Skills Research Initiative
Initiative de recherche sur les compétences

Costs and Benefits of Workforce Aging and Retirement to Firms

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A.   Labour Market and Skills Implications of Population Aging;
B.   Employer-Supported Training;
C.   Adjustments in Markets for Skilled Workers;
D.   International Mobility of Skilled Workers.

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B.   la formation en entreprise;
C.   l'adaptation du marché du travail aux travailleurs spécialisés;
D.   la mobilité des travailleurs spécialisés dans le monde.

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Abstract

The purpose of this paper is to shed light on the potential costs and benefits of workforce ageing and retirement to firms by analysing the retirement decision of older workers in Canada. The empirical analysis, which is the focus of the paper, addresses such questions as: What are the reasons for retiring? To what extent is retirement involuntary as opposed to voluntary? What are the barriers that inhibit the continuation in employment for those who otherwise would like to continue and how do those barriers differ depending upon the demographic, human capital and work related characteristics of individuals as well as their location? Why do some people return to work after retirement and how do those reasons differ depending upon the demographic, human capital and work related characteristics of individuals as well as their location? What are the determinants of retiring due to mandatory retirement and the expected age of retirement, and how have these changed over time? The report discusses the barriers that affect the costs and benefits to firms of an aging workforce and their retirement decisions. It then analyses the retirement decisions of individuals by using the retirement information from the General Social Survey (GSS) 2002 to provide econometric evidence on the correlates associated with five outcomes for retirees: (1) reasons they give for retiring, (2) barriers that inhibited them from continuing on in employment, (3) whether retirement was voluntary or not, (4) whether one returned to the labour market after retirement, and (5) reasons for returning to the labour market for those who returned from retirement. The next section then provides more detailed information on issues pertaining to mandatory retirement. It provides econometric evidence on the correlates of two outcomes: (1) whether retirees retired because of mandatory retirement, and (2) the expected age of retirement. That analysis is done separately on the 1994 GSS data and the 2002 GSS data to determine changes over that time period. The next section relates this and other evidence to the costs and benefit implications of aging and retirement for firms, relating to such issues as skill shortages, disability costs, pension and age-related fringe benefits, the banning of mandatory retirement, seniority issues and termination implications. The report concludes with a summary and discussion of research needs.

Résumé

Cette étude a pour but de jeter la lumière sur les coûts et les avantages que peuvent comporter pour les entreprises le vieillissement et le départ à la retraite de la main-d'œuvre, grâce à l'analyse des décisions liées à la retraite des travailleurs âgés au Canada. L'analyse empirique, au cœur de cette étude, porte sur diverses questions : Quelles sont les raisons qui motivent une personne à prendre sa retraite? Dans quelle mesure la retraite est-elle involontaire plutôt que volontaire? Quels obstacles empêchent la poursuite de l'emploi chez ceux qui autrement voudraient continuer à travailler et en quoi ces obstacles varient selon les caractéristiques liées à la démographie, au capital humain et au travail ainsi qu'au lieu de résidence? Pourquoi certaines personnes retournent travailler après avoir pris leur retraite et de quelle façon ces raisons varient-elles selon les caractéristiques liées à la démographie, au capital humain et au travail ainsi qu'au lieu de résidence? Quels sont les déterminants du départ à la retraite, motivé par la retraite obligatoire, et l'âge prévu de la retraite, et quelle a été l'évolution de ces facteurs au fil du temps? L'étude présente un examen des obstacles qui influent sur les coûts et les avantages pour

l'entreprise d'une main-d'œuvre vieillissante et de ses décisions liées à la retraite. On y analyse ensuite les décisions liées à la retraite des travailleurs en utilisant les données provenant de l'Enquête sociale générale (ESG) 2002 pour constituer une preuve économétrique des corrélats associés à cinq observations concernant les retraités : 1) les raisons qui ont motivé leur départ à la retraite, 2) les obstacles qui les empêchent de continuer à travailler, 3) le fait que leur départ à la retraite a été volontaire ou non, 4) leur retour ou non-retour sur le marché du travail après la retraite et 5) les raisons de leur retour sur le marché du travail, le cas échéant. La section suivante donne des renseignements plus détaillés sur les questions relatives à la retraite obligatoire. On y trouve une preuve économétrique des corrélats de deux observations : 1) le travailleur a pris sa retraite parce que celle-ci était obligatoire et 2) l'âge prévu de la retraite. L'analyse a été faite séparément à partir des données de l'ESG de 1994 et de celle de 2002 afin d'observer les changements durant cette période. Dans la section suivante, on fait un lien entre ces faits et d'autres preuves sur les coûts et les avantages découlant du vieillissement et du départ à la retraite pour l'entreprise et diverses questions, notamment les pénuries de main-d'œuvre, les frais liés à une incapacité, les avantages sociaux liés aux pensions et à l'âge, l'abolition de la retraite obligatoire, les questions d'ancienneté et les conséquences de la cessation d'emploi. L'étude se termine sur un résumé et un exposé sur les besoins en recherche.

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COSTS AND BENFITS OF WORKFORCE AGING
AND RETIREMENT TO FIRMS

1. INTRODUCTION

Issues pertaining to an aging workforce and retirement have numerous practical and policy implications for various labour market stakeholders including firms, employees, unions, policy makers and education and training institutions. Issues of relevance include: emerging skill shortages emanating from retirements; age discrimination and human rights issues; public and private pensions; early and delayed retirement, transitions into retirement and the impact of mandatory retirement; disability policies; and age-related aspects of social programs. Of particular importance in these areas is how various institutional, legislative and policy initiatives impose (often unintended) barriers and constraints on the behaviour of an aging workforce, and how this in turn will affect the stakeholders as the workforce ages and begins to retire.

While all stakeholders are affected by an ageing workforce, the impact on firms is particularly important since their competitiveness and viability will ultimately affect the income and opportunities of workers as well as demands placed on education and training institutions and as policy makers. As such, understanding the costs and benefits to firms of an aging workforce – the focus of this report – provides insights into how all stakeholders will be affected.

Particular attention will be paid to the preferences of an aging workforce in various areas: reasons for retirement; barriers inhibiting them from continuing in employment; whether retirement was voluntary; reasons for returning to the labour market after retirement; and their expected age of retirement. Understanding these preferences and constraints can inform firms and policy makers as to changes that can be made so as to provide flexibility to meet the needs of both employees and employers in this area of growing importance.

This is important since many of the employer workplace and human resource practices as well as policy initiatives of governments were established in the "old world of work," dominated by a middle-aged, male workforce of single-earner families often working in arduous blue-collar jobs with income needs associated with a mortgage and raising a family. Today's workforce is vastly different. It is older, longer lived and often working in white-collar jobs where work is not physically arduous and is often intrinsically interesting. Their preoccupations are more with transitions into (and perhaps back out of) retirement, and their income security needs relate to public and private pensions. Issues associated with raising a family have often been augmented by concerns over the care of elderly parents – making them the "sandwiched generation." When the aging workforce retires, firms may lose an important source of institutional knowledge as well as mentoring capabilities for younger workers. Yet their staying on with the firm can reduce hiring and promotion opportunities for younger workers within that firm, and have important cost implications for age-related policies like health and disability benefits. As with so many changes, both costs and benefits are involved.

The costs and benefits may be particularly affected by government policy initiatives and the workplace and human resource practices of firms that may (often unintentionally) give rise to barriers that inhibit the optimal utilization of an aging workforce. Identifying such barriers is an important objective of this report. This is so also in part because the reduction of such barriers can be a "win-win" situation if the barriers no longer serve their original purposes or serve purposes that are not in line with the needs of the new world of work. Even if the barriers still serve a purpose, it is important to delineate the trade-offs that are involved so that their costs and benefits can be assessed.

The optimal utilization of an aging workforce is consistent with the federal government's Innovation Strategy launched in February 2002 with the release of *Achieving Excellence: Investing in People, Knowledge and Opportunity* and the companion document *Knowledge Matters: Skills and Learning for Canadians*. Obviously, "investing in people" implies people of all ages, including older workers with their institutional knowledge and capability of mentoring. It can also imply an orderly and dignified retirement process that opens job and promotion opportunities for younger workers. "Investing in knowledge" includes life-long learning and tapping into the accumulated knowledge of older workers. "Investing in opportunity" implies giving older workers the opportunity for dignified transitions into retirement (and perhaps out of retirement if they wish) as well as opening job and promotion opportunities for younger workers. The subtitle of the companion document "skills and learning" includes life-long learning as well as re-tooling for some older workers and transferring their skills to younger workers.

The purpose of this report is to shed light on some of these issues by analysing the retirement decision of older workers in Canada. Particular attention is paid to the *reasons for retirement* since such information would facilitate firms altering those reasons so as to alter the retirement decision in a manner they preferred – postponing it if they wanted to retain older workers to keep their skills or to deal with impending shortages, or encouraging retirement if firms wanted to encourage renewal and manage the uncertainty of age-related benefits. Attention is also paid to *barriers that inhibit the continued participation* of older workers in the workforce, since such barrier removal could be a "win-win" situation if employees wanted to continue working and employers wanted to facilitate such continuation. The determinants of *whether retirement was voluntary* are analysed as are the determinants of *returning to the labour force* for those who retired. *Reasons for returning to the labour market after retirement* are also

analysed, again to provide information that may be useful for employers seeking to induce retirees back into the labour market. Given the growing policy interest around mandatory retirement, information is provided on whether retirees *retired because of mandatory retirement* as well as their *expected age of retirement*, along with changes in those dimensions over time.

The empirical analysis, which is the focus of the paper, will address such questions as:

➢ What are the reasons for retiring?

➢ To what extent is retirement involuntary as opposed to voluntary?

➢ What are the barriers that inhibit the continuation in employment for those who otherwise would like to continue and how do those barriers differ depending upon the demographic, human capital and work related characteristics of individuals as well as their location?

➢ Why do some people return to work after retirement and how do those reasons differ depending upon the demographic, human capital and work related characteristics of individuals as well as their location?

➢ What are the determinants of retiring due to mandatory retirement and the expected age of retirement, and how have these changed over time?

Answers to these questions will facilitate taking advantages of the *opportunities* associated with an aging workforce, while at the same time meeting the *challenges* – and in particular, converting challenges into opportunities. Answers will also shed light on the extent to which mandatory retirement is a constraining influence on retirement decisions, and the extent to which it varies by such factors as gender, occupation, education and workplace characteristics. This analysis will also help identify how (as well as which) firms will likely be affected by retirement and an aging workforce more generally. The empirical analysis will therefore allow for an improved appreciation and understanding of the costs and benefits of retirement to firms

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based on workplace characteristics and the characteristics of their workforce.

The report begins with some basic background demographic information to "set the stage." It then discusses the barriers that affect the costs and benefits to firms of an aging workforce and their retirement decisions. Such barriers arise from a variety of sources: mandatory retirement; age discrimination; employer pensions; public pensions and transfer programs; disability programs; and reasonable accommodation requirements. The report then "drills deeper" into analysing the retirement decisions of individuals by using the retirement information from the General Social Survey (GSS). The data sets are first described. The report then utilizes the most current 2002 GSS to provide econometric evidence on the correlates associated with five outcomes for retirees: (1) reasons they give for retiring, (2) barriers that inhibited them from continuing on in employment, (3) whether retirement was voluntary or not, (4) whether one returned to the labour market after retirement, and (5) reasons for returning to the labour market for those who returned from retirement. The next section then provides more detailed information on issues pertaining to mandatory retirement, given the current policy emphasis on that area. It provides econometric evidence on the correlates of two outcomes: (1) whether retirees retired because of mandatory retirement, and (2) the expected age of retirement. That analysis is done separately on the 1994 GSS data and the 2002 GSS data to determine changes over that time period. The next section relates this and other evidence to the costs and benefit implications of aging and retirement for firms, relating to such issues as skill shortages, disability costs, pension and age-related fringe benefits, the banning of mandatory retirement, seniority issues and termination implications. The report concludes with a summary and discussion of research needs.

2. BACKGROUND DEMOGRAPHICS

The costs and benefits to firms of an aging workforce depend in part on the extent to which the workforce is ageing. This section provides some basic background information on a number of dimensions:

➢ the current and future age structure of the Canadian workforce

➢ median retirement age and proportion of workforce approaching retirement, by industry

➢ current and future life expectancy

➢ an international comparison of old-age dependency ratios

➢ a Canada-US comparison of workforce aging and expected future retirements

Current and Future Age Structure of Canadian Population

The aging of the Canadian population is illustrated in Table 1. In 2001, only 12.6% of the population (top panel) was age 65 and over; by 2050 that proportion is expected to double to 24.9% (somewhat higher for females compared to males). Adding in the growing proportion in the age group 55-64 on the grounds of the trend towards earlier retirement, yields 21.6% of the population 55 and over in 2001, increasing to 37.6% by 2050. Conversely, the shares of the younger population are all declining. Those in the prime working years of 25-54 (largely out of the education phase and not having yet moved into the usual retirement phase) are expected to decline from 45.7% in 2001 to 36.5% by 2050.

If individuals up until the age of 24 are acquiring education or training, and those 55 and over are engaging in early retirement[1], then by 2005 about one-quarter of the population will be in the pre- labour market stage, slightly over one-third will be in the prime working year stage and slightly over one-third in the retirement phase. These are likely overestimates of those in the

pre labour market stage since not all spend that amount of time acquiring education and training, and overestimates of those in the retirement phase since not all retire at age 55, but they do illustrate a possible scenario if the trends to more education and earlier retirement continue.

Median Retirement Age and Proportion of Workforce Approaching Retirement, by Industry

As indicated in Table 2, the median retirement age dropped substantially from 64.3 to 60.6, over the brief period 1987 to 2002. This clearly highlights the tendency towards earlier retirement. There is also considerable variation in the median retirement age by industry. In 2002, the median retirement age ranged from a low of 57.3 years in educational services and 58.2 years in public administration, to highs of 66 years in agriculture, 65.3 years in management, administration and support, and 64.3 years in construction. While the median retirement age tended to drop across most industries, this was not always the case. It increased over that time period from 64.9 to 66 in agriculture, from 63.2 to 64.3 in construction, and from 62.7 to 65.3 in management, administration and support. In essence, the tendency towards earlier retirement generally, but not always, occurs across the various different industries.

The aging of the workforce is illustrated by the increasing proportion of older workers near the age of retirement. That proportion almost doubled from 11.4% in 1987 to 19.8% in 2002. The increase occurred across most industries, except for a small decline in agriculture and in management, administrative and support. The increase in the proportion of the workforce near retirement was particularly large in the following industries: professional, scientific and technical; educational services; health care and social assistance; and public administration. In part for this reason, the proportion of the workforce near retirement was highest in health care and social assistance (39.3%) and public administration (32.1%), well above the average of

[1] Evidence on early retirement in Canada is discussed in Gower (1995, 1997), Lowe (1991) and Monette (1996).   7

19.8% in 2002. These were also the two industries that had the lowest median age of retirement, highlighting the obvious fact that larger proportions will be near retirement when the retirement age is low.

Life Expectancy

The life expectancy dimension of the aging population is of particular relevance since it highlights a pressure for continued employment. That is, a longer life expectancy is likely to increase the pressure for individuals to want to work longer both because they have a longer expected remaining work-life, but also because they may have more need to accumulate additional income to support themselves over that longer period. The relevant concept here is *conditional* or remaining life expectancy at some age, say the "normal" retirement age of 65 because that is the number that will enter the decision calculus of a person at that age. The conditional life expectancy for such older persons is longer than the life expectancy (expected age of death) at earlier ages because those who have survived until an older age are likely to have characteristics that are conducive to living longer – that is why they survived in the first place.

As indicated in table 3 the remaining life expectancy for persons age 65 in the year 2001 is 16.7 years for males and 20.4 years for females. That is, males on average can expect to live until age 81.7 and females to age 85.4. By the year 2051, the remaining life expectancy is expected to increase to 20 years for males and 23.2 years for females. That is, males on average can expect to live until age 85 and females to age 88.2. Adding approximately 10 years to the remaining life expectancy *at age 55* for the growing number who are retiring earlier, say at age 55, implies that the average person who retires at 55 could expect to live another 30 years in retirement for males and 33.2 years for females. Such individuals can expect to live over one-

third of their life in retirement. For the large and growing proportion of the population that will likely graduate from university around the age of 22, this means that males can expect to spend about 52 years *outside* of the labour force and only 33 years *in* the labour force (85 – 52) and females 36 years (88 – 52) outside of the labour force and 36 years in the labour force (assuming no time out for child-raising).

These are likely to be upper- bound estimates of time spent outside of the labour force since not all persons spend as much time in education, and age 55 for retirement may not be typical. Nevertheless, they do illustrate the demographic squeeze that is coming from both the upper- and lower-end of the labour market to the extent that individuals retire earlier and live longer at the upper-end and spend more time acquiring education at the lower-end (and perhaps take more time out for recurring education and parental leaves in-between). This highlights the importance of ensuring that the time spent in the labour market is high-productivity time to provide the higher earnings (and associated taxes) to support the growing amount of time outside of the labour force. It also highlights the importance of removing any barriers that may artificially inhibit workers from remaining in the labour force if they prefer to do so.

