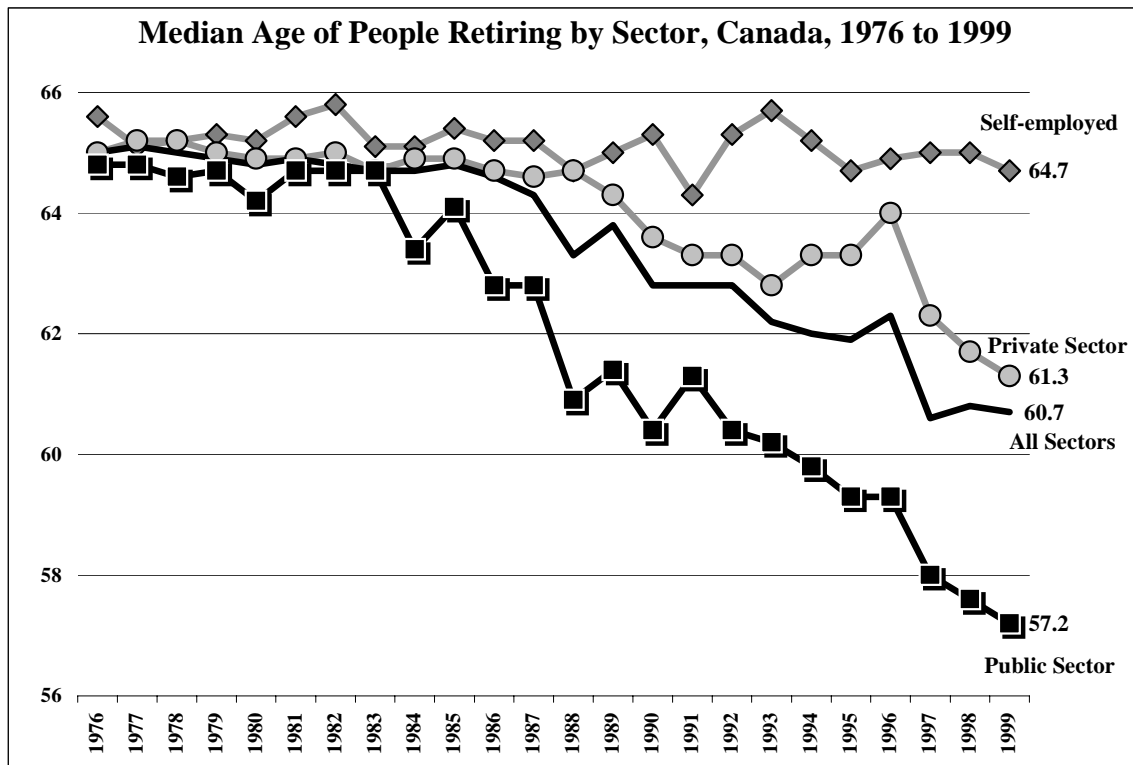


The Retiring Kind:

An Exploration of the Past and Future of
Labour Force Participation in Canada

by David Baxter



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Research on Population, Community Change and Land Use

The Retiring Kind: An Exploration of the Past and Future of Labour Force Participation in Canada

by David Baxter

Summary

Current trends in population growth and labour force participation are leading Canada inevitably towards chronic and severe labour shortages in the near future. The extent to which these shortages will occur, and the magnitude of their impact, has already become apparent in some sectors of the economy: by the end of this decade, if current trends continue, the same challenges will be presented throughout the economy.

The roots of the future labour shortage are demographic, for reasons that are evident in Canada's current age profile (Figure 56). In 2000, there were 12,947,500 people in Canada aged 33 to 62 (the demographic wedge), and 4,270,800 aged 63 to 92. With today's life expectancies, the aging of the demographic wedge into the 63 to 92 age group will ensure that the number of people in this age group more than doubles. This in turn will more than double the load that this net beneficiary population puts on the net contributory working age stage of the life cycle. There are only 12,449,600 people in the 3 to 32 age group today to replace the demographic wedge in the contributory population. The demographic equation is fewer young people, a shrinking labour force and shrinking contributory population, and a doubling of the beneficiary population equals a more than doubling of the load!

Statistics Canada's medium growth scenario, which assumes annual immigration of 225,000 people, is for the population to increase by 5,441,000 people (18%) between 2000's 30,750,000 and 2026's 36,190,000. This increase is comprised of a 928,000 person (5%) increase in the number of people in the 20 to 59 prime working age groups; a 662,000 person (8%) decline in the 0 to 19 age group; and a 5,175,000 person (101%) increase in the 60 plus population. The projected supply of labour based on this population growth and trends in age specific labour force participation rates will not keep up with the demand for labour that will be generated by a growing and aging population.

The result is that employers and employees, consumers and taxpayers must all prepare for economy wide labour supply challenges, and pronounced shortages in many sectors, in the medium and long term: the current slowdown in the global economy will simply permit near term postponement of dealing with some of these challenges. Meeting these challenges will bring fundamental change to employment markets in Canada, with particular impacts felt in the areas of unemployment, labour force participation rates, productivity and immigration.

Over the long term (i.e., moving through the cycles of global economic slowdown and recovery) unemployment rates will continue the pattern of decline observed over the 1993 to 2000 period. Getting more economic productivity out of the labour force by increasing the portion that is employed will help to narrow the gap between the potential demand for, and supply of, labour. Note, however, that because of structural and geographic issues, unemployment will never decline to zero, and hence falling unemployment (given the 40% decline that has already occurred since 1993) will provide only a marginal contribution to solving the challenges raised by labour shortages.

The evidence on the participation rates indicates that rather than increasing from, or even remaining constant at current levels (which the projection assumes), they are likely to decline: 96% of the adults in Canada who are currently not in the labour force do not want or are not available for work. Male age specific labour force participation rates declined significantly between 1951 and 2000: the evidence presented in the report indicates that, while this decline may continue in the future, it will be at a greatly diminished rate, and that the 2000 age specific labour force participation rates may reasonably be assumed to be those that will prevail in the future. Female age specific labour force participation rates, in contrast, increased dramatically between 1951 and 1991, and then demonstrated relatively little change in the 1991 to 2000 period. The evidence indicates the long-term rates for women in the under 50 population, like those for males, will be within the range that prevailed in 2000. The labour force projection anticipates and includes significant increases in participation rates for women in the 50 plus age groups.

The propensity to leave the labour force to go to school; to leave for personal and family responsibilities reasons; for reasons of illness and disability; and due to dissatisfaction with employment or job seeking, all declined significantly over the 1976 to 1993 period, but have remained generally stable since then. The new EI provisions with respect to a 12-, rather than a 6-month, maternity leave are likely to reduce rather than increase participation of women in the 15 to 44 age group.

Over the past fifteen years, the median age at retirement of people employed in the private sector dropped by 3.6 years, and of people employed in the public sector by 6.9 years. Between 1976 and 2000, the propensity for males in the 55 to 64 age group to retire increased by 66% and for females in the age group by 87%. With increasing life expectancy but not increasing life spans, people view retirement as a desirable state that they work towards: postponement of retirement in response to tightening labour market conditions may occur, but it is not likely to be a major factor, and will make only a marginal contribution to meeting labour shortages in the future.

The increasing demand for goods and services in an economy can be in part met by increasing labour productivity, generating more output per unit of labour input, thereby narrowing the gap between the rates of growth of the population and of the labour force. While increasing productivity will also have to be part of the future labour strategy for Canada, achieving it will bring its own challenges. There are significant skills, institutional and contractual constraints on both the rate and technology of increasing productivity, as well as functional limits in many sectors. While productivity increases will continue to provide resources to meet the challenge of labour shortages, as recent experience in the United States has demonstrated, these gains are often both marginal and elusive.

As 70% of immigrants to Canada are under the age of 35, they provide the opportunity for an almost immediate contribution to the entry stage of the labour force. The 225,000 immigrants per year included in the population projection are not sufficient to ensure an adequate labour supply in Canada: in order to ensure an adequate labour supply, Canada will have to recruit more than the 225,000 immigrants per year that it averaged from 1992 to 1997, and it will have to increase its immigration rate each year as the population of Canada ages.

The Urban Futures Institute

Research on Population, Community Change and Land Use

The Retiring Kind:

An Exploration of The Past and Future of Labour Force Participation in Canada

by David Baxter, September 2001

I. Introduction.

This report is the first in a series concerned with projections of the conditions in labour markets that may be anticipated over the coming decades. The focus of this report is first on the documentation and evaluation of historical trends in male and female labour force participation in Canada. On the basis of this analysis, projections of the level of future labour force participation that may be anticipated in Canada are presented. In subsequent reports, the future demand for labour will be examined.

There are only two reasonably comprehensive sources of data on labour force participation in Canada. The most comprehensive is Statistics Canada's Census of Canada, which, amongst much other data, gathers information on the labour force activity of people in approximately one out of every five households. The strengths of labour force data from this source is that they are 1) drawn from an approximately 20% sample, making them very representative of the population even at relatively disaggregate levels of cross tabulation; 2) because of the long history of Census taking in Canada, they permit analysis of very long term trends; and 3) because they are based on a survey document that is filled out and returned by the respondent, data quality is relatively high. The weakness of these data is that they are only available for discrete points in time 5 years apart and that they are published more than a year after the census date, both of which render them of reduced value for analysis of recent trends: the most recent published census data are for 1996.

The second source of labour force data is Statistics Canada's Labour Force Survey, which collects monthly data on labour force participation using a sample of 53,000 households in Canada. The strengths of the labour force survey data are that they are for small increments of time and are published within two months of collection. The weaknesses of these data are that they 1) are from a very small sample of households (about 0.45% of the total number of households and hence are representative only at relatively high levels of aggregation), 2) exist as a relatively constant series only for 1976 and later, and 3) rely on a telephone survey which involves one person providing information all of the members of the household without the opportunity to verify the data. Happily, both these data sources show the same general patterns with respect to labour force participation rates at the national level over the past twenty-five years, and hence, subject to their specific limitations, can be used together to reasonably describe trends in labour force participation in Canada up to the year 2000.

II. Labour Participation Rates from the Census

a) Definition of Labour Force Participation

The interpretation of trends in labour force participation depends upon on the definitions of labour force activities. Both of the surveys use essentially the same definitions with respect to labour force participation: the Census definitions are presented in this section, with the Labour Force Survey definitions presented in the accompanying endnotes. For those readers familiar with labour force definitions, the analysis of the labour force data begins on page 4.

The basis of the Census definition of labour force participation is its characterization of everyone under the age of 15 as not being in the labour force and everyone 15 years of age or older as being eligible to be a labour force participant. Persons in the labour force are those who either employed or who are unemployed, and persons not in the labour force are those who are neither employed nor unemployed¹. Specifically, the Census defines the labour force as “all persons 15 years of age and over, excluding institutional residents, who were either employed or unemployed during the week (Sunday to Saturday) prior to Census Day.”²

Employed persons are defined to be:

“Persons 15 years of age and over, excluding institutional residents, who, during the week (Sunday to Saturday) prior to Census Day:

- (a) did any work at all for pay or in self-employment; or
- (b) were absent from their job or business for the entire week because of vacation, illness, a labour dispute at their place of work or other reasons.

The “Employed” includes all persons who “worked for pay or in self-employment” in the paid labour force in the week prior to enumeration. This includes all persons working for wages or salaries, all self-employed persons (with or without paid help) working in their own business, farm or professional practice, and all persons working without pay in a family farm or business during the reference week. (The “Employed” also includes persons who were absent from their job or business for a variety of reasons.) “Work for pay or in self-employment” does not include unpaid household activities or volunteer work.

Work for wages or salaries includes work for wages, salaries, piece-rates, tips, commissions, payments “in kind” (payments in goods or services rather than money), service as a member of a religious order, active duty in the Armed Forces and casual work for pay such as baby-sitting in other people’s homes. Self-employed persons who worked in their own farm, business or professional practice include persons who:

- spent time in the operation or setting up of such enterprises, whether or not goods were sold or services were rendered and whether or not a profit was made;
- did work on a freelance or contract basis;
- operated a direct distributorship selling and delivering products such as cosmetics, newspapers, brushes or soap products;
- fished, hunted or trapped, whether for profit or for maintenance of their community.

Persons who directly contributed, without formal pay arrangements, towards the operation of a family farm or business owned or operated by a relative who was a member of the same household are included in the “Employed” as “unpaid family workers”.

In addition to the reasons given on the questionnaire ... for absence from a job or business in the week prior to enumeration, which included illness, disability, vacation and a labour dispute at the respondent’s place of work, the other reasons ... were maternity leave, bad weather, fire and personal or family responsibilities. In all cases, respondents must have been absent from their job or business for the **entire week**, with or without pay. Absences for training courses could also be included if wages or salary were received from the respondent’s employer.”³

Unemployed persons are defined to be:

“Persons 15 years of age and over, excluding institutional residents, who, during the week (Sunday to Saturday) prior to Census Day, were without paid work and were available for work and either:

- (a) had actively looked for work in the past four weeks; or

- (b) were on temporary lay-off and expected to return to their job; or
- (c) had definite arrangements to start a new job in four weeks or less.

“The ‘Unemployed’ consists primarily of those persons who, during the week prior to enumeration, were without paid work, were available for work and had actively looked for paid work in the past four weeks. There are two smaller components of the ‘Unemployed’: those persons who did not work during the week prior to enumeration because they had been laid off from a job to which they expected to return and persons who did not work during the week prior to enumeration but had arrangements to start a new job in four weeks or less.

Persons who actively looked for paid work in the past four weeks and who reported ‘No, going to school’ or ‘No, other reasons’ ... were considered unavailable for work. Also considered unavailable for work were those persons who did not look for part-time work (including those who looked for full-time work and those who did not look for work) and were also in full-time attendance at an elementary or secondary school at any time since September 1995.”⁴

People who are neither employed nor unemployed are defined to be not available for, or not wanting, employment and therefore to not be in the labour force:

“Persons 15 years of age and over, excluding institutional residents, who, in the week (Sunday to Saturday) prior to Census Day (May 14, 1996), were neither employed nor unemployed. It includes persons who did not work for pay or in self-employment in the week prior to enumeration and (a) did not look for paid work in the four weeks prior to enumeration, (b) were not on temporary lay-off and (c) did not have a new job to start in four weeks or less. It also includes persons who looked for work during the last four weeks but were not available to start work in the week prior to enumeration.

“Persons who actively looked for paid work in the past four weeks and who reported ‘No, going to school’ or ‘No, other reasons’ in the “Reasons unable to start a job in reference week” question were considered unavailable for work. Also considered unavailable for work were those persons who did not look for part-time work (including those who looked for full-time work and those who did not look for work) and who were in full-time attendance at an elementary or secondary school at any time since September 1995.

“Most persons in this category would be students, homemakers, retired workers, seasonal workers in an “off” season who were not looking for work and persons who could not work because of a long-term illness or disability.”⁵

The relative size of the population in, and not in, the labour force is measured by the labour force participation rate:

“The total labour force in the week (Sunday to Saturday) prior to Census Day, expressed as a percentage of the population 15 years of age and over, excluding institutional residents.

$$\text{Participation rate} = \frac{\text{Total labour force} \times 100}{\text{Population 15 years of age and over}}$$

The participation rate for a particular group (age, sex, marital status, etc.) is the total labour force in that group, expressed as a percentage of the population in that group.”⁶

The labour force participation rate, therefore, is the percentage of the people in the 15 plus population who are in the labour force (that is, who are employed or unemployed). A change in the participation rate will reflect a shift between the percentage of people who are employed or actively seeking employment and the percentage who are not. Such a shift can be influenced by both employment and non-employment related factors, and is defined as involving both job losers

and job leavers:

“Job losers: Persons currently not employed, who last worked within the previous year and left that job involuntarily (employer initiated because of business conditions, downsizing etc.). Prior to 1997, this category was broken down into those on temporary layoff and those laid off on a permanent basis. Since January 1997, more detail for reason for permanent layoff is available: end of seasonal job; end of temporary, term or contract job; casual job, no work; company moved; company went out of business; laid off due to business conditions with no expectation of recall; dismissal by employer; other reasons.

“Job Leavers: Persons currently not employed, who last worked within the previous year and left that job voluntarily. That is, the employer did not initiate the termination. Detailed reasons collected are: own illness, personal or family responsibilities, going to school, no specific reason, changed residence, dissatisfied with job, retired. Since 1997, further detail is available, including business sold or closed down (self-employed only), pregnancy.”⁷

In the following section, the long-term pattern of change in the percentage of men and women who are in the labour force, as indicated by the Census of Canada, is documented and evaluated. In subsequent sections, the reasons for this pattern of change, and their implications for future participation rates, are examined. In this context, two aspects of the labour force participation will be considered. The first involves overall sex specific labour force participation rates, the percentages of the male and female population 15 years of age and older who are in the labour force. The second involves age- and sex-specific labour force participation rates, the percentage of men and women in each age group who are in the labour force. By examining these two measures of labour force activity, it is possible to measure the impact of both demographic and behavioural change on the size and composition of Canada’s labour force in the past, and to anticipate how these factors will shape it in the future.

b) Long Term Changes in Labour Force Participation Rates in Canada: The Census

The Census shows a clear pattern of change in overall labour force participation rates (the percentage of people aged 15 and older who are in the labour force) in Canada (Figure 1)⁸. The male overall labour force participation rate has generally declined over the past century, from 90% of the males 15 years of age and older being in the labour force in 1911 to only 73% in 1996. A much different pattern of change occurred in the female overall labour force participation rate, which increased from only 16% of the women 15 years of age and older being in the labour force in 1911 to 59% being in the labour force in 1996.

The change in participation over the past century, while significant, was not continuous, with the greatest degree of change occurring in the 1941 to 1986 period. In the case of the male participation rate, the greatest decline occurred between 1951 and 1961 (a relative decline of 7% from 84% to 78%), with the rate remaining remarkably stable in the 76% to 78% range from then until 1991. The 4% drop between 1991 and 1996, from 76% to 73%, was the second largest drop in the rate in the postwar period.

In contrast, the female participation rate showed its greatest relative and absolute increases over the 1951 to 1991 period, increasing continuously, and by two and one half times, from 24% in 1951 to 60% in 1991. Surprisingly, as with the rate for males, the female participation rate declined between 1991 and 1996: the amount of the decline, from 60% to 59% is not significant - the fact that for the first time in the century the rate did not increase is significant.

There are two fundamental factors – life cycles and life styles - that can cause the overall labour force participation rates to shift. As data from the Labour Force Survey show (Figure 2)⁹, there is

a very distinct life cycle pattern to labour force participation. By both Statistics Canada's definition and by general practice, no labour force participation occurs in the under 15 population. From the 15 to 19 age group to the 25 to 29 age group, there is a significant increase in the percentage of people in the labour force, followed by a plateau to the 45 to 49 age group, and then by a steady decline to the lowest level in the 70 plus age group.

Figure 1: Labour Force Participation Rates by Sex, Canada, 1911 to 1996

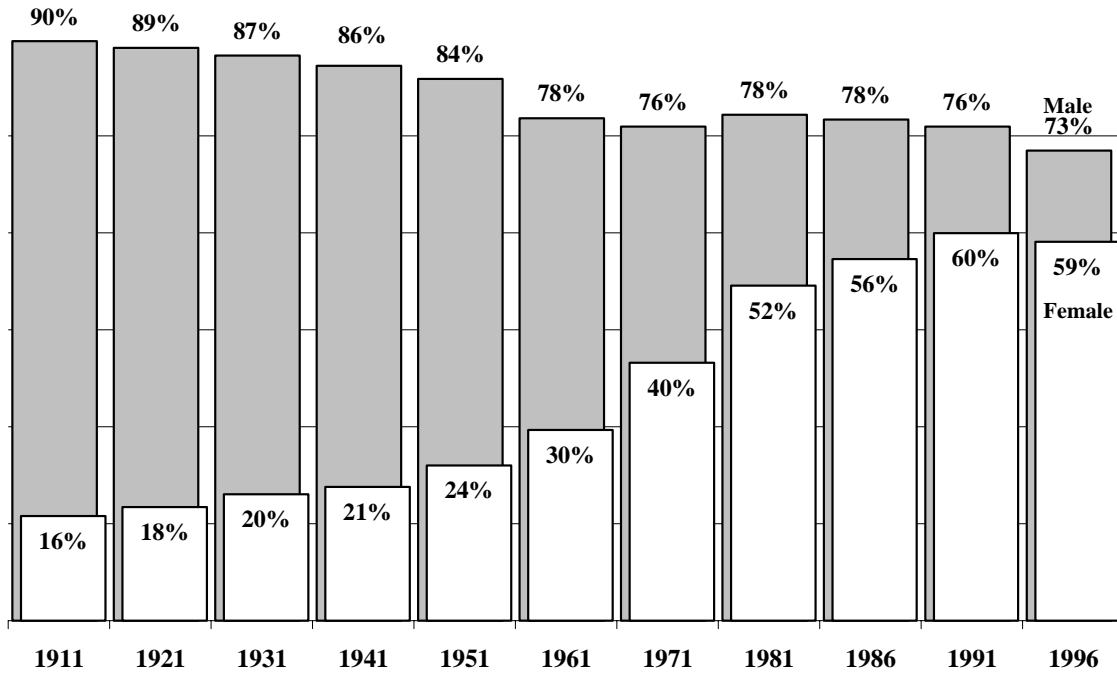
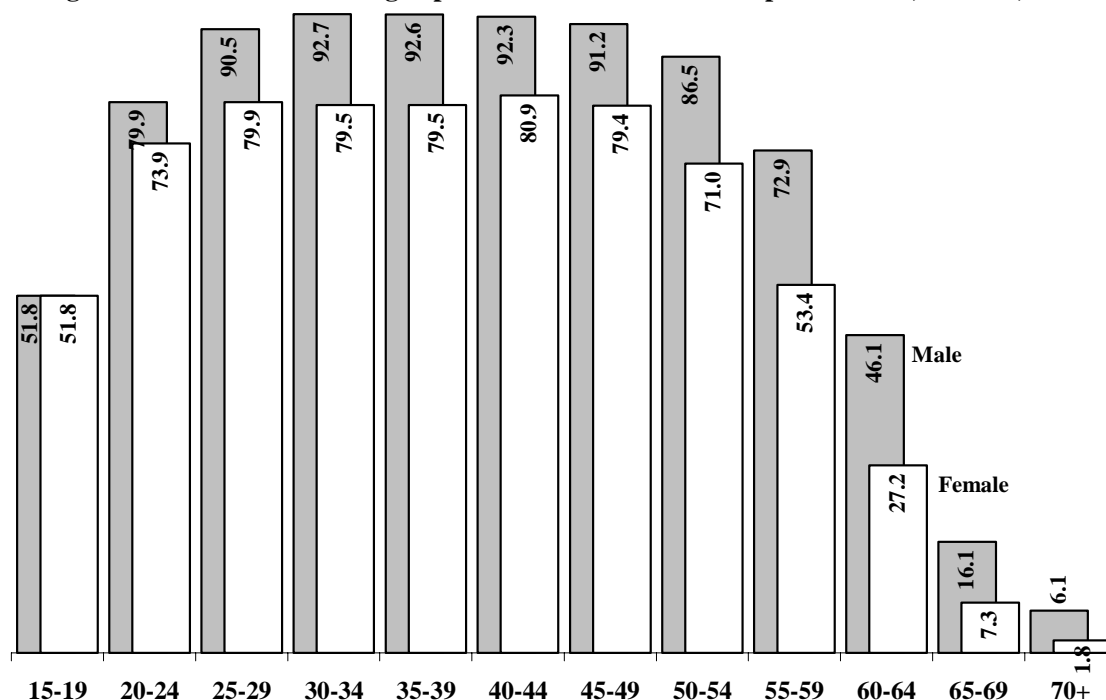


Figure 2: Male and Female Age Specific Labour Force Participation Rates, Canada, 2000



The pattern of change over the life cycle is exactly the same for both males and females: the only difference is that in all but the 15 to 19 age group, the percentage of males in an age group who are in the labour force is larger than the corresponding percentage for females. The difference is smallest in the younger age groups, with both males and females in the 15 to 19 age group having a 51.8% participation rate: the 73.9% participation rate for women in the 20 to 24 age group is 92% of the 79.9% rate for males of this age, with the 79.9% rate for women in the 25 to 29 age group being 88% of the 90.5% rate for males in the same age group. Rates for both males and females remain relatively constant through to the 45 to 49 years of age group, and hence so does the difference (averaging 13%) between them. From this age group on, the participation rates for both males and females decline, with the rate for women declining faster than that for males, to a point where there is a more than 50% difference between the 7.3% rate for women aged 65 to 69 and the 16.1% for males in this age group, and a 70% difference between the 1.8% participation rate of women in the 70 plus age group and the 6.1% rate of males in the same age group.

Given this “dome” shaped life cycle pattern, if the 50 plus population grows faster than the total population (i.e., the 50 plus population’s share of the total population increases), then the overall labour force participation rate will fall without any change in behaviour with respect to labour force activity, as there will be disproportionately more people in the older, lower participation rate age groups. As the 50 plus population’s share of Canada’s total population has increased almost continuously since the 1900s, this “life cycle and population composition” effect partly explains the decline in the male overall labour force participation rate during the 20th century. It does not explain it any of the increase in the female overall participation rate.

Life style, or behavioural, factors caused the increase in the overall female labour participation rate and much of the decline in the male rate. These are demonstrated by changes in the percentage of people in each age group who are in the labour force: as the rates are specific to age

groups, changes in the age composition will have not impact on the age group's rate. Figures 3 and 4 show male and female age specific labour force participation rates for the 1951 to 1996 period¹⁰. The rates for males in every age group in 1996 were significantly lower than they were in 1951, and were below the rates that prevailed between 1951 and 1996. While there was some evidence of cyclical patterns of participation in the 1951 to 1981 period, from 1981 to 1996 the pattern was one of decline in labour force participation rates for males in every age group except the 15 to 19 year olds. While significant, the 5% declines in participation of males in the under 55 population are not major: the steady, non-cyclical declines in the 55 to 64 and 65 plus age groups are major, with 1996's 62.0% rate for the 55 to 64 age group being three quarters of 1951's 85.7%, and 1996's 13.0% rate for the 65 plus population being one third of 1951's 38.6%.

The pattern of change of female age specific labour force participation has been very different, with 1996 rates in all but the oldest age group being much greater than they were in 1951 (Figure 4). The increase in the prime working age (25 to 64) population has been most striking, with women aged 35 to 44 and 45 to 54 being 3.6 times more likely to be labour force participants in 1996 than they were in 1951. In this case, however, comparison of the 1996 and 1951 rates alone does not describe the pattern of change within the period. In all but the youngest and oldest age groups, the period from 1951 to 1991 was one of uninterrupted increase in the percentage of women in each age group who were in the labour force, which was reflected in the increase in the overall labour force participation rate for women over this period.

Between 1991 and 1996, however, the participation rates of women in the 20 to 24, 25 to 34, 35 to 44, and 55 to 64 age groups all declined: what is important is not the amount of the decline but the fact that for the first time in the postwar period, age specific labour force participation rates for women in these age groups did not increase. The rate also declined for the 15 to 19 age group, only the second time it had declined in the post-war period, and for the 65 plus age group, which was part of a long-term decline recorded since 1971. The one age group where participation rates went up was the 45 to 54 age group, where the smallest percentage increase in the post-war period occurred.

