbott, C. M. Beach, R. W. Boadway, and J. G. MacKinnon, Eds., John Deutsch Institute for the Study of Economic Policy. McGill-Queen's University Press.

Hering, Martin, and Thomas R Klassen. 2010. "Strengthening Fairness and Funding in the Canada Pension Plan: Is Raising the Retirement Age an Option?" SEDAP Research Paper 263.

Hicks, Peter. 2011. "The Surprisingly Large Policy Implications Of Changing Retirement Durations." SEDAP research paper number 284. http://socserv.mcmaster.ca/sedap/p/sedap284.pdf

Kuhn, Michel, Stefan Wrzaczek, Alexia Prskawetz and Gustav Feichtinger. 2011. "Optional Choices of Health Retirement in a Life-cycle Model." http://www.lepas-fp7.de/lepas-proc-2011-18.pdf

Martel, Laurent, Éric Caron Malenfant, Jean-Dominique Morency, André Lebel, Alain Bélanger and Nicolas Bastien. 2011. "Projected Trends to 2031 for the Canadian Labour Force," *Canadian Economic Observer,* Statistics Canada, August.

Moore, Kevin D., William Robson and Alexandre Laurin. 2010. *Canada's Looming Retirement Challenge: Will Future Retirees Be Able to Maintain Their Living Standards upon Retirement?* Commentary. Toronto: C D Howe Institute, December.

OECD. 2006. *Live Longer, Work Longer: A synthesis report*, OECD 2006, ISBN: 9789264035874

———. 2011. *Pensions at Glance 2011: Retirement-Income Systems in OECD and G20 countries*, OECD 2011. ISBN 978-92-64-09523-6

———. 2011a. *A method for calculating the average effective age of retirement (Paris: OECD)*. http://www.oecd.org/dataoecd/3/0/39371923.pdf

Pignal, Jean, Stephen Arrowsmith and Andrea Nes, *First Results from the Survey of Older Workers*, 2008, Statistics Canada 2010. http://www.statcan.gc.ca/pub/89-646-x/89-646-x2010001-eng.htm

PRI.2004. *Views on Life-Course Flexibility and Canada's Aging Population*, Policy Research Initiative, http://www.policyresearch.gc.ca/doclib/PR_LC_Life-Course_200407_E.pdf

——. 2005. *Encouraging Choice in Work and Retirement Project Report*, Policy Research Initiative, 2005 http://www.policyresearch.gc.ca/doclib/PR_LC_Encour-Choice_200510_E.pdf

Rohwedder,Susann, and Robert J. Willis, " Mental Retirement," *Journal of Economic Perspectives*, Volume 24, Number 1,Winter 2010. http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.24.1.119

Schellenberg, Grant, and Yuri Ostrovsky. 2008. *The Retirement Plans and Expectations of Older Workers*. (Ottawa: Statistics Canada). Canadian Social Trends.

Schirle, Tammy. 2008. "Why Have the Labor Force Participation Rates of Older Men Increased since the Mid-1990s?" *Journal of Labor Economics*, University of Chicago Press, vol. 26 (4), pp. 549-594.

Sharpe, Andrew. 2011. "Is Aging a Drag on Productivity Growth? A Review Article on Aging, Health and Productivity: The Economics of Increased Life Expectancy," *International Productivity Monitor*, No 11, Spring.

Wolfson, Michael C 2011. "Projecting the Adequacy of Canadians' Retirement Incomes: Current Prospects and Possible Reform Options," IRPP Study 17, IRPP.

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