International Comparisons of Old-Age Dependency Ratios

The old age dependency ratio is the ratio of the population age 65 and over to the population age 16-64. It is widely taken as a measure of the resource strains on society in that the population age 65 and older often draws on the resources of society (especially in terms of health and pension expenditures) while the population age 16-64 contributes in terms of employment income. It runs the risk of being an ageist concept, however, implying that persons 65 and older are *dependent* and therefore a "drain" on the system, potentially downplaying the

fact that they contributed earlier and may still be contributing. Recognizing that concern, the term is used here because it is a label internationally applied to the concept. Its usage here, however, is simply to provide a broad portrayal of the aging population. Using the *population* age 16-64 in the denominator understates the ratio that would prevail if a "*working age*" population age 20-60 were used, excluding younger persons age 16-20 or even 16-24 on the grounds that they are likely to be students, and excluding persons age 60-65 since they may have retired before age 65.

The old age dependency ratio is generally rising because of a combination of three forces: an ageing baby-boom population (those born just after WWII and now approaching age 60); their increasing life expectancy; and a dramatic decline in birth rates. The first two factors are increasing the numerator of the ratio, while the latter is decreasing the denominator – both of which increase the ratio. Since these components are fairly predictable, the forecasts of the dependency ratio are likely to be reasonably accurate. That is, the existing population age groups are simply "aged" and the older age groups adjusted for life expectancy which is reasonably predictable. Unanticipated changes in death rates could alter life expectancy and hence the numerator, but this is not likely to be substantial. Dramatic changes in birth rates could alter the numerator but these are not likely to be pronounced and will not come "on stream" in the data for 16 years. Large changes in immigration could also alter the population structure since most are of working age, but these are also not likely to be substantial. Changes in retirement rates would not alter the population dependency ratio but could alter the ratio if it were based on the working age population; however, these are not likely to change dramatically and the direction of the change is uncertain. People are retiring sooner, but this could be reversed depending upon such factors as changes in mandatory retirement, increased life

expectancy, a reduction in pension wealth, and the shift to white-collar jobs and the information economy where work is less onerous and more intrinsically interesting.

As indicated in Table 4, the dependency ratios are expected to increase dramatically across the OECD countries. As illustrated in the last row, the overall (un-weighted) average is expected to increase from 0.145 in 1960 to 0.298 in 2020 to 0.484 in 2050. That is, in 1960, the older population was approximately 14.5 percent of the population age 15-64; by 2050 it is expected to be almost 50 percent of the population age 15-64.

As indicated in Figure 1, this increase is expected to occur across all regions of the OECD, albeit highest in Asia and Europe, followed by Scandinavian countries, with the increase being lowest in North American. Figure 2, provides a more disaggregate picture for the G7 countries, highlighting that the dependency ratios in 2050 are expected to be highest for Italy, Japan, and Germany and lowest for Canada and especially the US.

In essence, while the "demographic crunch" will be hitting Canada, it will not be as severe as in Asia and Europe. The combination of the components of the dependency ratio are such that the divergence will be most pronounced until about the year 2020 (McMorrow and Roeger, 1999). The higher working age dependency ratios in Europe result from the fact that they have very high retirement rates (i.e., they retire much earlier than in North America). This reflects the greater incentives to retire earlier in Europe because of the lower standard retirement ages, more generous pension benefits, higher pension contribution rates for those who remain in the workforce (and hence disincentive to remain), and more generous support from other programs such as disability and unemployment insurance (Blondal and Scarpetta, 1998a, 1998b). As a result of the impending demographic crunch combined with the strict budgetary requirements of the European Monetary Union, many European countries are reforming their

income support and public and private pension systems as well as their age discrimination legislation – all with a view to encourage continued employment of older workers.[2]

Canada-US Comparisons of Aging Workforces

As indicated in Table 5, into the near future (to 2010) Canada will experience a higher growth rate of its post-65 age population than will the US, and it will experience a lower growth rate of its younger population ages 16-24 and 25-34. This more pronounced workforce aging reflects that fact that our demographic baby-boom (1945-64) was more prominent as was our baby-bust (1965-1979). Our baby-bust was much closer to that of Europe, involving a prolonged fertility fall.

Summary Observations on Ageing

➢ As is common in developing countries, Canada is experiencing an aging population and workforce.

➢ This mainly reflects an aging baby-boom population, increases in life expectancy and declining fertility.

➢ The increased life expectancy for persons around the age of 65 also means that people can expect to life longer past the "normal" retirement age of 65, and even more so as the retirement age falls.

➢ The longer life expectancy combined with trends to earlier retirement and delayed labour force entry associated with increased education, implies that smaller and smaller proportions of the population are in the working-age group, producing the earnings and

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[2] Pension reforms are discussed in Kalisch and Aman (1998) and OECD (1998), while age discrimination issues are discussed in Hornstein (2001).

taxes necessary to sustain the delayed entry and earlier and longer exit from the labour force.

➢ Conversely, larger proportions of the workforce are near the age of retirement (in part also because the median age of retirement is falling substantially as people retire earlier). When that large portion of the workforce retires, concerns may arise because of possible labour and skill shortages, lack of mentoring by senior employees, and possible losses of experience and institutional knowledge. As well, they will be drawing from, rather than contributing to, pensions.

➢ This highlights the importance of ensuring that the working age years are high productivity ones that generate higher earnings and associated taxes, and that barriers are removed to facilitate the continued employment of those who want to continue working.

➢ The demographic crunch is less pronounced in Canada than in Europe and Asia, but it is greater than in the US.

➢ The demographic pattern in Canada creates both opportunities and challenges for firms.

➢ The opportunities involve tapping into this reserve of "potentially retired" labour to fill skill shortages and mentoring needs.

➢ The challenges involve a myriad of factors discussed subsequently, including:

- designing incentives to retain those the firm wants to retain,

- managing the age-related "fringe benefit" costs of an older workforce,

- dealing with potential dismissal issues for those who the firm does not want to retain, especially if mandatory retirement is banned,

- creating job and promotion opportunities for younger workers.

3. BARRIERS AFFECTING COSTS AND BENEFITS OF AGING AND RETIREMENT

There is a wide array of institutional, legal and policy constraints that can affect the retirement decision making of employees, which in turn, can affect firms as workers approach retirement age. Many of these constraints can serve as barriers that inhibit continued employment or optimal transitions into retirement[3]. Such barriers therefore operate as indirect channels affecting the costs and benefits of retirement to firms. The barriers are often an unintended by-product of laws, policies and practices that were put in place in earlier periods when a younger, male-dominated, blue-collar workforce was the norm. As such, identifying these constraints and their (perhaps unintended) effects on firms is an important first step in such "barrier removal." It also guides us in our subsequent interpretation of the results from our empirical analysis. The issue is complicated, however, by the fact that such constraints are not simply exogenously determined, but often arise as an endogenous response to other needs on the part of employers and employees. Understanding the rationale for these constraints and why they arise is therefore important for arriving at a causal understanding of the impact on firms of altering these constraints.

Banning Mandatory Retirement

Legislative bans on mandatory retirement can obviously have potential cost implications for employers in jurisdictions where mandatory retirement is allowed[4]. Currently, only Manitoba and Quebec have an outright ban on mandatory retirement. British Columbia, Saskatchewan, Ontario and Newfoundland/ Labrador allow mandatory retirement effectively by having an age cap of 65

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[3] The importance of phased transitions into retirement and the barriers that can inhibit such transitions are emphasized in Davidson, Worrell and Fox (1996), Doeringer (1990), Gunderson (1998), Marshall (1995), McDonald and Wanner (1991), OECD (1995) and Ruhm (1990, 1991).

in their Human Rights Codes essentially to accommodate mandatory retirement. The other jurisdictions have removed the age cap (which would appear to ban mandatory retirement by allowing it to be contested as constituting age discrimination) but they have exempted *bona fide* retirement or pension plans (which effectively allows mandatory retirement because it almost invariably exists as part of such plans).

Private employers obviously do not have to have mandatory retirement – all that the law does (if mandatory retirement is not banned) is to allow such policies as part of their personnel policy or collective agreement if they have one. The federal government, for example, does not have mandatory retirement for its civil servants and the University of Toronto just announced its intention to voluntarily eliminate mandatory retirement. Although the data is sketchy, it appears that about one-half of the workforce is in jobs with mandatory retirement[5].

As indicated in Silver (2004) about 40 percent of retirees retired because of mandatory retirement at the age of 65 – the most common age of mandatory retirement, when public and private pensions normally become available. However, a substantial fraction (10%) of retirees retired earlier due to mandatory retirement, between the ages of 50 and 63. Some of this could reflect situations which mandate earlier retirement because age is a bone fide occupational requirement (BFOR), as is often the case with groups like airline pilots, police and firefighters. Some could also reflect individuals taking early retirement buyouts in advance of mandatory retirement, and interpreting the retirement requirement as mandatory retirement. Gomez, Gunderson and Luchak (2002, p. 409) also document substantial variation in the age of mandatory retirement, with less than half of mandatory retirement policies having age 65.

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[4] Legislation on mandatory retirement and age discrimination in Canada is outlined in Gillin and Klassen (forthcoming), Gunderson (2003), Ontario Human Rights Commission (2000) and Zinn and Brethour (1999).
[5] The extent of mandatory retirement in Canada is discussed in Pesando and Gunderson (1988), Gomez, Gunderson

Silver (2004) also documents that in Quebec, which has banned mandatory retirement, employees who retired before age 64 were over three times as likely (23%) to have retired due to mandatory retirement, compared to their counterparts in Ontario (7%), where mandatory retirement is not banned. This could reflect a greater use of BFOQs at an earlier age in Quebec as a substitute for mandatory retirement, or the greater use of early retirement buyouts (again as a substitute for mandatory retirement) with respondents interpreting the retirement requirement as mandatory retirement.

A ban on mandatory retirement would occur either through changes in provincial law (as occurred in Manitoba and Quebec and as is being contemplated in Ontario) or through a revisiting of the earlier Supreme Court decisions in 1990 where mandatory retirement was deemed to be discriminatory but "demonstrably justified in a free and democratic society" because its social benefits exceeded its social costs. All jurisdictions, including those that have banned mandatory retirement, can allow it to exist at a specific age if it is a *bona fide* occupational requirement (BFOR) of the job. The requirements for this are very stringent; hence, it tends to be limited to situations that involve public safety, such as with airline pilots, police and firefighters.

Banning mandatory retirement is likely to have both costs and benefits to firms that have such a policy. In general, it is likely that the costs of eliminating mandatory retirement to firms exceed the benefits; otherwise, firms would have voluntarily eliminated the practice. A variety of costs to firms of eliminating mandatory retirement are possible (with these being part of why mandatory retirement exists in the first place)[6]:

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and Luchak (2002), Hewitt Associates (2003) and Kesselman (2004).
[6] The implications of banning mandatory retirement on the workplace and human resource management practices of firms are discussed in Gunderson (1983) and Gunderson and Pesando (1980).

- Fewer promotion opportunities for younger persons in the firm

- Fewer opportunities for renewal by hiring younger persons, often with updated skills

- More expensive age-related fringe benefits

- Greater need to monitor and evaluate older workers given the uncertainty as to how long they may remain with the firm, with such evaluation also being necessary to prepare for unjust dismissal cases since dismissals will occur in some cases

- Greater difficulty in succession planning given the uncertainty as to how long some individuals will remain

- More costly compensation to the extent that compensation is deferred or "back-loaded" and that deferred compensation will continue for a longer period for some workers

- More difficulty in sustaining deferred compensation where workers are underpaid when young in return for being overpaid when older, with the possible loss of the benefits to both employees and employers of such deferred compensation (e.g., reduced turnover, increased employee commitment, reduced monitoring)

As indicated, there are also potential benefits to firms from eliminating mandatory retirement. They include:

- Reduction of skill shortages to the extent that older workers can fill those vacancies

- Mentoring of younger workers

- Institutional memory that is often embedded in older workers

- Possible future savings in pension related costs to the extent that firms are under less pressure to provide pensions if workers can continue working (this, in fact, is one of the concerns of many who oppose a ban on mandatory retirement).

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While there are both benefits and costs to firms if mandatory retirement were banned by law, as indicated previously, it is likely that the costs of eliminating it are outweighed by the benefits, otherwise firms would have eliminated the practice voluntarily.

Age Discrimination Initiatives

As indicated previously, if mandatory retirement is banned it likely will occur through removing the age cap of 65 in Human Rights Codes. This means that employers are likely to be more exposed to age discrimination charges from persons over the age of 65. This is appropriate since the former age cap (which existed to accommodate mandatory retirement) effectively denied such persons the normal protection against age discrimination. While closing that loophole is appropriate, it does mean that employers will be more exposed to the cost of possible litigation *and* to the costs of monitoring and evaluation to protect against such discrimination cases and unjust dismissal charges.

Adjusting Employer Pension Plans

Employer-sponsored occupation pension plans[7] can involve substantial costs to employers, with pension benefit accruals often in the neighbourhood of 20 percent of wage costs for workers age 45 and over. Such pensions can also involve important incentive effects that can be strategically used by employers. Subsidized early retirement programs can be used to encourage early retirement, and penalties can be imposed (e.g., by not actuarially adjusting pension benefits) to discourage postponed retirement.

Banning mandatory retirement may encourage employers to use these incentives embedded in their pension plan to serve as a substitute for mandatory retirement. However, if

this entails more generous early and normal retirement features, then this is a cost to employers. The postponed retirement features that penalize postponed retirement could be a cost saving to employers, but it is not clear that this will be allowed since the jurisdictions that have banned mandatory retirement have also banned such penalties. (Pesando and Gunderson 1988).

As indicated, there is also the possibility that employers will feel less pressure to provide pensions if workers can now continue working, since pensions and mandatory retirement otherwise went hand-in-hand. This can be a cost saving to employers, but it is not clear by how much if at all given the evidence that more generous pensions enable employers to pay lower compensating wages (Gunderson, Hyatt and Pesando 1992).

Defined benefit plans based on final-earnings can also discourage gradual retirement to the extent that such gradual scaling down of work time can lower earnings and hence subsequent pension benefits. They can create perverse incentives to work full-time, full-year (and possibly overtime if those earnings count in the final-earnings calculation), and then to retire abruptly.

Public Pension and Transfer Programs

Public pension and transfer programs also involve incentive effects that (probably unintentionally) serve as a barrier to continued employment on the part of older workers[8]. This is the case, for example, with various programs:

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[7] The incentive effects of employer-sponsored occupational pension plans are discussed, for example, in Pesando and Gunderson (1988).
[8] Details of the effect of public programs are provided, for example, in Gunderson (1998) and Gunderson, Hyatt and Pesando (2000).

- Clawbacks in the Old Age Security (OAS) system and in Guaranteed Income Supplements (GIS) as well as additional provincial supplements, whereby benefits are reduced if people earn income,

- The requirement to "substantially cease working" to be in receipt of *early* CPP benefits,

- Penalties for those who delay receipt of CPP until age 70, and especially after age 70,

- Requirements to draw-down RRSPs after age 69,

- Clawbacks on the income tax credit for persons age 65 and older,

- Income tax regulations that prohibit a person from accruing benefits in a defined benefit pension plan and drawing from that plan at the same time.

Obviously these clawbacks and regulations serve other important social purposes including the recovery of benefit payouts for those who earn additional income. Nevertheless, they can serve as (likely unintended) barriers to the continued employment of older workers.

Disability Pensions

Disability income support systems can also have important incentive effects that can be barriers to the continued employment of older workers. These issues will likely grow in the near future given the higher incidence of disability amongst older workers. The recent Participation and Activities Limitation Survey (PALS), for example, indicates that over 40% of persons over the age of 65 self-report themselves as disabled (Cossette and Duclos 2002). Firms will face growing pressure to accommodate these employee demands. This will also give rise to a wide array of other related policy initiatives such as return-to-work requirements, vocational rehabilitation and reasonable accommodation requirements that will affect firm productivity and the costs to employers of accommodating workforce aging.

The main disability income support programs are:[9]

➢ Canada/Quebec Pension Plan – Disability Component (C/QPP-D)

➢ Workers' Compensation (WC)

➢ Social Assistance for Persons with Disabilities (SA-D)

➢ Employment Insurance – Sickness Benefits (EI)

➢ Employer Short- and Long-Term Disability Insurance (S/LTD)

Canada/Quebec Pension Plan Disability (C/QPP-D) benefits are available to persons who have a severe and prolonged disability that makes them incapable of regularly pursuing any substantially gainful employment. The program has a strong disincentive to try to obtain employment because those who return to work lose all of their C/QPP-D benefits. That is, there is a 100 percent clawback on earnings, and perhaps more than 100% if they lose other forms of assistance. As is so often the case when monetary incentives to return to work are absent, regulations are instituted as a substitute. In this case, recipients can lose their benefits if they are deemed to be able to return to work but have not found work, but this seldom occurs.

Workers' compensation provides compensation for work related injuries. Depending upon the jurisdiction and nature of disability, the income replacement rates usually amount to 75 to 90 percent of earnings loss. Persons who return to work lose those benefits and thereby augment their income by only 10 to 25 percent, perhaps less after work related expenses.