Figure 3: Labour Force Participation Rates, Males, Canada, 1951 to 1996

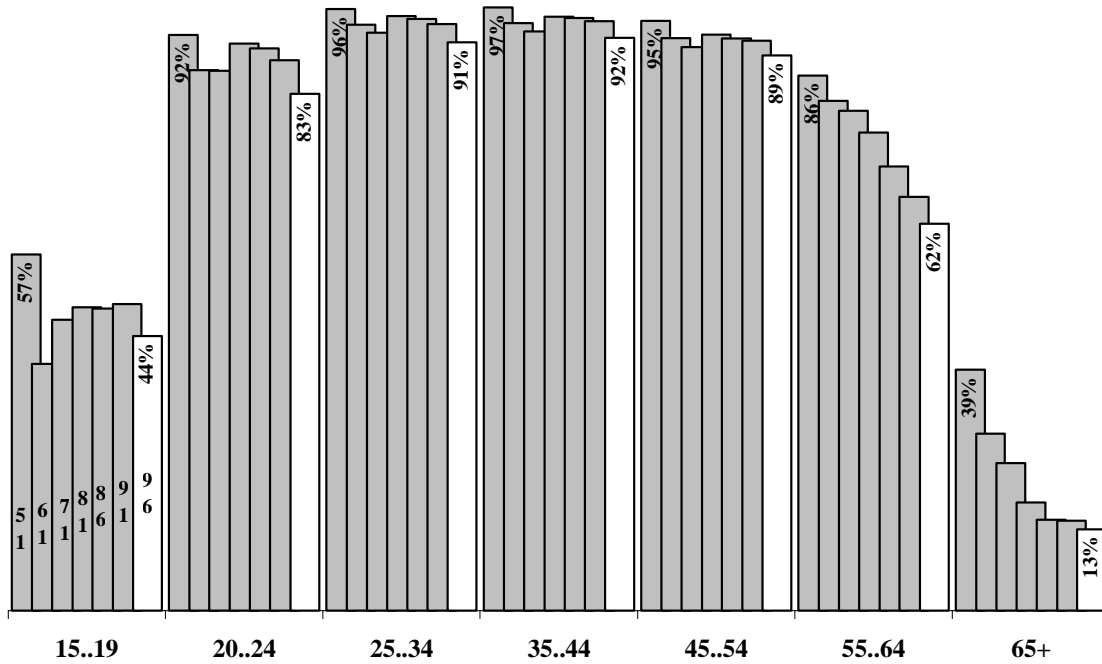
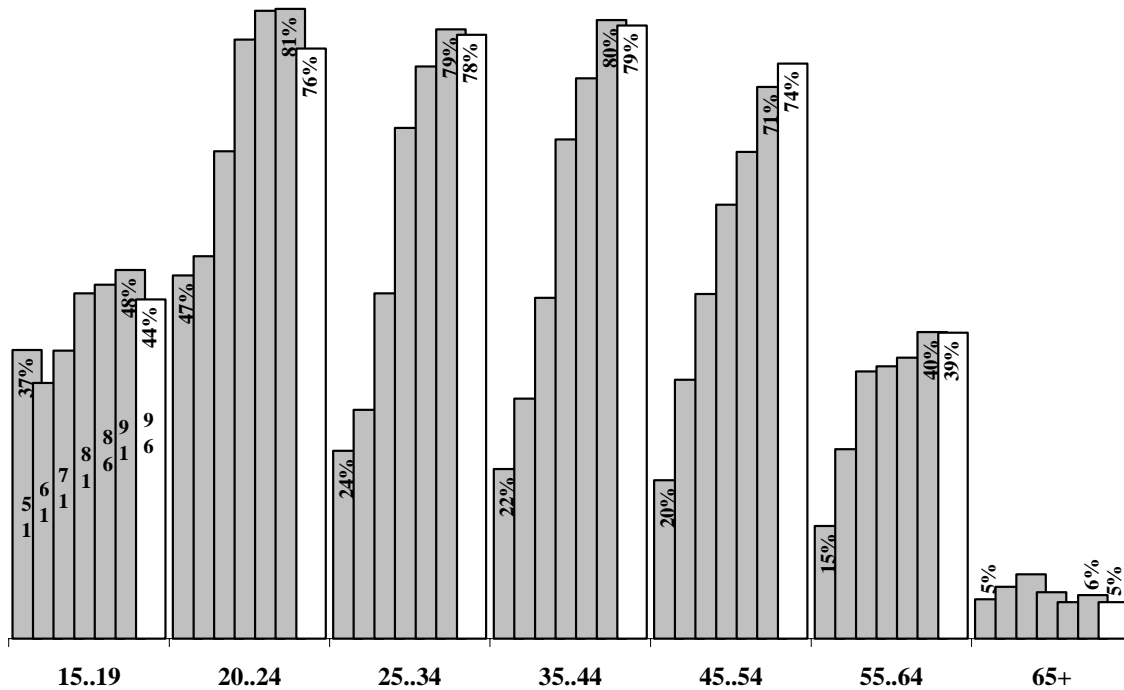


Figure 4: Labour Force Participation Rates, Females, Canada, 1951 to 1996



Before drawing conclusions about these long term age specific trends, it is important to note that the ten year age groups are relatively large, and hence that some of the observed change in participation may be as a result of changes in the age composition within groups. More age

disaggregated data (by five year age groups from 15 to 19 to 60 to 64) are available from the Census, but only for the 1981 to 1996 period: these data show that it is indeed behavioural change, and not merely changes in the age composition of the population, that is affecting age specific labour force participation rates.

In the case of male age specific participation rates, the rates in every age group were lower in 1996 than they were in 1981, and, with the exception of the 15 to 19 age group, were lower in every successive census year during this period (Figure 5)¹¹. The greatest relative and absolute declines were in the rates for the 55 to 59 age group (from 84% in 1981 to 74% in 1996) and the 60 to 64 age group (from 69% to 48%). In most age groups, the relative decline in participation rates between 1991 and 1996 was the largest decline in the post 1981 period.

The percentage of males of every age who were active in the labour force declined continuously during the post world war two period: in the 15 years between 1981 and 1996, they declined by as little as 3% in the 45 to 49 age group and as much as 30% in the 60 to 64 age group. While the data show that this has occurred, they do not explain why it has occurred (the Labour Force Survey does, as it discussed in Section V.c), the fact that the greatest declines are in the 55 plus population where retirement occurs gives a strong indication that a reduction in the age at retirement is a major factor in declining male labour force participation.

The 5-year age group data for female age specific participation rates from 1981 to 1996 also show a pattern that is generally consistent with trends shown in the 10-year age group data for the 1951 to 1996 period (Figure 6)¹². In all age groups above the age of 25 and under the age of 60, female labour force participation rates were significantly higher in 1996 than they were in 1981. In the 15 to 19, 20 to 24, 60 to 64 and 65 plus age group, the participation rates were slightly lower than they were in 1981.

Considering the under 60 population first, note that the only declines in labour force participation rates – in the 15 to 19, 20 to 24, 25 to 29, 35 to 39, and 40 to 44 age groups – occurred between the 1991 and 1996 census. The declines recorded in the 60 to 64 and 65 plus age groups were part of a pattern of a (modest) decline in participation between 1981 and 1996. The increases in the 45 to 49 and 50 to 54 age groups match the increase shown in the 45 to 54 age group data: the increase in the rate for women aged 55 to 59 was more than offset by the decline in the rate for women in 60 to 64 age group, and hence the very slight decline shown for the 55 to 64 age group.

Thus while the 5 year data do show some very slight age composition effects, it is clear that the 1991 to 1996 period recorded the smallest increase (if an increase occurred), or the first time when an increase did not occur, for female age specific rates for the under 65 population during the 1981 to 1996 period (and, from the earlier data, over the post-war period). As unemployment rates for women aged 25 and older were lower in 1996 than they were in 1991, the effects of a significant behavioural change with respect to labour force activity occurred in the 1990s.

Given the robustness of the 20% sample of the Census, it is possible to conclude that 1) the long term trend in male age specific labour force participation is one of declining participation in all age groups, with the most marked decline in the 55 plus age groups and 2) the long term trend in female labour force participation rates was one of steady increases up to 1991, with no increases recorded over the 1991 to 1996 period. What these data do not address is what has happened since 1996 and why these changes in participation occurred: to deal with these issues, it is necessary to use the much less robust sample data from the Labour Force Survey.

Fig. 5: Male Labour Force Participation Rates by Age Group, Canada, 1981-1996

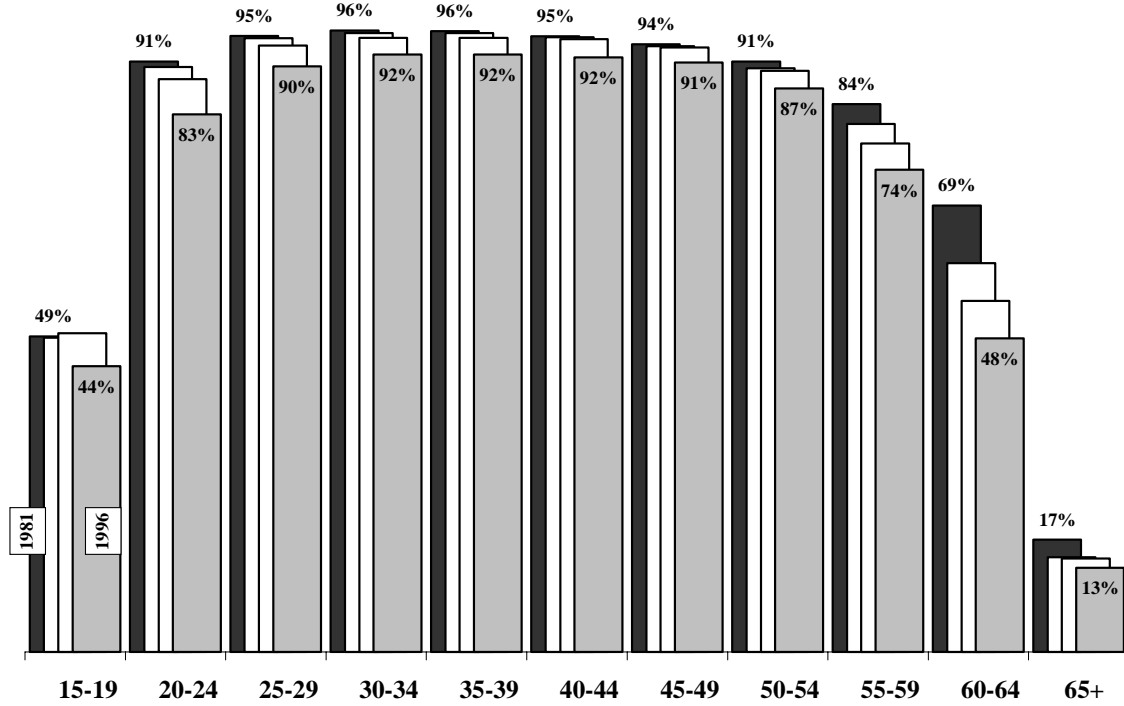
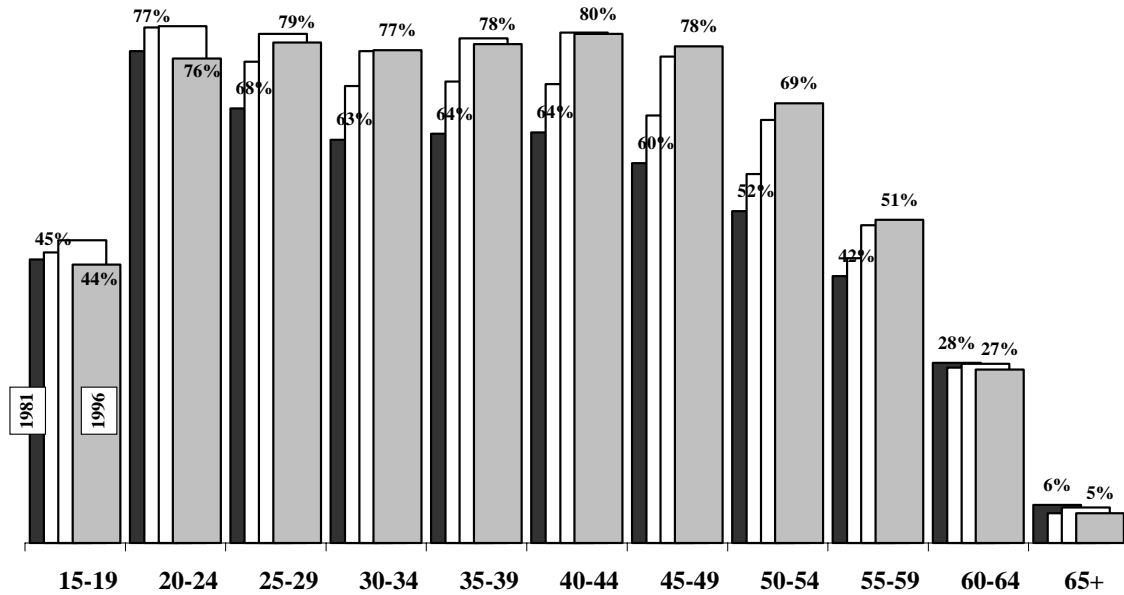


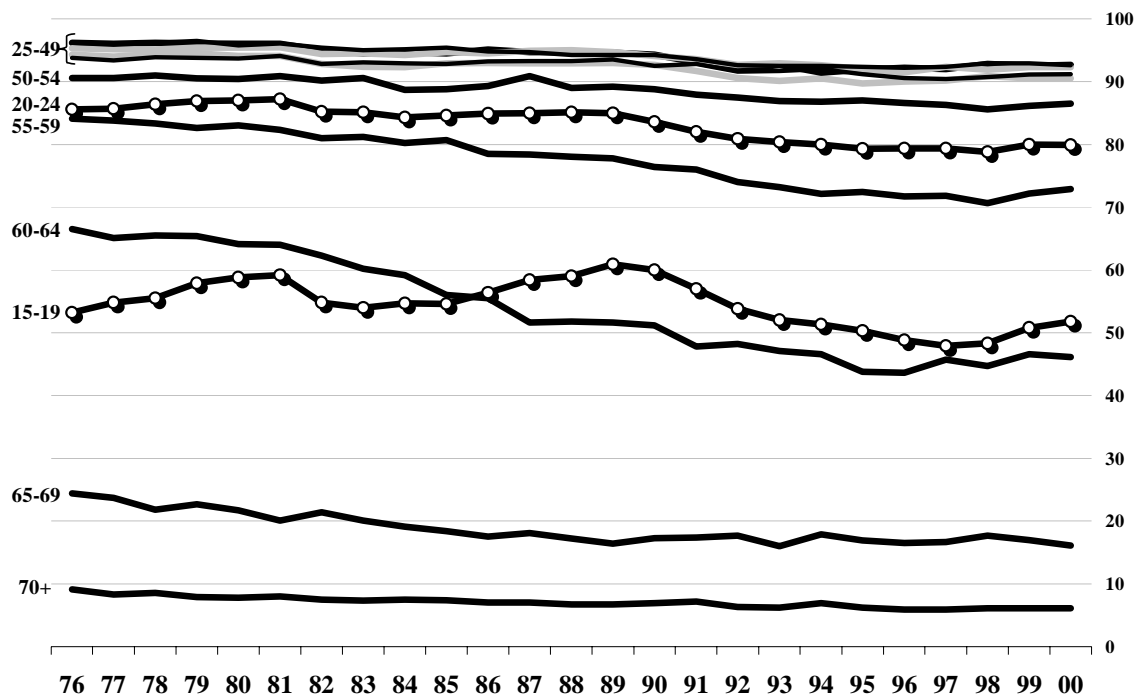
Fig. 6: Female Labour Force Participation Rates by Age Group, Canada, 1981-1996



III. Recent Changes in Labour Participation Rates in Canada: The Labour Force Survey

Before relying on the data from the Labour Force Survey, it is important to demonstrate that it describes the same pattern of change in participation rates as the Census. In the case of age specific rates for males, the general decline in rates for all age groups is clearly shown in the Labour Force Survey data (Figure 7¹³). Rates for males aged 25 to 49 declined from the range of 93% to 95% in 1971 to the 91% to 92% range by 2000. The participation rate for the 50 to 54 age group declined from 91% in 1976 to 86% in 2000, while the rates for the 55 to 59 age group dropped from 84% to 73%, for the 60 to 64 age group from 66% to 46%, for the 65 to 69 age group from 24% to 16%, and for the 70 plus age group from 9% to 6%. These declines were generally steady throughout the twenty-five year period, although there were slight increases in the 55 to 59 and 60 to 64 age groups between 1998 and 2000. The rate for the 15 to 19 age group has shown a cyclical pattern since 1976, while that for males in the 20 to 24 age group has been stable since 1991.

Figure 7: Male Age Specific Labour Force Participation Rates, Canada, Annual 1971 to 2000



The pattern of increasing rates for females is also clearly demonstrated in the Labour Force Survey data (Figure 8)¹⁴. The rates for women in the 25 to 49 age group increased from the 51% to 57% range in 1971 to a very narrow 79% to 81% range in 2000. Two points should be noted for these age groups. First, the most rapid increases occurred up to 1990, with the rates generally flat after that, and second, to be considered in more detail shortly, the rates did increase slightly after 1996. In contrast, the rates for the 50 to 54 and 55 to 59 age groups increased relatively continuously over the twenty-five year period, from 46% to 71% and from 38% to 53%, respectively. The rate for the 60 to 64 age group remained essentially constant at 25% from 1976 to 1996, and then increased, reaching 27% by 2000. The rates for females age 65 to 69 and 70 plus declined throughout the period, dropping from 7.8% to 7.3% and 2.2% to 1.8%, respectively. As with the rate for males in the same age group, labour force participation for women in the 15 to 19 age group followed a long cyclical pattern, while the rate for the 20 to 24 age group increased from 1976 to 1989 and then was relatively stable.

Figure 8: Female Age Specific Labour Force Participation Rates, Canada, Annual 1971 to 2000

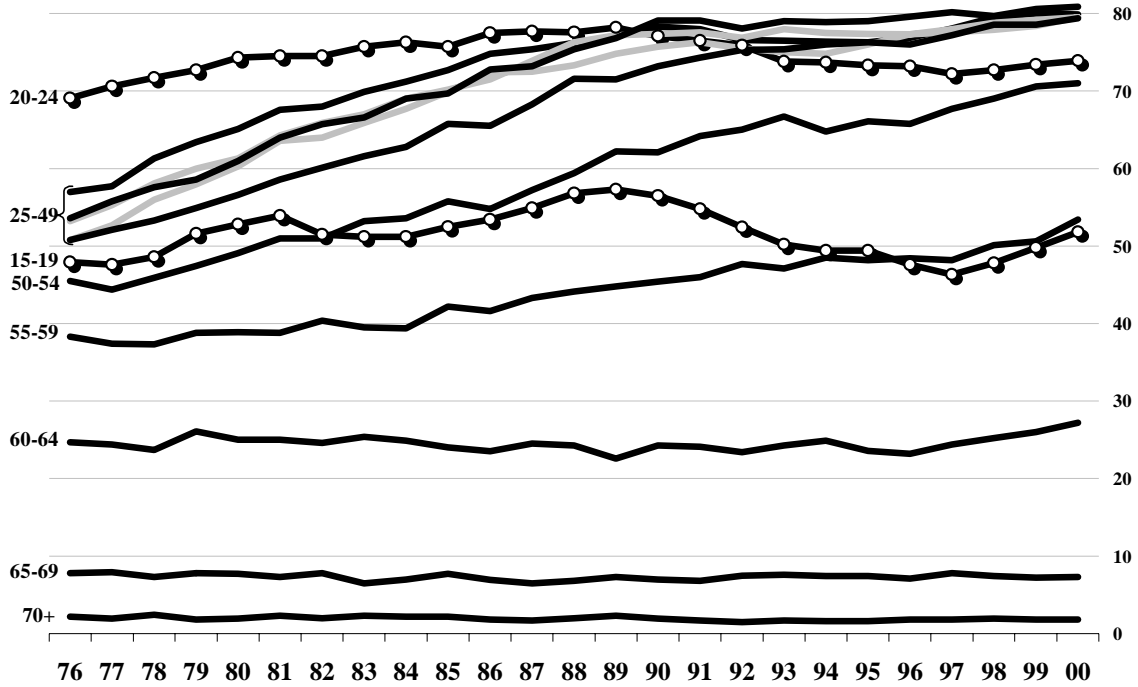
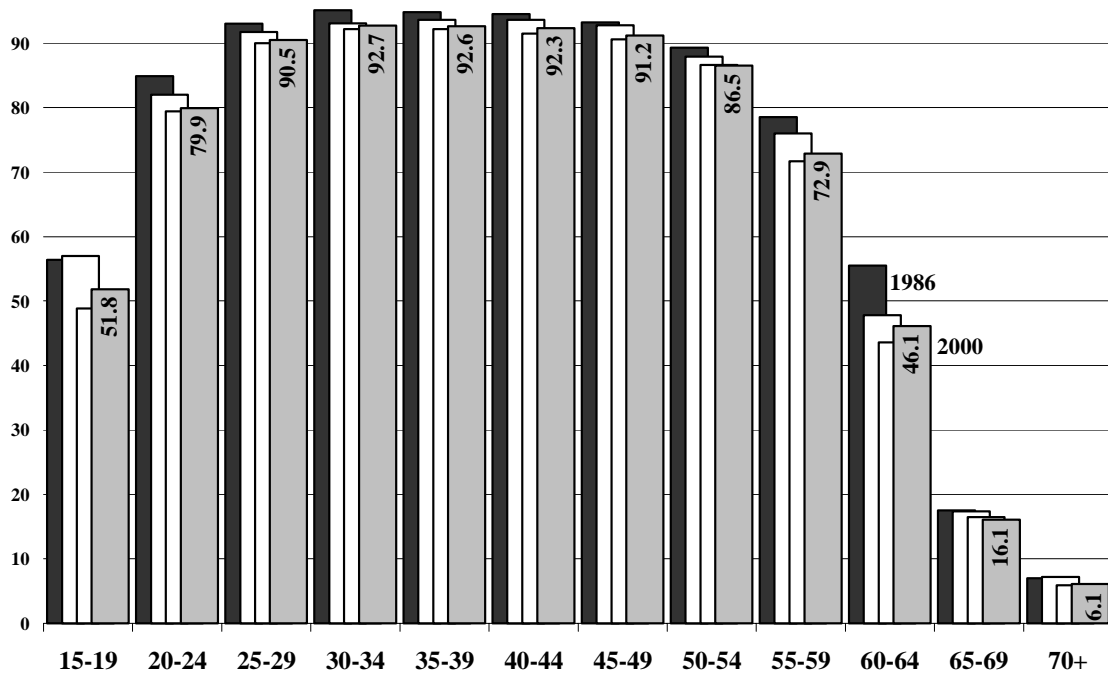


Figure 9: Male Age Specific Labour Force Participation Rates, Canada, 1986, 1991, 1996, 2000

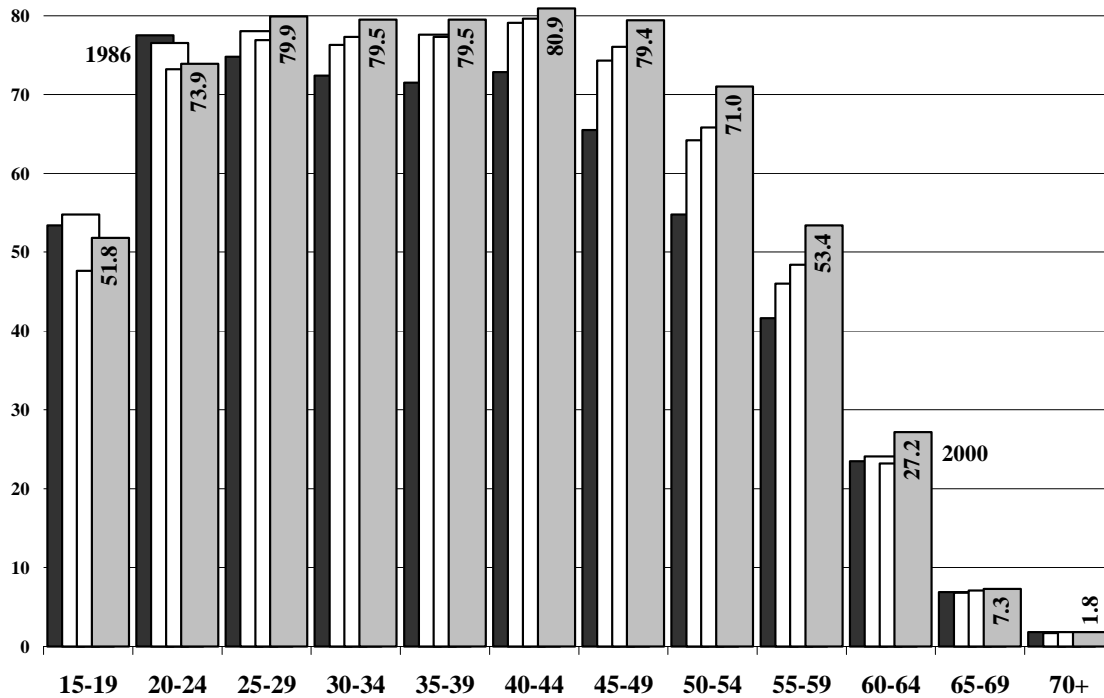


Having demonstrated the general consistency of the Census and Labour Force Survey data, it is possible to consider what the Labour Force Survey tells about the post 1996 Census period. In the case of male labour force participation rates (Figure 9)¹⁵, age specific rates increased slightly between 1996 and 2000: these increases were not sufficient to bring the rates above their 1991

level. From this, it is possible to conclude that male age specific labour force participation rates continued to decline over the 1991 to 2000 period, but that within this period much of the change being minor short term fluctuations (perhaps generated by the small sample size – the result of the 2001 Census will be necessary to confirm this).

According to the Labour Force Survey, female labour force participation rates in the 25 to 64 population continued their post war pattern of increase during the 1991 to 2000 period (Figure 10)¹⁶. In the 15 to 19 and 20 to 24 age groups, the increase was not sufficient to bring rates back to 1991 levels. In all other age groups, the post 1996 increases in participation were sufficient to achieve record levels in terms of the percentage of women in an age group who were active in the labour force. The greatest relative increases were observed for women in the 50 to 54, 55 to 59 and 60 to 64 age groups, where the increase in participation was in the magnitude observed in the 1986 to 1991 period. In the 25 to 49 age groups, the increases were more modest, well below those that occurred from 1986 to 1991. Again it will be necessary to confirm this with the more robust data from the 2001 Census when it becomes available.

Figure 10: Female Age Specific Labour Force Participation Rates, Canada, 1986, 91, 96, 2000



The Census and Labour Force Survey data on labour force participation rates show the changing pattern of labour force activity for males and females throughout the life cycle, and provide an empirical base for a mathematical projection of where historical trends in labour force participation rates would lead to if extended into the future. They do not, however, provide insights into why male age specific labour force participation rates have experienced significant, but now diminishing, declines in the post war period or to why female age specific rates have experienced significant growth over this period, growth in the under 50 age group which appears to be diminishing, and in the 50 plus age group appears to be accelerating. To consider the behavioural factors that underlie the changes in age specific rates, it is necessary to consider additional data from the Labour Force Survey. These data are tabulated from the Survey questions that ask respondents if there are people in their household who are not in the labour force, and, if there are, why they are not participants. This data will provide a context for the mathematics of the projection of future age- and sex-specific labour force participation rates.

IV. Persons Not in the Labour Force

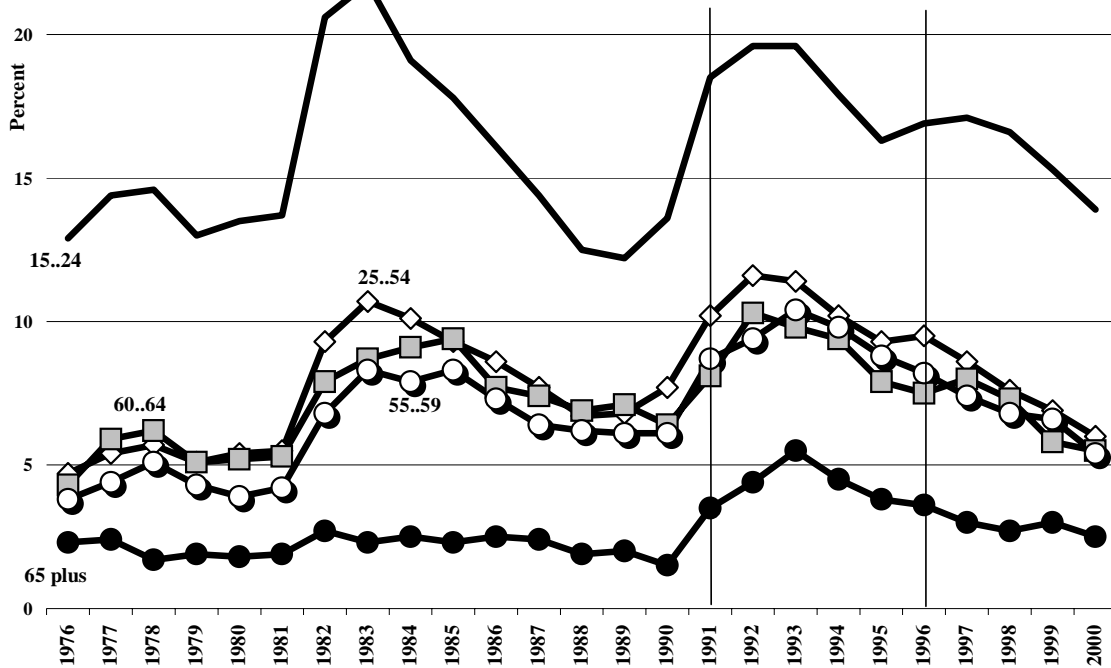
The obverse of the labour force participation rate is the non-participation rate, the percentage of people who are not in the labour force, that is, who are neither employed or unemployed, comprised of people who are either not seeking or not available for employment. Over the long term, non-participants have been growing as a percentage of the adult male population and declining as a percentage of the adult female population. The reasons for these changes include changes in the labour market (such as unemployment rates) and changes in attitudes.

a. Unemployment Rates and Labour Force Participation

A long-standing hypothesis is that increasing unemployment reduces labour force participation: the logical, if oft omitted, corollary is that falling unemployment rates increase participation. The underlying logic is that in times of high unemployment, some unemployed people become discouraged by an un-rewarded search for employment, quit looking for work, by definition leaving the labour force. When unemployment rates fall, some of these people anticipate greater success at finding a job and rejoin the labour force. As the following analysis shows, the data, while supporting the logic of the relationship between participation and unemployment, also indicate that it applies to a relatively small portion of the people who are not in the labour force.

Figure 11¹⁷ shows the change in the male unemployment rate (the percent of males in the labour force who were unemployed) for the major age groups from 1976 to 2000. Note the relative constancy of both the distance between the rates and their almost uniform pattern of change: the rates for the entry level 15 to 24 age groups are always highest, for the 65 plus age group are always lowest, and the rates for the 25 to 64 population are always tightly grouped. Note also that the rates declined almost continuously from 1993 on, and in 2000 near the lows of the 1970s.

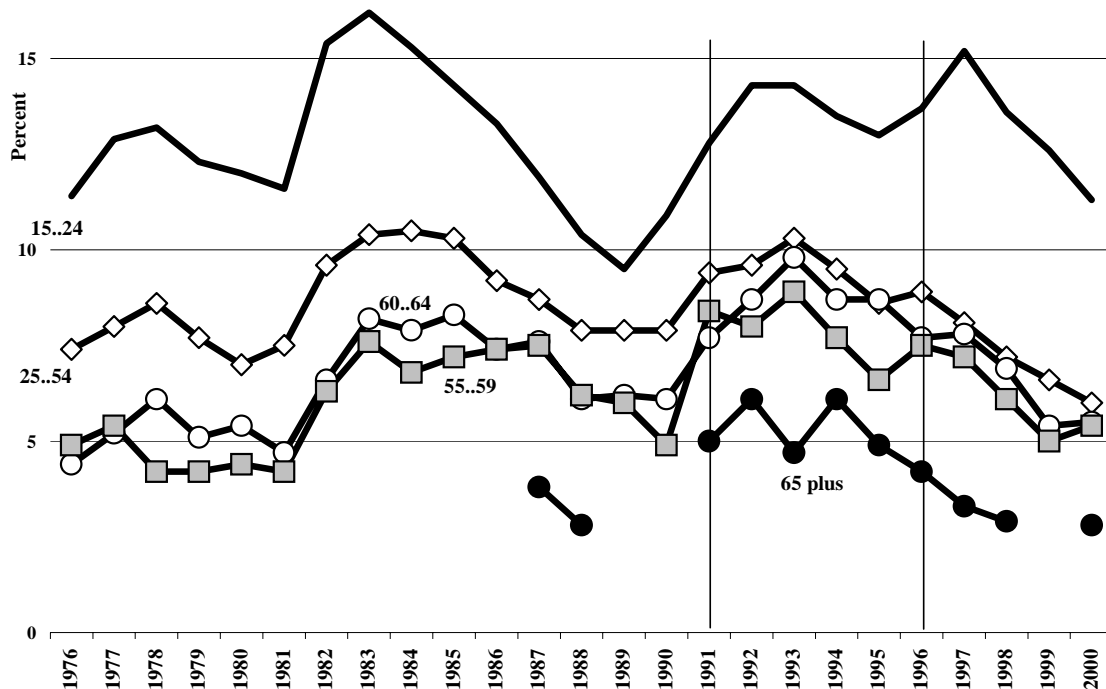
Figure 11: Percentage of the Labour Force Unemployed, Males, Canada, 1976 to 2000



Unemployment rates for women (Figure 12)¹⁸ follow a similar pattern both with respect to the relative magnitude of the age group rates and their change over time. Female rates have slightly less amplitude in their cycles, and while the 2000 rates for the 25 to 64 age group are as tightly

clustered as the corresponding rates for males, there was a much larger range in female rates in the pre-1990s period. [Statistics Canada publishes data only when a minimum level of statistical validity is attained: as a result, the unemployment rate for females 65 plus not always published].

Figure 12: Percentage of the Labour Force Unemployed, Females, Canada, 1976 to 2000



For the hypothesis about the inverse correlation between labour force participation and unemployment rates to hold, participation rates should have fallen (non-participation rates, the percentage not in the labour force, should have risen) during the rise in unemployment from 1981 to 1983 and 1990 to 1993, and participation rates should have increased (non-participation rates fallen) during the fall in unemployment from 1982 to 1989 and 1994 to 2000. As participation rates in the 25 to 54 age group are high (in the range of 90%), small percentage changes in their values are large percentage changes in the non-participation rates: non-participation rates, therefore, will most clearly show the changes that accompany increasing unemployment.

Figure 13¹⁹ shows the unemployment rate and the non-participation rate for males aged 25 to 54. The unemployment rate almost doubled between 1981 and 1983, going from 5.2% to 9.9%: the non-participation rate moved in the same direction, increasing from 5.4% to 6.5% in 1983 (and to 6.8% in 1984). This supports the “increasing unemployment increasing non-participation” hypothesis. From 1983 to 1989 the unemployment rate for this group fell, from 9.9% to 6.3%, but there was little change in age group’s 6.5% non-participation rate: this does not support the “falling unemployment falling non-participation” hypothesis. Exactly the same pattern occurred over the rising then falling unemployment cycle form 1990 to 2000, with non-participation increasing to 9% as unemployment rates increased to 10.7% in 1992, then showing little responsiveness to the almost 50% decline in unemployment rates to 5.7% in 2000.

Figure 14²⁰ shows that there was no correlation between unemployment and non-participation for women aged 25 to 54 from 1976 to 2000. Regardless of the direction of change in unemployment rates (the 1981 to 1990 and 1990 to 2000 cycle), the non-participation rate declined, from 47.8% of women 25 to 54 not in the labour force in 1976 to 21.4% not in the labour force in 2000. The plateau in the decline in the non-participation rate in from 1991 to 1994 suggests that the

relatively high unemployment rates that prevailed may have slowed the increase in labour force participation, which was resumed in 1996 as unemployment rates fell to their 25 year record low of 5.8% by 2000. Both charts indicate that something in addition to unemployment rates determined labour force participation of people in the 25 to 54 age group over the past 25 years.

Figure 13: Unemployment and Non-participation Rates, Males 25 to 54, Canada, 1976 to 2000

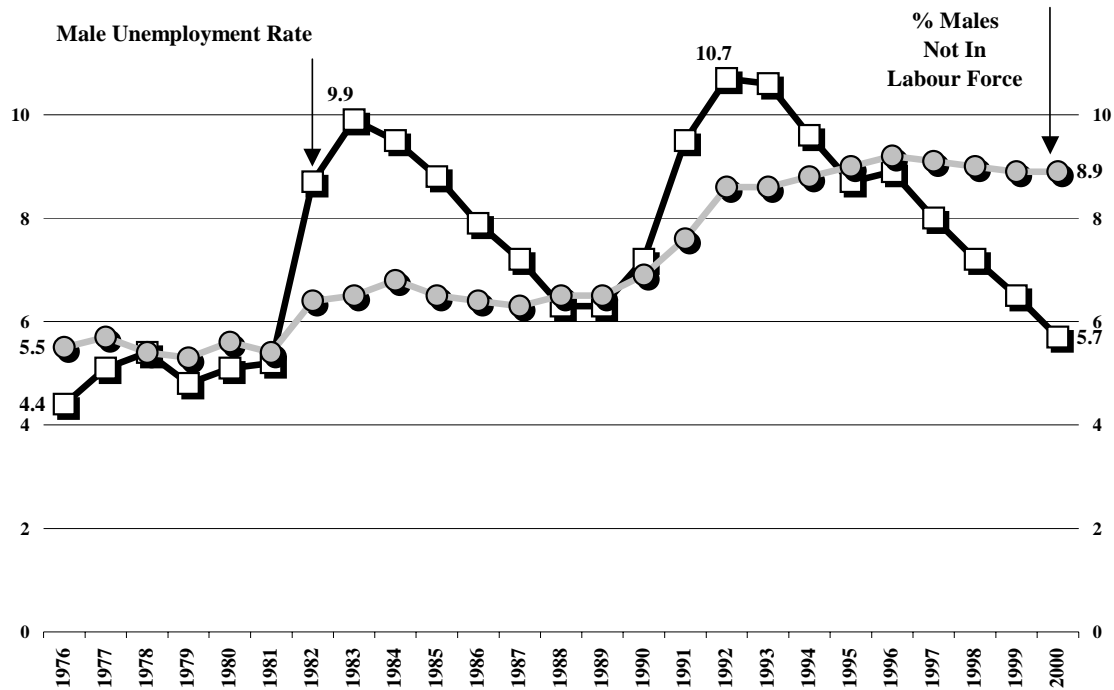
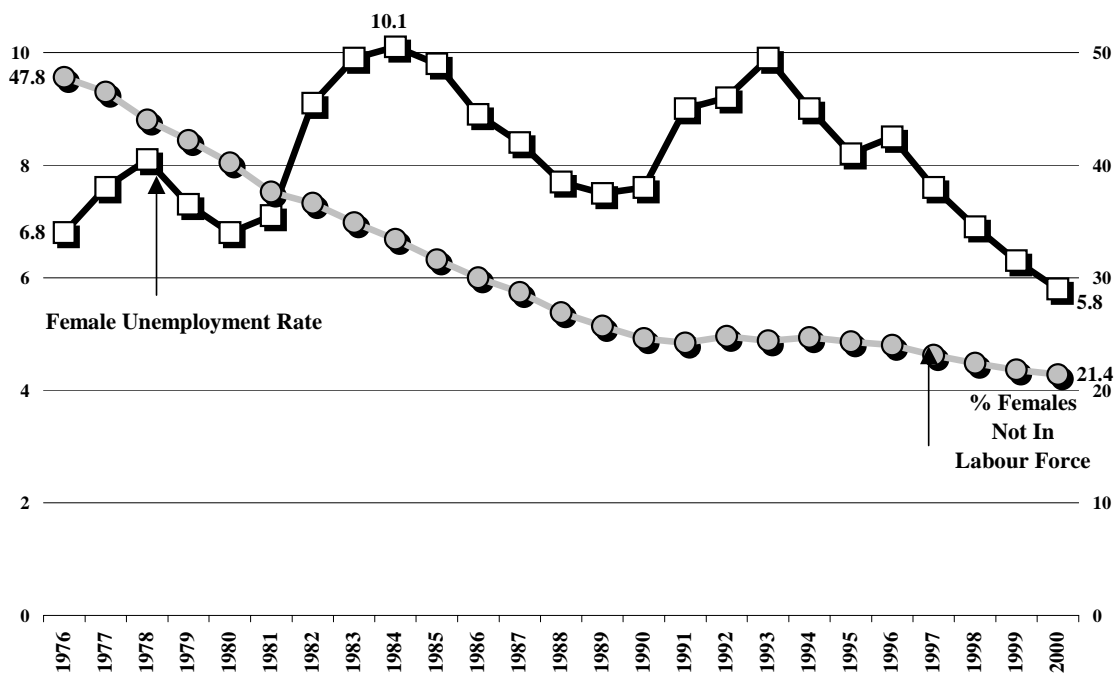
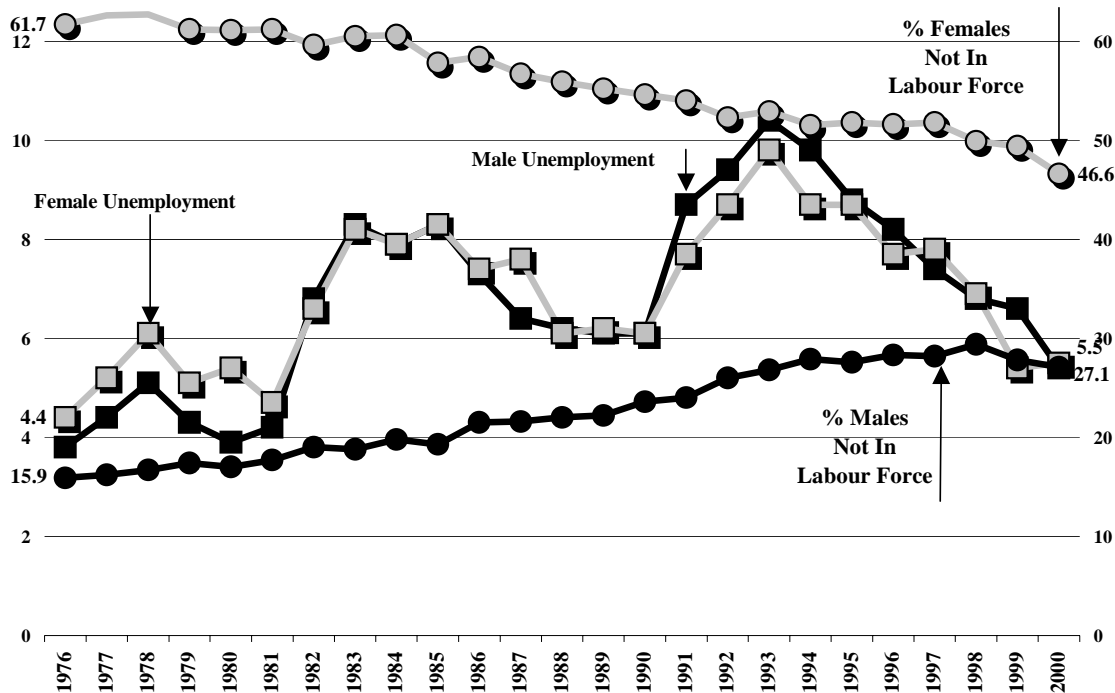


Figure 14: Unemployment and Non-participation Rates, Females 25 to 54, Canada, 1976 to 2000



Labour force participation in the 55 to 59 age group is even less responsive to unemployment (Figure 15)²¹. The level and pattern of change in unemployment rates for both males and females in this age group were virtually identical, moving in the same 1980/1990 and 1990/2000 cycle already described. The percentage of female non-participants declined continuously over the 25-year period (from 61.7% in 1976 to 46.6% in 2000), and the percentage of males not in the labour force increased continuously from 1976 to 1998 (from 15.9% to 29.4%), regardless of the level or direction of change in the unemployment rate. If there was any correlation between the two variables, it might explain the small decline in the male non-participation rate from 29.4% in 1998 to 27.1% in 2000, and the steep drop in female non-participation from 49.9% to 46.6%, over the past two years as unemployment rates dropped back to their late 1970s lows.

Figure 15: Unemployment and Non-participation Rates, 55-59 Age Group, Canada, 1976-2000



The same conclusions apply to the 60 to 64 age group (Figure 16)²², with female non-participation remaining constant in the 75% range regardless of changes in the age group's unemployment rate up to 1996, and then a slight decline to 72.8% with the decline in unemployment from 1997 to 2000. Similarly, the male non-participation rate increased regardless of the unemployment rate, from 33.5% of the males of this age not being in the labour force in 1976 to 56.4% in 1996, and then dropping slightly to 53.9% in 2000.

In contrast to the other age groups, the non-participation rates of 15 to 24 year olds appears relatively responsive to changes in unemployment (Figure 17)²³. From 1976 to 1980, the non-participation rate for both males and females in this age group declined in the face of relatively constant unemployment rates. When unemployment rates climbed between 1981 and 1983, non-participation rates for both males and females followed suit, as they did when unemployment rates fell from 1983 to 1989. Non-participation rates also followed unemployment rates up from 1990 to 1993, but when unemployment rates for both males and females in the age group began to fall from 1993 on, non-participation rates went the opposite direction: it was only after 1996 that non-participation rates followed unemployment.

These data show that labour force participation is responsive to unemployment rates, but only at

the margin: other factors play a significant role in determining the extent to which people chose to participate in labour force activities. [Noting the modest magnitude of the 1998 to 2000 changes, and the small sample size used in the Labour Force Survey, it will be important to confirm the recent trend with the 2001 Census data before drawing strong conclusions.]

Figure 16: Unemployment and Non-participation Rates, 60-64 Age Group, Canada, 1976-2000

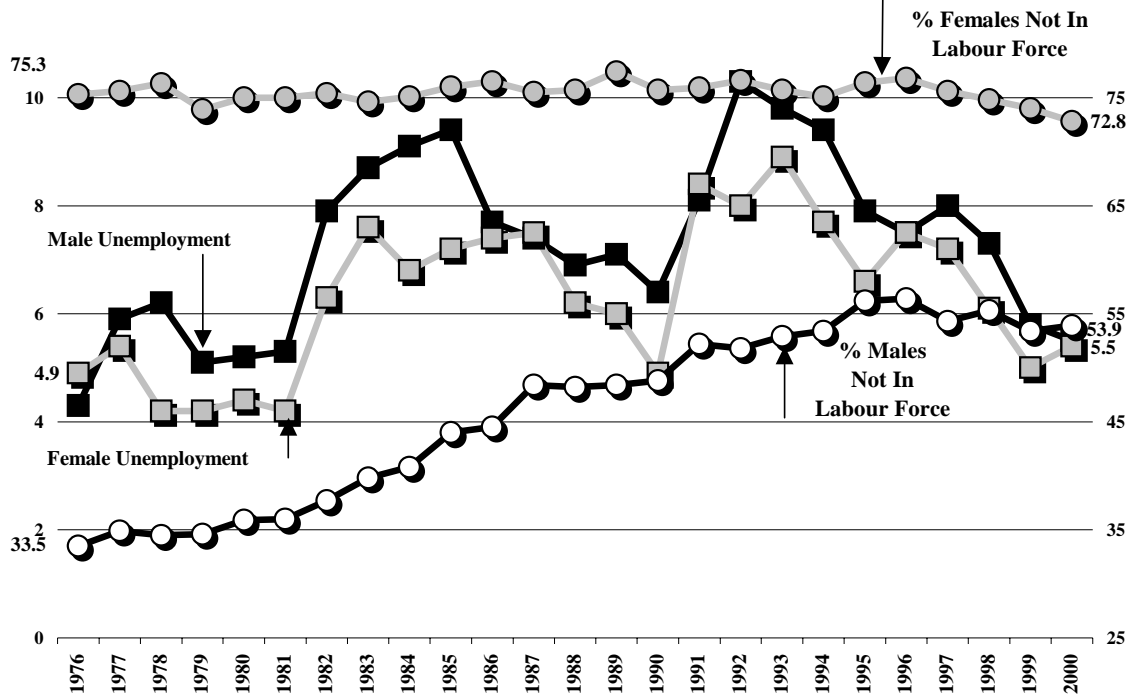
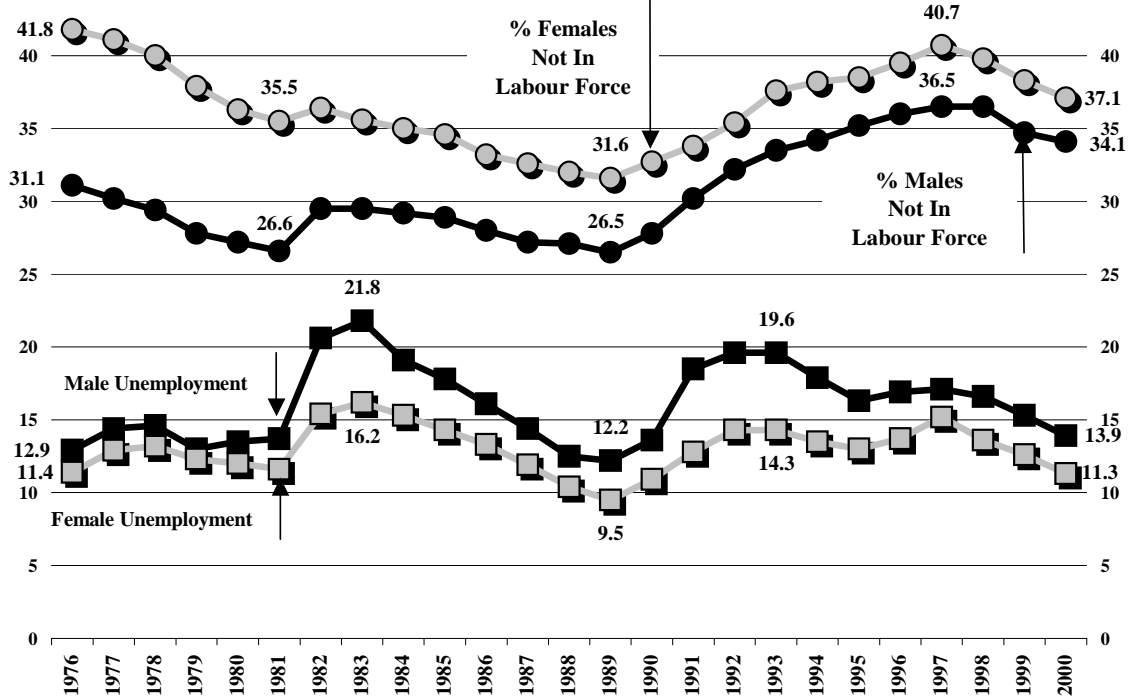


Figure 17: Unemployment and Non-participation Rates, 15-24 Age Group, Canada, 1976-2000



b. Reasons for Not Looking For Work

The Labour Force Survey publishes data on the reasons that people not in the labour are not looking, or are not available, for work²⁴. While these data provide a useful measure of the factors influencing labour force participation, they must be regarded as merely indicative for the following reasons: 1) they represent what respondents state are the reasons that a member of their household not participation in the labour force, which may not be accurate or may not indicate what these people will do when labour market conditions change; 2) they are from a small number of people within an already small sample, and hence at the age group and reason level may be subject to significant variation; and 3) they are available only for 1997 to 2000 and hence do not permit consideration of long term trends – although they are useful in examining the change in non-participation rates over the past 4 years.

There are two sub-groups in the non-labour force participant population: those who want work but are not actively seeking it (hereafter non-participants who want work) and those who do not want work or who are not available for it and hence are not actively seeking it (hereafter referred to non-participants not wanting work). Those non-participants who want work are those most likely to enter the labour force should labour market conditions change sufficiently: the reasons they are not looking for work are tabulated in the Labour Force Survey as: 1) their own illness or disability, 2) personal or family responsibilities, 3) attending school, 4) awaiting recall to work or a reply to an application for work, 5) they are discouraged ex-job seekers, and 6) other reasons.

These data explain why labour force participation rates for both males and females are not particularly responsive to changes in unemployment rates: 95% of the people not in the labour force are not looking for work because they do not want it or are not available for it. Only 5% of the people not in the labour force want or are available for employment should it present itself.

In 1997, there were 5,018,800 women not in the labour force, 4,784,600 (95%) who did not want work and 234,300 (5%) who did. By 2000, the number of women not in the labour force had dropped to 5,007,000: the number who did not want work had increased to 4,826,000 (96%) while the number who did decreased to 181,000 (4%). The 25% drop in the female unemployment rate from 8.9% to 6.7% in the 1997 to 2000 period may have lead to a 25% (62,000 person) reduction in the number of female non-participants who want work, but it did not stop 41,400 women from joining the 4,784,600 female non-participants who did not want work.

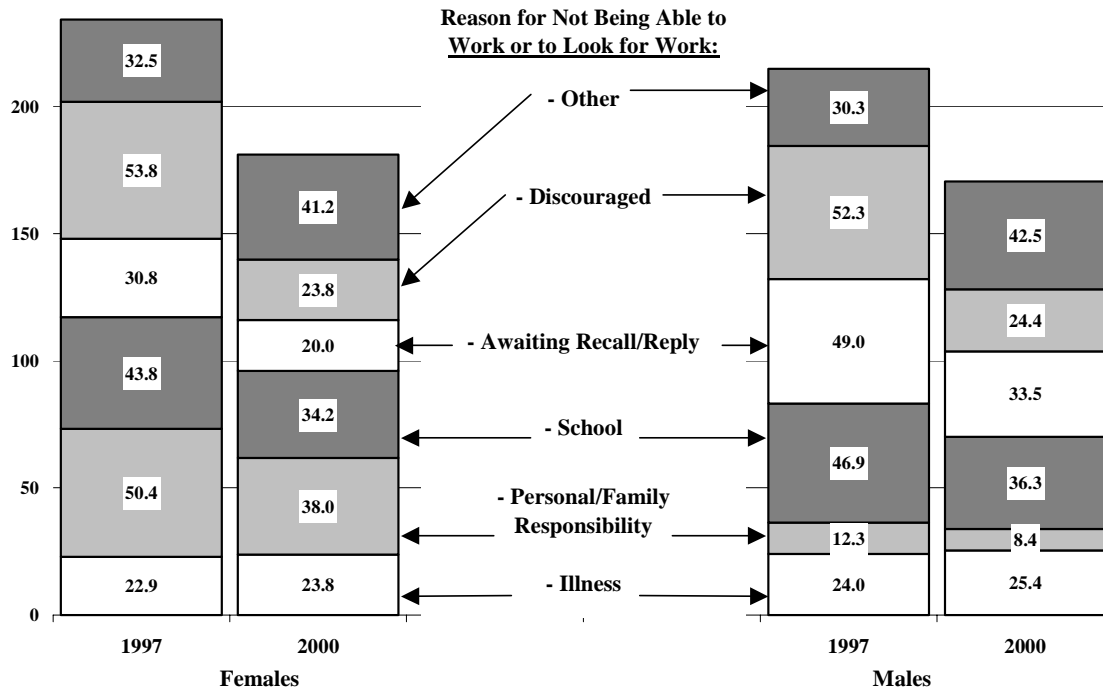
Almost the same pattern was followed in the male population, where there were 3,187,400 males not in the labour force in 1997, 2,972,600 (93%) who did not want work and 214,800 (7%) who did. By 2000, the number of males not in the labour force had increased to 3,278,600: the number who wanted work had declined 170,500 (4%) and the number who did not had increased to 3,108,000 (96%). Thus while the decline in the male unemployment rate from 9.3% to 6.9% in the 1997 to 2000 period may have lead to a 20% (44,300 person) reduction in the number of men who were not in the labour force but who want work, but they did not stop 135,400 men from joining the 2,972,600 who did not want work.

This clearly indicates that the number of people not in the labour force who want to work is very small with respect to both the number who do not want work and the total labour force: if all of the people 351,600 non-participants who wanted work in 2000 were to have joined the labour force of 15,999,200, they would have increased its size by only 2%: employment would have had to increase by only 2.4% to provide jobs for all of them.

But not all of the population not in the labour force who wanted work could enter the workforce if employment conditions improved. Between 1997 and 2000, the number of both females and males who wanted to work but could not because of illness increased from 22,900 to 23,800 and

24,000 to 25,400 respectively (Figure 18)²⁵, and the number who could not work for “other” reasons increased from 32,500 to 41,200 for females and 30,300 to 42,500 for males. The number of people who wanted to participate in the labour force but who were unable to do so due to personal or family responsibility fell from 50,400 females to 38,000 (a 25% decline) and 12,300 males to 8,400 (a 32% decline); because they were attending school fell from 43,800 females to 34,200 (a 22% decline) and from 46,900 males to 36,300 (a 23% decline); because they were awaiting recall or a reply to a job application from 30,800 females to 20,000 (a 35% decline) and from 49,000 males to 33,500 (a 32% decline); and because they were discouraged from 53,800 females to 23,800 (a 56% decline) and from 52,300 males to 24,400 (a 53% decline).

Figure 18: People Not in the Labour Force Who Want Work, Canada, 1997 & 2000 (1000s)



Falling unemployment rates, therefore do appear to have an impact on participation, particularly on discouraged workers who want to work, with a 25% decline in unemployment rates reducing the number of discouraged workers by more than 50%. They also appear to reduce the number of persons wanting to work but not participating for awaiting recall/reply reasons by about a third, and the number out of the labour force because they are attending school or for family or personal responsibility reasons by about a quarter. They had no effect on the number not in the labour force because of illness or “other” reasons.

The overwhelming majority (95%) of the people who are not in the labour force are there because they want to be – they do not want to work or are not available for work: they may change their minds in the future, but it will take much more in the way of incentive to induce them to seek work than it will the much smaller population of people not in the labour force who want to work. Excluding those who cannot work because of illness or “other” reasons, at most only two thirds of the non-participant want to work group might be responsive to improving labour markets.

Some immeasurable portion of this two thirds will also be, effectively, immune from labour market conditions, as it includes people who are going to school or who have family or personal responsibilities that preclude participation. There will always be some people who want to work but are not actively seeking it because they are in school or have family or personal

responsibilities. For example, four out of five of the female non-participant but wanted to work group who cited personal or family responsibility reasons for not seeking work were between the ages of 15 and 44: the increase in the EI maternity leave provisions from 6 months to one year in 2001 will likely increase, rather than reduce, both this number and its share of all non-participants. Four out of five of both the males and females who were not in the labour force because they were in school but who wanted to work were in the 15 to 24 age group: in the skills based economy of the future, it is not likely that this pool will continue to decline as it did from 1997 to 2000 (except as the 15 to 24 population declines because of Canada's below the replacement level birth rate).