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[9] Descriptions of the different disability programs are given in Gunderson, Gildner and King (1997), HRDC (1996a, 1998, 1999) and Torjman (2002).

Social assistance or welfare is potentially available to disabled persons whose needs exceed their means or income, including support from other income support programs. Approximately 20% of social assistance cases are headed by a disabled person. Social assistance payments are reduced or clawed-back usually at a rate of 75 percent or more as employment earnings are increased. This means that social assistance recipients augment their income by 25% or less if they return to work. The effective clawback may be even higher if they incur work related expenses or also lose in-kind benefits including those associated with their disability.

Employment Insurance Sickness Benefits are also available for those covered by EI and who have met the hours of work requirements. To be eligible for the special sickness benefits, claimants must be incapable of work by reason of illness, injury or quarantine. The basic El benefit is equal to 55 percent of weekly insurable earnings (65 percent for low-income families) subject to a maximum, payable for a maximum of 15 weeks. Claimants lose their benefits if they return to work; hence, they face an effective clawback of 55 percent (65 percent for low-income families).

Disabled employees may also receive Short- Term Disability (STD) and Long-Term Disability (LTD) compensation through their employer. Unlike the requirements under workers' compensation, the cause of the disability does not have to arise from employment. Earnings replacement for LTD is typically in the range of 60 to 70 per cent of pre-disability earnings, and generally higher for STD. Again this implies that workers increase their income by only 30 to 40 percent under LTD (and less under STD) by returning to work. The returns may be even less after accounting for work related expenses.

Clearly, difficult trade-offs are involved with respect to disability income support programs. Generous income replacement rates are desirable to insure and compensate disabled persons for their income loss. However, in order to contain costs and target benefits to those most in need, benefits are invariably clawed back for those who return to work, thereby reducing the monetary incentive to return to work. Empirical evidence for Canada confirms the theoretical predictions, indicating that the more generous the benefits, the lower the probability of returning to work[10].

Reasonable Accommodation and other Administrative Requirements

When the monetary incentives to return to work are reduced, administrative regulations are often added to encourage the return to work. In some cases, these are applied to the injured workers, as is the case if they lose their benefits if they are deemed to be able to return to work or if they are required to take vocational rehabilitation. In other cases, the requirements may fall on employers as is the case with the requirements to reasonably accommodate injured workers or to provide employment equity for disabled persons. As indicated, such costs are likely to increase for employers as the workforce ages with its associated disability issues.

Empirical evidence for Canada suggests that direct costs of accommodation to employers are not large but indirect costs in the form of managerial time may be more substantial (Gunderson 1992, Gunderson, Hyatt and Law 1995). The costs to employers are offset in part by the fact that many of the costs are shifted to workers in the form of lower wages for workers who return to work for an employer other than the accident-employer (Gunderson and Hyatt 1996). Costs to employers are also mitigated by the fact that such accommodations reduce absenteeism

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[10] See Butler, Johnson and Baldwin (1995) and Hyatt (1996) for workers' compensation, and Campolieti (2001), Gruber (2000) and Maki (1993) for C/QPP-D. Campolieti (2004) finds the impact to be statistically insignificant.

amongst disabled workers who return to work (Campolieti 2002) and they increase the duration of employment after a disabled person *returns* to work, both in their initial job and any subsequent jobs (Campolieti 2004). US evidence, however, indicates that costs of accommodation requirements deters employers from hiring disabled persons and this more than offsets the positive effect on encouraging the disabled to remain in employment so that on net accommodation requirements unintentionally reduce the overall *employment* of the disabled (Acemoglu and Angrist 1998, DeLeire 2000a, 2000b).

Whether accommodation requirements remove or augment barriers to employment remains an open question. The issue will increase in importance, however, given the aging workforce and their associated disability issues.

Summary Observations on Barriers to the Continued Employment of Older Workers

Clearly there is a wide array of barriers that inhibit the continued employment of older workers. The barriers, however, often serve other private and social purposes. Their removal will give rise to both costs and benefits to firms. This is the case with respect to a wide range of programs and policies: legislative bans on mandatory retirement; age discrimination; employer pensions; public pensions and transfer programs; disability programs; and reasonable accommodation requirements.

The purpose of the next section is to "drill deeper" and provide evidence on various dimensions of the retirement decision, and the factors associated with that decision, from the perspective of employees. Such evidence, however, should also be useful for employers and policy makers in terms of issues that are important to an aging workforce – issues that can provide both challenges and opportunities.

4. GSS DATA

Our subsequent empirical work on various dimensions of the retirement decision is based on the General Social Survey (GSS). In the years 1989, 1994 and 2002 the GSS contained questions on work and retirement involving such dimensions as reasons for retiring (including mandatory retirement), expected retirement ages and reasons for returning to the labour market after retirement. The 2002 GSS (Cycle 16) is the most recent cycle to have included questions on retirement[11]; hence, we will use that data set for the more detailed current analysis. The 2002 GSS (unlike the 1989 and 1994 files) is not available as a public use micro data file. Since it is a confidential data file, it had to be accessed at the Research Data Centre at the University of Toronto.

We will also compare those results with ones from the earlier GSS to provide a picture of changes over time. While the 1989 GSS was the first cycle to have included questions on retirement, the questions were not sufficiently comparable to those of the 2002 cycle so as to provide such inter-temporal comparisons. The 1994 GSS, however, did have some comparable questions; hence, we will do an inter-temporal analysis between the years 1994 and 2002, based on a subset of the common questions. These pertained to two dimensions: retiring due to mandatory retirement, and expected age of retirement. This enables us to conduct an inter-temporal analysis of the changes in these dimensions as well as whether the changes occurred because of changes in the composition or characteristics of the workforce, or changes in the preferences of workers.

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[11] Shellenberg and Silver (2004) use this GSS to analyse the congruence of retirement preferences and experiences.

5. EMPIRICAL METHODOLOGY

For the detailed analysis of the 2002 GSS data, the methodology essentially involves using OLS regression to analyse the determinants of the different outcomes or dependent variables. Since all of the independent variables are categorical and not continuous, the estimated regression coefficients indicate the effect on the dependent variable of being in a particular category such as male, as opposed to an omitted reference category (i.e., female). When the dependent variable is dichotomous (e.g., coded one if the individual retired because of mandatory retirement, and zero if they retired for other reasons) the linear-probability function coefficients provide an estimate of the effect that being in a particular category (compared to being in the reference category) has on the probability of, say, having retired because of mandatory retirement. When the dependent variables are continuous (e.g., expected age of retirement) the coefficients indicate the effect that being in a particular category has on changes in the magnitude of the dependent (e.g., the coefficient on the male dummy variable indicates the difference in the expected age of retirement for males as opposed to females).

P-values are reported indicating the level at which the variable becomes significant, with significance being denoted next to the estimated coefficients. In some cases, where a large number of dependent variables are involved the p-values are given on a separate parallel table so that the main table could focus on the effects of the different independent variables.

The independent variables essentially involve a range of factors available in the data set that are likely to influence retirement outcomes: demographic variables (gender, age, marital status, child status, immigrant status, education); health status; work status (self-employed, unpaid family worker as opposed to a regular paid worker, and part-time as opposed to full-time status); occupation; province and rural-urban status; and household income.

6. EMPRICAL RESULTS

Empirical results will first be provided on the reasons for retiring and the factors associated with those reasons, based on the most current 2002 data. Barriers that inhibit continuing in employment are then discussed, followed by an analysis of the determinants of whether retirement was voluntary or not, as well as the determinants of returning to the labour force after retirement. The correlates of the different reasons for returning from retirement are then analysed. The empirical analysis then shifts to an analysis of the inter-temporal comparisons over the time period 1994 to 2002 with respect to two dimensions: retiring due to mandatory retirement, and the expected age of retirement. For each year, the factors influencing those dimensions are discussed, as are the extent to which the changes over time reflect changes in the composition of the workforce or changing preferences.

Reasons for Retiring, 2002

As indicated in the top row of Table 6, the reasons for retiring, in descending order of the extent to which they were given by the respondents (with the percent giving that reason indicated) were:

- Financially possible 59.7%

- Wanted to stop working 55.5%

- Wanted to do other things 39%

- Qualified for a pension 38.6%

- Health 28.4%

- Early retirement incentive 13.3%

➢ No longer enjoyed work 12.8%

➢ Job downsized 11.3%

➢ Mandatory retirement 11.1%

➢ Care for a family member 11%

➢ Unemployed 4.8%.

The percents sum to more than 100% since multiple responses were allowed.

Clearly, the most common responses relate to reasons that could broadly be classified as voluntary – wanted to stop working, wanted to do other things, financially possible, qualified for a pension, no longer enjoyed working. Health reasons were fairly common, indicated by 28.4% of respondents, highlighting the importance of age-related health conditions. While the health problems themselves are not ones that the person would want, it would not be appropriate to label the *retirement* decision an involuntary one simply because it was related to a condition that involuntarily occurred. The same applies to care for a family member (11% of respondents). Early retirement incentives (13.3% of respondents) are also generally regarded as voluntary, although they sometimes can involve elements of coercion.

The job being downsized (11.3% of respondents) and being unemployed (4.8% of respondents) are more in the nature of involuntary responses. Even here, however, the numbers must be tempered by the social consequences of downsizing through retirements as opposed to practices that would affect other groups, and the fact that the 4.8% who retired because of unemployment is less than the unemployment rate in general.

Perhaps somewhat surprising is the low proportion (11.1%) who indicated that they retired due to mandatory retirement, given the fact that about half of the workforce appears to be in jobs with a mandatory retirement policy. Presumably for most of these workers the mandatory

retirement date corresponded with their preferred date of retirement, so that the other reasons enumerated above dominated (e.g., financially possible, wanted to stop working and do other things, qualified for a pension). The 11.1% could be taken as an *extreme* upper limit of the proportion of the workforce that *involuntarily* retired due to mandatory retirement, since indicating that one retired because of mandatory retirement does not mean that the decision was involuntary. The mandatory retirement date could correspond with the persons preferred age of retirement. This is especially the case since mandatory retirement is generally part of a long-term arrangement, often as part of a collective agreement and in "good jobs" with an associated pension. The arrangement is generally known in advance and voluntarily entered into by the employee. When the mandatory retirement date occurs, the employee may well indicate that they retired because of mandatory retirement even though it was part of a voluntary arrangement. Some portion of the 10.8% who indicated that they retired because of mandatory retirement policy may do so involuntarily in that they would have preferred to continue working (discussed subsequently). This may simply reflect the fact that they would like the other parts of the arrangement (pensions, good jobs etc) to continue without the *quid pro quo* of the mandatory retirement component. Others may have not preferred the arrangement in the first place but accepted it because it was part of the collective agreement or personnel practice and it was the best arrangement they could obtain. Others may simply have "changed their mind" when the mandatory retirement date came due. That is, they accepted it earlier as part of the package of a good job with a pension, and perhaps because they got the job or promotions because others retired, but now that the due date for them to be part of the arrangement comes to fruition, they have a different perspective. As such, it is difficult to determine what portion of the 11.1% who indicated that they retired due to mandatory retirement did so in an involuntary fashion. The fact

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that it is likely to be considerably less than the 11.1%, however, is consistent with the general evidence[12] that banning mandatory retirement is not likely to lead to substantial portions of the workforce continuing in employment so as to fill skill shortages.

Overall, the reasons given for retirement suggest a pattern of voluntarism as opposed to coercion. The involuntary aspect tends to arise because of the coercive effects of related factors such as ill health or the need to provide care for family members, as well as general conditions such as unemployment and the job being downsized – conditions that affect many in the workforce. More will be said about the involuntary aspect latter when responses to the question of whether retirement was involuntary or not are dealt with.

Correlates of Reasons for Retiring, 2002

The remainder of Table 6 indicates how the various reasons given for retirement are correlated with the different reasons for retirement. Given the mass of detail in the table, only the main patterns will be highlighted.

Compared to females, males are much more likely to have retired because it was financially possible, or they qualified for a pension or an early retirement incentive[13] or because of mandatory retirement (the latter being invariably tied to a pension). For example, the probability of retiring because they qualified for a pension was 19 percentage points higher for

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[12] Gunderson and Hyatt (forthcoming) cite such evidence and provide illustrative calculations. Of persons who are retired, approximately 12 to 20% report that they did so because of a mandatory retirement policy. Of those who retired because of mandatory retirement, about 6 to 20% did so involuntarily in that they would like to have continued working. If 50% of the workforce works in jobs with mandatory retirement, and 12 to 20% of those retire because of mandatory retirement, and 6 to 20% of those would like to carry on working, this suggests that one-third of 1% (i.e., 0.5 x 0.12 x 0.06) to 2% (0.5 x 0.20 x 0.20) of the workforce is involuntarily constrained by mandatory retirement. These are very rough calculations, but they illustrate that the numbers who are involuntarily constrained by mandatory retirement is likely to be very small, and there appears to be reasonable agreement on this point (e.g., Shannon and Grierson 2004) and references therein.
[13] Pesando, Gunderson and McLaren (1991) provide Canadian evidence indicating that females are less likely than are males to be members of an employer-sponsored occupational pension plan and to accumulate the years-of-service

males compared to females, which is a large difference relative to the average probability (38.6%) of retiring because of qualifying for a pension. Clearly, being able to retire for reasons related to financial security is more prominent for males compared to females. In contrast, females are much more likely (7 percentage points) than are males to retire so as to care for a family member – a large difference relative to the average probability of 11% for retiring for that reason. Retiring for the various other reasons are either not statistically different for males compared to females, or if the differences are statistically significant they are quantitatively small (e.g., around 2%).

Persons who are age 45-49 at the time of the survey and who are retired are much more likely to have retired due to ill health compared to older age groups who have retired. Since age 45-49 is earlier than the ages of even early retirement, their ill health clearly prompted their need to retire. Early retirement incentives (column 6) are obviously more prominent for persons in the 55-64 age group. Downsizing is a prominent reason for retiring for persons age 50-54, while unemployment is prominent for persons age 55-64. Persons who are over age 65 are more likely to have retired due to mandatory retirement reflecting the obvious fact that mandatory retirement generally applies at age 65.

Although the effects are not always statistically significant, persons who are separated, widowed or divorced are much less likely to have retired because it was financially possible or they wanted to stop working or they qualified for a pension. Single, never-married persons are more likely to have retired because their job was downsized or they were unemployed. Persons who are separated or divorced are least likely to have retired to care for a family member, while those who are widowed are most likely to have retired for that reason.

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requirements to make them eligible for the generous early-retirement features of such plans. As well, any lower wages

Persons who retired and still had children in their household are much less likely to indicate that they retired because it was financially possible and much more likely to have retired to care for a family member. Presumably this occurs because people who retire often still have children to care for, and such children still represent a financial commitment that can inhibit their retiring.

Immigrants are also much less likely to have retired because it was financially feasible or because they wanted to stop working. They are also less likely to retire because of early retirement incentives (column 6), presumably reflecting the fact that the most recent immigrants who arrived in the 1980s and 1990s may not have accumulated the pension credits to qualify for early retirement; however, this does not show up in their being less likely to qualify for a normal pension (column 4). Immigrants are more likely to have retired due to mandatory retirement. Immigrants who arrived in the 1970s and 1980s are much more likely to have retired because of unemployment.

Persons with higher education are much more likely to have retired because it was financially feasible or they wanted to do other things and less likely to have retired because of unemployment or their job was downsized. They are more likely to retire because of mandatory retirement, likely reflecting the fact that they are able to obtain the "good jobs" that characterise mandatory retirement. Perhaps somewhat surprising, those with a university education were more likely to retire because they wanted to stop working or they no longer enjoyed work – perhaps suggesting a misfit with their work and education.

As indicated in column 6, those who have better health are obviously less likely to retire because of their health status. Outside of that indicator, there is generally a strong positive

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due to discrimination get compounded into lower pension benefits based on wages.

relationship between health status and most of the other reasons for retiring. For example, as health status improves, people are more likely to retire because it is financially possible or they wanted to stop working and do other things. For the other reasons for retiring, there is generally a jump in the probability of retiring for each reason as long as one's health is not poor, but there is not a strong relationship as health status itself improves. This is the case for pension related reasons such as qualified for a pension or an early retirement incentive or because of mandatory retirement, as well as for job downsized or unemployed. This suggests that poor health can dictate retirement, but once outside of that state, different degrees of better health are not related to retiring due to pension issues or job loss.

There is generally not a strong relationship between retiring for a particular reason and work status with respect to being a paid worker or self-employed or unpaid family worker prior to retirement. The exceptions are expected: self-employed persons are much less likely to retire because they qualify for a pension or an early retirement incentive or because of mandatory retirement or their job being downsized. Self-employed persons obviously do not have an employer-sponsored occupational pension plan nor are they likely to "downsize themselves" and retire for those reasons.

A similarly pattern prevails for part-time employees who also are unlikely to be in an employer-sponsored occupational pension plan and hence to respond to those incentives. They are more likely to retire simply because they wanted to stop working (column 2), possibly reflecting the fact that their part-time job was not attractive or that they wanted to reduce work-time by working part-time and then retiring.

Persons in lower-level sales and service, trades, primary and processing occupations were less likely to retire because it was financially possible or wanted to do other things or because

they qualified for a pension or early retirement incentive, while managerial and professional persons were less likely to retire because of downsizing.

Compared to persons from Ontario, persons from the Atlantic provinces were much less likely to retire because it was financially possible, or they wanted to stop working, or wanted to do other things and much more likely to retire because their job was downsized – likely reflecting the restructuring of the fishing industry. Persons from Quebec were much less likely to retire to do other things or because they no longer enjoyed work, suggesting that work provided more intrinsic interest in that province. This could also reflect in part the fact that mandatory retirement is banned in that province so that those who carry on working likely find work to be intrinsically rewarding. The responses in Manitoba – the only other province to effectively ban mandatory retirement – however, is often opposite to that of Quebec, suggesting that the banning of mandatory retirement does not have an obvious impact on retiring for particular other reasons. The fact that the probability of retiring due to mandatory retirement is lowest in Manitoba is expected since mandatory retirement is banned in that province, but the fact that the probability is highest in Quebec is a puzzle since that is the other province that has banned mandatory retirement.

Rural-urban differences in retiring for particular reasons are either statistically insignificant or quantitatively small.

Higher household income has an obvious strong positive effect on retiring because it was financially possible or because it enabled people who wanted to stop working to stop working and to do other things. It is also strongly related to retiring because of qualifying for a pension or because of early retirement incentives or mandatory retirement – highlighting the fact that relatively advantaged persons are likely to have jobs with pensions and be subject to mandatory

retirement. Higher income persons are also less likely to have to retire to care for a family member (presumably because they have the resources to provide for such care) or because of unemployment (because they are less likely to be exposed to that risk). They are also much less likely to have to retire for health reasons, reflecting the positive relationship between health and income.

The R-squared for most of the equations are often in the neighbourhood of 0.10 to 0.20 which is typical for cross-section data. It is much higher at 0.44 for persons who retire for health reasons, reflecting the obvious relationship between the health status variables and retiring for that reasons. It is much lower for the less common reasons relating to no longer enjoying work or job downsizing or unemployment or caring for a family member, highlighting that our measures do not explain much of the variation across individuals in retiring for those reasons.

Barriers to Continued Employment, 2002

As indicated in the top row of Table 7, ill health was the most prominent barrier to continued employment reported by 27.3% of persons who retired. This is followed closely by a number of factors over which employers have more control: part-time work, fewer days per week, fewer hours per day and longer vacations or leaves. In essence, providing jobs with reduced work-time could facilitate the continued employment of many retirees. Better pay was reported by 16.4% of retirees as a factor that could have induced them to continue working, and suitable care giving was indicated by only 5.8% of retirees. The absence of mandatory retirement would have facilitated the continued employment of 10.5% of retirees suggesting that this is not a substantial constraint for most.

Males are more likely than are females to have continued working if these barriers were eliminated, except for ill-health and suitable care giving. Older retirees are generally less likely to report these as barriers, perhaps reflecting the fact that age itself ultimately becomes the dominant factor.

Divorced persons are more likely to report the absence of reduced work-time arrangements as a barrier to continued employment. Reasons for this are not obvious.

Those who have one child in the household, compared to those who have no children, would have been more likely to continue working if any of the barriers would have been removed. Why this relationship does not carry over for those who have two or more children is not obvious.

The pattern with respect to immigrant status is mixed with a few significant positive coefficients as well as negative ones, but with most immigrant groups having no significantly different likelihood of continuing on in employment, compared to non-immigrants, if barriers were removed. Similarly, there is generally no significant pattern across different education levels.

Persons in better health obviously are less likely to regard health problems as a barrier. They are much more likely, however, to regard almost all of the other factors as barriers to continued employment (with the exception of suitable care-giving).

Self-employed workers are less likely to regard the different factors as barriers since they obviously could remove such self-imposed constraints if they were barriers. The exception is better pay; compared to paid workers, self-employed persons are more likely to carry on working if they could receive higher pay.

Part-time workers are less likely to regard the different factors as barriers to continued employment, possibly reflecting the fact that most of them are associated with reduced working time, and they had already reduced their work-time. As well, they are not likely to be covered by mandatory retirement since it tends to be associated with "good" full-time jobs. Their part-time work already likely allows them to provide suitable care-giving if that were necessary.

The occupation pattern is generally mixed with respect to the extent to which the various factors serve as barriers to continued employment. The exception is that managerial and professional as well as primary occupations are less likely to regard these factors as barriers. Since most of these potential barriers relate to working time, this suggests that the reduction of working time would not necessarily facilitate the continued employment of such persons. These are occupations that already likely have long hours with the incumbents likely being used to such hours. As well, the work itself may have an element of intrinsic interest.

There is generally not significant regional variation in the extent to which the different factors are barriers to continued employment. The exception is that persons in the Atlantic provinces are less likely to regard the absence of part-time work as a significant barrier. As well, persons in Quebec are generally less likely to regard most of the factors as barriers to continued employment. As expected, persons in Manitoba are less likely to regard mandatory retirement as a barrier since mandatory retirement is banned in that province. Why this is not the case in Quebec, where mandatory retirement is also banned, is somewhat of a puzzle.

Rural-urban differences in barriers to continued employment are either statistically insignificant or quantitatively small.

Higher income households are less likely to be constrained by health issues as a barrier to continued employment, reflecting the well-known relationship between income and health. The

same applies to suitable care-giving, presumably because they have the resources for such care-giving. Otherwise, there is little relationship between household income and the existence of different barriers to continued employment.

The R-squareds are extremely low (around 0.03) highlighting that there is little variation in barriers to continued employment across the different variables used here. In essence, most retirees do not regard them as substantial barriers (reported as such generally for fewer than one-quarter of the retirees) and the extent to which they are barriers does not vary substantially across the different variables used in the analysis. The exception is the health status barrier with an R-squared of 0.43, reflecting the fact that persons in better health are obviously less likely to regard health status as a barrier.

Determinants of Whether Retirement was Voluntary, 2002

As indicated in the top row of Table 8, 27.1% indicated that they had retired involuntarily. It is difficult to know how to interpret that response because it is not known if this could reflect an employer imposed constraint (e.g., mandatory retirement, downsizing, an imposed early retirement buyout) or an employee related constraint (e.g., ill health, family pressure, need to provide care for others).

Males are slightly more likely than are females to have retired involuntarily. Older workers are less likely to retire involuntarily; conversely, if a younger worker (e.g., 45 -55) retired, it is more likely that they did so involuntarily.

Persons who are widowed or divorced are more likely to have retired involuntarily as are persons with one child still in the household. Immigrants who arrived in the 1970s are more likely to have retired involuntarily; why this pattern should not prevail for other immigrant

groups is not obvious. Higher educated persons are less likely to retire involuntarily, as are persons in better health. The strong negative effect of better health on the probability of retiring involuntarily suggests that people in ill health indicate that they retired involuntarily.

There is not much variation in the probability of retiring involuntarily by occupation except that persons in professional occupations are less likely to do so while those in processing and manufacturing are more likely to do so. Similarly, there is little provincial variation, although persons in PEI are less likely to retire involuntarily, while persons in Nova Scotia and Manitoba are more likely to retire involuntarily. The fact that persons in Manitoba are more likely to retire involuntarily is a puzzle since that province banned mandatory retirement. The fact that the probability of retiring involuntarily is not significantly lower in Manitoba and Quebec (in fact is higher in Manitoba) is puzzling, since both of these provinces have banned mandatory retirement. This suggests, that even if mandatory retirement were banned, many workers are likely to retire involuntarily (in fact possibly even more likely if the Manitoba situation is indicative).

Persons with higher household income are much less likely to retire involuntarily. This suggests that higher income enables people to buy many things, including the ability to afford to retire voluntarily.

Determinants of Returning to Work after Retirement, 2002

As indicated in the third column of the top row of table 8, 22.6% of persons who ever retired had returned to work after retiring. Males were 7 percentage points more likely to return than were females. The probability of returning declined substantially with age; conversely, those who had retired when younger (e.g., 45-49) were obviously more likely to return to work.

Divorced persons were much more likely to return to work . More recent immigrants (who came in the 1990s) were less likely to return to work after retiring. Higher educated persons were much more likely to return to work as were persons in better health. Persons who had mainly worked part-time prior to retiring were much less likely to return as were persons in the lower-end occupations. Persons in the Atlantic provinces and in Quebec were generally less likely to return to work while persons in British Columbia were more likely to return. Persons of higher household income were also more likely to return after retiring, especially those above $80,000 and even more so above $100,000.

Reasons for Returning to Labour Market After Retirement, 2002

As indicated in the top row of Table 9, the most prominent reason for returning to work after retirement[14] was financial (43.9% of those who returned) followed by did not like retirement (22.4% of those who returned). Returning because of improvements in health was uncommon (5.2%) as was the fact that care-giving was no longer required (2.9%).

Males were more likely than females to return for financial reasons but females were more likely to return because it was no longer necessary to provide care-giving.

Older persons were less likely to have to return for financial reasons; conversely younger persons who retired were more likely to have to return for financial reasons. They are also more likely to return because care-giving was no longer needed, suggesting that many who retired early did so to provide care-giving.

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[14] The data set contained other reasons for returning to work after retirement, but we were unable to use them for a number of reasons. Family pressure was a reason given by only 3 of the 2266 respondents. Returning because of the "challenge to return" or because one was "needed or asked to return" or "because of pressure from the employer to return" did not have any respondents in the "no" category. For these reasons we focused on the four reasons for returning from retirement as given in Table 8.

Divorced persons are more likely to return for financial reasons while widows are more likely to return because care-giving is no longer needed, likely reflecting the fact that they were providing care until their spouse deceased. Immigrants who arrived earlier are less likely to have to return to the labour market for financial reasons while those who arrived later are more likely to have to return for financial reasons, possibly reflecting the greater difficulty that more recent cohorts of immigrants have had assimilating into the labour market.

University graduates are less likely to return because they did not like retirement. Persons in better health were less likely to return for financial reasons. Persons in poor health were more likely to return because their health improved, likely reflecting the temporary nature of some aspects of poor health.

People who worked part-time prior to retirement were less likely to return for financial reasons, suggesting that their part-time status was voluntary and they could afford to work part-time (hence not having to return to the labour market after retiring from their part-time job).

There is no systematic pattern in the reasons for returning to work by occupation nor by province. For reasons that are not obvious, persons from British Columbia were more likely to return to work for most of the reasons – financial, health improved, no longer required to provide care-giving. Retirees in Quebec and Manitoba are much less likely to return because they did not like retirement, presumably reflecting the fact that these are the two jurisdictions that banned mandatory retirement and hence people would be less likely to retire if they felt they would not like retirement.

Persons in households of higher income are obviously much less likely to have to return to work for financial reasons but are much more likely to return because they did not like retirement.

Retiring Due to Mandatory Retirement, 1994 to 2002

        The previous tables of empirical results from the 2002 GSS provided detailed information on various dimensions of the retirement and return-to-work decision, as well as the determinants of those decisions. The remaining tables will provide comparisons of the 2002 data with responses to a subset of questions that were also asked in the 1994 GSS. Only a small number of common questions were asked in both surveys; hence, this analysis is more restricted, dealing only with questions on retiring due to mandatory retirement and on the expected age of retirement.

        Retiring due to mandatory retirement was one of the reasons given previously in Table 6, dealing with various reasons for retiring. The focus in that table was with comparisons across other reasons for retiring. The focus in this section is on comparisons with the 1994 data. Since the correlates of retiring due to mandatory retirement were already discussed previously, they will only be briefly reiterated here, with the focus here being on the comparisons with 1994.

        As indicated in the first row of Table 9, the proportion of persons who indicated that they retired due to mandatory retirement declined from 12.3% in 1994 to 11.1% by 2002[15].

        With respect to the correlates of retiring due to mandatory retirement, the patterns were fairly similar between 1994 and 2002. As such, the discussion here will focus only on the differences, since, as indicated previously, the 2002 results have been discussed previously in the context of the reasons for retiring in Table. While the changes will be pointed out, the reasons for the changes are not obvious.

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[15] The comparisons between 1994 and 2002 should be used with caution since in 1994, there was a separate "yes-no" question on whether the person retired due to a mandatory retirement policy, while in 2004, mandatory retirement was listed along with the other factors indicated in Table 5 as a reason for retiring. There is the possibility that with a range of other options specified in 2002, respondents may have shifted to some of those

In 1994, the probability of retiring due to mandatory retirement was significantly lower for persons who were married or common law compared to single persons, but by 2002 this effect of marriage had dissipated.

The pattern with respect to immigration also changed somewhat. In 1994, immigrants who came more than 3 decades earlier and those who recently arrived had higher probabilities of retiring due to mandatory retirement, while those who came in the decades in-between had lower probabilities. By 2002, all immigrant groups had a higher probability of retiring due to mandatory retirement than did non-immigrants.

In 1994, university graduates had a lower probability of retiring due to mandatory retirement (albeit not statistically significant). By 2002, they had a slightly higher probability of retiring due to mandatory retirement.

The occupation pattern also changed slightly. In 1994, those in primary occupations had the lowest probability of retiring due to mandatory retirement. By 2002, those in managerial jobs had the lowest probability and those in technical jobs the highest probability.

The general absence of a provincial pattern prevailed in both 1994 and 2002, except that in the two jurisdictions that banned mandatory retirement – Manitoba in 1982 and Quebec in 1983 – there was no effect on the probability of retiring due to mandatory retirement in 1994, while it fell in Manitoba by 2002, but for reasons that are not obvious, it actually increased in Quebec by that time.

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reasons since they were specifically enumerated. If so, this would understate the 2002 numbers for retiring due to mandatory retirement, relative to the 1994 numbers.

<u>Expected Age of Retirement, 1994 to 2002</u>

As indicated in the first row of Table 11, the expected age of retirement increased from 59.2 years in 1994 to 61.7.

Since the 2002 results with respect to the expected age of retirement have not been discussed previously, they will be discussed here first. Then the comparisons will be made with the earlier 1994 results.

As the first row indicates, the expected age of retirement in 2002 was 61.7 years. This is somewhat less than the "normal" age of retirement of 65 for most employer-sponsored occupational pension plans and when regular Canada/Quebec Pension Plan payments become available. To the extent that the expected age becomes the norm, this likely reflects the tendency towards early retirement.

The expected retirement age for males is 0.8 of a year later than for females. It is obviously higher for older age groups since this is based on the sub-sample of those who have not retired and if they are already older and not retired then they obviously expect to retire later than do younger workers.

The expected retirement age for divorced persons is 0.6 years later than for single, never-married persons, possibly reflecting their need for additional earnings given their divorced status. For similar reasons it is 0.5 years later for persons with two or more children in the household.

The expected age of retirement is higher for recent immigrants who arrived within the last two decades. This could reflect their need to continue working to accumulate pension benefit accruals and because of the slower assimilation into the labour market for the more recent cohorts of immigrants.

The expected age of retirement is substantially lower by 1.8 years for employees with an employer-sponsored occupational pension plan. This likely reflects the fact that their pension enables them to retire earlier and not to continue working. As well, pensions invariably have a mandatory retirement age that may constrain some from continued employment, and they often have generous early retirement features that encourage early retirement as well as penalties to postponed retirement that discourage the postponing of retirement.

There is not much variation in the expected retirement age by occupation. Compared to clerical occupations, it is 0.6 years lower fro technical occupations and 1 year later for primary occupations. The expected retirement age is substantially lower (by 1 to 2 years) for the groups with higher family income, highlighting that they can afford to retire earlier.

Relative to Ontario, the expected retirement age is lower in the Atlantic provinces (typically by 1 – 3 years), and in Quebec (by slightly over a year). This is somewhat surprising given that their legislative ban on mandatory retirement in Quebec could be expected to increase the expected retirement age as persons could remain in the labour force. This unexpected earlier retirement age (by 0.6 years) also occurs in Manitoba – the only other province to have effectively banned mandatory retirement.

The pattern that prevailed in 2002 with respect to the expected age of retirement also generally prevailed in 1994. In 1994, however, there were no gender differences in the expected age, but by 2002, males expected to retire almost a year later than females. In 1994, higher levels of education were associated with earlier expected ages of retirement (except for university grads where there was no effect). By 2002, higher levels of education were associated with later ages of retirement, especially for university grads. To the extent that education levels will continue to increase into the future, this suggests increased pressure for later retirement.

Summary Picture of Dimensions of Retirement Behaviour

Table 12 provides a summary picture of the main dimensions of retirement behaviour analysed in the previous Tables 6 to 11 based on the GSS data. Essentially, it reproduces the dependent variables used in those tables. Since those dimensions were already discussed previously, only the main aspects will be highlighted here. Those aspects are:

➢ The dominance of voluntary reasons for retiring – wanted to stop working, wanted to do other things, financially possible, qualified for a pension, no longer enjoyed working and early retirement incentives.

➢ The low proportion (11.1%) who indicated that they retired due to mandatory retirement, given the fact that about half of the workforce appears to be in jobs with a mandatory retirement policy.