By 2000, there were only 101,700 people in Canada who were discouraged workers or awaiting recall or reply: all other things equal a 0.7% increase in employment would absorb all of these workers. While the number of people not in the labour force who would like to be may seem large, it is very small in comparison to the size of the labour force and employment in Canada. Even if all of these people returned to the labour force, participation rates would not increase significantly.

The forgoing dealt with the 5% of the population not in the labour force who wanted work but who were not actively looking for it: the same reasons for not being in the labour force apply to the 95% who were not looking for work because they did not want it or were not available should they stumble upon it. The Labour Force Survey does not publish information on the reasons why those non-participants do not want work, but an examination of the age profile of this population provides grounds for informed speculation on these reasons.

As Figure 19²⁶ shows, the majority of males not in the labour force who do not want or are not available for work are either between the ages of 15 and 24 (21%, most of whom are in secondary or post-secondary education programs) or 65 years of age and older (45%, most of whom are retired). The third largest group is the 55 to 64 age group, accounting for 16%, many of whom, as the next section indicates, are also retired. Thus 82% of the male population not in the work force who are not available or not looking for work are there for reasons unrelated to the labour market – they are either in school or retired.

The number of males in every age group 25 and older who were not in the labour force who did not want or were not available for work increased from 1997 to 2000, but the greatest increase, both in rate and absolute value, were in the 45 and older age group. Much of this growth was due to people in the age group retiring: with half the males retiring from public sector jobs in 2000 being under the age of 57.6 (see section III.b., page 38), the impact of retirement on labour force participation is being felt in the 45 to 54 age group, as well as in the 55 and older traditional retirement age groups.

There is a different age distribution for women not in the labour force who do not want or are not available for employment, with the 25 to 44 age group accounting for 18% of the female non-participants who do not want or are not available for work, with the corresponding share for males being only 10% (Figure 20)²⁷. This is the stage of the life cycle where the majority of women not in the labour force who want jobs are not looking for them because of personal or family responsibilities: this is likely the same reason for women who do not want or are not available for employment. As with the pattern for the male population, the number of women not in the labour force who did not want or were not available for jobs in the 45 plus age groups increased between 1997 and 2000, an increase likely the result of retirement: half of the women retiring from public sector employment in 2000 were under the age of 57.

Figure 19: Non-Participants Not Wanting or Not Available For Work, Males, Canada (1000s)

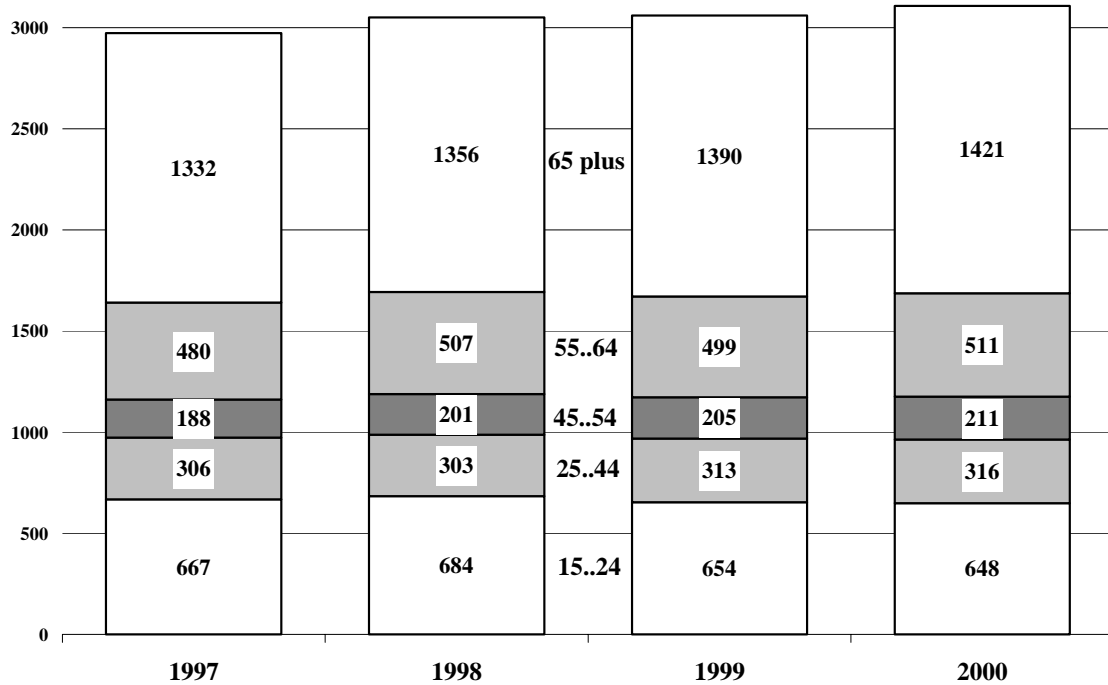
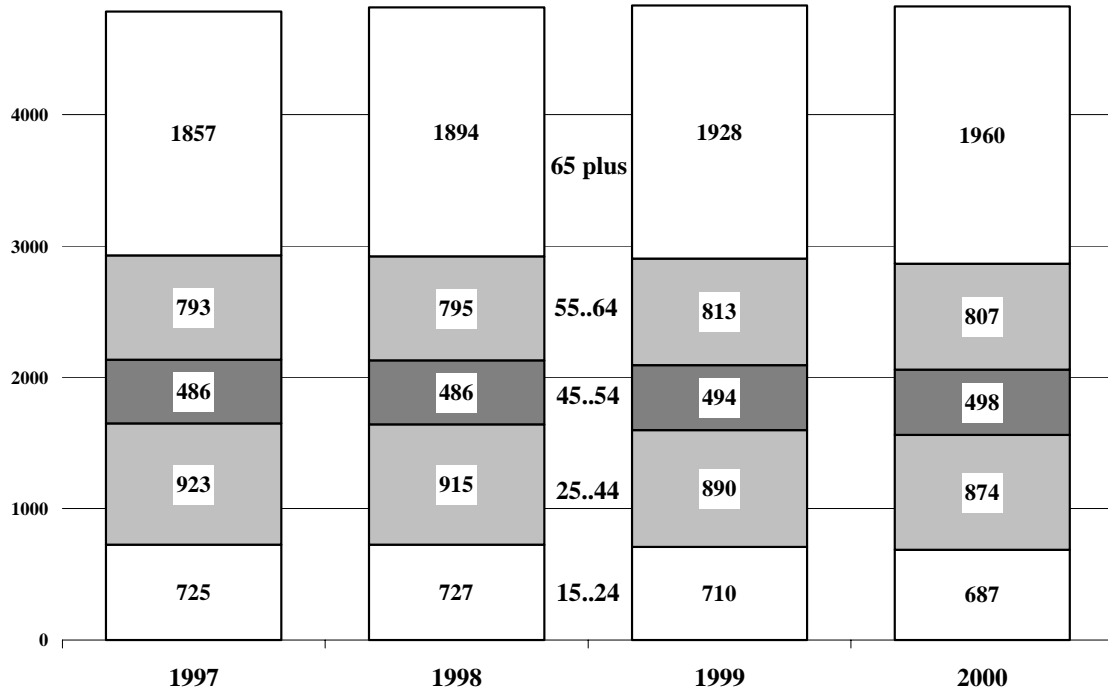


Figure 20: Non-Participants Not Wanting or Not Available For Work, Females, Canada (1000s)



c. Job Leavers and Job Losers: The Growing Importance of Retirement

The Labour Force Survey also publishes data on the reasons for not being in the labour force for those non-participants who left the labour force in the previous year: these data show the increasing role of retirement as a reason for leaving the labour force. These data are tabulated for the two sub-groups that make up this group, the job losers and the job leavers. Job losers are those who left the labour force within the past year because their employment was either permanently or temporarily terminated: they lost their job, an involuntary departure. Job leavers left their jobs voluntarily, and they did so for personal reasons, much like those considered above for reasons why people were not in the labour force. Job losers and job leavers may remain in the labour force, either finding new jobs or being part of the unemployed (job seekers), or they may leave the labour force, becoming non-participants who either want or do not want / are not available for work.

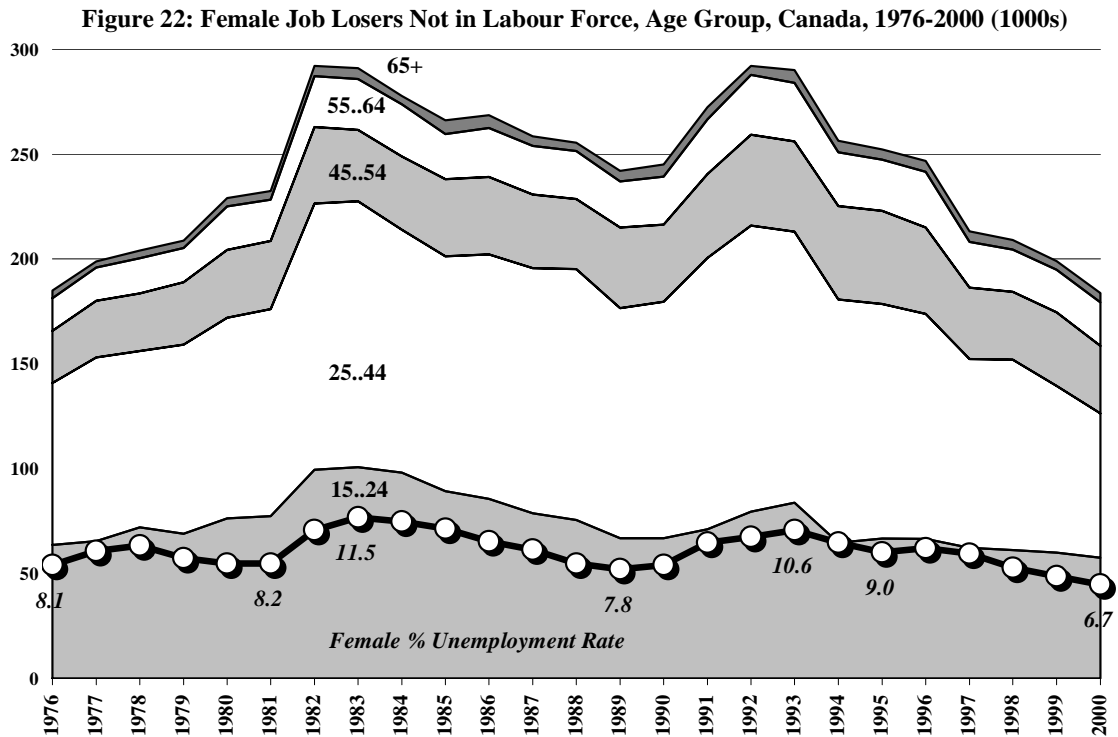
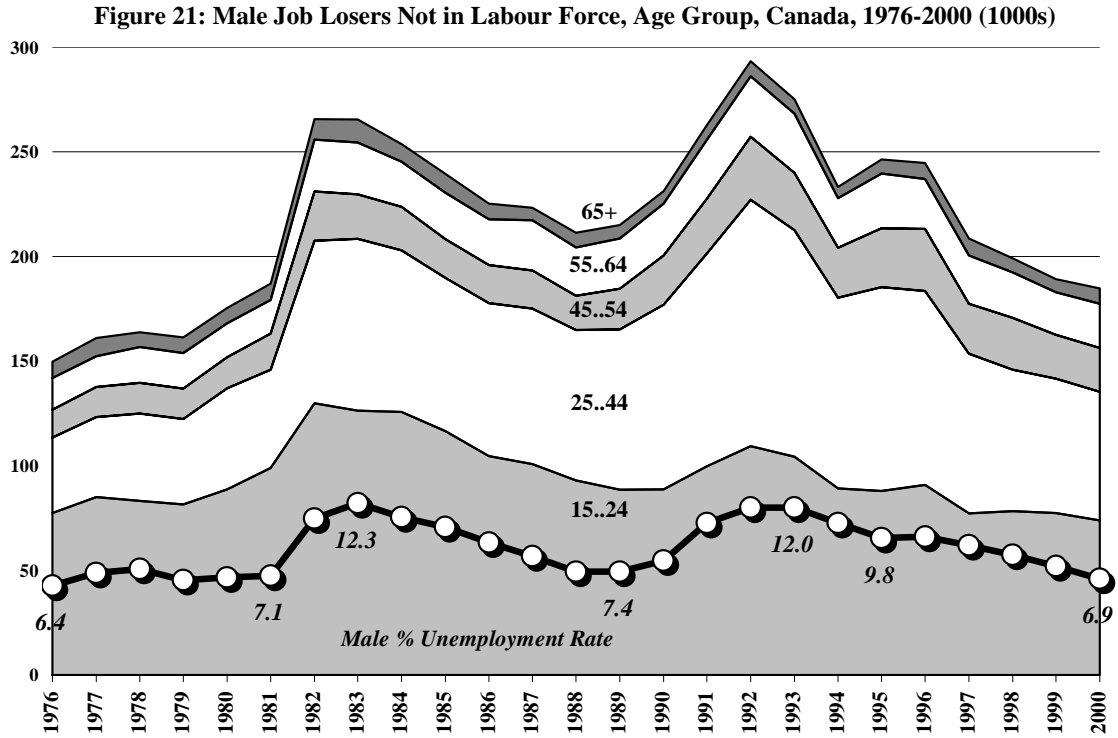
In 2000, there were 24,284,900 people 15 and older in Canada, 15,999,000 (66%) who were in the labour force and 8,285,900 (33%) who were not. Of the labour force, 14,909,700 (93.2%) were employed and 1,089,500 who were unemployed (6.8%). Of the unemployed labour force participants, 227,600 (21%) had left their job in the previous year, 490,200 (45%) had lost their job in the previous year, and 371,700 (34%) had not worked within the previous year.

The non-participant population was made up of 351,600 people (11%) who wanted work but who were not seeking it (only 48,200 of whom were discouraged workers) and 7,394,000 (89%) who did not want work or were not available for it. People 55 years of age and older accounted for 63% (4,699,100 people) of the population who did not want or were not available for work.

In the non-participant population, job leavers outnumber job losers (by a ratio of 802,000 to 368,000, a factor of 2 to 1) while in the unemployed (i.e. participant) population job losers outnumber job leavers by a factor of 2 to 1 (490,000 to 228,000)²⁸. The unemployed population accounted for 57% of the 859,000 job losers, but for only 22% of the 1,090,000 people who left (rather than lost) their job in 2000: most job losers remain in the labour force during the year, but the overwhelming majority of job leavers leave the labour force.

The number of job losers who leave the labour force is directly and strongly correlated with unemployment rates. This is most clearly shown in the rates for males (Figure 21)²⁹: when the male unemployment rate increased from 7.1% in 1981 to 12.3% in 1983, the number of males who lost jobs and left the labour force increased from 187,000 to 265,400; the unemployment rate dropped to 7.4% in 1989, the number of job losers who became non-participants declined to 214,900; the unemployment rate increased to 12% in 1992, and the number of job losers who became non-participants increased to 293,000; and the unemployment rate dropped to 6.9% in 2000, the number of non-participant job losers fell to 184,700. Note that throughout these two cycles, the majority of the male job losers who became non-participants were in the 15 to 24 age group (40% in 2000) followed by the 25 to 44 age group (33%).

A similar pattern is evident for the female population (Figure 22)³⁰: when their unemployment rate increased from 8.2% in 1981 to 11.5% in 1983, the number of females who lost jobs and left the labour force that year increased from 232,000 to 291,000; the female unemployment rate dropped to 7.8% in 1989, and the number of job losers who became non-participants declined to 242,000; the unemployment rate increased to 12% in 1992, and the number of job losers who became non-participants increased to 227,300; and as the unemployment rate dropped to 6.7% in 2000, the number of female non-participant job losers fell to 183,600. Note that throughout these cycles, the majority of the female job losers who became non-participants were in the 25 to 44 age group (37% in 2000) followed by the 25 to 44 age group (31%).



There is also a discernable unemployment-related pattern to the number of job leavers becoming non-participants, although it is not as consistent as that for job losers. For males (Figure 23)³¹ and females (Figure 24)³², the number who left their job and the labour force declined as unemployment increased from 1981 to 1983, suggesting that as unemployment increases, people

become less confident about a successful return to the labour force and more concerned with the risk of unemployment of another household member. When unemployment rates fell from 1983 to 1989, the number of job leaver non-participants increased, suggesting more confidence about re-entry and lower risk of other household members becoming unemployed.

Figure 23: Male Job Leavers Not in Labour Force, Age Group, Canada, 1976-2000 (1000s)

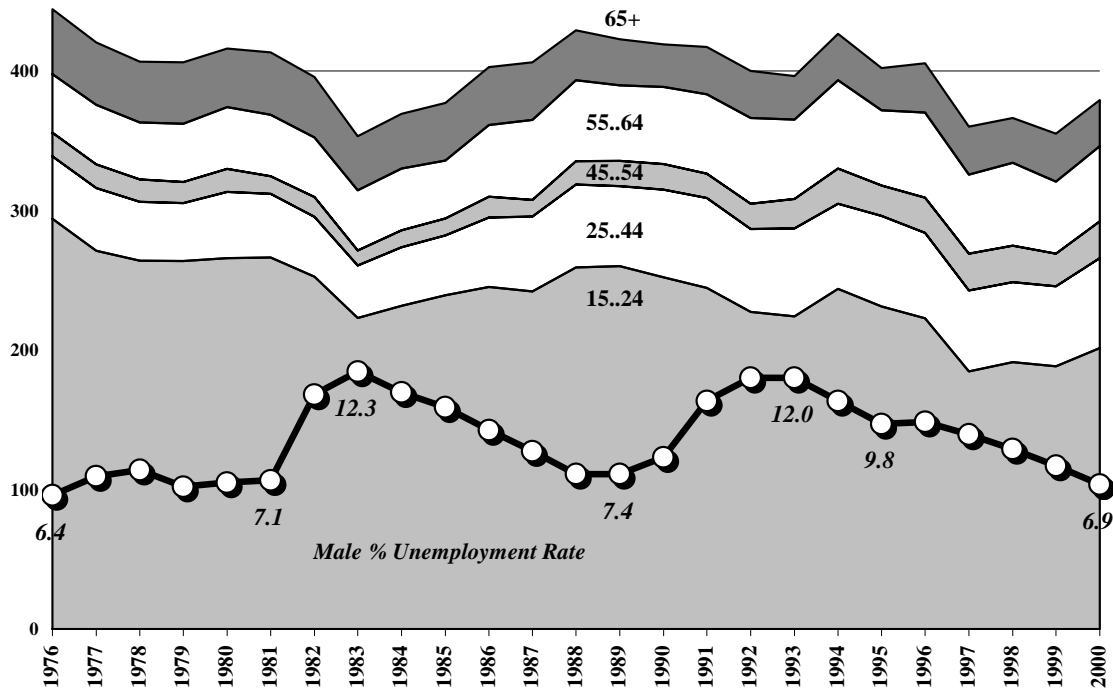
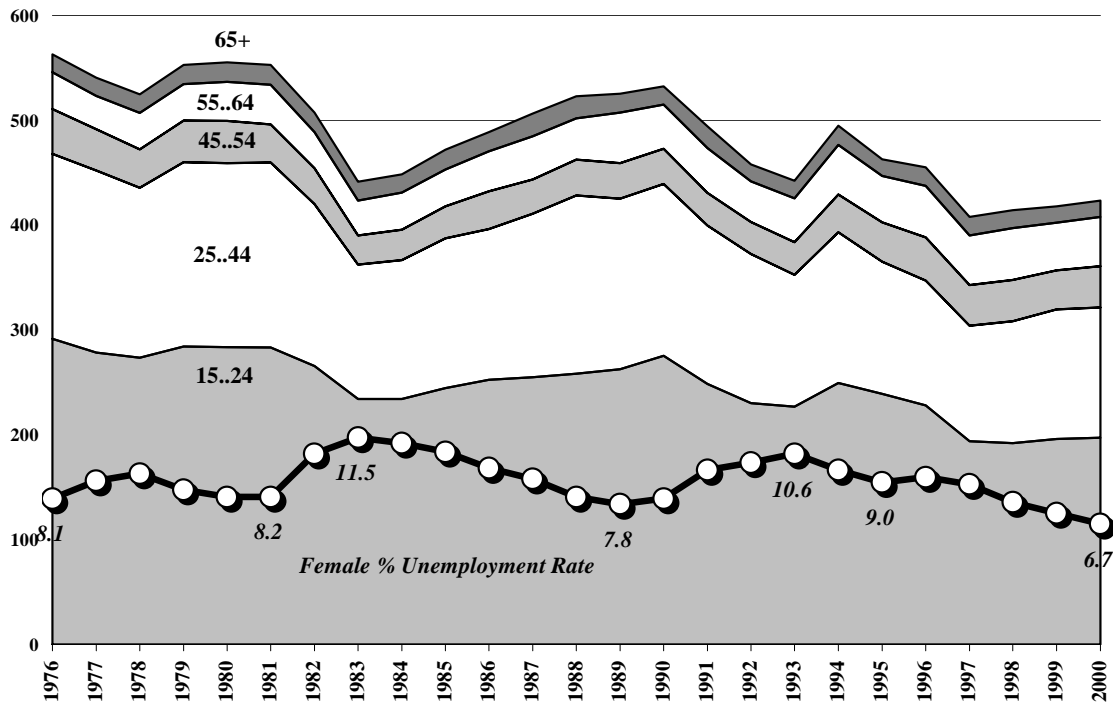


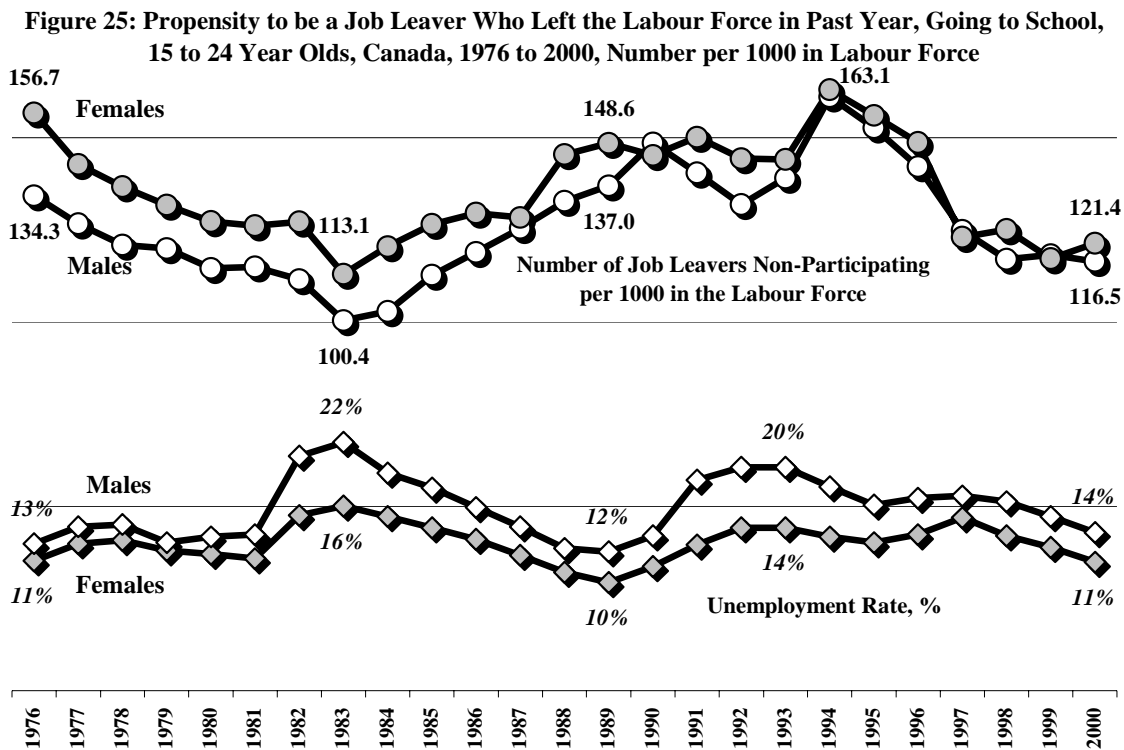
Figure 24: Female Job Leavers Not in Labour Force, Age Group, Canada, 1976-2000 (1000s)



The pattern repeats itself with the number of non-participant job leavers declining as unemployment rates climbed from 1989 to 1993, and then increasing as unemployment rates declined from 1993 to 1994. After 1994, however, the relationship does not continue, as unemployment rates and the number of non-participant job leavers both declined, until 1997 in the case of the female population and until 1999 in the case of the male population. It will be necessary to wait for data for 2001 and 2002 to determine whether there is simply a longer lag between falling unemployment and increasing non-participation of job leavers, or there has been a fundamental change between the relationship between unemployment and job leavers also leaving the labour force: in the current economy, in contrast to that of the 1980s, it may be that low unemployment is a reason to stay in the workforce, rather than to leave it.

The reasons given for leaving the labour force by people who left, rather than lost, jobs in the prior year indicate that there has been a shift in attitudes with respect to labour force participation. As there is a strong life cycle pattern to reasons for not being in the labour force (school in younger age groups, retirement in older ones, family responsibilities in the middle) it is appropriate to use age specific rates, thereby separating changes in the number of people in an age group from changes in the behaviour of people in the age group. When this is done, the changing relationship between school attendance and unemployment in young adult age groups becomes evident (Figure 25)³³.

As unemployment rates increased from 1981 to 1983, the propensity for both males and females to leave a job and the labour force in order to attend school declined from 126.2 females out of every 1000 (12.6%) aged 15 to 24 in the labour force leaving in 1981 to 113.1 in 1983, and from 114.9 to 100.4 for males in the same age group. As unemployment rates fell from 1983 to 1989, the propensity of both males and females to leave both a job and the labour force to go to school increased, to reach 148.6 per 1000 for females and 137.0 for males. This matches the anticipated inverse relationship between job leaving and unemployed in the context of leaving to go to school: what happened after 1989 did not.



As unemployment rates for the 15 to 24 age group again climbed from 1989 to 1993, rather than the anticipated drop in the propensity to leave jobs and the labour force for school, there was no change for women and only a modest decline for men. When unemployment rates for this age group began to decline in 1994, there was an increase in the propensity to leave jobs to go to school, but this lasted for only one year. From 1994 to 1997, in the face of unemployment rates that were either falling or stable, the propensity for 15 to 24 year olds to leave jobs and the labour force to go to school fell, in direct contrast to the 1970s and 1980s. From 1997 to 2000, in the face of continuous declines in the unemployment rate, this propensity remained essentially constant in the 116 to 120 per 1000 range, which, given the low levels of unemployment in 2000, may be regarded as minimums. Low unemployment rates are no longer a significant factor in increasing the propensity of young adults to the leave jobs and the labour force to attend school.

Going to school is the most significant reason why people in the 15 to 24 age group leave jobs and the labour force, so much so that separate charts must be used to track the changes in other factors affecting the propensity to leave jobs and the labour force. In the case of males, the next most significant reason was dissatisfaction: in 2000, 11.5 out of every 1000 males aged 15 to 24 in the labour force left a job and the labour force because of job dissatisfaction (Figure 26)³⁴. While leaving for reasons of job dissatisfaction was higher in 2000 (11.5 per 1000) than in 1976 (7.5 per 1000) note, first, that this reason moves with the unemployment rate (high in low unemployment periods, low in high unemployment periods) and, second, that it moves in the opposite direction and the same magnitude as the “other reasons” category: combined these two categories were in the 16.5 to 17.5 range throughout most of the past 25 years. This suggests rationalization of, rather than reason for, a decision.

The propensity to leave job and labour force because of illness or disability declined slightly over the period, from 4.6 per 1000 to 3.7 per 1000, as did the propensity to leave for personal or family responsibility reasons, from 5.1 per 1000 to 4.6 per 1000: a greater decline in these two propensities would have been recorded if not for their significant increase in 1999 and 2000. One may characterize non-school propensities for males in this age group as both minor and constant.

A much greater change in behaviour is shown for females aged 15 to 24 (Figure 27)³⁵. The second most important reason after schooling for leaving jobs and the labour force is personal and family responsibility, with 16.1 per 1000 women in this age group in the labour force leaving for this reason in 2000, compared to only 4.6 per 1000 men in the age group. While women are almost four times as likely to leave jobs and the labour force for this reason, their propensity to do so is half of the 37.7 per 1000 who left for this reason in 1976. Note that this 50% reduction occurred between 1976 and 1993, with the rate remaining relatively constant since then.

The propensity of women in the 15 to 24 age group to leave jobs and the labour force due to reasons of illness and disability also declined significantly over the 1976 to 2000 period, falling from 11.6 per 1000 to 3.1 per 1000, below the 3.7 per 1000 rate for males. Note that most of the decline occurred between 1976 and 1983. The propensity to leave because of dissatisfaction with a job remained relatively constant in the 11.5 per 1000 range (equal to the rate for males in 2000), with the exception of a decline similar to that for males in the high unemployment 1993 to 1995 period (and a corresponding increase in the “other” reasons category). There was also a significant decline over the period in the propensity to leave jobs and the labour force for “other” reasons, which dropped from 25.4 per 1000 to 10.3 per 1000.