➢ The prominence of ill health as a barrier to continued employment, followed closely by a number of factors over which employers have more control involving reduced worktime: part-time work, fewer days per week, fewer hours per day and longer vacations or leaves.

➢ Mandatory retirement was not a substantial barrier for most.

➢ Retirement was involuntary for slightly over one-quarter of the retirees, and slightly less than one-quarter of retirees return to work after initially retiring.

➢ The most prominent reason for returning to work after retirement was financial, followed by did not like retirement. Returning because of improvements in health was uncommon as was the fact that care-giving was no longer required.

➢ 11.1% of retirees in 2002 retired due to mandatory retirement, slightly down from 1994.

➢ The expected age of retirement in 2002 was 61.7 years, slightly up from 1994.

7. OVERALL COST-BENEFIT IMPLICATIONS OF AGING AND RETIREMENT FOR FIRMS

The previous discussion dealt with institutional and other constraints that may alter the employment/ retirement decisions of older workers and, in turn, how these decisions affect the costs and benefits to firms of dealing with retirement. In this section, we link that material to a more direct discussion of factors that affect employer costs and benefits in relation to workforce aging and retirement. Dimensions that will be discussed include: skill shortages; disability cost; deferred compensation; the strategic use of pensions; and implications of banning mandatory retirement.

Skill Shortages

Employers will clearly be facing a potential challenge of skill shortages associated with the retirements of the aging baby-boom population. This can be an especially important challenge since it can involve the loss not only of the labour pool of retirees, but also of their accumulated experience as well as their institutional knowledge and mentoring capabilities for younger workers. This challenge, however, also implies opportunities since this is a potential pool of talent to fill the shortages. This is especially the case since the pool is growing not only because of the aging workforce, but also because it is often retiring earlier and living longer.

The real challenge, therefore, is for firms to tap into that potential pool of talent as appropriate. Our empirical evidence on the reasons for retiring suggested that many elements are under the control of employers. That is, slightly over half of retirees retired because it was financially possible or they wanted to stop working. But that also means that financial incentives are still important for almost half of potential retirees and those who wanted to stop working may

have wanted to because of the conditions of employment provided by employers. The factors that are largely beyond the control of employers (health of worker, no longer enjoyed working, job downsized, care for family members) are not the most important reasons given for retiring – and even many of these reasons can be influenced by employers.

More specifically, the most important barriers that inhibited retirees from continuing in employment had to do with wanting to reduce their work-time through such arrangements as part-time work, fewer days per week, shorter days and longer vacations. Pay was not a major factor nor was the constraint of mandatory retirement nor lack of suitable care giving. As such, *more flexible work-time* appears to be the potentially most important "carrot" employers can use to retain the skills of an older workforce. Such a practice can also have broader social benefits by facilitating transitions into retirement and back out of retirement and thereby avoid the abrupt all-or-nothing aspect of working long hours and then suddenly not working. More flexible work-time arrangements are also attractive to two-earner families so as to balance work and family pressures.

Government policies can also impose barriers that inhibit flexible work-time arrangements, and these should be re-examined given the growing desirability of such flexible arrangements. As indicated previously, public pensions and transfer programs as well as disability programs (the latter of particular relevance to older workers) have claw-backs that reduce the incentive to return to work. Such claw-backs serve other social purposes, but they may merit re-examination given their (perhaps unintended) effect on discouraging a return to work from retirement. As well, many payroll taxes have ceilings beyond which the tax is not paid. Such ceilings may (again unintentionally) encourage employers to work their existing workforce long hours if they are already at the ceiling so that further payroll taxes are not paid.

<u>Disability and Age-Related Employment Costs</u>

If employers retain larger portions of their older workforce, this will clearly imply more age-related costs including those related to disability given the large numbers of older persons who report disabilities. Managing those costs will be a challenge and this may entail the need for reductions in such benefits or more cost-sharing with employees who want to continue in employment.

There is some consolation to the fact that "purchasing" insurance against these contingencies is likely to be cheaper through employers given economies of scale in group purchases as well as the fact that purchasing through the employer reduces the adverse-selection problem since it is not easy for individuals who have private information about their health status to purchase more insurance though the employment relationship.

Employers may incur age-related employment costs associated with age discrimination initiatives as well as building the case to protect against unjust dismissal since such cases will invariably arise if older persons continue in employment. They may also incur "accommodation costs" although these are not likely to be large.

<u>Deferred Compensation</u>

As discussed previously, compensation systems can involve deferred compensation whereby employees are underpaid when younger in return for being overpaid when older. Such a system can have desirable productivity enhancing effects including reduced turnover, increased employee commitment and reduced monitoring costs. However, if people who otherwise retire continue in employment they may be receiving their "overpayment" portion for a longer and indefinite period of time.

This is a difficult challenge for employers to align current pay with current productivity since it can entail moving away from seniority-based pay or pay on the basis of a grid with increments for experience and qualifications. It is also very difficult to reduce the pay of older workers, although that could be tied to the reduced work-time arrangements that older employees desire or perhaps to the cost sharing of age-related fringe benefit costs. In all likelihood it will entail moving away from deferred compensation and devising other methods to replace its benefits.

Strategic Use of Pensions

Employers can also use features of their employer-sponsored occupational pension plans to retain older workers if that is desired (Pesando, Hyatt and Gunderson 1992). Certainly cutting back on the early retirement incentives could reduce early retirements – albeit the magnitude may not be large given that only about 10% of retirees indicated that they retired because of such incentives. Blanket early retirement incentives given to all workers also have the undesirable adverse selection problem in that the best workers are more likely to leave because they have viable other alternatives.

Employers can also reduce the penalties that often exist in their pension plans for those who postpone retirement. Such penalties can take the form of not actuarially adjusting the pension benefits for those who remain, to offset the fact that they will be receiving their pension later and for a reduced period of time.

Eliminating Mandatory Retirement

Eliminating mandatory retirement obviously is another option that employers have if they want to retain their retirees. As indicated, this has been done in the federal civil service as well

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as in institutions like the University of Toronto and University of Calgary. In jurisdictions where mandatory retirement is allowed (i.e., all but Manitoba and Quebec) the voluntary elimination of mandatory retirement is always an option. It may have to be negotiated with a union if one is present, but this is a desirable feature since it ensures that various trade-offs are considered in that decision.

The voluntary elimination of mandatory retirement (as opposed to banning it outright by legislation) has the desirable feature that it can be a customized solution, tailored to the different needs of different organisation and not a "one-size-fits all" solution. Organisations that are concerned about impending shortages are more likely to eliminate the practice. Those that are more concerned about renewal and promotion opportunities for younger workers or that want jobs to open up to foster new hiring to meet employment equity objectives may not eliminate the practice.

Our evidence, however, suggests that eliminating mandatory retirement is not likely to lead to large numbers continuing on in employment (i.e., only 11.1% gave it as the reason for retiring and 10.5% indicated that they would have continued in employment if there were no mandatory retirement policy). Nevertheless, the numbers could be larger in the future for a number of reasons: greater life expectancy means people may have a longer potential work period; more education in the early periods means that people may want a longer work period to amortize those costs; the shift to the knowledge economy where work is more intrinsically interesting and away from blue-collar work where work is more arduous; the possible dissipation of public and private pensions, if people can be expected to work longer; and the fact that retirements in the 1980s and 1990s may have been spurred by the bubble in pension wealth that accompanied the stock market boom – a boom that no longer exists.

<u>Challenges and Opportunities</u>

Clearly there are an emerging set of challenges facing employers associated with an aging workforce. But the challenges also entail opportunities – if they are acted upon in a proactive fashion.

Both the challenges and the opportunities are likely to increase in the future. In particular, our empirical evidence suggests that the expected age of retirement is increasing and not declining as might otherwise be expected. More importantly, the variables that are associated with increases in the expected age of retirement themselves are increasing and this should give rise to an even older expected age of retirement in the future. This is the case with variables such as the age of the workforce, the divorce rate, being a recent immigrant, having a university education, and population shifts from the Atlantic provinces to provinces like Ontario. As well, variables that have an effect on lowering the expected age of retirement such as having an employer-sponsored pension plan may dissipate somewhat if people can continue working, and if the trend away from defined benefit and towards defined contribution plans continue, with the latter not having incentive effects on retirement decisions.

The challenge for employers is to manage the costs associated with an aging workforce and to harness the potential benefits by proactively using the personnel and human resource practices within their policy control. The same applies to governments, especially by removing (often unintended) barriers that inhibit employers and employees from working out their mutually agreed upon arrangements.

Recognizing the changes that are coming is a first step. Removing barriers, many of which were designed for the old world of work, is a second step. Proactively altering the policies under one's control, especially to convert challenges to opportunities, is a third step.

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Figure 1: Old Age Dependency Ratios, OECD Region: 1960-2050
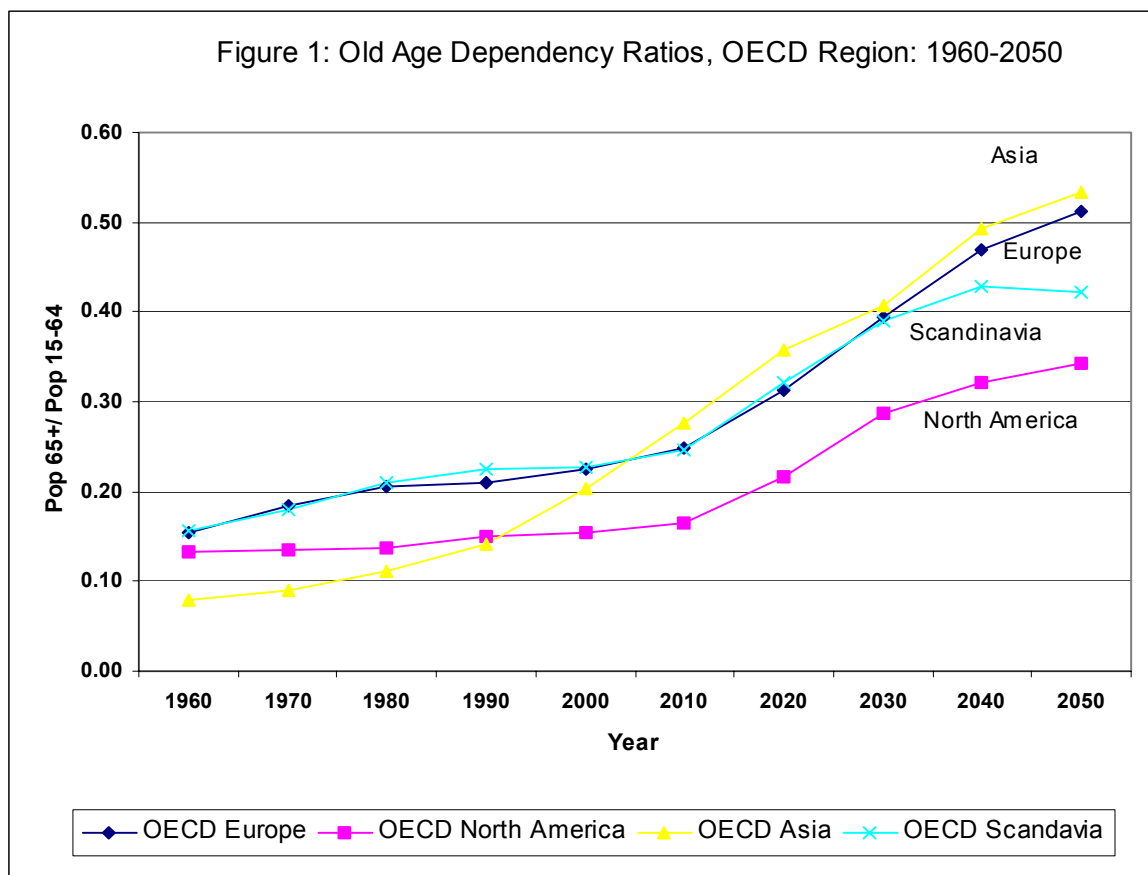
OECD EUROPE: AUSTRIA, BELGIUM, CZECH REPUBLIC, FRANCE, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, LUXEMBURG, NETHERLANDS, POLAND, PORTUGAL, SLOVAK REPUBLIC, SPAIN, SWITZERLAND, TURKEY; **OECD NORTH AMERICA:** CANADA, MEXICO, UNITED STATES; OECD ASIA: JAPAN, KOREA; OECD SCANDINAVIA: DENMARK, ICELAND, FINLAND, NORWAY, SWEDEN.

SOURCE: TABLE 4, UN-WEIGHTED AVERAGES OF DEPENDENCY RATIOS.

Figure 2: Old Age Dependency Ratios, Selected OECD Countries: 1960-2050
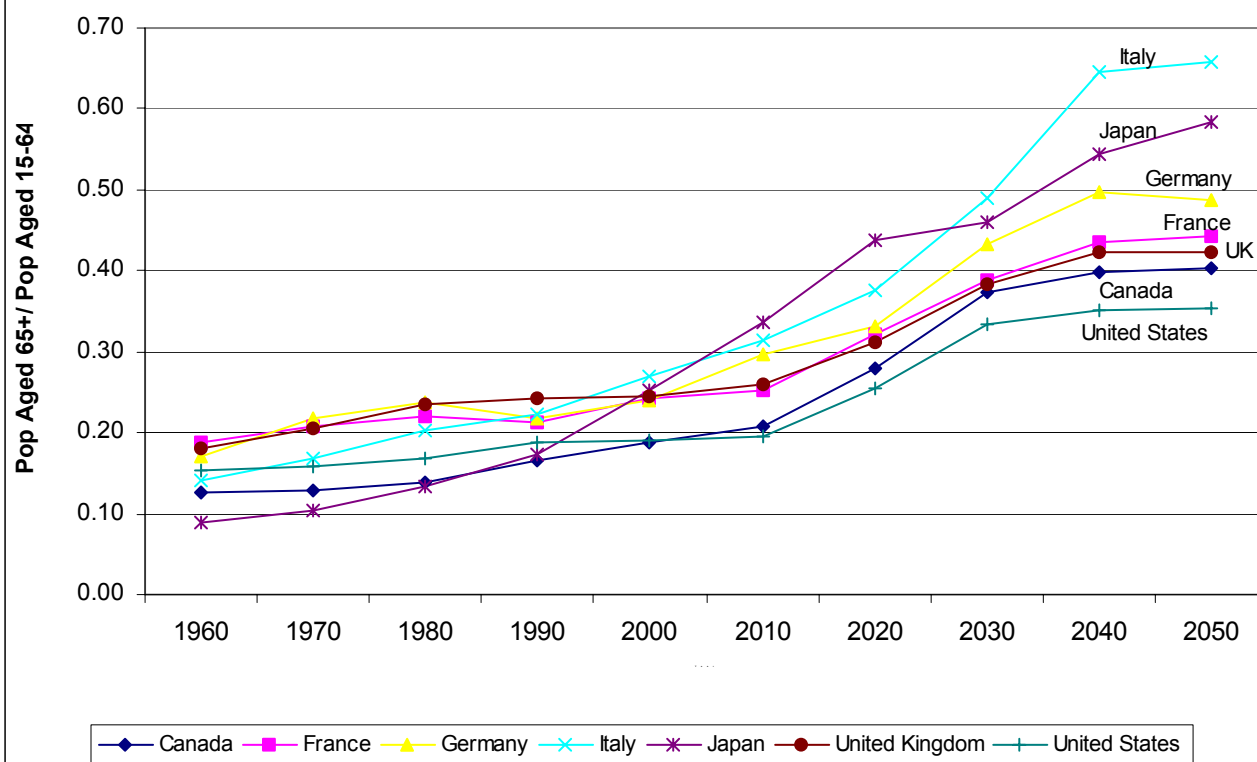
Source: Table 4.

TABLE 1 – AGE DISTRIBUTION OF CANADIAN POPULATION (%), 1991 - 2050

Age	2001	2011	2021	2031	2041	2050
Both Sexes						
Under 14	19.2	16.4	15.9	15.5	15.1	15.0
14-24	13.3	13.0	11.3	11.0	11.0	10.7
25-54	45.7	43.1	39.8	38.1	37.4	36.5
55-64	9.0	12.8	14.3	12.1	12.2	12.7
65 plus	12.6	14.5	18.7	23.3	24.5	24.9
Males						
Under 14	19.9	17.0	16.6	16.1	15.7	15.9
14-24	13.7	13.5	11.7	11.5	11.5	11.2
25-54	46.5	44.1	40.9	39.4	38.7	37.9
55-64	9.1	12.7	14.3	12.2	12.3	12.9
65 plus	10.9	12.7	16.8	20.9	21.8	22.3
Females						
Under 14	18.5	15.8	15.2	14.8	14.2	14.4
14-24	12.9	12.6	10.9	10.5	10.6	10.3
25-54	45.1	42.4	38.8	36.9	36.1	35.3
55-64	9.1	12.8	14.4	12.1	12.1	12.6
65 plus	14.4	16.3	20.7	25.5	26.9	27.5

Source: http://www.census.gov/ipc/www/idbsum.html (US Census Bureau, International Population Division).

TABLE 2 – MEDIAN RETIREMENT AGE AND % OF WORKFORCE NEAR RETIREMENT, BY INDUSTRY

	Near-Retirement Rate (%)*			Median Retirement Age (Years)	
	1987	2002		1987	2002
Industry					
Total, All Industries	**11.4**	**19.8**		**64.3**	**60.6**
Agriculture	24.7	23.0		64.9	66.0
Forestry, fishing, mining, oil and gas	13.9	25.7		61.7	59.4
Utilities	15.5	27.5		60.3	58.9
Construction	13.4	14.5		63.2	64.3
Manufacturing	13.0	16.4		63.2	61.7
Trade	8.8	14.7		64.8	62.0
Transportation and warehousing	13.5	26.7		62.7	60.3
Finance, insurance, real estate and leasing	10.6	20.9		64.4	61.1
Professional, scientific and technical	5.1	19.8		69.1	61.2
Management, administrative and support	14.7	12.9		62.7	65.3
Educational services	14.8	39.3		62.0	57.3
Health care and social assistance	9.2	24.7		64.8	60.2
Information, culture and recreation	7.8	16.0		64.6	60.4
Accommodation and food services	8.6	11.2		61.6	61.3
Other services	13.8	17.2		65.0	63.8
Public administration	14.7	32.1		62.4	58.2

Source: Provided by HRSDC based on Labour Force Survey data.
Note: The near retirement rate is defined as the % of the workforce within 10 years of the median retirement age.

TABLE 3 -- REMAINING LIFE EXPECTANCY AT AGE 65

Year	Males	Females
2001	16.7	20.4
2011	18.1	21.2
2021	18.9	21.8
2031	19.4	22.4
2041	19.7	22.8
2051	20.0	23.2

Source: Special data request provided by Byron Spencer from projections based on the forecasting model of the Social and Economic Dimensions of an Ageing Population (SEDAP).

TABLE 4 -- OLD AGE DEPENDENCY RATIOS[†], OECD COUNTRIES: 1960-2050
(G7 COUNTRIES IN BOLD)

Countries	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
Australia	0.138	0.132	0.147	0.167	0.180	0.197	0.258	0.322	0.360	0.375
Austria	0.182	0.229	0.240	0.222	0.215	0.240	0.286	0.402	0.506	0.536
Belgium	0.186	0.213	0.218	0.226	0.252	0.260	0.326	0.425	0.477	0.482
Canada	**0.127**	**0.128**	**0.138**	**0.165**	**0.187**	**0.207**	**0.280**	**0.374**	**0.398**	**0.402**
Czech Republic	0.135	0.181	0.212	0.189	0.195	0.219	0.318	0.377	0.471	0.606
Denmark	0.165	0.191	0.222	0.232	0.227	0.257	0.322	0.383	0.430	0.402
Finland	0.115	0.139	0.177	0.199	0.222	0.255	0.364	0.435	0.435	0.440
France	**0.187**	**0.207**	**0.220**	**0.213**	**0.243**	**0.252**	**0.321**	**0.387**	**0.435**	**0.442**
Germany	**0.171**	**0.217**	**0.237**	**0.218**	**0.241**	**0.296**	**0.331**	**0.432**	**0.497**	**0.488**
Greece	0.127	0.175	0.204	0.204	0.266	0.302	0.351	0.424	0.543	0.646
Hungary	0.137	0.172	0.207	0.200	0.215	0.230	0.290	0.319	0.385	0.484
Iceland	0.140	0.152	0.158	0.164	0.176	0.185	0.238	0.314	0.362	0.388
Ireland	0.194	0.194	0.182	0.186	0.168	0.182	0.235	0.283	0.325	0.400
Italy	**0.141**	**0.169**	**0.203**	**0.222**	**0.270**	**0.313**	**0.375**	**0.491**	**0.645**	**0.657**
Japan	**0.089**	**0.103**	**0.134**	**0.172**	**0.251**	**0.338**	**0.437**	**0.461**	**0.544**	**0.585**
Korea	0.060	0.060	0.061	0.072	0.093	0.131	0.176	0.278	0.374	0.417
Luxemburg	0.159	0.191	0.200	0.193	0.215	0.216	0.288	0.371	0.429	0.453
Mexico	0.091	0.087	0.074	0.070	0.076	0.090	0.117	0.163	0.236	0.300
Netherlands	0.148	0.163	0.174	0.186	0.203	0.230	0.316	0.431	0.514	0.491
New Zealand	0.147	0.142	0.158	0.169	0.177	0.189	0.241	0.303	0.334	0.343
Norway	0.176	0.206	0.235	0.252	0.237	0.242	0.312	0.384	0.438	0.422
Poland	0.095	0.132	0.154	0.156	0.175	0.177	0.253	0.318	0.349	0.448
Portugal	0.127	0.148	0.165	0.205	0.231	0.252	0.293	0.359	0.476	0.564
Slovak Republic	0.110	0.145	0.164	0.160	0.165	0.170	0.232	0.295	0.353	0.461
Spain	0.127	0.157	0.171	0.207	0.248	0.269	0.316	0.422	0.598	0.721
Sweden	0.182	0.209	0.254	0.277	0.270	0.297	0.374	0.434	0.474	0.465
Switzerland	0.153	0.176	0.208	0.208	0.216	0.247	0.314	0.443	0.531	0.532
Turkey	0.063	0.081	0.084	0.071	0.072	0.098	0.120	0.169	0.231	0.302
United Kingdom	**0.180**	**0.205**	**0.236**	**0.241**	**0.245**	**0.259**	**0.311**	**0.384**	**0.424**	**0.423**
United States	**0.153**	**0.159**	**0.169**	**0.189**	**0.189**	**0.195**	**0.255**	**0.334**	**0.351**	**0.355**
OECD Un-weighted Average	**0.145**	**0.168**	**0.186**	**0.194**	**0.211**	**0.234**	**0.298**	**0.376**	**0.446**	**0.484**

[†] Old age dependency ratio calculated as the population aged 65+ divided by the population aged 15-64.

Source: World Population Prospects 1998, United Nations.

TABLE 5 -- GROWTH IN CANADIAN AND U.S. WORKFORCE BY AGE (2000-10)

Age Category	Canada (%)	US (%)
16-24	8	15
25-34	4	8
35-44	-13	-10
44-54	23	21
55-64	50	52
65+	34	30

Source: US data drawn from Bureau of Labour Statistics and Canadian data drawn from Statistics Canada.

TABLE 6 – CORRELATES OF REASONS FOR RETIRING, 2002 GSS (Multiple Responses Possible)

	Financially possible	Wanted to stop working	Wanted to do other things	Qualified for pension	Health	Early retirement incentive	No longer enjoyed work	Job down sized	Mandatory retirement	Care for family member	Unemployed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Mean dependent variable	.597	.555	.390	.386	.284	.133	.128	.113	.111	.110	.048
(Female)											
Male	.081***	-.024**	-.012	.189***	.001	.102***	.023***	.025***	.061***	-.071***	.007
(Age 45-49)											
Age 50-54	.075*	-.038	-.001	.051	-.065**	.026	.015	.050*	-.004	-.016	.014
Age 55-59	.145***	.054	.028	.168***	-.067**	.098***	.016	.021	.018	-.044*	.028
Age 60-64	.147***	.055	-.012	.167***	-.093***	.067***	-.009	.016	.001	-.045*	.027
Age 65-69	.197***	.102***	.001	.220***	-.092***	.022	-.023	-.020	.037	-.045*	.009
Age 70 and over	.213***	.149***	.009	.236***	-.110***	-.033	-.044*	-.054**	.087***	-.033	-.004
(Single, never married)											
Married or common law	-.024	-.027	.038**	-.091***	.008	-.033*	-.028**	-.028**	-.018	-.011	-.015*
Separated	-.075**	-.028	-.002	-.041	.025	-.003	-.034	-.040*	-.011	-.045**	-.020
Widowed	-.028	-.055***	-.008	-.069***	.006	-.042***	-.035**	-.037***	-.005	.058***	-.021**
Divorced	-.061***	-.099***	-.014	-.029	.021	-.012	-.022	-.001	.005	-.043***	.002
(No children in household)											
One child	-.089***	-.060***	-.047*	-.029*	.022*	.009	-.024*	.004	-.006	.028**	.012
Two or more children	-.079**	-.010	-.024	-.067**	-.004	-.038	-.021**	.007	-.003	.115***	.023
(Non-immigrant)											
Immigrant pre 1970s	-.003	-.008	-.010	-.008	-.006	-.016*	-.001	.001	.022***	.004	.001
Immigrant1970s	-.103**	-.068	-.027	-.032	.010	.001	-.031	.056**	.040	-.030	.079***
Immigrant 1980s	-.077	-.070	-.050	.008	.028	-.074**	-.058	-.066*	.030	-.006	.094***
Immigrant 1990s	-.139**	-.062	-.002	-.002	-.031	-.124***	-.092**	-.035	.064*	-.001	-.015
(Less than high school)											
High school graduate	.030**	.006	.024	.008	-.018*	.026**	.013	-.008	.016	.001	-.014**
Some post secondary	.026*	-.031*	.024	.026*	-.009	.019*	.008	.001	.017*	.030***	-.012*
Comm. College/voc. Ed	.049***	.022	.030**	.001	-.010	.029***	.008	-.017*	.009	.001	-.013**
University graduate	.084***	.045**	.100***	.064***	-.023*	.018	.043***	-.046***	.021*	.022*	-.017**
(Health poor)											
Health fair	.167***	.260***	.149***	.100***	-.197***	.082***	.084***	.069***	.028*	.021	.036***
Health good	.247***	.366***	.241***	.115***	-.644***	.095***	.085***	.097***	.066***	.062***	.033***
Health very good	.284***	.375***	.297***	.148***	-.778***	.116***	.067***	.109***	.072***	.053***	.028***
Health excellent	.286***	.380***	.330***	.115***	-.843***	.093***	.051***	.120***	.064***	.054***	.037***

(Paid worker pre retirement)											
Self-employed pre retirement	.020	.032**	.032**	-.286***	.048***	-.144***	-.009	-.062***	-.015	-.007	-.020***
Unpaid family worker	.040	-.059	-.048	-.112**	-.029	-.039	.013	.001	-.122***	.005	-.013
(Full-time pre retirement)											
Part-time pre retirement	-.018	.054***	.003	-.137***	-.001	-.072***	.001	.004	-.023***	.010	.017*
(Clerical occupation)											
Managerial	-.004	.009	-.021	-.025	.001	-.027**	-.017	-.038***	-.033***	.007	.001
Professional	.010	-.004	-.006	.049***	.033**	-.003	-.020	-.048***	.009	.008	-.007
Technical	-.008	-.020	.002	.054**	.044**	-.014	-.039**	-.029*	.039**	.001	-.007
Sales and service	-.041***	-.004	-.032**	-.047***	.049***	-.047***	.002	-.018*	-.010	.001	.011
Trades/ operators	-.040**	-.004	-.013	.002	.064***	-.043***	-.019	-.031**	-.010	.020	.009
Primary occupations	-.034	-.009	-.081***	-.071***	.034*	-.007	-.044**	.001	-.017	.024	.021*
Processing & mfg.	-.047**	-.037*	-.075***	-.039*	.006	-.010	-.016	.029**	.004	.026*	.044***
[Ontario]											
Newfoundland/Labrador	-.055**	-.076***	-.090***	-.033	.002	.008	-.049***	.052***	.001	-.027*	.021*
Prince Edward Island	-.020	-.034	.008	-.021	.001	-.016	-.022	.042**	-.008	-.009	-.005
Nova Scotia	-.111***	-.062***	-.061***	-.033*	.023	-.008	-.025*	.029**	.013	.005	-.004
New Brunswick	-.101***	-.031	-.078***	-.049**	.032**	.001	-.018	.023	.013	.018	.008
Quebec	-.022	-.008	-.112***	-.011	-.032***	-.023**	-.051***	.015	.028***	-.022**	.055***
Manitoba	.048**	.059***	.066***	-.010	.001	-.005	-.009	-.018	-.037***	.001	-.005
Saskatchewan	-.009	.003	.046**	-.019	-.009	-.038**	-.044***	.012	.003	-.018	-.009
Alberta	-.005	.005	.051***	-.033*	-.013	-.027**	.001	.014	-.006	-.001	.006
British Columbia	.001	.017	.002	-.106***	-.016	-.052***	.012	.005	-.017*	.024**	.012*
(Rural)											
Urban	-.008	-.013	-.024**	.013	.003	.024***	-.008	.004	.017**	-.011	-.001
(Household income < $10,000											
$10,000-14,999	.070**	.027	.021	.029	-.023	.056**	.025	.003	-.009	-.012	-.027*
$15,000-19,999	.145***	.077**	.065*	.110***	-.032	.069***	.034	.009	.013	-.026	-.030*
$20,000-29,999	.235***	.118***	.107***	.139***	-.041	.094***	.032	-.006	.041*	-.023	-.067***
$30,000-39,999	.311***	.172***	.113***	.206***	-.048*	.118***	.053**	-.014	.031	-.037	-.081***
$40,000-49,999	.319***	.165***	.120***	.213***	-.055**	.154***	.072***	.016	.034	-.051**	-.073***
$50,000-59,999	.344***	.189***	.178***	.247***	-.068**	.140***	.062**	-.019	.030	-.043*	-.094***
$60,000-79,999	.334***	.149***	.164***	.235***	-.083***	.183***	.078***	.004	.062**	-.041	-.094***
$80,000-99,999	.323***	.118*	.133***	.259***	-.080**	.178***	.038	.024	.031	-.055*	-.078***
$100,000+	.305***	.158***	.187***	.150***	-.099***	.117***	.058*	-.001	.027	-.041	-.086***
Sample size	9972	10,010	9994	10,050	10,106	10,105	9999	10,003	10,070	10,050	10,052
R-squared	.152	.115	.110	.172	.437	.127	.026	.038	.064	.048	.051

Note: Significance is denoted by * at the 0.01 level, ** at the 0.05 level and *** at the 0.10 level. P-values are in accompanying appendix table.

Notes: The more complete description of each of the reasons given in response to the question "Why did you retire? Was it because …as given in the column headings are (multiple responses are possible as evidenced by the fact that the proportion who responded to each possibility summed to greater than one:

1. Financially possible = retirement was financially possible
2. Wanted to stop = you wanted to stop working
3. Wanted to do other things = you wanted to do other things
4. Qualified for pension = you had completed the required years of service to qualify for a pension
5. Health = your health required it
6. Early retirement incentive = received an early retirement incentive
7. No longer enjoyed work = you no longer enjoyed your work
8. Combination of four possible responses in descending order of importance: job downsized; business decision or layoff; unemployed; new technology
9. Mandatory retirement = your employer had a mandatory retirement policy
10. Care for family member = you need to take care of a family member
11. Unemployed = you were unemployed and could not find a job

TABLE 7 – FACTORS THAT WOULD FACILITATE CONTINUED EMPLOYMENT, 2002 GSS (Multiple Responses Possible)

	Better health	Part-time work	Work fewer days	Work shorter days	Better pay	Vacation/ leaves	No Mand. Retirement	Suitable care-giving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean dependent variable	.273	.231	.229	.210	.164	.140	.105	.058
(Female)								
Male	.013	.026**	.046***	.048***	.046***	.036***	.045***	-.006
(Age 45-49)								
Age 50-54	-.003	-.046	-.028	-.034	.002	-.048	-.003	.008
Age 55-59	-.054*	-.100***	-.038	-.076**	-.037	-.096***	-.009	-.038**
Age 60-64	-.044	-.068**	-.034	-.052	-.034	-.089***	.004	-.019
Age 65-69	-.052*	-.100***	-.060*	-.090***	-.057*	-.111***	.030	-.041**
Age 70 and over	-.087***	-.157***	-.132***	-.152***	-.117***	-.158***	.033	-.046**
(Single, never married)								
Married or common law	.030**	.025	.001	-.002	-.016	.004	-.015	.001
Separated	.041*	.035	.007	-.022	-.038	-.007	-.008	.007
Widowed	.020	.016	.005	-.009	-.021	.002	-.014	.013
Divorced	.032*	.057*	.060***	.058***	.022	.052***	.024	.001
(No children in household)								
One child	.033**	.042**	.050***	.034**	.037*	.025*	.038***	.028***
Two or more children	.013	-.025**	-.024	-.037	-.006	-.023	.012	.003
(Non-immigrant)								
Immigrant pre 1970s	-.025**	.005	-.008	-.017	.004	.004	.013	.001
Immigrant 1970s	.005	.042	.138***	.092**	.044	.111***	.042	.001
Immigrant 1980s	.039	.039	-.016	.017	.029	.035	.090**	.052*
Immigrant 1990s	-.022	-.005	-.087	-.117**	-.037	.046	.003	.026
(Less than high school)								
High school graduate	-.001	.014	-.011	-.004	.013	.011	.001	.001
Some post secondary	.010	.026*	.004	-.006	-.001	-.007	.012	.001
Comm. College/voc. Ed	.001	-.001	-.008	-.006	.001	.003	.001	-.017**
University graduate	-.010	.054***	.015	.006	-.001	.002	-.001	-.012
(Health poor)								
Health fair	-.234***	.043**	.074***	.069***	.036**	.028*	.020	-.006
Health good	-.636***	.014	.068***	.046***	.064***	.039***	.041***	-.013
Health very good	-.765***	.009	.065***	.051***	.072***	.033**	.060***	-.028***
Health excellent	-.818***	.002	.069***	.053***	.070***	.046***	.061***	-.034***