Summing the reasons, the propensity of 15 to 24 year old males to leave jobs and the labour force ranged between 140 and 180 leaving each year per 1000 in the labour force over the past 25 years, while the propensity for women moved in the range of 160 and 200 leaving per 1000 in the labour force. These propensities followed the same pattern, moved from the high to the low end

of the range from 1994 to 1997, and were constant from 1997 to 2000. The propensity for males in this age group to leave the labour force is overwhelmingly, and for females is increasingly, determined by the decision to go to school: with the exception of leaving for personal or family responsibility reasons, male and female propensities in this age group are now essential the same.

Figure 26: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year, Not to School 15 to 24 Year Old Males, Canada, 1976 to 2000, Number per 1000 in Labour Force

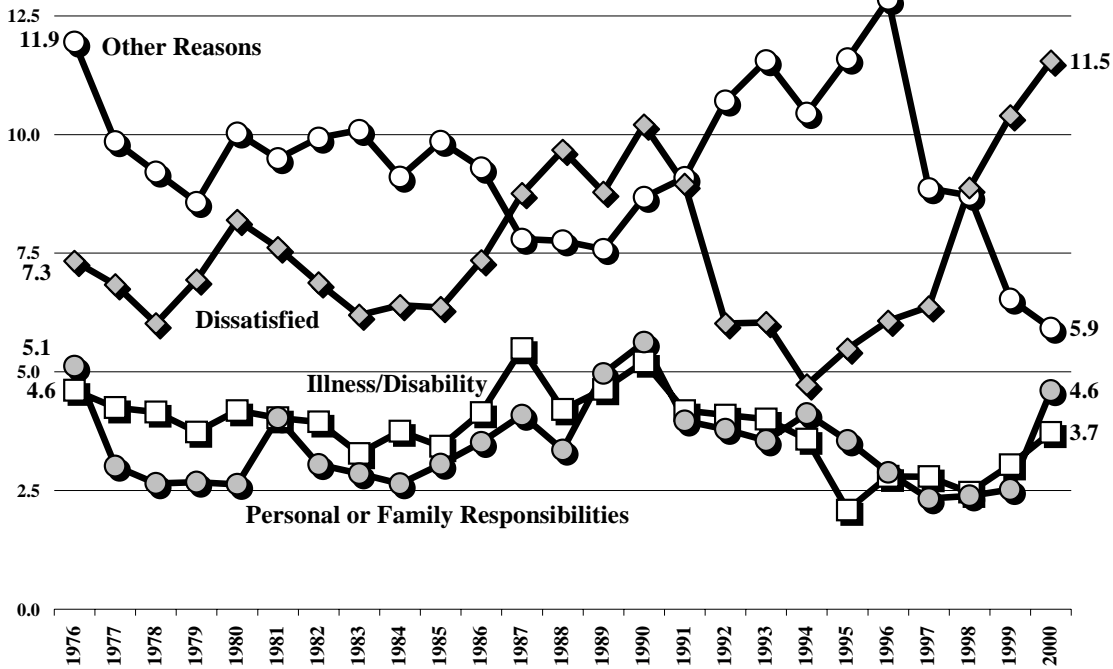
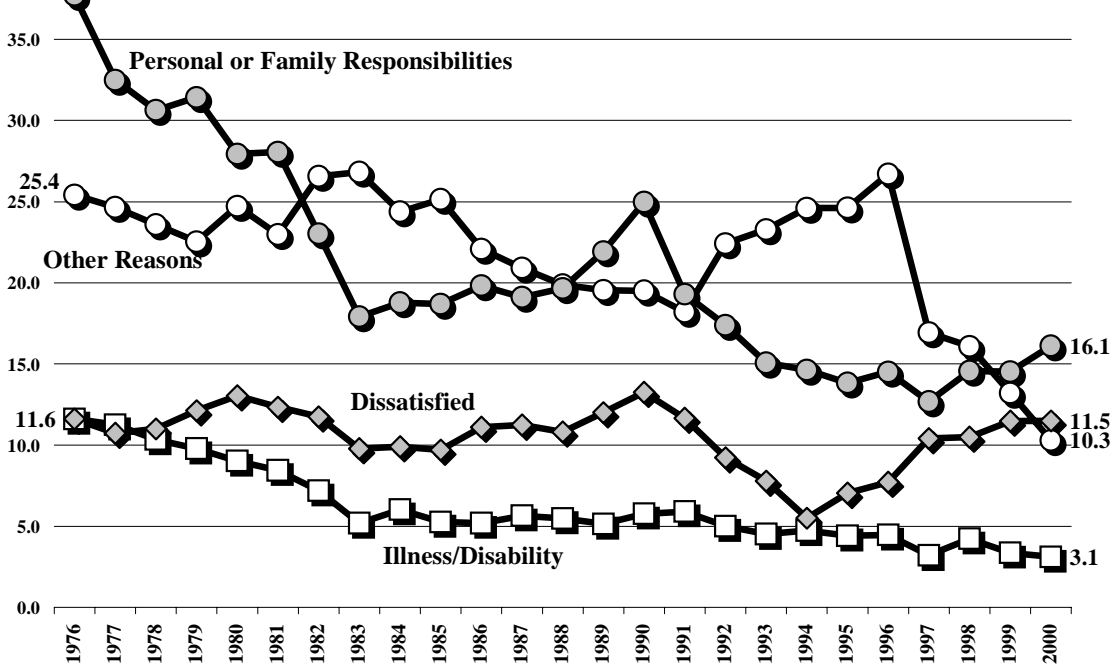


Figure 27: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year, Not to School 15 to 24 year Old Females, Canada, 1976 to 2000, Number per 1000 in Labour Force



The general pattern in the propensities for males in the 25 to 44 age group to leave jobs and the labour force is similar to that for the 15 to 24 age group (Figure 28)³⁶, although the magnitudes for the rates differ considerably. The propensity to leave to go to school is the most significant, with 6.2 of every 1000 males of this age in the labour force leaving it for this reason in 2000, followed by a rate of 3.5 per 1000 leaving for reasons of illness or disability, 2.2 per 1000 for “other” reasons, 1.7 per 1000 because of job dissatisfaction, and 1.0 per 1000 for personal or family responsibilities. These rates remained generally unchanged over the past 25 years, responding only slightly to changes in unemployment. It must be noted that these rates are so small that much of the variance may be the result of sampling.

In 1976, the propensities for women in this age group to leave the labour force were dramatically different from those for men (Figure 29)³⁷: by the end of the period, they had become similar. The biggest difference and change was in women’s propensity to leave the labour force for personal or family responsibility reasons. In 1976, 53.2 out of every 1000 women aged 15 to 24 in the labour force left for this reason, compared to the 1 per 1000 rate for males. By 2000, the propensity for women to leave the labour force for this reason had dropped to only 12.2 per 1000 women in the labour force, a quarter of the 1976 rate, but still twelve times the 1 per 1000 rate for males. Note that the rate for women was generally constant from 1996 to 2000.

The propensity for women in this age group to leave for reasons of illness and disability also declined over the period, from 16.4 per 1000 in 1976 to 4.4 per 1000 in 2000, slightly above the 3.5 per 1000 rate for males: this rate has also been relatively stable since the early 1990s. Women in this age group are more likely to leave the labour force to go to school now than they were in 1976, with the number of women leaving for this reason increasing from 5.0 per 1000 in 1976 to 6.2 in 2000, equal to the rate for males in the age group. Their propensity to leave the labour force because of dissatisfaction with a job has also fallen, from 7.6 per 1000 to 4.3 per 1000 (compared to 1.7 per 1000 for males): note that this propensity increased slightly for males and females as unemployment rates fell since 1994. The propensity to leave for “other” reasons has also fallen, from 22.8 per 1000 women in the age group in the labour force in 1976 to 5.4 per 1000 in 2000 (compared to the 2.2 per 1000 rate for males).

The total propensity for males in the 25 to 44 age group to leave a job and the labour force is relatively low in this age group, and has generally moved in the range of 12 to 15 leaving each year per 1000 in the labour force (with the exception of the high unemployment rate 1982 to 1985 period when it dropped to the 10 to 12 leaving per 1000 range). From 1987 to 2000 this rate was consistently in the range of 13.5 to 14.9 leaving per 1000 in the labour force.

The total propensity for females in this age group to leave the labour force declined dramatically over the past 25 years. In 1976, 105 women (10.5%) aged 25 to 44 left the labour force for every 1000 women of this age in the labour force: by 1983, this propensity had dropped by more than a half, to 50 leaving per 1000, a rate that was maintained until 1988. Between 1988 and 1997, the rate dropped again, reaching 30 leaving per 1000, a rate that it maintained to 2000.

The propensity for women in the 25 to 44 age group to leave the labour force is approximately twice that for males: the major difference is attributable to the much greater propensity for women to leave the labour force for personal or family responsibility reasons. Both the pattern of change and the stabilization of this propensity for women in this age group to leave the labour force is strongly correlated with the pattern of change and stabilization of the propensity of women in this age group to have children, which suggests that it is families, not labour market conditions, that determining the decision of women in this age group to leave the labour force.

Figure 28: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year
25 to 44 year old Males, Canada, 1976 to 2000, Number per 1000 in Labour Force

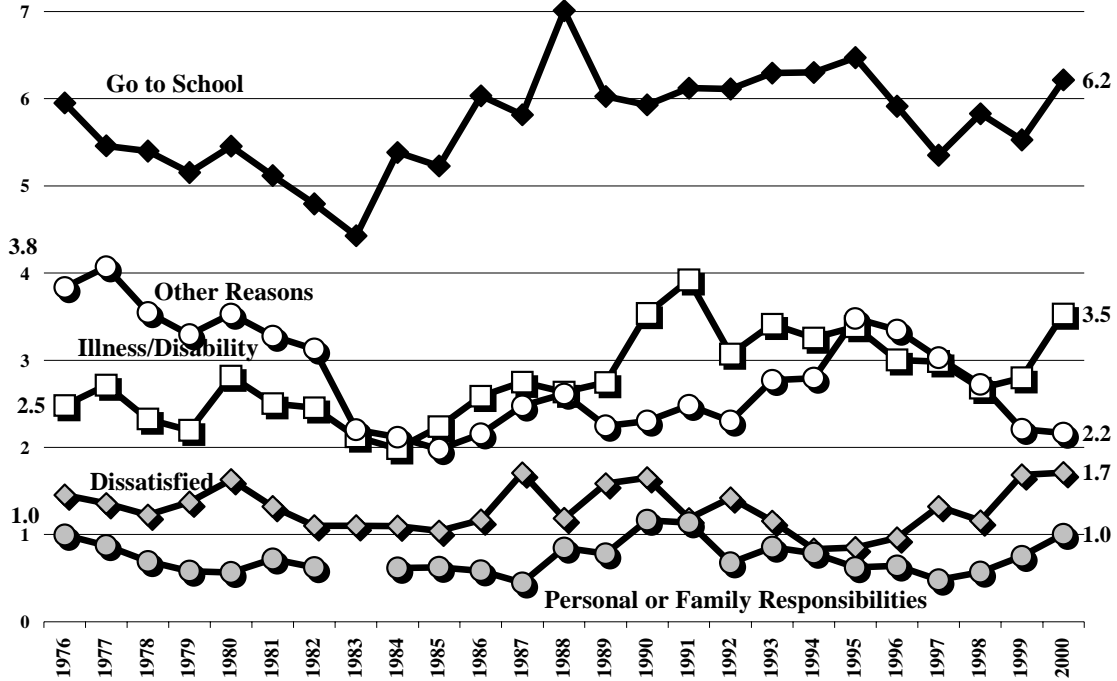
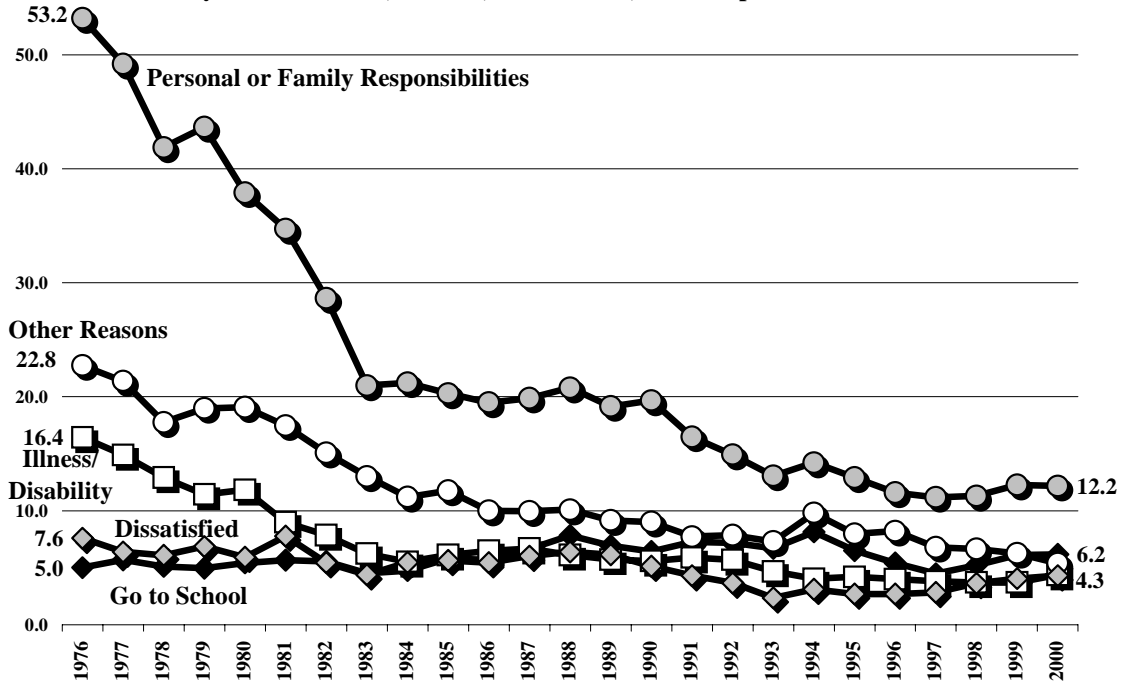


Figure 29: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year
25 to 44 year old Females, Canada, 1976 to 2000, Number per 1000 in Labour Force



The overall propensity to leave the labour force in the 45 to 54 age group is also very low, with only 14 males, and 24 females, leaving the labour force in 2000 per 1000 of them in the labour force. As a result, given both the low propensity and the small sample size, one can anticipate significant volatility in the rates by reason over time. As a result, the focus must be on general trends rather than specific values.

As with the younger age groups, with one exception, rates for males remained relatively the same over the past 25 years (Figure 30)³⁸. Illness and disability was the leading reason for leaving the labour force for males in this age group in 1976, with 6.4 per 1000 in the labour force leaving for this reason: this had dropped to 4.7 per 1000 by 2000. "Other" reasons, the second highest propensity in 1976 with a leaving rate of 5.1 per 1000, also declined slightly, reaching 2.6 per 1000 by 2000. The rate of leaving the labour force because of dissatisfaction with the job dropped from 1 per 1000 in the labour force in 1976 to 0.7 per 1000 in 2000; because of personal or family reasons from 1.0 per 1000 to 0.5 per 1000; and the propensity to leave to go to school increased from 0.2 per 1000 to 0.7 per 1000. These are all modest changes in modest rates: given the sample size, it would be prudent to conclude that the propensity for males aged 45 to 54 to leave the labour force for one of these reasons essentially remained unchanged.

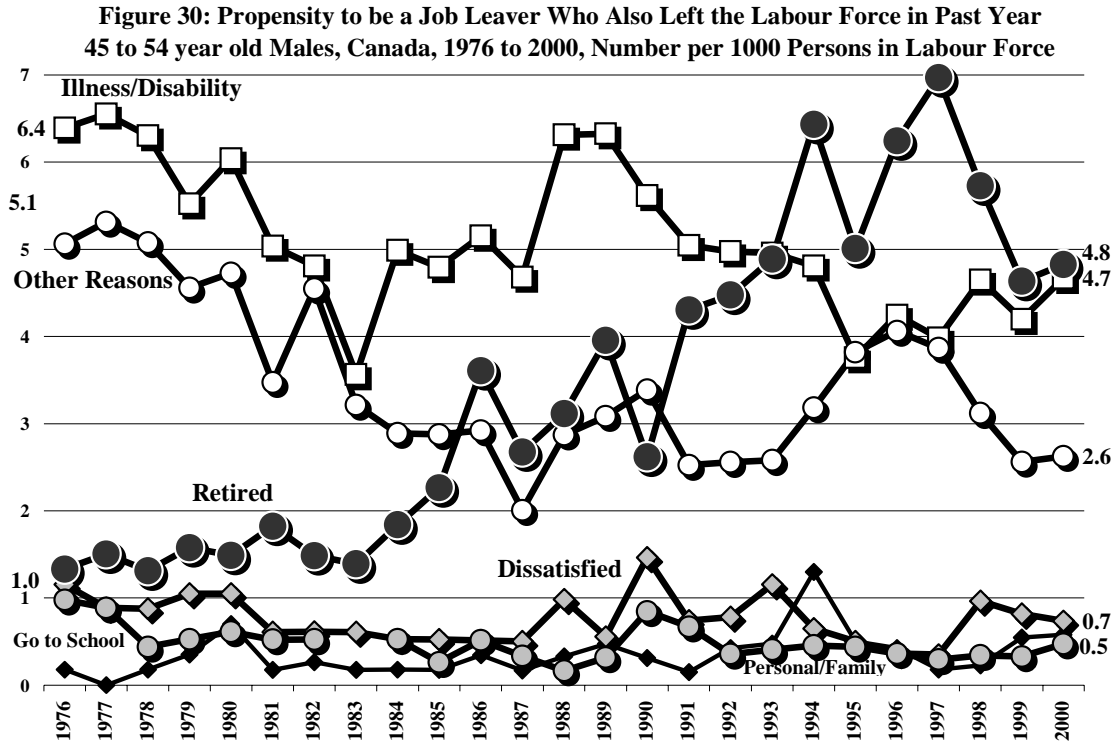
The exceptional rate, the one that both increased significantly and has become significant is the propensity to leave a job and the labour force because of retirement. In 1976 1 male aged 45 to 54 retired for every 1000 males of this age in the labour force, a rate that remained relatively constant until 1985, when it began a climb to its 2000 rate of 4.7 per 1000. The maturing of employment pension plans in the mid 1980s provided an unprecedented opportunity for males in the 45 to 54 age group to retire: start employment in 1955, put in 30 years of service and at age 54 the combination of age and years of service is 84. An example was recently provided by the fire chief of North Vancouver District, who retired last year after 30 years of service – at age 53.

An increase of a similar magnitude in the propensity to retire in the 45 to 54 age group did not occur in the female population: in 1976, 5.7 women in this age group retired per 1000 of them in the labour force: in 2000 the rate was 5.4 per 1000 (Figure 30)³⁹, still higher than the 5.4 rate for males, but only slightly so. There was a threefold increase from a rate of 3.1 per 1000 in 1990 to 9.7 per 1000 in 1999, but it declined to 5.4 in 2000. The reasons that the increasing trend in retirement is not observed for women in this age group are related to three factors: the labour force participation rates for 20 to 30 year old women in the 1950s and early 1960's was between a quarter and a half of that for men; the higher propensity of women to leave the labour force for family responsibility reasons means that a longer time period is required to acquire the 30 years service; and the jump from 1996 to 1998 and the decline from 1999 to 2000 may be in part the result of the small number of women in this age group both retiring and in the sample.

The big changes in the propensities of women in this age group to leave the labour force are the same ones as observed for the younger age groups: the propensity to leave for personal and family responsibility reasons dropped from 23.4 per 1000 in 1967 to 3.6 per 1000 in 2000 (it reached 3.2 per 1000 in 1993, and remained in that range thereafter); the propensity to leave because of illness and disability dropped from 17.7 per 1000 in 1976 to 7.2 per 1000 in 2000 (this rate reached 7.7 per 1000 in 1993); the propensity to leave because of dissatisfaction with employment dropped from 4.8 per 1000 to 2.9 per 1000 in 2000; and the propensity to leave to go to school increased from 0.7 per 1000 to 1.0 per 1000.

The total propensity for women in this age group to leave jobs and the labour force dropped significantly, from 72.6 per 1000 in 1976 to 27.6 per 1000 in 1993, and remained in this range for the rest of the period, ending at 24.6 per 1000 in 2000. The overall rate for males to leave the labour force generally moved within the 10 to 17 per 1000 in the labour force range over the past

25 years, with the increase in the propensity to retire offsetting declines in the propensity to leave due to illness and disability and “other” reasons: it closed the period in the middle of this range, at 13.9 men aged 45 to 54 leaving the labour force per 1000 males of this age in the labour force.



The impact of maturing pension plans is dramatically apparent on the propensities to retire for both males (Figure 32)⁴⁰ and females (Figure 33)⁴¹ in the 55 to 64 age group. In 1976, 28.4 males in this age group retired from the labour force for every 1000 in the labour force: by 1994 it had passed 60 per 1000, before dropping to 46.3 per 1000 in 1999 and then rising to 47.2 in 2000. A similar pattern of increase occurred in the female population, with the propensity to retire increasing from 27.2 per 1000 women in the labour force of this age retiring in 1976 to pass 60 per 1000 in 1994, dropping below 60 in 1999 to reach 50.9 per 1000 in 2000.

There was a distinct long term decrease in the propensity of males in this age group to leave the labour force for reasons of illness and disability, from 18.5 per 1000 in 1976 to 11.2 per 1000 in 2000 (the rate was in the 10 to 11 per 1000 range from 1994 to 2000) and for “other” reasons, from 9.9 per 1000 in 1976 to 4.4 per 1000 in 2000 (with the rate moving in the 4 to 10 per 1000 range throughout the period). Data on males in this age group leaving for personal or family reasons and due to job dissatisfaction does not meet Statistics Canada’s statistical validity criteria, and hence are not published.

The propensity of women aged 54 to 64 to leave the labour force for personal and family responsibility reasons declined sharply from 23.7 per 1000 in 1976 to 4.8 per 1000 in 1993, and then remained in the 4 to 8 per 1000 range for the rest of the period, reaching 4.3 per 1000 in 2000. Their propensity to leave for reasons related to illness or disability also declined, from 26.9 per 1000 in 1976 to 14.3 per 1000 in 2000, with most of this decline occurring 1989 to 1998 period. A similar pattern of decline was observed in the propensity to leave the labour force for “other” reasons, which dropped from 27.5 per 1000 in 1976 to 6.8 per 1000 in 2000, with most of the decline in the post 1989 period. Finally, the propensity to leave because of job dissatisfaction remained generally constant during the past 25 years, starting the period with 4.7 women aged 55 to 64 leaving the labour force for this reason out of every 1000 in the labour force, and ending it at 3.2 per 1000.

Summing all of the reasons for leaving the labour force, the impact of males in this age group’s increasing propensity to retire has more than offset the impact of the decline in the propensity to leave for other reasons, the result being an increase in the overall propensity to leave the labour force. From 1976 to 1985, the number of men of this age leaving the labour force was in the range of 60 per 1000 in the labour force. It then increased steeply to reach the range of 80 per 1000 in 1988, where it remained until 1998, where it declined to the 65 per 1000 range.

The overall propensity for women in the 55 to 64 age group to leave the labour force has been in the 90 to 110 per 1000 range over much of the past quarter century. It opened the period at 110 per 1000, dropped steadily to lows of 85 per 1000 in 1983 and 1985, and then moved back up into the 100 leaving per 1000 in the labour force range for most of the next decade and a half. The propensity for women in this age group to retire declined 1998’s 95.6 per 1000 to reach 79.6 per 1000 in 2000.

People are retiring earlier, with long-term trends of increasing retirement demonstrated in the data for both males and females in the 45 to 54 and 55 to 64 age groups. There is considerable variance in the pattern of increase, with noticeable declines occurring in 1999 and 2000 from peaks of 1995 to 1998. Further data from both the 2001 Census and the Labour Force Survey are required to determine the extent to which this is 1) a long-term trend, 2) a short-term trend, or 3) a sample size issue. The consequences of the trend towards earlier retirement, however, are already apparent, both in labour force participation rates, and in the declining propensity of people to retire in the 65 plus age group (Figure 34), which has been pre-empted by retirement in the 45 to 54 and 55 to 64 age group.

Figure 32: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year
55 to 64 year old Males, Canada, 1976 to 2000, Number per 1000 in Labour Force

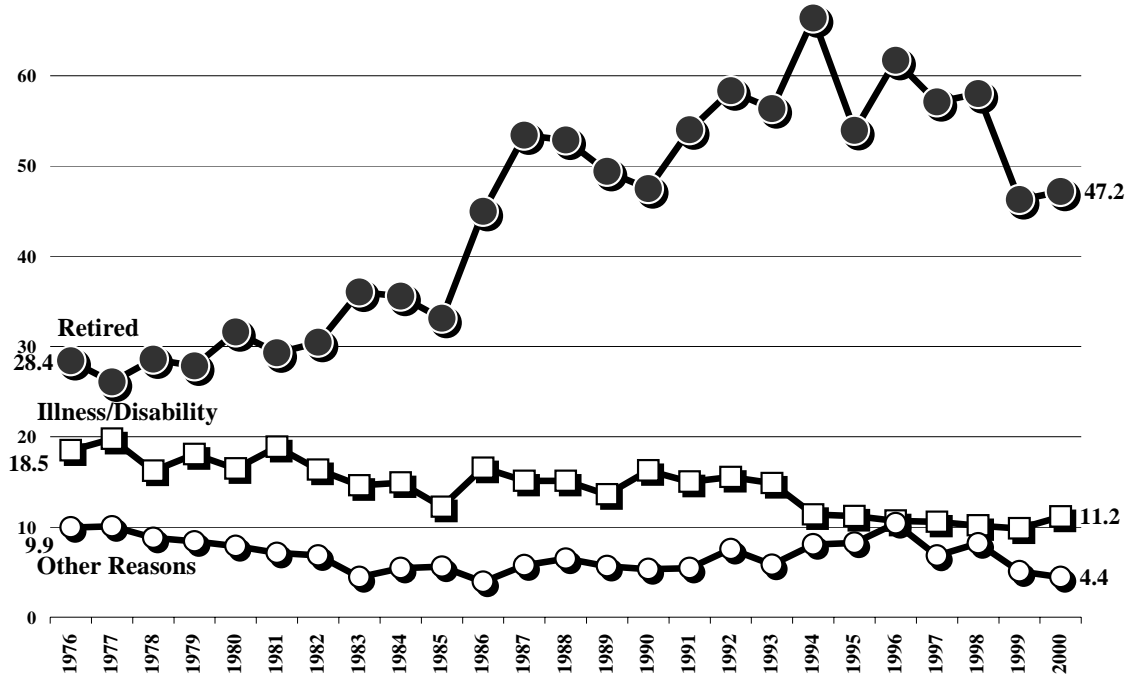
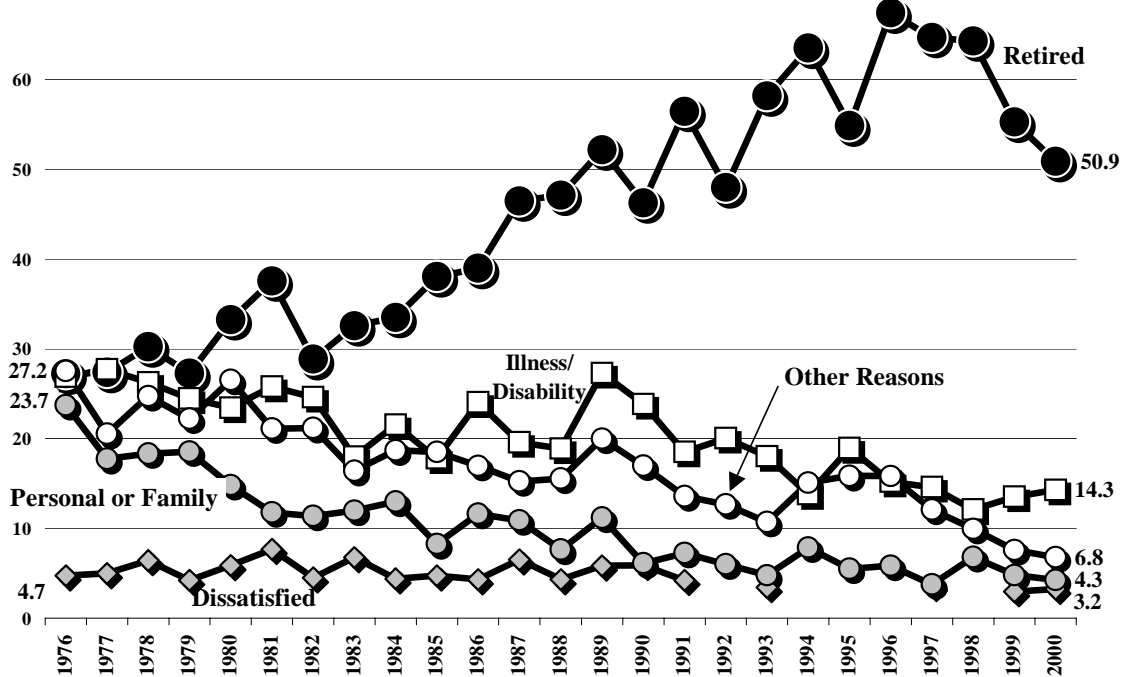
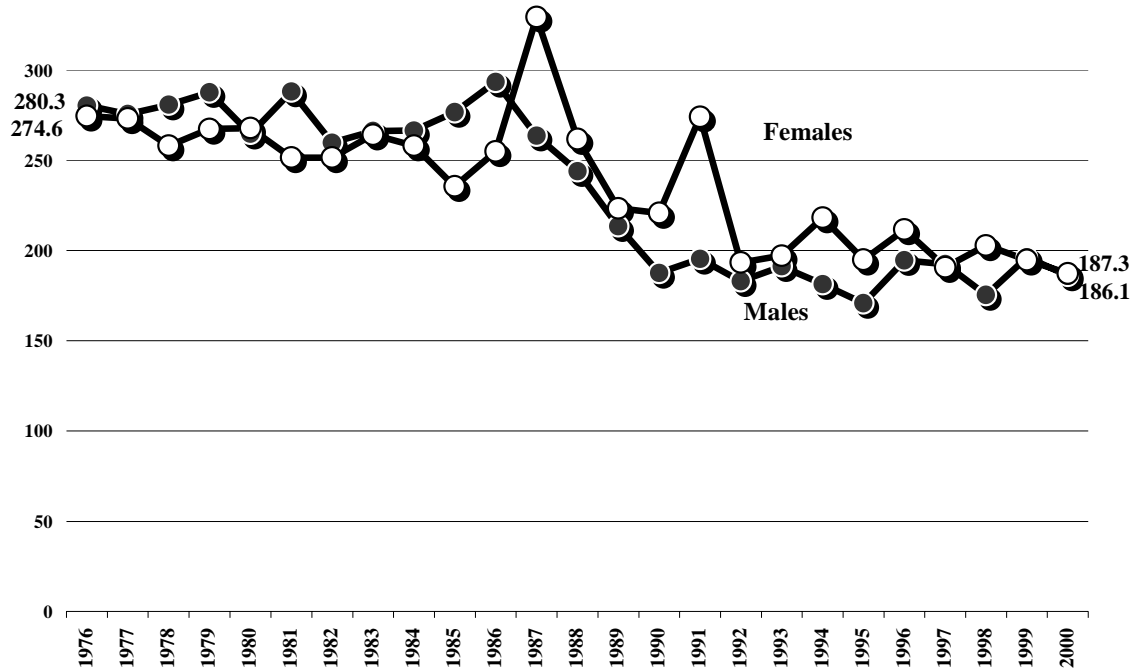


Figure 33: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year
55 to 64 year old Females, Canada, 1976 to 2000, Number per 1000 in Labour Force



Retirement is overwhelmingly the reason why both males and females 65 and older leave the labour force, so much so that it is necessary to plot this propensity on a separate chart (Figure 34)⁴². The propensities to retire for both males and females in this age group were generally the same at the beginning of the period (280.3 per 1000 and 274.6 per 1000), followed the same general pattern of decline over the period, and were essentially the same at the end of the period (186.1 per 1000 and 187.3 per 1000).