(Paid worker pre retirement)								
Self-employed pre retirement	.014	-.022*	-.071***	-.070***	.060***	-.063***	-.074***	.010
Unpaid family worker	-.079*	.001	-.013	.011	.017	.014	-.029	.040
(Full-time pre retirement)								
Part-time pre retirement	-.030***	-.085***	-.082***	-.054***	-.039***	-.058***	-.025**	-.014*
(Clerical occupation)								
Managerial	.004	-.041**	-.040**	-.034*	-.043***	-.037**	-.045***	-.008
Professional	.012	-.045***	-.019	-.025	-.046***	-.026*	-.019	.004
Technical	.045**	.016	.001	-0.012	-.005	-.004	.007	-.005
Sales and service	.033***	-.021	-.022	-.021	-.020	-.022**	-.012	.004
Trades/ operators	.056***	-.015	-.013	-.023	-.044***	-.014	.001	.010
Primary occupations	.005	-.102***	-.092***	-.052**	-.096***	-.060***	-.025	-.014
Processing & mfg.	-.004	-.001	.005	.008	-.014	-.005	-.020	.035***
[Ontario]								
Newfoundland/Labrador	-.011	-.059**	.009	.007	.011	-.016	.022	.006
Prince Edward Island	.003	-.069**	-.009	-.002	.010	.008	.006	.018
Nova Scotia	.018	-.058***	-.001	-.011	.011	-.001	.021	-.001
New Brunswick	.034**	-.021	.011	.017	.005	-.019	.002	.008
Quebec	-.036***	-.051***	-.042***	-.042***	-.025**	-.002	.014	.031***
Manitoba	-.011	-.007	-.014	-.010	-.019	-.030*	-.043***	-.-009
Saskatchewan	-.010	-.008	-.003	-.013	-.021	.026	-.014	-.008
Alberta	-.013	-.010	-.001	.002	.008	.022	-.013	.009
British Columbia	-.013	-.021	.025*	.025*	.003	.002	.001	.010
(Rural)								
Urban	.008	.021**	.008	.004	.002	.008	.005	-.004
(Household income < $10,000								
$10,000-14,999	-.060**	.059*	.032	.046	.015	.056**	-.012	-.041**
$15,000-19,999	-.077***	.057*	.013	.034	.009	.043	-.001	-.070***
$20,000-29,999	-.090***	.008*	.015	.018	.001	.043	-.009	-.059***
$30,000-39,999	-.134***	-.038	-.010	.001	-.035	.033	-.024	-.071***
$40,000-49,999	-.141***	-.023	-.007	.009	-.032	.050*	-.044*	-.069***
$50,000-59,999	-.186***	-.016	-.025	-.017	-.023	.019	-.024	-.075***
$60,000-79,999	-.179***	-.022	-.006	.018	.012	.025	.020	-.083***
$80,000-99,999	-.148***	-.029	-.010	.011	.020	.034	-.016	-.081***
$100,000+	-.187***	-.073*	-.040	-.017	-.038	.008	-.053*	-.090***
Sample size	9,727	9.620	9,651	9,669	9,621	9,625	9.632	9,663
R-squared	.429	.035	.037	.035	.033	.033	.032	0.026

Note: Significance is denoted by * at the 0.01 level, ** at the 0.05 level and *** at the 0.10 level.   P-values are in accompanying appendix table.

Notes: The more complete description of each of the reasons given in response to the question "At the time of your first retirement, would you have continued to do paid work if … (multiple responses are possible as evidenced by the fact that the proportion who responded to each possibility summed to greater than one:

1.   Better health = your health had been better
2.   Part-time work = you could have worked part-time
3.   Work fewer days = were able to work fewer days without affecting your pension
4.   Work fewer hours per day = were able to work shorter days without affecting your pension
5.   Better pay = your salary was increased
6.   More vacation and/or leave time = our vacation leave was increased without affecting your pension
7.   If mandatory retirement did not exist = mandatory retirement policies had not existed
8.   If suitable care-giving could have been found = you could have found suitable care giving

TABLE 8 – CORRELATES OF RETURNING FROM RETIREMENT AND WHETHER RETIREMENT INVOLUNTARY, 2002 GSS

	Retirement Involuntary		Returning from Retirement	
	Coefficient	P-values	Coefficient	P-values
Mean dependent variable	.271		.226	
(Female)				
Male	.025**	.012	.071***	.000
(Age 45-49)				
Age 50-54	.018*	.614	-.063*	.074
Age 55-59	-.080**	.016	-.208***	.000
Age 60-64	-.075**	.022	-.265***	.000
Age 65-69	-.128***	.000	-.347***	.000
Age 70 and over	-.166***	.000	-.394***	.000
(Single, never married)				
Married or common law	.011	.490	.015	.340
Separated	.036	.209	.039	.160
Widowed	.039**	.022	.001	.946
Divorced	.086***	.000	.072***	.000
(No children in household)				
One child	.060***	.000	.029*	.052
Two or more children	.033	.281	.028	.332
(Non-immigrant)				
Immigrant pre 1970s	.007	.527	-.018	.114
Immigrant1970s	.144***	.000	-.018	.599
Immigrant 1980s	.025	.585	-.021	.634
Immigrant 1990s	-.009	.855	-.119**	.015
(Less than high school)				
High school graduate	-.012	.346	.001	.932
Some post secondary	.024*	.082	.065***	.000
Comm. College/voc. Ed	-.022*	.065	.054***	.000
University graduate	-.041**	.012	.071***	.000
(Health poor)				
Health fair	-.296***	.000	.067***	.000
Health good	-.385***	.000	.133***	.000
Health very good	-.412***	.000	.129***	.000
Health excellent	-.413***	.000	.163***	.000

(Paid worker pre retirement)				
Self-employed pre retirement	-.038***	.003	-.018	.142
Unpaid family worker	.025	.131	-.035	.466
(Full-time pre retirement)				
Part-time pre retirement	-.019	.146	-.059***	.000
(Clerical occupation)				
Managerial	-.014	.438	.009	.572
Professional	-.042***	.009	.008	.591
Technical	.012	.573	-.013	.529
Sales and service	.001	.966	-.023*	.072
Trades/ operators	.008	.614	-.055***	.001
Primary occupations	-.003	.890	-.047**	.036
Processing & mfg.	.052***	.005	-.055***	.002
[Ontario]				
Newfoundland/Labrador	.034	.120	-.076***	.000
Prince Edward Island	-.044*	.089	-.029	.239
Nova Scotia	.044**	.015	-.016	.354
New Brunswick	.028	.127	-.050***	.006
Quebec	-.004	.726	-.046***	.000
Manitoba	.054***	.004	-.001	.994
Saskatchewan	.009	.624	.017	.352
Alberta	.003	.827	.018	.245
British Columbia	-.007	.560	.044***	.001
(Rural)				
Urban	.008	.373	-.003	.690
(Household income < $10,000				
$10,000-14,999	-.045	.155	.047	.120
$15,000-19,999	-.094***	.004	.040	.191
$20,000-29,999	-.141***	.000	.041	.166
$30,000-39,999	-.180***	.000	.042	.173
$40,000-49,999	-.178***	.000	.059*	.066
$50,000-59,999	-.199***	.000	.058*	.080
$60,000-79,999	-.192***	.000	.078**	.021
$80,000-99,999	-.194***	.000	.125***	.001
$100,000+	-.234***	.000	.207***	.000
Sample size	10,304		10,100	
R-squared	.157		.128	

Note: Significance is denoted by * at the 0.01 level, ** at the 0.05 level and *** at the 0.10 level.

TABLE 9 – CORRELATES OF REASONS FOR RETURNING TO LABOUR MARKET (TO WORK OR LOOK FOR WORK), 2002 GSS (Multiple Responses)

	Financial	Did not like Retirement	Health Improved	Care-giving no longer needed
	(1)	(2)	(3)	(4)
Mean dependent variable	.439	.224	.052*	.029**
(Female)				
Male	.040*	.012	-.020*	-.035***
(Age 45-49)				
Age 50-54	.019	.011	-.023	-.038*
Age 55-59	.021	.014	-.036	-.047**
Age 60-64	-.093*	.034	-.054**	-.057***
Age 65-69	-.114**	.020	-.053**	-.055***
Age 70 and over	-.229***	.013	-.064***	-.053***
(Single, never married)				
Married or common law	-.025	-.046	.015	.007
Separated	.045	-.044	.011	.004
Widowed	-.007	.003	.010	.043***
Divorced	.102**	-.016	.023	-.006
(No children in household)				
One child	.013	-.015	.021	.030**
Two or more children	.149***	-.101**	-.007	.057***
(Non-immigrant)				
Immigrant pre 1970s	-.040***	.016	.004	.009
Immigrant1970s	-.067	.025	-.008	-.033
Immigrant 1980s	.200	-.085	.031	.018
Immigrant 1990s	.145*	.035	-.041	.023
(Less than high school)				
High school graduate	-.019	-.013	-.009	-.008
Some post secondary	.042	-.020	.022	-.009
Comm. College/voc. Ed	.018	.003	.012	-.023**
University graduate	.020	-.113***	.016	-.009
(Health poor)				
Health fair	-.025	.033	-.133***	-.004
Health good	-.044	.016	-.255***	.002
Health very good	-.056	.014	-.278***	-.003
Health excellent	-.133***	.024	-.291***	.017

(Paid worker pre retirement)				
Self-employed pre retirement	-.035	-.005	.013	-.013
Unpaid family worker	.155	.152	.020	-.072
(Full-time pre retirement)				
Part-time pre retirement	-.083**	.040	-.015	-.022*
(Clerical occupation)				
Managerial	-.046	.032	.026	-.023*
Professional	-.061*	.046	.030**	-.020*
Technical	-.011	.097**	.002	-.011
Sales and service	-.017	.026	.034**	-.023**
Trades/ operators	-.017	.048	.027	-.018
Primary occupations	-.050	.064	.007	-.002
Processing & mfg.	.008	.061	-.005	-.009
[Ontario]				
Newfoundland/Labrador	.018	-.006	-.005	.011
Prince Edward Island	-.061	-.013	.019	.029
Nova Scotia	.001	-.005	.033*	.024
New Brunswick	.021	-.043	.011	-.005
Quebec	-.043	-.109***	-.013	-.015
Manitoba	.012	-.068*	.021	.025
Saskatchewan	-.058	-.019	.001	.006
Alberta	.007	.027	.011	.010
British Columbia	.078***	.030	.067***	.024**
(Rural)				
Urban	.028	-.013	-.004	.001
(Household income < $10,000				
$10,000-14,999	.108	.116	-.039	.002
$15,000-19,999	.075	.076	-.038	-.018
$20,000-29,999	-.050	.128*	-.042	-.003
$30,000-39,999	-.120	.204***	-.034	-.015
$40,000-49,999	-.184**	.154**	-.049	.017
$50,000-59,999	-.158*	.150**	-.034	-.003
$60,000-79,999	-.175**	.184**	-.057	.012
$80,000-99,999	-.180**	.298***	-.054	-.010
$100,000+	-.285***	.214***	-.032	.002
Sample size	2269	2269	2269	2269
R-squared	.120	.040	.169	.067

Note: Significance is denoted by * at the 0.01 level, ** at the 0.05 level and *** at the 0.10 level. P-values are in accompanying appendix table.

The more complete description of each of the reasons given in response to the question "Reason that the respondent looked for paid work or accepted paid work after their first retirement was ….. (multiple responses are possible as evidenced by the fact that the proportion who responded to each possibility summed to greater than one:

1. Financial = financial considerations
2. Did not like retirement = did not like retirement
3. Health improved = improvement in health
4. Care giving no longer needed = care giving duties were no longer required

TABLE 10 – CORRLEATES OF PROBABILITY OF RETIRING DUE TO MANDATORY RETIREMENT (Subsample of Ever Retired), 1994 & 2002

Variable	1994 GSS		2002 GSS	
	Coefficient	P-values	Coefficient	P-values
Mean dependent variable	.123		.111	
(Female)				
Male	.072***	.000	.061***	.000
(Age 45-49)	N/A	N/A		
Age 50-54 (reference in 1994)			-.004	.872
Age 55-59	.009	.757	.018	.442
Age 60-64	.021	.474	.001	.941
Age 65-69	.048*	.094	.037	.119
Age 70 and over	.128***	.000	.087***	.000
(Single, never married)				
Married or common law	-.057**	.037	-.018	.155
Separated	.007	.854	-.011	.610
Widowed	-.032	.266	-.005	.726
Divorced (with widow in '94)			.005	.800
(No children in household)				
One child	.018	.520	-.006	.544
Two or more children	-.024	.533	-.003	.116
(Non-immigrant)				
Immigrant > 3 decades earlier	.044**	.043	.022***	.000
Immigrant 3 decades earlier	-.082**	.027	.040	.141
Immigrant 2 decades earlier	-.043	.428	.030	.365
Immigrant last decade	.151	.187	.064*	.093
(Less than high school)				
High school graduate	-.018	.431	.016	.102
Some post secondary	.057*	.083	.017*	.100
Comm. College/voc. Ed	.020	.316	.009	.260
University graduate	-.026	.333	.021*	.081
(Health poor)				
Health fair	.061**	.021	.028*	.100
Health good	.033	.164	.066***	.000
Health very good	.066**	.010	.072***	.000
Health excellent	.044*	.100	.064***	.000
Health unknown	.058	.503	-.015	.810
(Paid worker pre retirement)				
Self-employed pre retirement	-.133***	.000	-.122***	.000
(Full-time pre retirement)				
Part-time pre retirement	-.056***	.009	-.023***	.000
(Clerical occupation)				
Managerial	-.006	.847	-.033***	.002
Professional	.005	.890	.009	.421
Technical	-.062	.450	.039**	.018
Sales and service	.016	.673	-.010	.269
Trades/ operators	.007	.851	-.010	.423
Primary occupations	-.065**	.016	-.017	.310
Processing & mfg.	-.020	.470	.004	.807

….. Continued)	1994		2002	
	Coefficient	P-values	Coefficient	P-values
(Household income <$10,000)				
$10,000-14,999	.011	.705	-.009	.667
$15,000-19,999	.065*	.055	.013	.610
$20,000-29,999	.073**	.019	.041*	.076
$30,000-39,999	.110***	.003	.031	.204
$40,000-49,999	.042	.308	.034	.175
$50,000-59,999	.016	.706	.030	.249
$60,000-79,999	-.002	.966	.062**	.018
$80,000-99,999	-.018	.758	.031	.293
$100,000+	.054	.438	.027	.342
[Ontario]				
Newfoundland/Labrador	-.001	.978	.001	.919
Prince Edward Island	-.062*	.062	-.008	.659
Nova Scotia	.016	.616	.013	.320
New Brunswick	-.038	.189	.013	.322
Quebec	.012	.655	.028***	.000
Manitoba	-.010	.743	-.037***	.009
Saskatchewan	-.030	.255	.003	.373
Alberta	-.032	.178	-.006	.659
British Columbia	-.062***	.006	-.017*	.094
(Rural)				
Urban	N/A	N/A	.017**	.018
Sample size	2,163		10,070	
R-squared	.087		.064	

Note: Significance is denoted by * at the 0.01 level, ** at the 0.05 level and *** at the 0.10 level.

TABLE 11–EXPECTED AGE OF RETIREMENT (Subsample of Not Retired) 1994 and 2002 GSS

Variable	1994		2002	
	Coefficient	P-values	Coefficient	P-values
Mean dependent variable	59.15		61.67	
(Female)				
Male	0.06	0.740	0.8***	000
(Age 45-49)				
Age 50-54	2.3***	0.000	0.8***	000
Age 55-59	4.1***	0.000	2.5***	000
Age 60-64	6.0***	0.000	4.6***	000
Age 65-69	9.0***	0.000	8.5***	000
Age 70 and over	12.1***	0.000	19.5***	000
(Single, never married)				
Married or common law	-0.9***	0.000	-0.3	.299
Separated	0.8**	0.022	0.4	.343
Widowed	-0.7	0.110	-0.2	.700
Divorced (with widow in '94)			0.6**	.047
(No children in household)				
One child	0.4*	0.075	0.04	.815
Two or more children	0.6**	0.010	0.5**	.026
(Non-immigrant)				
Immigrant > 3 decades earlier	0.6*	0.051	-0.4	.160
Immigrant 3 decades earlier	0.5	0.185	-0.1	.726
Immigrant 2 decades earlier	-0.1	0.819	1.0***	.000
Immigrant last decade	1.3**	0.023	1.8***	.000
(Less than high school)				
High school graduate	-0.8***	0.004	-0.02	.938
Some post secondary	-0.9***	0.002	0.5**	.049
Comm. College/voc. Ed	-0.9***	0.000	0.3	.161
University graduate	-0.1	0.618	0.9***	000
(No employer pension plan)				
Employer pension plan	-1.1***	0.000	-1.8***	.000
(Other)				
Paid workers	0.5	0.133	-0.4	.148
(Clerical occupation)				
Managerial	0.0	0.972	0.2	.555
Professional	0.1	0.674	-0.2	.342
Technical	-1.0*	0.096	-0.6*	.084
Sales and service	0.2	0.558	0.4	.110
Trades/ operators	-0.3	0.397	0.1	.870
Primary occupations	0.2	0.747	1.0**	.013
Processing & mfg.	0.2	0.554	0.4	.253

….. Continued)	1994		2002	
	Coefficient	P-values	Coefficient	P-values
(Household income <$10,000)				
$10,000-14,999	0.2	0.852	2.0**	.037
$15,000-19,999	-0.2	0.777	-0.7	.935
$20,000-29,999	0.03	0.965	0.4	.577
$30,000-39,999	-0.6	0.341	0.1	.887
$40,000-49,999	-1.1*	0.096	-0.2	.807
$50,000-59,999	-1.4**	0.029	-1.2	.143
$60,000-79,999	-2.0***	0.003	-1.2	.130
$80,000-99,999	-2.5***	0.000	-1.6**	.043
$100,000+	-2.0***	0.006	-2.0**	.015
[Ontario]				
Newfoundland/Labrador	-2.2***	0.000	-2.7***	.000
Prince Edward Island	-0.9	0.103	-0.4	.348
Nova Scotia	-1.3***	0.000	-0.9***	.000
New Brunswick	-0.9**	0.025	-1.5***	.000
Quebec	-1.9***	0.000	-1.3***	.000
Manitoba	-0.7**	0.021	-0.6*	.056
Saskatchewan	-0.6*	0.089	-0.3	.257
Alberta	-0.7**	0.015	-.05	.863
British Columbia	-0.7**	0.029	0.3	.148
(Rural)				
Urban	N/A	N/A	0.1	.514
Sample size	4,855		5,158	
R-squared	.193		.271	

Note: Significance is denoted by * at the 0.01 level, ** at the 0.05 level and *** at the 0.10 level.

Omits workers who responded "no intention to retire".

TABLE 12 – SUMMARY PICTURE OF DIMENSIONS OF RETIREMENT BEHAVIOUR

	% Responding
Reasons for Retiring (Table 6)	
Financially possible	59.7
Wanted to stop working	55.5
Wanted to do other things	39.0
Qualified for a pension	38.6
Health	28.4
Early retirement incentive	13.3
No longer enjoyed work	12.8
Job downsized	11.3
Mandatory retirement	11.1
Care for family member	11.0
Unemployed	4.8
Factors That Would Facilitate Continued Employment (Table 7)	
Better health	27.3
Part-time work	23.1
Work fewer days	22.9
Work shorter days	21.0
Better pay	16.4
Vacation leaves	14.0
No mandatory retirement	10.5
Suitable care giving	5.8
Retirement Involuntary and Returned from Retirement (Table 8)	
Retirement involuntary	27.1
Returned from retirement	22.6
Reasons for Returning from Retirement (Table 9)	
Financial	43.9
Did not like retirement	22.4
Health improved	5.2
Care-giving no longer needed	2.9
Retiring Due to Mandatory Retirement (Table 10)	
1994	12.3
2002	11.1
Expected Age of Retirement (Table 11)	
1994	59.1
2002	61.7

Source: Tables 6-11, based on GSS.

APPENDIX A6– P-VALUES FOR TABLE 6, CORRELATES OF REASONS FOR RETIRING, 2002 GSS

	Financially possible	Wanted to stop working	Wanted to do other things	Qualified for pension	Health	Early retirement incentive	No longer enjoyed work	Job down sized	Mandatory retirement	Care for family member	Unemployed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Mean dependent variable	.597	.555	.390	.386	.284	.133	.128	.113	.111	.110	.048
(Female)											
Male	.000	.040	.297	.000	.928	.000	.004	.001	.000	.000	.156
(Age 45-49)											
Age 50-54	.069	.366	.980	.208	.035	.364	.609	.077	.872	.553	.457
Age 55-59	.000	.156	.457	.000	.014	.000	.537	.392	.442	.080	.102
Age 60-64	.000	.141	.734	.000	.001	.008	.727	.502	.941	.066	.106
Age 65-69	.000	.006	.979	.000	.001	.380	.368	.414	.119	.062	.567
Age 70 and over	.000	.000	.791	.000	.000	.186	.090	.026	.000	.167	.786
(Single, never married)											
Married or common law	.185	.156	.042	.000	.549	.010	.037	.026	.155	.362	.072
Separated	.021	.404	.951	.191	.290	.894	.145	.067	.610	.037	.181
Widowed	.151	.006	.660	.000	.645	.002	.012	.005	.726	.000	.018
Divorced	.009	.000	.543	.196	.229	.471	.188	.908	.800	.006	.797
(No children in household)											
One child	.000	.001	.010	.088	.087	.463	.065	.720	.544	.017	.132
Two or more children	.021	.760	.478	.045	.865	.114	.039	.749	.116	.000	.143
(Non-immigrant)											
Immigrant pre 1970s	.812	.531	.460	.536	.514	.082	.985	.872	.000	.653	.904
Immigrant1970s	.012	.105	.515	.423	.738	.973	.287	.045	.141	.268	.000
Immigrant 1980s	.141	.180	.351	.864	.462	.045	.126	.066	.365	.862	.000
Immigrant 1990s	.015	.282	.966	.967	.463	.002	.025	.369	.093	.971	.544
(Less than high school)											
High school graduate	.046	.694	.110	.568	.095	.014	.221	.416	.102	.873	.044
Some post secondary	.093	.055	.132	.081	.441	.081	.482	.991	.100	.005	.094
Comm. College/voc. Ed	.000	.112	.029	.940	.290	.002	.382	.060	.260	.987	.030
University graduate	.000	.016	.000	.000	.082	.150	.001	.000	.081	.068	.036
(Health poor)											
Health fair	.000	.000	.000	.000	.000	.000	.000	.000	.100	.123	.000
Health good	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Health very good	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Health excellent	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

(Paid worker pre retirement)											
Self-employed pre retirement	.149	.029	.025	.000	.000	.000	.364	.000	.810	.432	.002
Unpaid family worker	.483	.316	.402	.047	.494	.326	.741	.961	.000	.893	.621
(Full-time pre retirement)											
Part-time pre retirement	.224	.000	.810	.000	.863	.000	.885	.650	.000	.279	.010
(Clerical occupation)											
Managerial	.836	.635	.296	.192	.968	.058	.224	.005	.002	.592	.984
Professional	.579	.790	.725	.005	.012	.811	.114	.000	.421	.471	.391
Technical	.724	.442	.920	.030	.019	.447	.033	.087	.018	.955	.534
Sales and service	.006	.751	.031	.001	.000	.000	.785	.066	.269	.942	.105
Trades/ operators	.032	.803	.497	.891	.000	.001	.164	.017	.423	.103	.280
Primary occupations	.184	.724	.002	.005	.073	.700	.020	.997	.310	.159	.077
Processing & mfg.	.026	.089	.000	.057	.662	.497	.285	.042	.807	.065	.000
[Ontario]											
Newfoundland/Labrador	.025	.003	.000	.159	.892	.625	.005	.002	.919	.099	.058
Prince Edward Island	.490	.262	.785	.451	.990	.421	.305	.035	.659	.618	.680
Nova Scotia	.000	.003	.003	.099	.126	.598	.092	.035	.320	.706	.628
New Brunswick	.000	.152	.000	.017	.040	.933	.236	.102	.322	.197	.412
Quebec	.101	.534	.000	.418	.002	.022	.000	.112	.000	.015	.000
Manitoba	.020	.006	.002	.617	.695	.726	.547	.198	.009	.916	.582
Saskatchewan	.662	.875	.038	.364	.554	.012	.005	.404	.373	.202	.399
Alberta	.758	.791	.007	.068	.344	.038	.952	.249	.659	.914	.453
British Columbia	.907	.265	.879	.000	.147	.000	.247	.617	.094	.015	.061
(Rural)											
Urban	.447	.235	.025	.195	.677	.002	.313	.564	.018	.124	.816
(Household income < $10,000											
$10,000-14,999	.047	.455	.544	.395	.374	.023	.322	.880	.667	.591	.090
$15,000-19,999	.000	.038	.078	.002	.235	.007	.190	.693	.610	.286	.067
$20,000-29,999	.000	.001	.003	.000	.114	.000	.208	.802	.076	.321	.000
$30,000-39,999	.000	.000	.002	.000	.073	.000	.042	.548	.204	.119	.000
$40,000-49,999	.000	.000	.002	.000	.048	.000	.008	.525	.175	.044	.000
$50,000-59,999	.000	.000	.000	.000	.018	.000	.029	.469	.249	.097	.000
$60,000-79,999	.000	.000	.000	.000	.004	.000	.006	.867	.018	.116	.000
$80,000-99,999	.000	.010	.003	.000	.015	.000	.232	.430	.293	.061	.000
$100,000+	.000	.000	.000	.000	.002	.000	.066	.965	.342	.155	.000

APPENDIX A7 –P-VALUES FOR TABLE 7, FACTORS THAT WOULD HAVE FACILITATED CONTINUING IN EMPLOYMENT, 2002 GSS

	Better health	Part-time work	Work fewer days	Work shorter days	Better pay	Vacation/ leaves	No. Mand. Retirement	Suitable care-giving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean dependent variable	.273	.231	.229	.210	.164	.140	.105	.058
(Female)								
Male	.114	.011	.000	.000	.000	.000	.000	.279
(Age 45-49)								
Age 50-54	.913	.229	.458	.355	.130	.125	.891	.683
Age 55-59	.051	.004	.266	.023	.217	.001	.715	.049
Age 60-64	.106	.043	.304	.112	.249	.002	.860	.305
Age 65-69	.053	.003	.073	.005	.054	.000	.213	.028
Age 70 and over	.001	.000	.000	.000	.000	.000	.172	.013
(Single, never married)								
Married or common law	.027	.139	.984	.877	.269	.754	.218	.873
Separated	.095	.250	.803	.456	.154	.779	.689	.643
Widowed	.168	.370	.778	.582	.940	.892	.290	.191
Divorced	.068	.010	.006	.006	.243	.004	.130	.938
(No children in household)								
One child	.012	.011	.002	.030	.010	.068	.001	.002
Two or more children	.599	.042	.438	.221	.815	.371	.602	.829
(Non-immigrant)								
Immigrant pre 1970s	.014	.660	.521	.152	.623	.662	.154	.836
Immigrant1970s	.852	.282	.000	.013	.194	.000	.132	.980
Immigrant 1980s	.332	.438	.741	.717	.505	.392	.014	.067
Immigrant 1990s	.611	.923	.104	.024	.440	.302	.922	.397
(Less than high school)								
High school graduate	.879	.313	.406	.720	.274	.320	.870	.827
Some post secondary	.402	.076	.745	.625	.967	.533	.235	.867
Comm. College/voc. Ed	.989	.895	.480	.620	.892	.718	.913	.015
University graduate	.449	.002	.366	.700	.942	.836	.975	.186
(Health poor)								
Health fair	.000	.021	.000	.000	.028	.065	.145	.559
Health good	.000	.366	.000	.003	.000	.003	.000	.131
Health very good	.000	.552	.000	.001	.000	.013	.000	.002
Health excellent	.000	.888	.000	.001	.000	.000	.000	.000

(Paid worker pre retirement)								
Self-employed pre retirement	.175	.092	.000	.000	.000	.000	.000	.165
Unpaid family worker	.063	.974	.797	.821	.711	.742	.445	.176
(Full-time pre retirement)								
Part-time pre retirement	.007	.000	.000	.000	.001	.000	.012	.066
(Clerical occupation)								
Managerial	.757	.029	.033	.055	.008	.014	.001	.409
Professional	.355	.007	.243	.125	.002	.059	.122	.598
Technical	.019	.490	.963	.586	.778	.833	.665	.671
Sales and service	.003	.115	.110	.111	.102	.049	.208	.594
Trades/ operators	.000	.391	.441	.169	.005	.321	.947	.278
Primary occupations	.784	.000	.000	.026	.000	.003	.148	.296
Processing & mfg.	.789	.949	.764	.667	.415	.727	.152	.002
[Ontario]								
Newfoundland/Labrador	.538	.010	.664	.740	.574	.393	.174	.602
Prince Edward Island	.864	.012	.722	.939	.649	.708	.746	.235
Nova Scotia	.234	.002	.977	.522	.491	.963	.126	.967
New Brunswick	.029	.292	.550	.352	.740	.231	.858	.447
Quebec	.001	.000	.001	.001	.026	.846	.137	.000
Manitoba	.478	.693	.458	.563	.257	.057	.003	.402
Saskatchewan	.519	.681	.867	.485	.235	.111	.323	.451
Alberta	.355	.562	.966	.884	.562	.116	.277	.352
British Columbia	.227	.116	.061	.060	.788	.823	.899	.190
(Rural)								
Urban	.276	.036	.415	.622	.758	.301	.429	.468
(Household income < $10,000								
$10,000-14,999	.026	.073	.325	.149	.602	.039	.611	.026
$15,000-19,999	.005	.090	.683	.289	.748	.118	.971	.000
$20,000-29,999	.001	.079	.633	.553	.981	.107	.699	.001
$30,000-39,999	.000	.283	.754	.984	.232	.232	.325	.000
$40,000-49,999	.000	.497	.825	.786	.295	.083	.084	.000
$50,000-59,999	.000	.643	.476	.170	.465	.518	.353	.000
$60,000-79,999	.000	.531	.870	.605	.708	.396	.449	.000
$80,000-99,999	.000	.472	.800	.772	.568	.310	.577	.000
$100,000+	.000	.070	.315	.657	.279	.804	.067	.000

APPENDIX A9 –P-VALUES FOR TABLE 9, REASONS FOR RETURNING TO LABOUR MARKET (TO WORK OR LOOK FOR WORK), 2002 GSS

	Financial	Did not like retirement	Health improved	Care-giving no longer needed
	(1)	(2)	(6)	(8)
Mean dependent variable (Female)	.439	.224	.052	.029
Male	.090	.535	.051	.000
(Age 45-49)				
Age 50-54	.740	.825	.375	.063
Age 55-59	.701	.768	.129	.014
Age 60-64	.094	.480	.024	.003
Age 65-69	.041	.670	.027	.004
Age 70 and over	.000	.784	.007	.005
(Single, never married)				
Married or common law	.559	.220	.409	.615
Separated	.518	.480	.720	.866
Widowed	.879	.933	.601	.009
Divorced	.041	.716	.281	.721
(No children in household)				
One child	.711	.634	.170	.015
Two or more children	.000	.033	.760	.002
(Non-immigrant)				
Immigrant pre 1970s	.006	.538	.708	.380
Immigrant1970s	.188	.721	.820	.246
Immigrant 1980s	.411	.404	.531	.652
Immigrant 1990s	.087	.760	.473	.608
(Less than high school)		.		
High school graduate	.604	.667	.540	.511
Some post secondary	.210	.487	.132	.438
Comm. College/voc. Ed	.553	.899	.342	.026
University graduate	.593	.001	.309	.452
(Health poor)				
Health fair	.640	.486	.000	.796
Health good	.318	.683	.000	.869
Health very good	.213	.722	.000	.834
Health excellent	.002	.528	.000	.239
Health unknown	.876	.858	.001	.737

(Paid worker pre retirement)				
Self-employed pre retirement	.267	.855	.314	.221
Unpaid family worker	.390	.339	.794	.248
(Full-time pre retirement)				
Part-time pre retirement	.032	.238	.371	.094
(Clerical occupation)				
Managerial	.242	.353	.129	.094
Professional	.087	.136	.048	.098
Technical	.816	.031	.905	.535
Sales and service	.601	.373	.019	.045
Trades/ operators	.679	.185	.126	.216
Primary occupations	.415	.235	.787	.910
Processing & mfg.	.876	.181	.818	.598
[Ontario]				
Newfoundland/Labrador	.765	.902	.842	.589
Prince Edward Island	.375	.826	.522	.220
Nova Scotia	.981	.884	.089	.131
New Brunswick	.677	.350	.608	.780
Quebec	.180	.000	.341	.160
Manitoba	.787	.099	.300	.127
Saskatchewan	.217	.644	.962	.696
Alberta	.839	.422	.499	.427
British Columbia	.009	.250	.000	.019
(Rural)				
Urban	.234	.516	.698	.880
(Household income < $10,000				
$10,000-14,999	.200	.116	.279	.932
$15,000-19,999	.377	.306	.292	.536
$20,000-29,999	.535	.072	.226	.893
$30,000-39,999	.143	.005	.336	.587
$40,000-49,999	.031	.039	.192	.555
$50,000-59,999	.068	.049	.361	.911
$60,000-79,999	.041	.015	.126	.685
$80,000-99,999	.048	.000	.170	.747
$100,000+	.001	.006	.395	.926