Figure 34: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year, Retired 65 Plus Population, Canada, 1976 to 2000, Number per 1000 in Labour Force



The published data permit calculation of the propensity of males 65 and older to leave the labour force for illness/disability and “other” reasons: data for the other reasons are not published due to concerns about statistical validity. The propensity to leave for reasons of illness and disability dropped from 41.5 males aged 65 plus leaving the labour force per 1000 in the labour force in 1976 to 13.3 per 1000 in 2000, in the range that has prevailed since 1993 (Figure 35)⁴³. The propensity to leave for “other” reasons started the period at 28.2 per 1000 and ended it at 16.7 per 1000: it is hard to discern any particular trend in the course it followed between these two dates.

Such a small percentage of females 65 years of age and older are in the labour force that data are often below the statistical representation levels required by Statistics Canada, and hence are not released. The data that are published show a declining trend, with the propensity to leave for reasons on illness or disability dropping from 41.2 per 1000 in 1976 to 24.6 per 1000 in 1997, and for “other” reasons from 36.6 per 1000 to 22.1 per 1000 (Figure 36)⁴⁴.

The overall propensity for males 65 and older to leave a job and the labour force was 350 per 1000 in 1976, and remained in the 300 to 350 per 100 range until 1987 when it began a decline that dropped it into the 200 to 250 range, reaching 218 per 1000 by 1990. It has remained in this range since, ending the period at 216 per 1000. In 1976 one out of three males aged 65 plus left the labour force: in 2000 one out of five left it. The overall propensity to leave a job and the labour force for women 65 plus declined almost continuously from 1976’s 393.6 leaving per 1000 in the labour force to 228.6 per 1000 in 1999 and 2000. In 1976 40% of the women aged 65 plus who were in the labour force left it: in 2000 25% of them did.

Figure 35: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year
65 Plus Males, Canada, 1976 to 2000, Number per 1000 in Labour Force

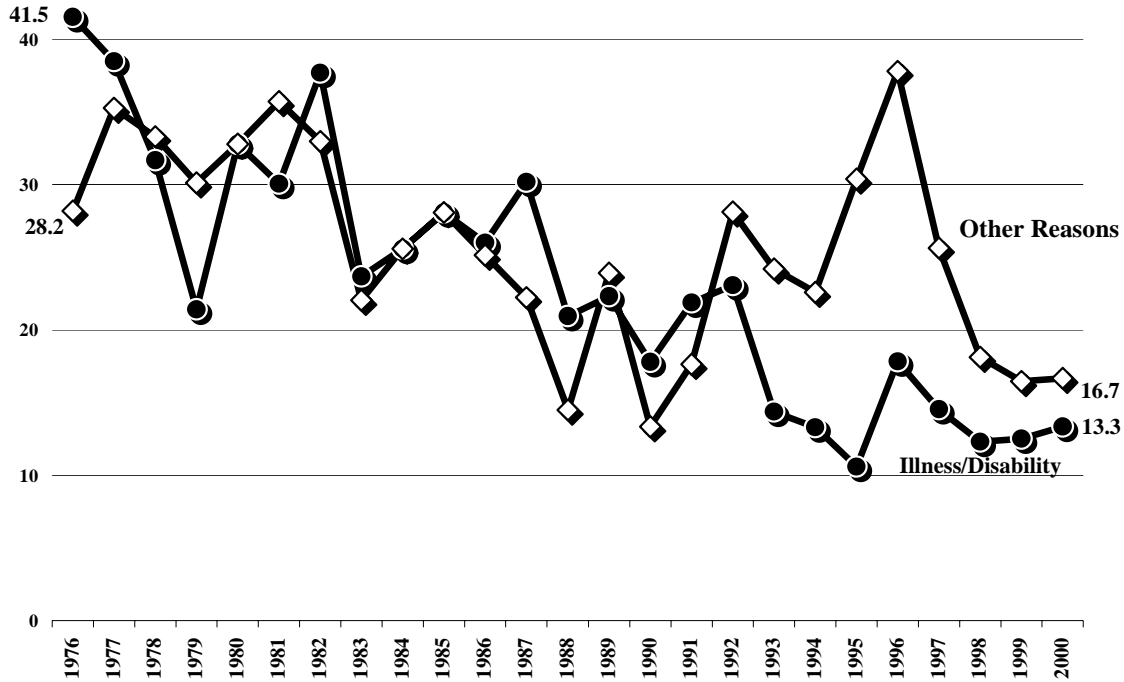
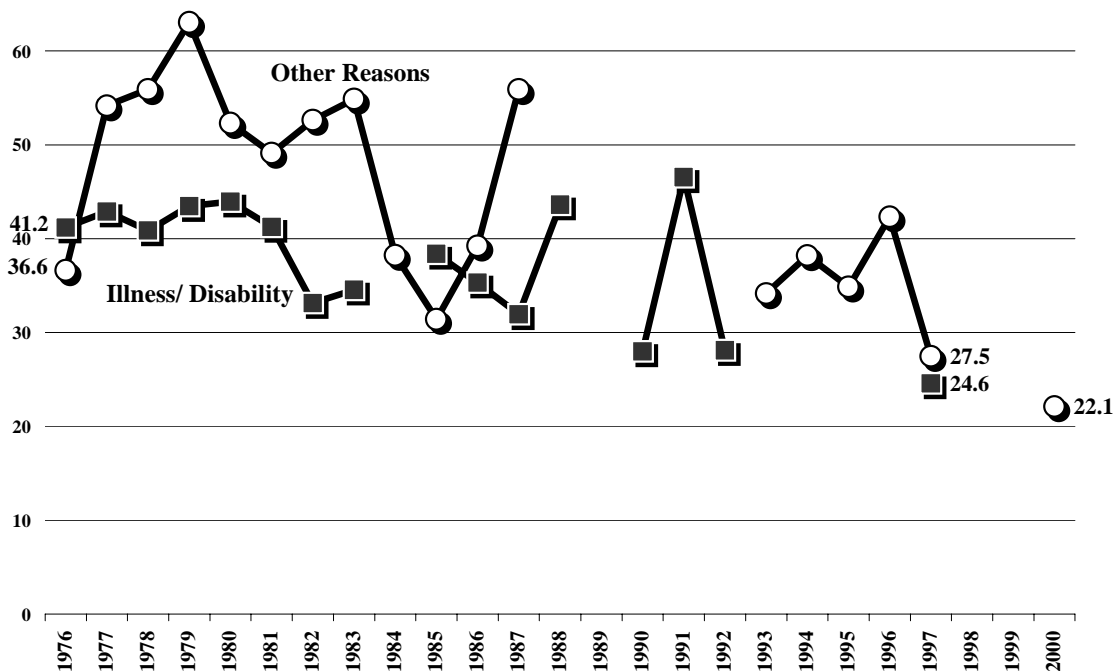


Figure 36: Propensity to be a Job Leaver Who Also Left the Labour Force in Past Year
65 Plus Females, Canada, 1976 to 2000, Number per 1000 in Labour Force

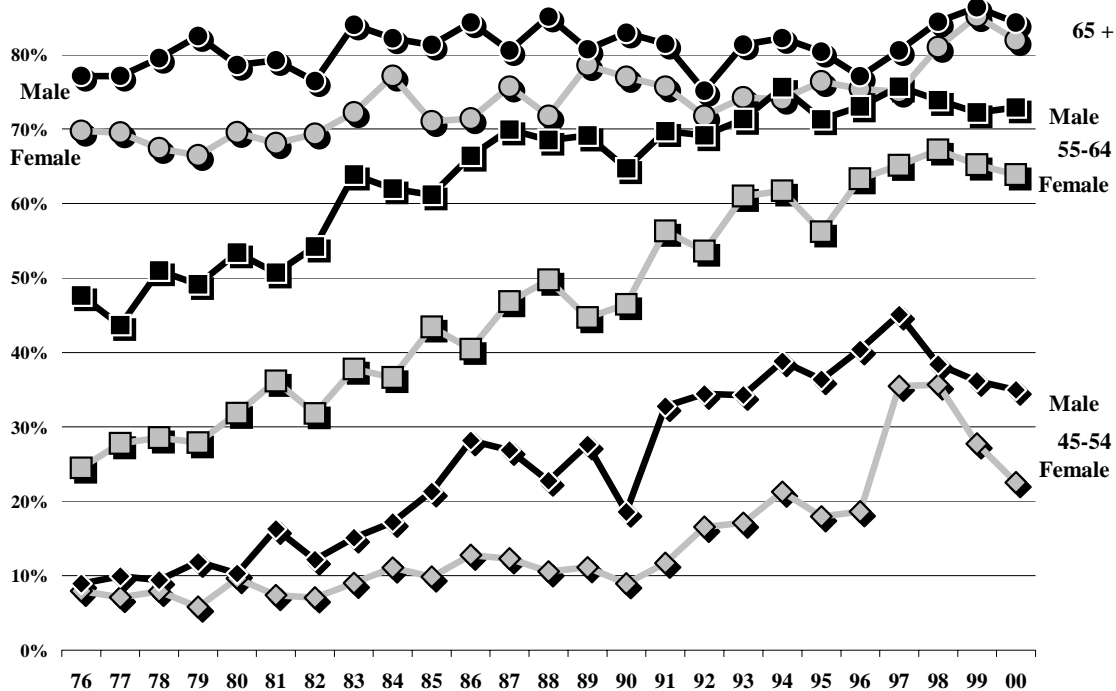


A decline in the propensity to leave the labour force in the 65 plus age group does not mean that people are staying in the labour force longer – the participation rate for males 65 to 69 fell from 24.4% in 1976 to 16.1% in 2000 (from 7.8% to 7.3% for females), and for males in the 70 plus age group from 9.1% to 6.1% (from 2.2% to 1.8% for females) between 1976 and 2000 (page 10)

– but rather that the diminishing percentage of the population that does remain in the labour force to age 65 are less likely to leave it each year than occurred before the increase in the retirement rates of the under 65 population.

The growing importance of retirement in reasons for leaving a job and the labour force is shown in the increases its share of all responses given for leaving the labour force (Figure 37)⁴⁵. In 1976, retirement accounted for less than 10% of the reasons given for leaving the labour force for both males and females in the 45 to 54 age group: by 2000 it accounted for a third of the reasons for males in the age group leaving the labour force, and for almost a quarter of those for women. In the 55 to 64, only a quarter of the women who left the labour force in 1976 gave retirement as a reasons: in 2000 almost two thirds of the women cited this reason: the share for males in the age group increased from just under a half to three quarters over the same period. Seventy percent of the women aged 65 plus, and 78% of the men, who left the labour force in 1976 gave retirement as the reason: by 2000 these had increased to 82%.

Figure 37: Retiring as a Percent of All Reasons for Leaving Labour Force, Canada, 1976-2000



Personal and family reasons declined in importance as a reason for women to leave the labour force over the past twenty-five years (Figure 38)⁴⁶: its minor share of the reasons given by males remained relatively constant. In 1976 50% of the women aged 25 to 44 who left the labour force cited personal or family responsibility reasons: this had dropped to 37% in 2000. An even greater decline occurred for women aged 45 to 54 (which dropped by a half, from a third of the women leaving in 1976 to a sixth by 2000) and women aged 55 to 64 (from 21% of the reasons in 1976 to 5% in 2000). In 1976, 17% of the women aged 15 to 24 left for personal or family responsibility reasons: in 2000 only 10% of the women who left cited this reason. Having noted these declines, it is important to also note that most of the decline for the 25 to 44 age group occurred before 1990, with the share remaining relatively constant since then: the share citing this reason increased for the 15 to 24 age group from 1995 to 2000.

The role of schooling as a reason for leaving the labour force remained relatively constant for males in the 15 to 24 and 25 to 44 age group, but it increased significantly for women in these age

groups (Figure 39)⁴⁷. In 1976, 61% of the women in the 15 to 24 age group who left the labour force cited schooling as the reason, as did 5% of the women in the 25 to 44 age group. By 2000, 74% of the women aged 15 to 24, and 19% of those aged 25 to 44 who left the labour force cited schooling as the reason for leaving both their job and the labour force.

Figure 38: Personal or Family Responsibility as Percentage of All Reasons for Leaving Labour Force, Females, Canada, 1976 to 2000

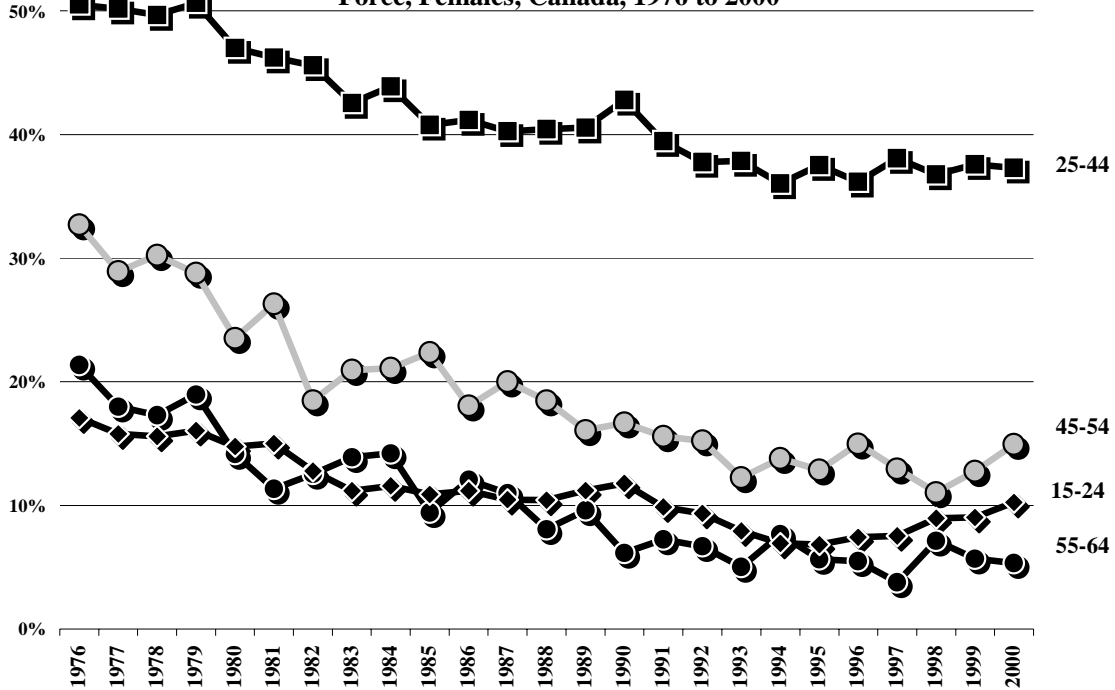
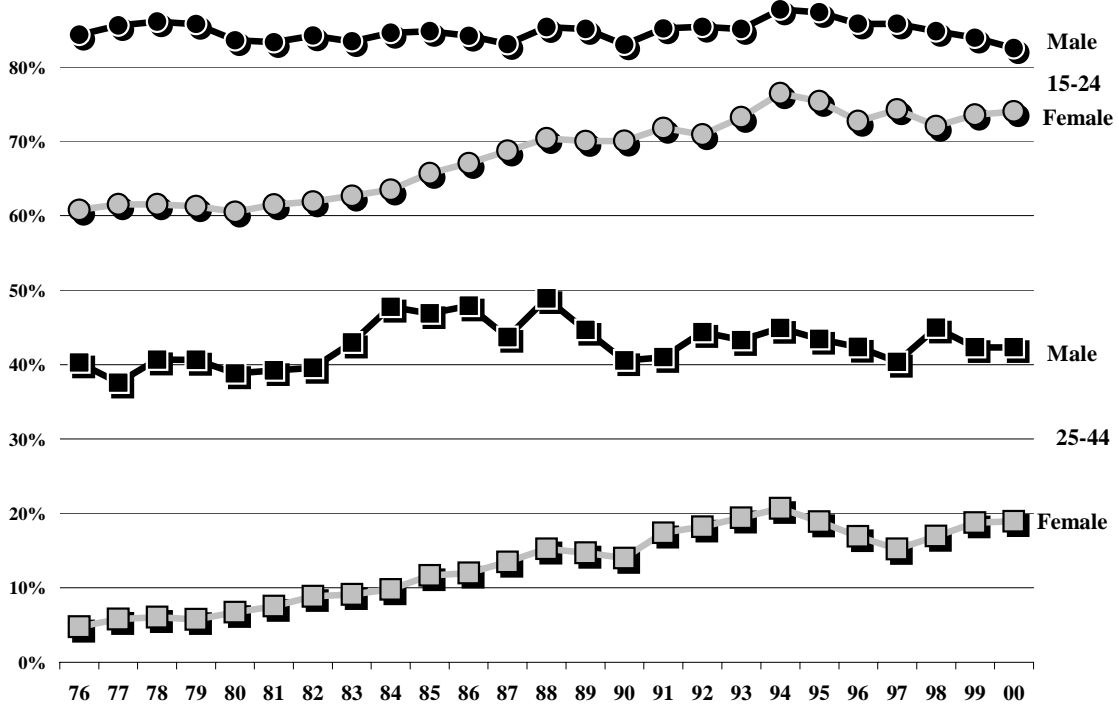


Figure 39: Going to School as a Percent of Reasons for Leaving Labour Force, Canada, 76-2000



d. The Median Age at Retirement: Who is Retiring Early?

The hypothesis that pensions play a significant role in reducing participation in the 45 and older age groups is supported by Labour Force Survey data on the age of retirees by sector, where retired is defined as retiring from a job and not starting another. In 1999, 132,700 people retired, 4,700 (3.5%) who were unemployed and 128,000 (96.5%) who left the labour force.

In 1976, half of the males who retired were under the age of 65.1 and half were at or above this age: in 1999 (the most recent data) half of the males who retired were under 61.8 years of age (Figure 40)⁴⁸. Thus over the past twenty five years there has been a 3.3 year (5%) reduction in the median age at which males retired. A much greater drop in the median age at retirement occurred for women, which fell from half of the female retirees being under the age of 64.8 to half being under the age of 59.8. The median age at retirement for women fell by 5 years (8%) over the past 25 years. The average age for males retiring in 1976 was 65.3 years, while in 1999 it was 61.7 years, 3.6 years (5.5%) younger (Figure 41)⁴⁹. The average age of females retiring in 1976 was 63.9 years: in 1999, the average had dropped to 60.1, for a 3.8 year (5.9%) reduction in the average age of retirement.

The decline in the age at retirement was not uniform across all sectors. There has been no noticeable change in the median age at retirement of people who are self-employed. The median age at retirement for males who were self-employed was 65.0 years in 1999, only 1% lower than the 65.7 median age in 1976. The same 1% decline occurred in the median age of females who were self-employed, which declined from 64.6 years of age in 1976 to 64.1 in 1999.

There was a noticeable decline in the median age at retirement for people who were employed in the private sector, which recorded changes that were reflective of the average for all sectors. In 1976, the median age at retirement for males working in the private sector was 65.1 years, which dropped to by 2.8 years (4%) to 62.3 years by 1999. A much greater decline occurred for women employed in the private sector, where the median age at retirement fell from 64.8 years in 1976 to 60.3 years in 1999, a drop of 4.5 years (7%).

The median age at retirement of people employed in the public sector demonstrated the greatest decline. Half of the males retiring from public sector employment in 1999 were under the age of 57.6 years, 7.3 years (11%) younger than the 64.9 years of age median that prevailed for males employed in the public sector in 1976. The median age at retirement of females employed in the public sector in 2000 was 56.9 years, 7.7 years (12%) younger than the 64.6 years median age that prevailed for females employed in the public sector in 1976.

Sectoral differences in the median age at retirement have become very significant over the past twenty-five years. In 1976, the median age at retirement of males differed by only 1%, from the 65.7 of self-employed males to the 64.9 for males working in the public sector. In 1999, there was a 13% difference – 7.4 years – between the 65.0 median age of male retirees from self-employment and the 57.6 median age of retirees from the public sector. A similar gap has developed for women: in 1976 the age at retirement for women was virtually the same in all sectors, ranging from the 64.6 in the public sector to 64.8 in the private sector. In 1999, there was a 7.2 year (13%) difference between the 56.9 years of age at retirement median for women in the public sector and the 64.1 median for self-employed women.

In 1999, the average age at which a male retired from the labour force was 61.7 and for a female was 60.1. The average age at which a male retired from employment in the public sector was 58.7, from employment in the private sector was 61.7 and from self employment was 65.4: the average age at which a female retired from employment in the public sector was 58.4, from employment in the private sector was 60.7, and from self-employment was 63.9 years of age.

Figure 40: Median Age of People Retiring in 1976 and 1999, by Sector and Sex

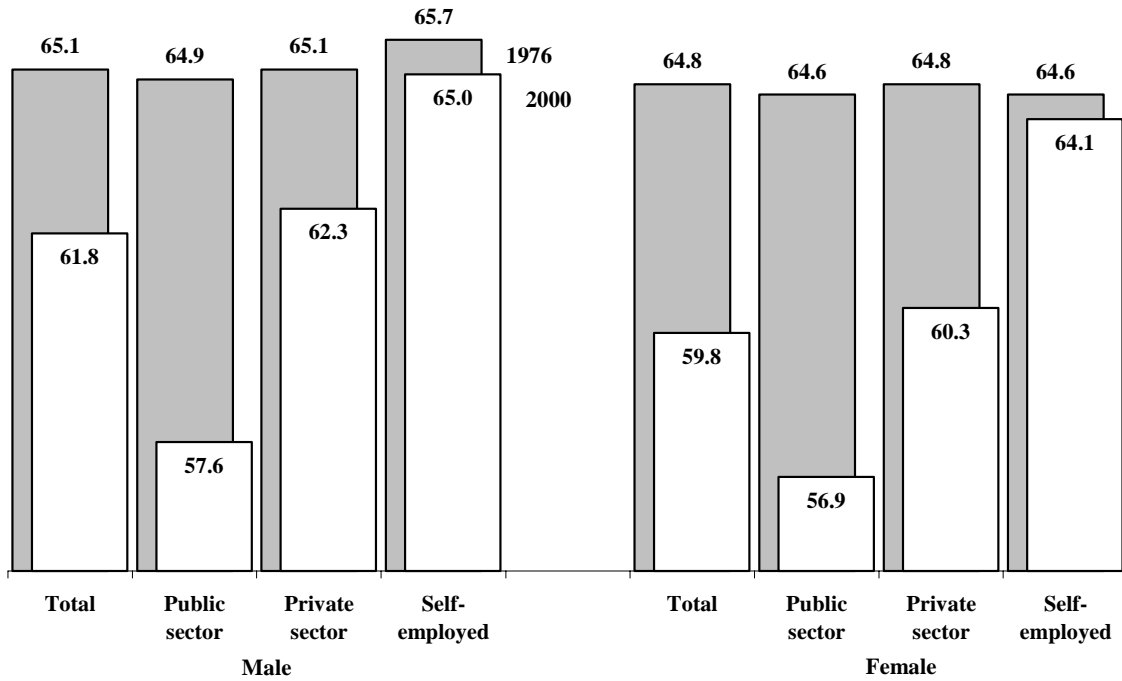


Figure 41: Average Age of People Retiring in 1976 and 1999, by Sector and Sex

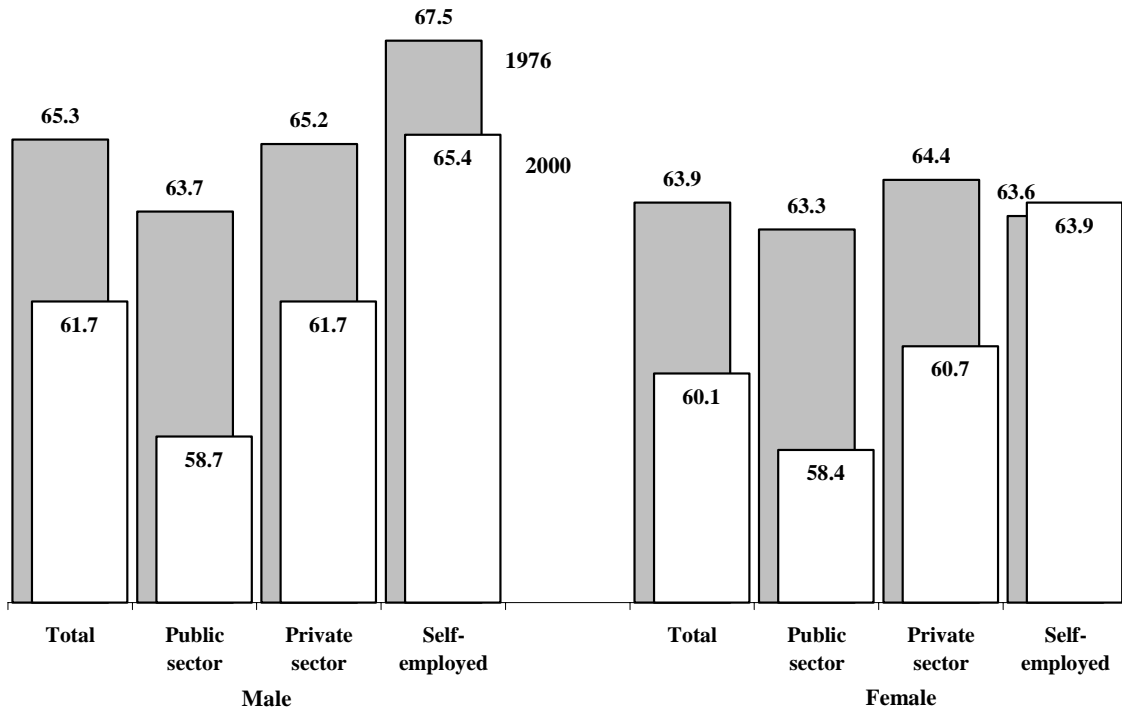


Figure 42: Median Age of Males Retiring by Sector, Canada, 1976 to 1999

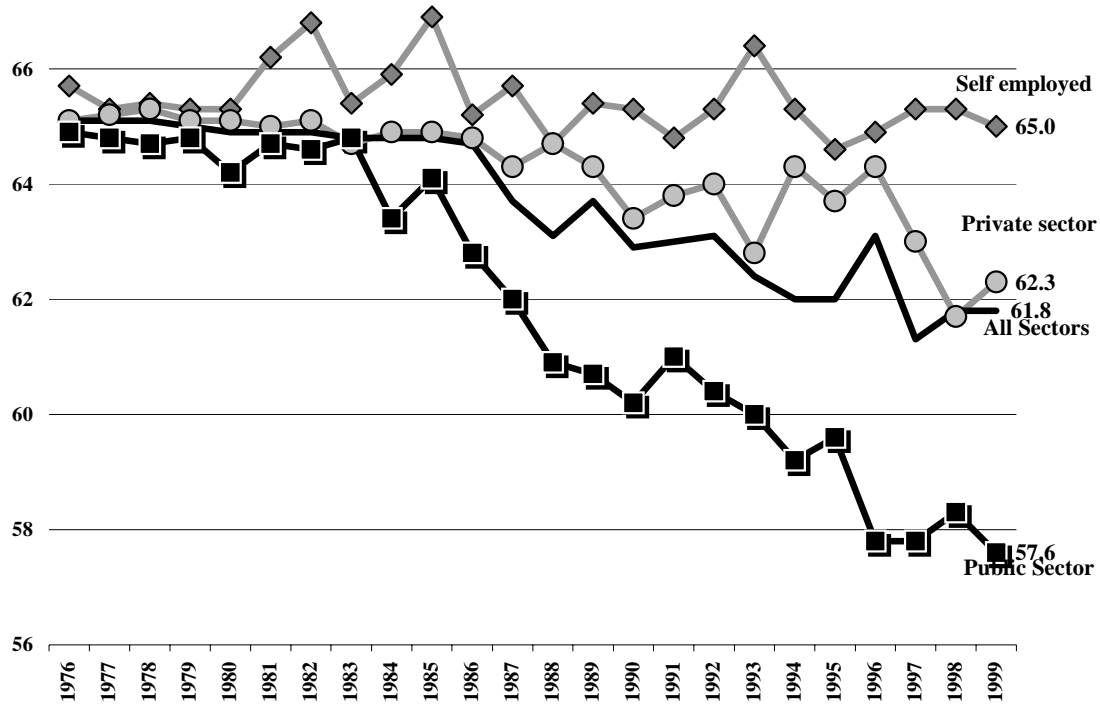
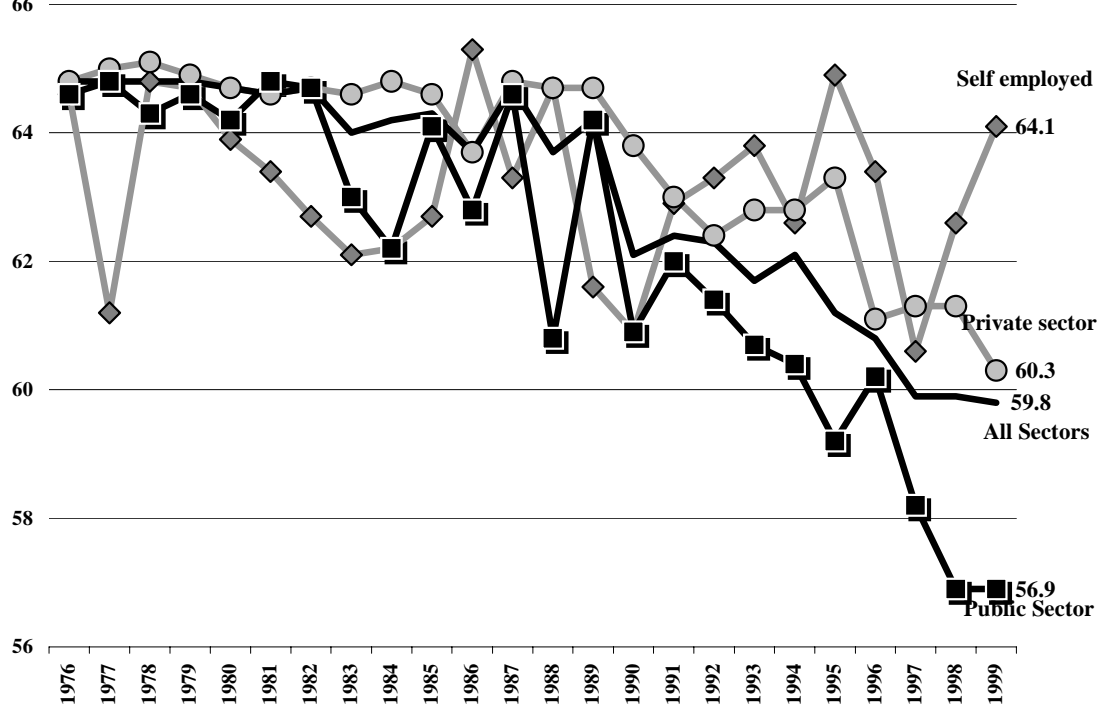


Figure 43: Median Age of Females Retiring by Sector, Canada, 1976 to 1999



The widening gap between the median age at retirement by sector of employment is a continuing process, with 1998 and 1999 representing the lowest median age at retirement from both public and private sector employment during the past 25 years. The median age at retirement for males remained relatively the same for the three sectors from 1976 to 1983: after that, right up to 1999, there was a significant and almost continuous decline in this median (Figure 42)⁵⁰. There was no noticeable change in this median for males employed in the private sector until 1988, when it too began a decline that generally continued up to 1999. The median age of retirement of males from self-employment, while varying somewhat throughout the period, generally moved in a narrow range around 65 years of age. Given the small sample size and the fact that there were fewer females retiring each year, the pattern of change in the median age at retirement demonstrates a greater degree of variance (Figure 43)⁵¹. Nonetheless, the same overall pattern of declining age at retirement was followed, with 1998 and 1999 being the low points on a 15-year downward trend for median age at retirement for females employed in both the public and private sectors.

The data on median age at retirement include only those who retire from a job and do not take up another one (i.e., those who are unemployed labour force participants or those who are not labour force participants). Retirees who take another job are in the (employed) labour force and hence are accounted for in the participation rate, as are those who are unemployed. It may be that some of the people who retire and leave the labour force subsequently return to it: to the extent that this occurs, they are counted as labour force participants, and hence will also show up in the labour force participation rate. The fact that the labour force participation rates remained generally constant in the 1990s while the propensity to retire from the labour force and the number of people not in the labour force and not seeking work increased indicates that most retirees who leave the labour force stay out of it. The data also indicate that retirees who wanted employment but were not able to find it were at a minimum over the past 5 years, as unemployed retirees accounted for a declining share of the population of retirees: in the late 1970s, an average of .15% of the people who retired and were not working were seeking work (i.e., unemployed); in the early 1980s this climbed to 8.9%; in the late 1980s it dropped to 5.6%; in the early 1990s to 5.3%; and in the late 1990s 3.2% of the retirees were seeking work and 96.7% had left the labour force. The propensities to retire and leave the labour force, therefore, are a reasonable measure of people's desire to hang up the skates.

V. Projected Labour Force Participation Rates

The foregoing exploration of the population not in the labour force provides a great deal of information on what may occur in the future with labour force participation rates. Male age specific labour force participation rates declined continuously over the 1951 to 1996 period, with Labour Force Survey data indicating a slight increase in the 1996 to 2000 period. A projection of future rates based solely on these long term trends would generate a constant to declining pattern.

The last decade's general stability in the propensity to leave the labour force for reasons other than retirement, the increase in the propensity to retire in the 45 to 64 age groups, and the continuing decline in the median age at retirement for both public and private sectors, all in the face of a 40% decline in unemployment rates (from 12% to 6.9%), supports a hypothesis that the 2000 age specific labour force participation rates for males will prevail in the future. Certainly there will be year-to-year variations based on labour market conditions, but the 2000 rates can reasonably be assumed to represent the long-term average rates that may be anticipated in the future. Given the long period of decline in unemployment rates up to 2000 and the widespread prevalence of employment pension in both the public and private sector, this may err on the high side, as it does not project the continuance of the 1951 to 1996 declines.

In the case of female age specific rates, the 1951 to 1991 period was one of continuous increases, with 1991 to 1996 indicating the end of this trend, as rates declined or did not increase noticeably between 1991 and 1996. To some extent the end of the increases was presaged in earlier time periods, as the growth in female age specific participation rates was greatest in the 1971 to 1981 period, with smaller growth recorded in the 1981 to 1991 period. The Labour Force Survey data indicate a return to female age specific labour force participation rates increasing at a slowing rate from 1996 to 2000. A mathematical projection of these trends into the future would be for continued slowing growth in participation rates to reach a plateau within the next one to two decades: mathematically, the greatest increases would be in the 50 plus age groups, as the rates in the younger age groups already appear to have attained their plateaus.

Life style data, with one exception, generally support the mathematics of increase at a decreasing rate. Throughout most of the 1990s, after more than a decade and a half of significant decline, the propensity for women to leave the labour force for personal or family responsibility reasons was general stable, as was the propensity to leave it for reasons of illness and disability. The propensity for women to retire from the labour force increased over this period, and the median age at which women retired from both the public and private sectors declined significantly. The exception is comes for the change in the EI regulations, effective in 2001, that allow women who give birth to a child during a year to claim EI benefits for 12 months, rather than the 6 month maximum that prevailed up to then. To the extent that this increases the period of time that women who have children are out of the labour force, it will directly push down participation rates in the childbearing age groups, as it will indirectly to the extent that it permits women to have children earlier than they otherwise would have. To the extent that this change may also increase the number of women who decide to stay out of the labour force permanently, it will push down participation rates in older age groups. While only time, and more data, will tell the extent to which these reductions occur, there is nothing in this change that will cause participation rates to increase.

In projection of future age specific labour force participation rates for women, it is necessary to balance the mathematical trend of diminishing increases with the stability of the propensity to leave the labour force (which argues for constant rates) and the EI changes (which argue for declining rates). Guidance in this regard comes from examining the trends in female age specific labour force participation rates as a percentage of the rates for males in the same age groups (Figure 44⁵²). While the narrowing of the gap between male and female rates is obvious from this chart, so too is that fact that the narrowing has not occurred in all age groups nor has it occurred at the same rate over the period. The rates for males and females in the 15 to 19 age group were identical in 2000, and there is no reason to presume that this will not continue.

The rate for females in the 20 to 24 age group, having increased from 80% of that for males of the same age in 1976 to 92% of the male rate in 1990, did not increase thereafter. Similarly the rates for women aged 25 to 49 increased significantly from between 53% (30 to 34) and 60% (25 to 29) of male rates in the corresponding age groups to being between 79% (45 to 49) and 84% (25 to 29) of male rates in 1990: while the gap continued to narrow in 1990s, it was at much slower pace, reaching between 86% (30 to 34) and 88% (25 to 29) of the corresponding male rates.

In the 25 to 49 age groups, female labour participation rates were an average of 87% of the male rates in 2000. On a trend basis, these lines would plateau at approximately 90% of male rates, which corresponds nicely with the fact that approximately 10% of the women in the 25 to 34 age group give birth to a child in a year. The extension of the EI claim period to a year will have its greatest impact in these age groups, and will push the rates down. Balancing this change with the diminishing narrowing trend, it is reasonable to assume that the age specific labour force for women in age groups between 15 and 49 rates will generally remain at their 2000 level.

Figure 44: Female Age Specific Participation Rates as a Percent of Male Rates, Canada, 1976 to 2000

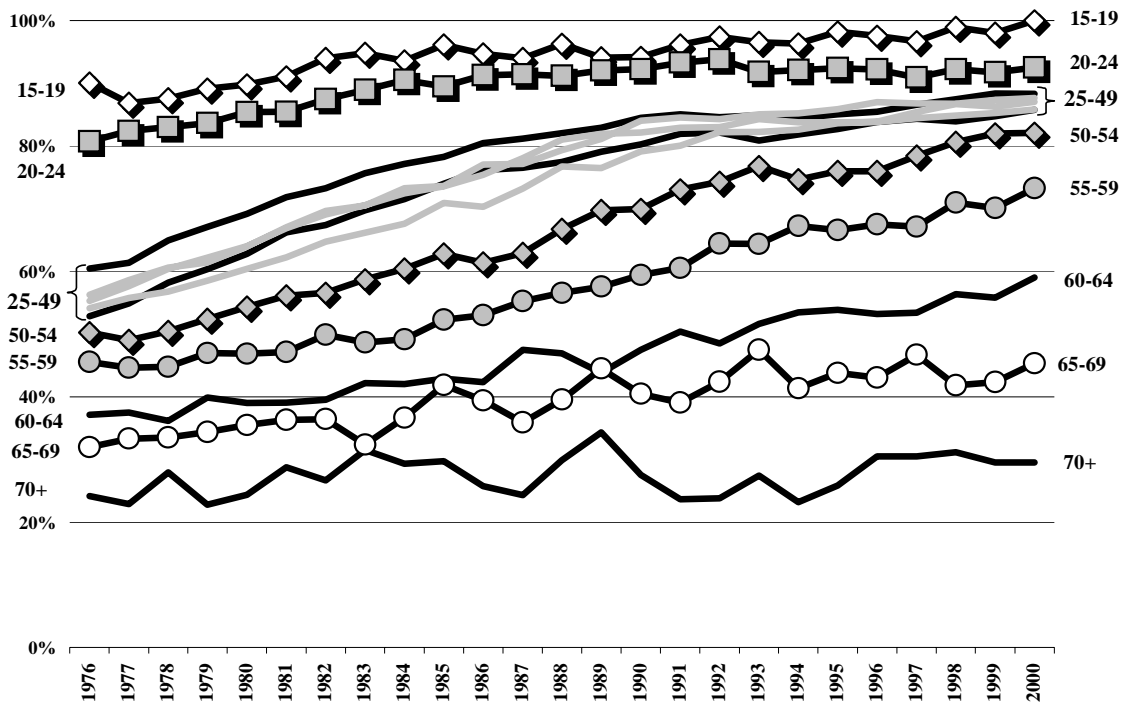
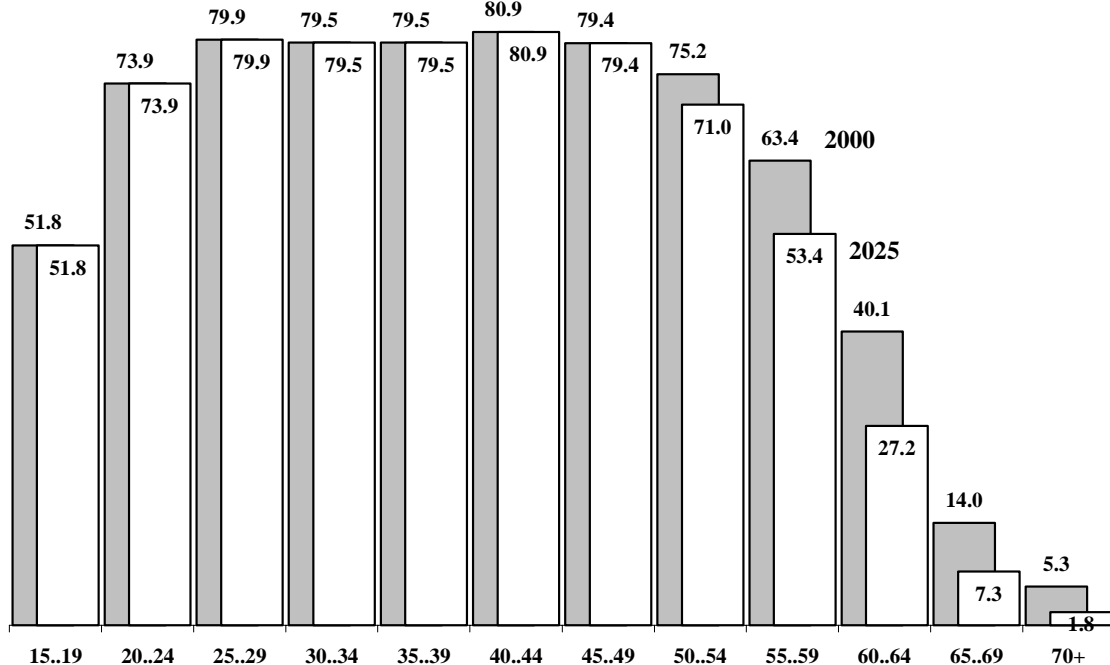


Figure 45: Female Age Specific Labour Force Participation Rates, Canada
2000 Actual and Projected 2025



It is not reasonable to make this assumption for the over 50 age groups. To anticipate what might happen in the future in these age groups, it is informative to examine the historical data in a generation context. In 1976, the front half of the baby boom generation was aged 20 to 29 and the bigger second half was aged 9 to 19; in 1996, the front half was aged 40 to 49 and the second

half was aged 29 to 39. Historically, by the time the second half had reached an age group, the labour force participation rate for the age group had reached the range of 85% to 88% of male rates in the same age group. Thus it was during the period that the front half of the baby boom generation reached an age group that the most rapid change in age specific labour force participation occurred. Assuming that the baby boom and subsequent generations continue to carry their high labour force participation rates with them, it is possible to argue that the major increases are yet to occur in the 50 and older age groups.

To use this information in projection of participation rates for women in the 50 plus age groups, it is assumed that female labour force participation rates in these age groups will reach the 87% average of the male rates that prevailed in the 25 to 49 age groups in 2000 by the time the second half of the baby boom generation reaches the age group. This means that by 2010, the labour force participation rate for women aged 50 to 54 will have increased to 75.2% (from its current 71.0%), by 2010 the rate for the 55 to 59 age group to 63.4% (from 53.4%), by 2020 the rate for the 60 to 64 age group to 40.1% (from 27.2%), and by 2025 the rate for the 65 to 69 age group to 14.0% from 7.3% and the rate for the 70 plus age group will have increased to 5.3% from its current 1.0%. Figure 45⁵³ shows the female age specific labour force participation rates that are projected for the time that the front half of the baby boom generation has had its 70th birthday.

This means female labour force participation will increase by between 6% (50 to 54 age group) and 190% (70 plus) before stabilizing. This assumption of increased participation must be put in the context of the increased propensity of people to retire and the fact that while life expectancies are increasing, life spans are not: retirement is, for most people, a goal, and it is hard to argue that, without increased life spans, most people will forego retirement if they have a choice. The projection of increasing participation for females may overstate the size of future labour supply.

VI. Projected Labour Force

These age and sex specific labour force participation rates can be combined with an age and sex specific population projection to describe the future size and composition of Canada's labour supply. The picture that such a labour force projection presents is one of increasing labour shortages, as it shows a population that continues to increase and a labour force that does not.

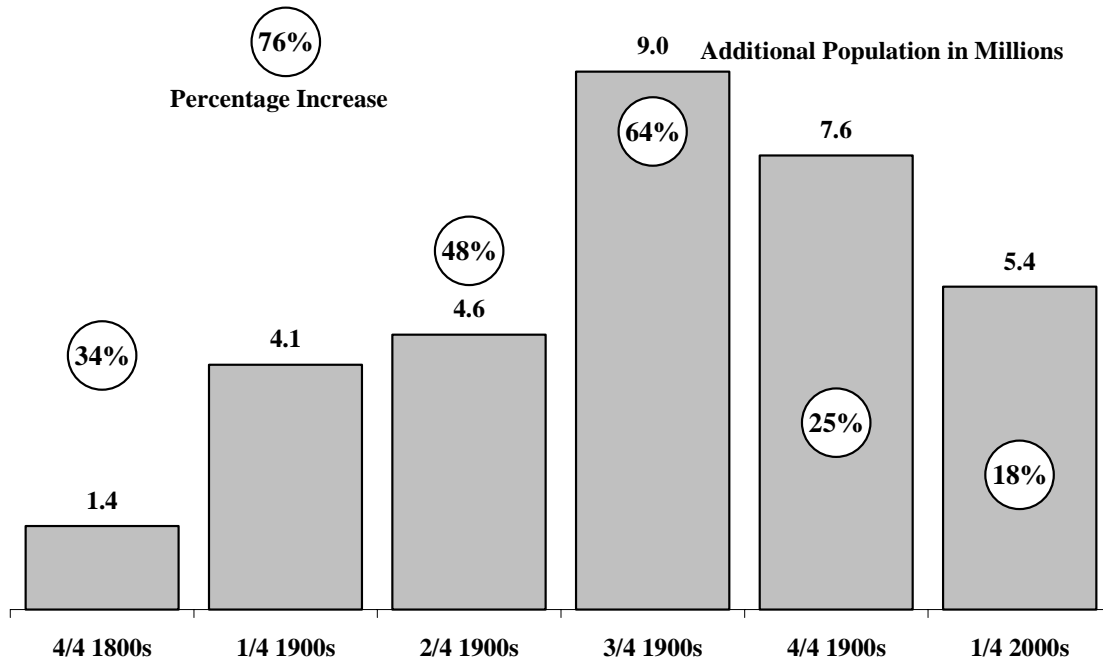
a. The Population Projection

The population projection used here as a component in the labour force projection is from Statistics Canada's recently released Population Projections For Canada, Provinces, and Territories, 2000 to 2026⁵⁴. Readers interested in the specific details of the assumptions, the projections and the projection methodology are referred to the cited publication: the general character of the projections and the assumption are summarized here to provide the context for the labour force projection presented in the next section.

The population projection selected for use in this labour force projection is the medium growth projection. This population change scenario might be called a Goldilocks scenario, as it involves assumptions about future birth, death and immigration rates that are neither high nor low. It assumes that life expectancy will increase by 4.5%, compared to the high growth scenario's assumption of a 6% increase and the low growth scenario's assumption of a 3% increase. It also assumes that fertility rates will decline by 5%, compared to the high growth scenario's assumption of an increase of 15% and the low growth scenario's assumption of a 17% decline. In the case of immigration, it assumes that future immigration of 225,000 persons per year (the 1992 to 1997 average) rather than the 270,000 used in the high growth projection (about the same as the 1992 rate) or 180,000 per year used in the low growth projection (the average of 1997 and 1998 immigration).

The medium growth scenario is really a slow growth scenario, as its projected population for 2026 of 36,190,000 people in Canada would involve the smallest quarter century rate of increase in Canada’s history and the smallest net increase in population in the post world war two period (Figure 46)⁵⁵. The 18% increase in population projected for the next quarter century, from 2000’s population of 30,750,000 to 36,045,000 in 2025, is less than a third of the 64% growth of the 1951 to 1976 period, and the 5.4 million projected net increase is less than two thirds of the 9.0 million person increase that the country experienced in the ¾ of the past century (i.e., 1951 to 1976). [Even the high growth projection, to a population of 38,587,000 in 2026 would involve a growth rate and increment in population that only equaled that of the last quarter of the 20th century, and hence, in the historical context, involved relative slow growth].

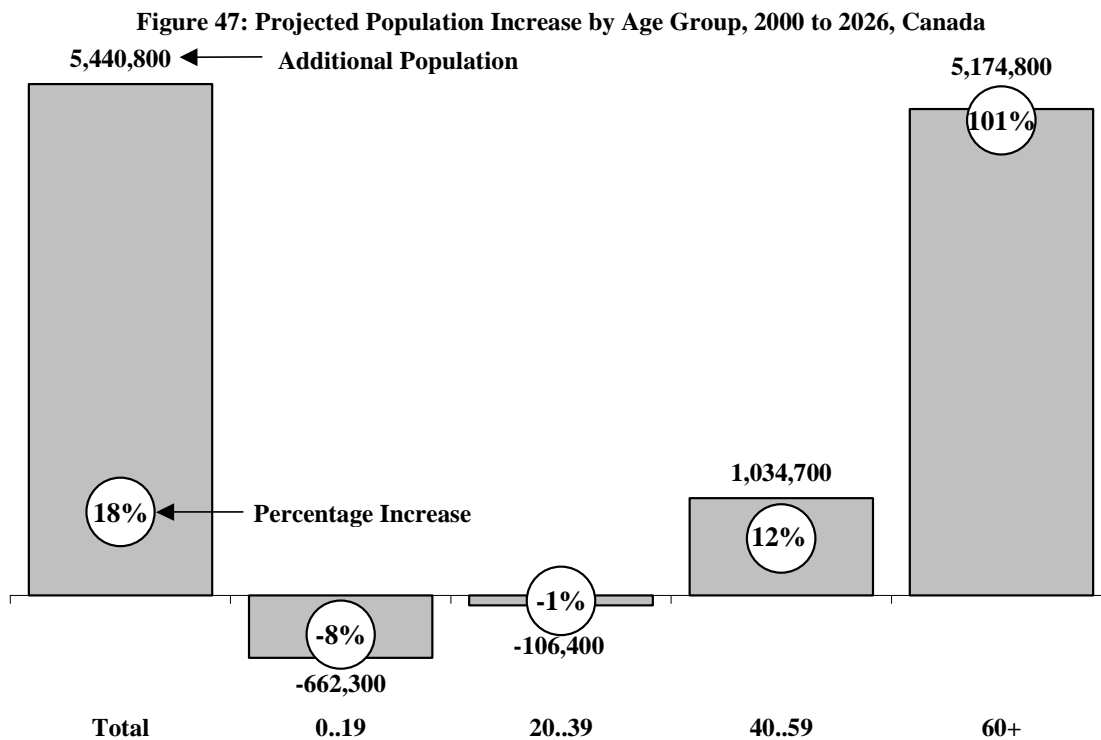
Figure 46: Historical and Projected Population Increase for Canada by Quarter Century



While a slow growth projection in first quarter of this century, the medium growth projection is a no-growth scenario in the long term. Under the assumptions of fertility, mortality and net immigration used in the medium growth scenario, Canada’s population would stop increasing and start declining by 2041.

Slow growth and ultimately no-growth does not mean no-change: given Canada’s current demographics, the medium growth projection is for a rapidly aging population. For purposes of presentation, the population can be grouped into 20-year “stage of the life cycle” categories: 0 to 19 years of age for schooling, 20 to 39 years of age for establishing families and careers, 40 to 59 years of age building for retirement, and 60 plus for retirement. Examining the population projection according to these categories (Figure 47)⁵⁶ shows that 95% of the net growth in Canada’s population between 2000 and 2026 will be in the retirement stage of the life cycle. The projected 18% increase of 5,441,000 people from 2000’s 30,750,000 to 2026’s 36,190,000 would be the net result of a 101% (5,175,000 person) increase in the number of people 60 plus, a 12% (1,035,000 person) increase in the population aged 40 to 59, offset by a 1% (106,000 person) decrease in the 20 to 39 age group and a 8% (662,000 person) decrease in the number of people age 0 to 19.

[The life cycle grouping, by imposing boundaries on age groups, does not precisely capture the projected changes in age composition. The number of people in every age group under the age of 26 is projected to be smaller in 2026 than it is today: in total these age groups will decline by 791,000 people (8%). The number of people in every age group from 26 to 34 will increase, for a total increase in the number of people of these ages of 213,000 (5%), while the number of people in every age group from 35 to 45 will decline, for a total decline in the number of 35 to 45 year olds of 331,000 (6%). The number of people in every age from 46 to 64 will increase, for a total increase in the number of 46 to 64 year olds of 37% (2,460,000 people). The number of people of every age in the 65 plus age group will also increase, for a total increase of 3,890,000 people (101%) 65 and older.]

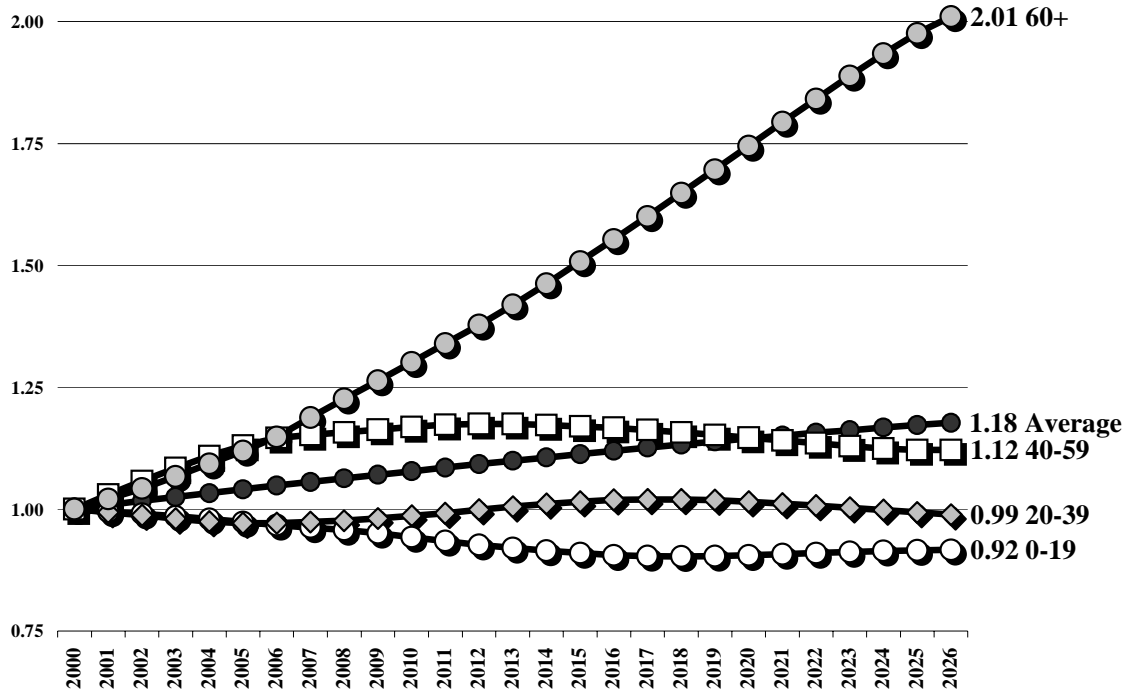


Where are all of the 60 plus people going to come from?: from the aging of front half of the post war baby boom population that is currently aged 54 to 45. Where are all the 40 to 59 year olds going to come from?: from the aging of the bulge of the baby boom, currently aged 35 to 44. Projection of the future size of the 40 plus population relatively straight forward, as it relies almost entirely on projection of the mortality rates for the people already in the population: the most likely bias would be to under-estimate the effect of medical technology reducing mortality, and hence under-estimating the future size of the older population.

Projection of the size of the future population under the age of 40 is more complex, as it involves not only projection of fertility rates but also of net migration. Given historical and international trends, the most likely bias in the assumption of trends in fertility rates is to under-estimate their decline, and hence to over-estimate the size of the under 40 population. Net immigration's near term effect is on the under 40 population, as 70% of the immigrants to Canada are under the age of 35. The assumption of 225,000 immigrants per year is reasonable based on the experience of the past decade: the effect on the immigration rate of future labour markets conditions not only in Canada, but in the United States and Europe as well, means that there will be much more variance to this component of population change than in the natality and mortality components.

The projected pattern of change in the number of people in life cycle age groups over the next century is quite consistent (Figure 48)⁵⁷. In 2026 there will be 2.01 people 60 years of age and older for every one there is in Canada today (a 101% increase): this increase will follow a relative straight path over the period. The number of people aged 40 to 59 will increase during the next decade, with their being 1.17 people of this age in the population in 2010 for every one there is today (the result of the aging of the second half of the baby boom into the 40 to 59 age group) and then it will slowly decline to be 12% above today's level by 2026 (the decline is the result of the first half of the baby boom generation aging out of this age group and into the 60 plus age group).

Figure 48: Projected Change in Population, by Age Groups, Canada, 2000 to 2026, 2000=1.00



The 20 to 39 age group will generally remain at its current size throughout the next twenty five years, dropping slightly over the next 7 years to 3% below its current size as the last of the boomers age out of it, then growing to be 2% above its current size by 2020, and then declining back to its current size by 2026. The number of people under the age of 20 will decline throughout most of the next twenty years, falling to 90% of its current size by 2020, and then increase slightly to end the period at 92% of its current level.

By 2013, for the first time in Canada's history, the number of people 60 plus will be greater than the number under the age of 20. The implications of this shift on markets will be significant: solely on a demographic basis, there will be an 8% decline in the demand for goods and services oriented to the under 20 population, but a 101% increase in the demand for goods and services for the over 65 population.

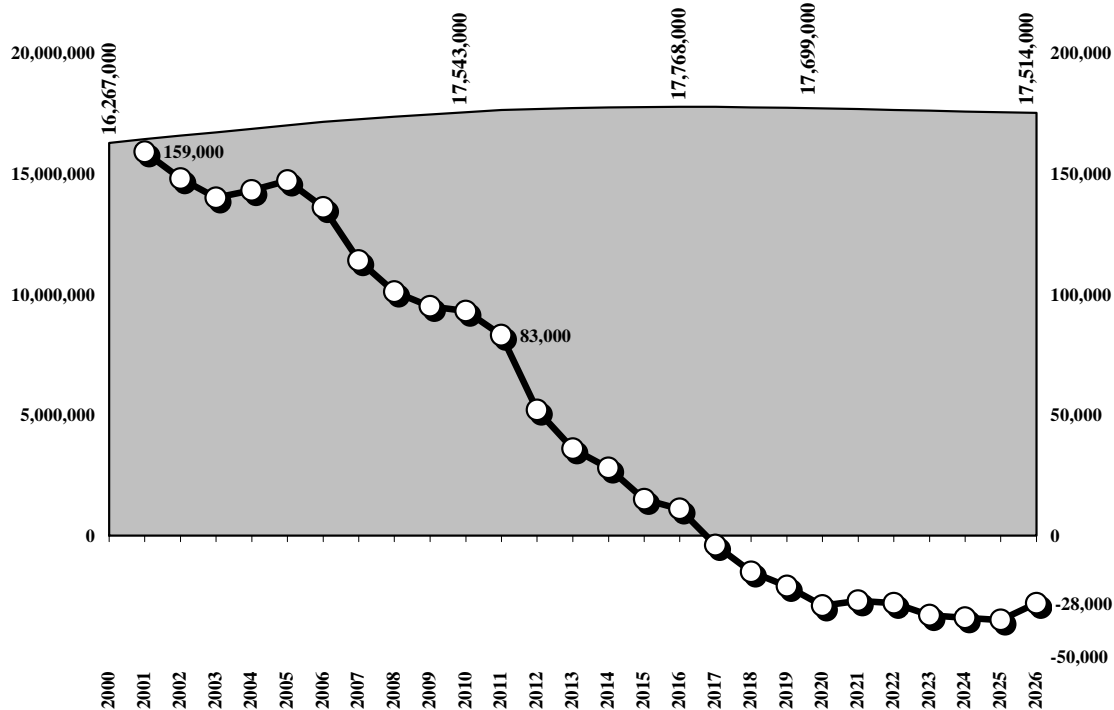
b. The Labour Force Projection.

The impacts of this demographic shift, combined with future trends in labour force participation, on labour supply can be shown in two labour force projections presented here. The first is a baseline projection assuming that age specific labour force participation rates for both males and females remain at their 2000 level, as shown on Figure 2 (Page 5). There are two reasons for considering this scenario: first, it shows the effects of demographic change on the labour force of

the future in isolation, as the only factors determining change come from the population projection, and second, it does not include the assumption made about behavioural change, in terms of increasing labour force participation rates for women aged 50 plus. The second labour force projection scenario includes the projected changes in these labour force participation rates: it shows the extent to which increasing participation rates in the high growth age groups might increase labour supply.

The **constant rate scenario** would lead to a situation where the labour force will stop growing within the next decade and a half. If male and female labour force participation rates remain at their 2000 level, the labour force will grow from its current 16,267,000 workers to 17,768,000 in 2017, and then decline to 17,514,000 by 2026 (Figure 49)⁵⁸. Over the entire period, the labour force would grow by 7.6% (1,247,000 people), with its peak size in 2017 being 9% above its 2000 size. This slowing growth will be the result of an ever declining number of people entering the labour force each year: with constant participation rates the labour force will add 159,000 workers between 2000 and 2001, only half this number (83,000 additional workers) between 2010 and 2011, and none by 2017. The labour force will decline by an average of 25,000 people per year between 2017 and 2026.

Figure 49: Projected Labour Force, Constant Participation Rates, Canada, 2000 to 2026



The 1,247,000 person (8%) increase in the labour force between 2000 and 2026 will be entirely the result of the increase in the number of people in the labour force who are 45 years of age or older (figure 50)⁵⁹. The number of people 60 plus in the labour force would increase by 719,000 (a 105% increase), with this age group increasing from 4% of the labour supply in 2000 to 8% in 2026. The 45 to 59 age group will also increase as a portion of the labour force, moving up from 28% of the current labour force to 31% of the 2026 labour force as a result of the 814,000 person (18%) increase in labour force participants of this age. The number of labour force participants between the ages of 15 and 29 will decline by 154,000 people (3%) and between the ages of 30 and 44 by 133,000 people (2%), with their share of the labour force declining from 27% to 25% and 40% to 37% respectively. A much older labour force will be the result, with the 45 and older population increasing from 32% of the labour force to 39% over the next quarter century.

Figure 50: Projected Labour Force Increase by Age Group, Constant Participation Rates
2000 to 2026, Canada

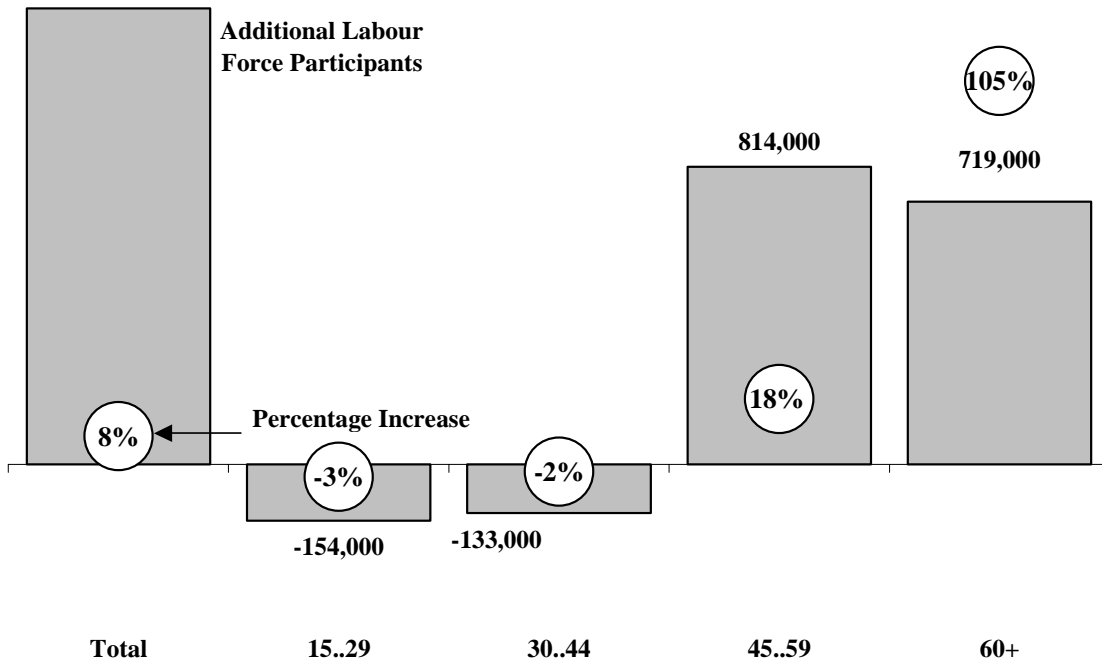
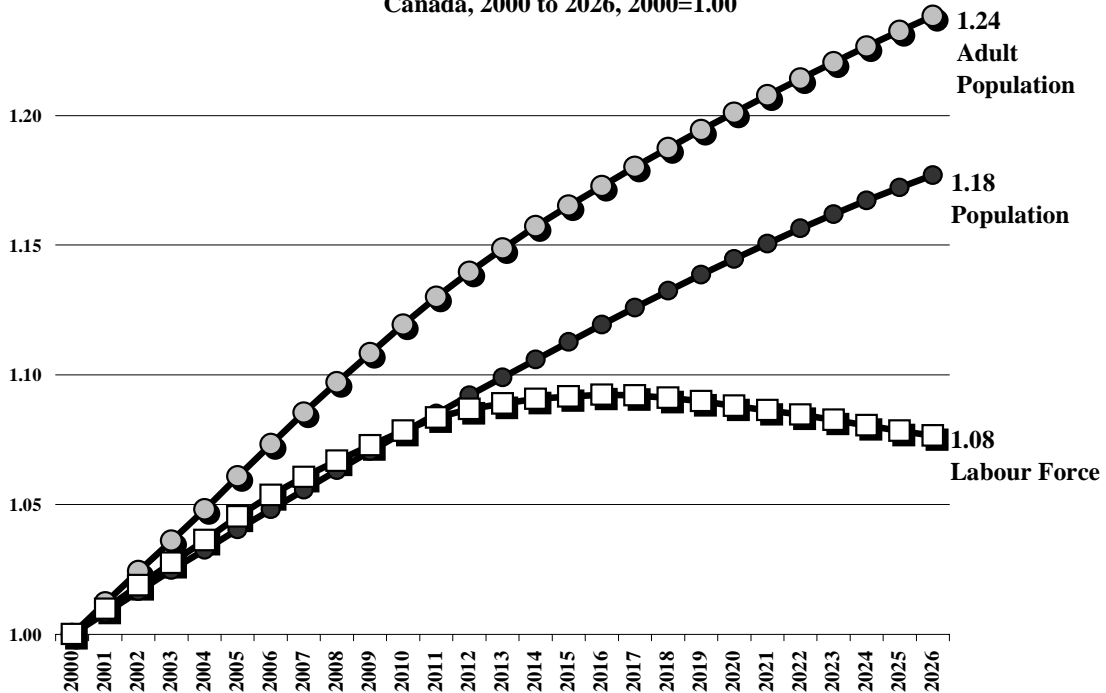


Figure 51: Projected Change in Population and the Labour Force, Constant Participation
Canada, 2000 to 2026, 2000=1.00

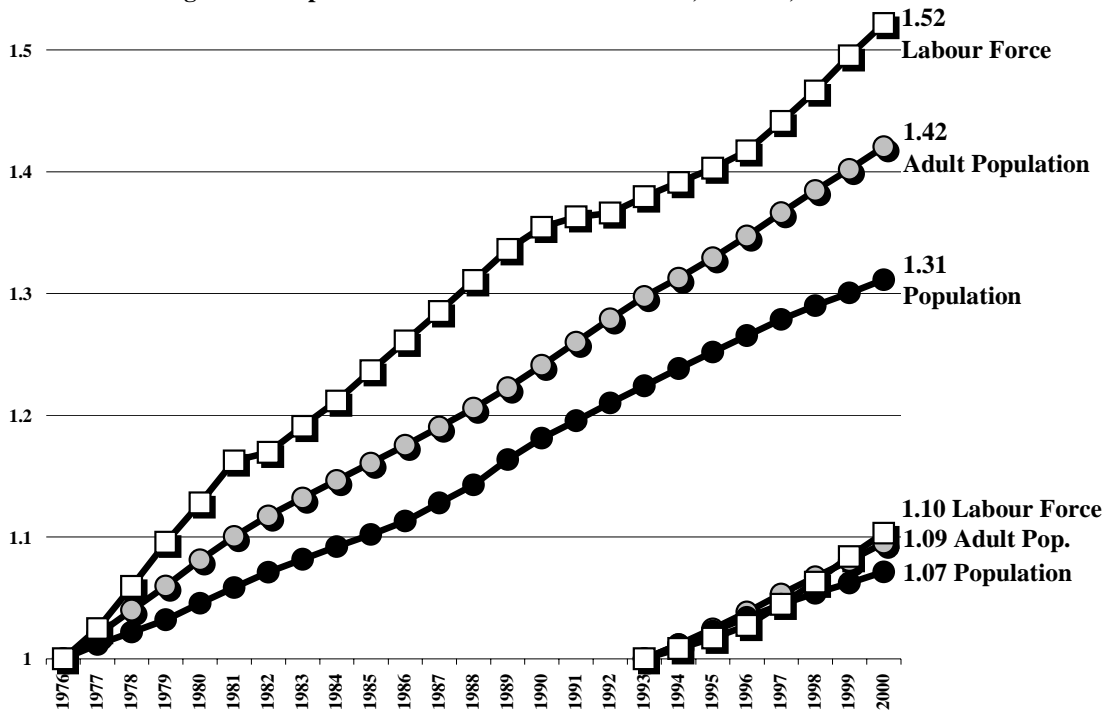


The constant participation rate scenario would result in an 8% increase in the labour force for a population that is projected to grow by 18%, and an adult population that is projected to increase by 24% (Figure 51)⁶⁰. The constant rate scenario generates a labour force that grows at the same rate as the population from 2000 to 2010, and then consistently grows at a rate that is much

slower than population growth until 2017, and final declines while the population continues to increase until 2026. Further, this pattern of slow growth, no growth and finally decline in the size of Canada's labour force would occur in the context of a rapidly increasing adult population.

To the extent that the demand for labour – a product of the demand for goods and services – is a function of the size of the population in Canada, labour force growth should, over the long term, match population growth. To the extent that the economy shifts to the service-producing sector and to increasing labour intensive value added production of goods and services, and to the extent it responds to increasing net demand for exports, the labour force should increase faster than the population. It did so over both the past quarter century: between 1976 and 2000, Canada's labour force increased by 52%, its adult population increased by 42%, and its population by 31% (Figure 52)⁶¹: even with the labour force growing 70% faster than the population over this period, the unemployment rate in 2000 was 6.8%, essentially equal to 1976's 7.0%. The unemployment rate dropped from 11.4% in 1993 to 6.8% in 2000: the labour force still grew faster than the population over this period, increasing by 10%, while the population increased by 7% and the adult population by 9%.

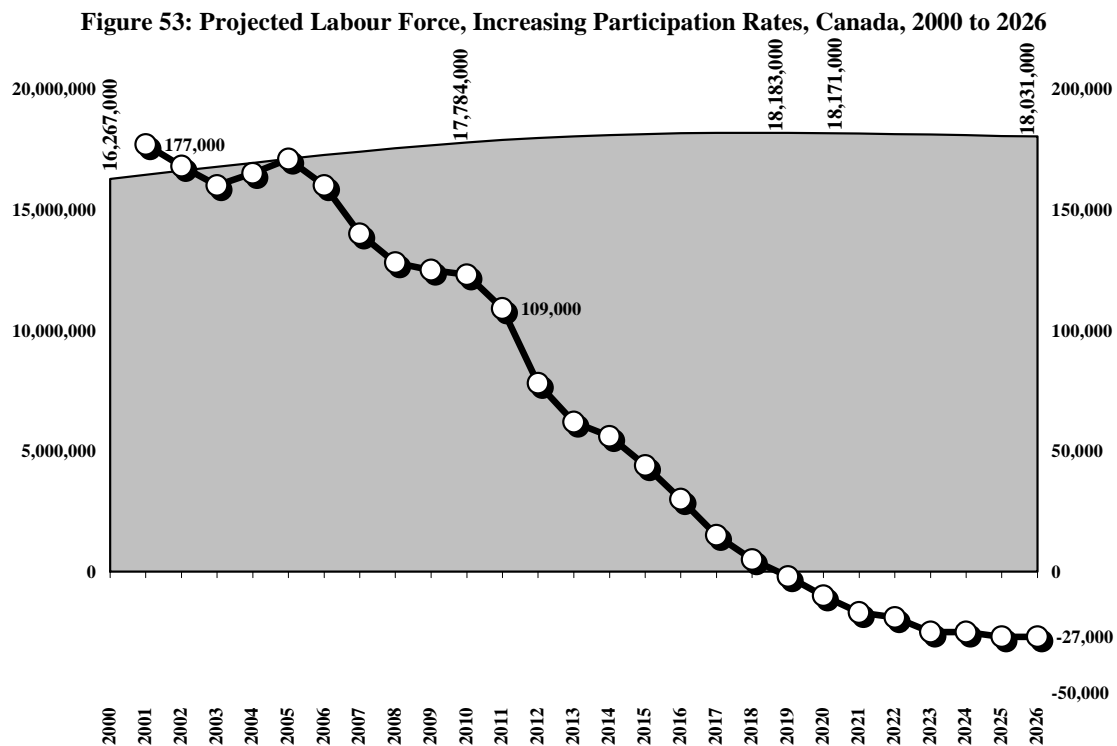
Figure 52: Population and Labour Force Growth, Canada, 1976 to 2000



It is hard to conceive of a set of circumstances where, over a long period of time, the labour force could grow slower than the population: it would require declining labour requirements to meet growing domestic demand. With the population aged 65 plus doubling over the next twenty-five years, it is hard to imagine a declining per capita demand for nurses and other health care providers. Some of the labour supply in sectors that are driven by rapidly growing life cycle groups might come from sectors where life cycle groups are declining in size – some nurses might otherwise have been school teachers. However, the decline in the size of younger age groups, for example the 8% decline projected for the 0 to 19 age group, is not sufficient to offset the increase demand in other sectors as a result of increasing populations in other stage of the life cycle. Much will have to change in the labour force in order to accommodate the projected decline in Canada's under 45 population and the rapid growth in the 45 plus population.

One of these changes will be increases in labour force participation rates, which leads to the second labour force projection, the **increasing labour force participation rate** scenario. In this scenario, male labour force participation rates, and, as was discussed in section V (pages 41 to 44) participation rates for females under the age of 50 are held constant at their 2000 level, while rates for women aged 50 and older are increased to reach 87% of the rates for males in the corresponding age groups by the time that the second half of the baby boom generation reach the age group. The participation rates that would prevail in 2026 under this scenario are those shown on Figure 45 (Page 43).

The increase in female labour force participation would not change the general picture, but rather would merely bring about marginal change in magnitude and timing (Figure 53)⁶². The labour force would still increase at a diminishing rate and increment, reaching a peak size of 18,183,000 in 2018 (12% larger than today) before declining to 18,031,000 in 2026 (11% larger than today). The annual growth in the labour force would decline from the additional 177,000 participants of 2000 to 2001 to an increment of 109,000 participants between 2010 to 2011, to no net growth in the size of the labour force between 2018 and 2019: from 2019 to 2026, the labour force would shrink by an average of 19,000 fewer workers per year.



Projection of continuing increases in the female age specific labour force participation rates in the 50 and older population will increase the rate of growth and share of the older labour force (Figure 54)⁶³. The projected increase of 1,764,000 labour force participants (11%) over the next between 2000 and 2026 would involve a 156% (1,072,000) increase in the number of workers 60 plus and a 21% (979,000 workers) increase in the number aged 45 to 59. As it is assumed that labour force participation rates of the under 45 population remain at their 2000 level in both scenarios, the change in the number of labour force participants in these age group is the same in both. The result of the increase in female age specific labour force participation rates would be to increase the 60 plus age group's share of the labour force from 4% to 10% and the 45 to 59 age group's share from 28% to 31%: in total, the 45 plus age group would increase from 32% to 41% of the total labour force.

Figure 54: Projected Labour Force Increase by Age Group, Increasing Participation Rates 2000 to 2026, Canada

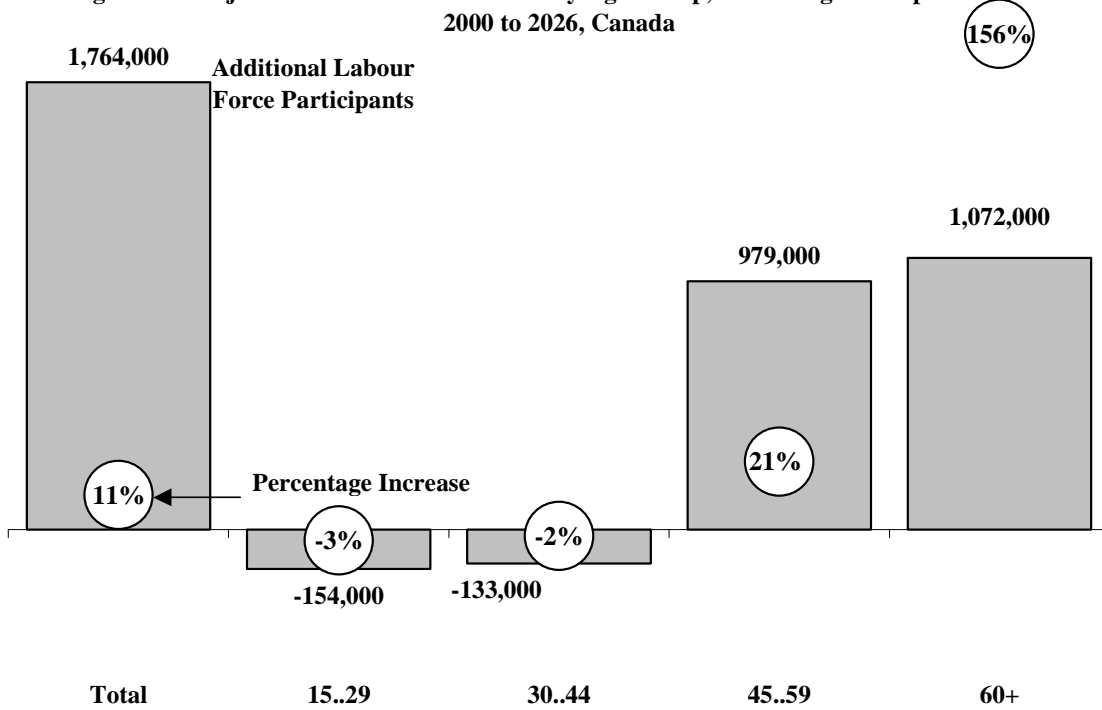
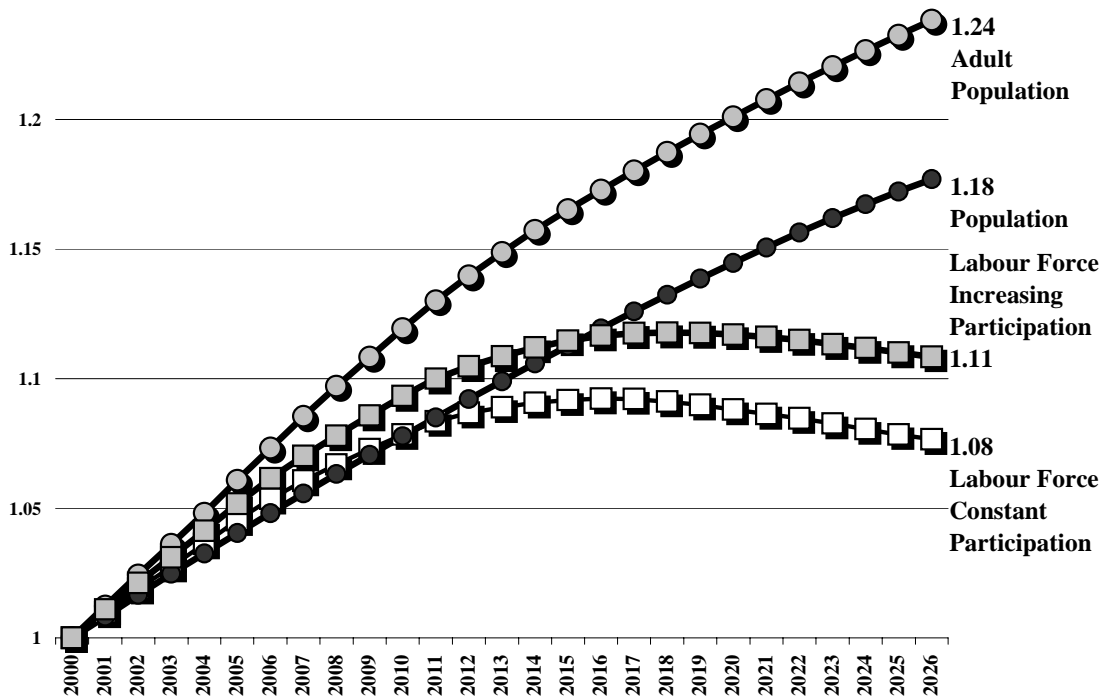


Figure 55: Projected Change in Population and Labour Force, Increasing Participation



The increasing participation rate scenario would result in an 11% growth in the labour force over the next twenty five years, greater than the 8% growth that would result under the constant participation rate scenario, but less than the projected 18% increase in the population and the 24% increase in the adult population (Figure 55)⁶⁴. The assumption of increasing participation rates for women aged 50 plus means that the labour force would grow slightly faster than the population between 2000 and 2010 and slower thereafter. The cumulative growth of the labour force under this scenario would exceed that of the population until 2016, and would be less than that of the population from then on. The labour force growth rate would be slower than the growth rate of the adult population throughout the period.

Again, this scenario results in a long-term projection of a labour force that increases at a rate well below that of the population. To the extent that the demand for goods and services, and hence labour, is a function of the size of the population, it is reasonable to conclude that at a minimum, labour force growth should at least keep up with population growth. More reasonable is to assume that it should grow faster than the population, as it has in the past quarter century and during every decade this century except those when the post world war one and post world war two baby booms occurred. The positive differential between labour force and population growth is necessary to account for growth of the service sectors, value added production, import substitution, and growth in demand for exports. To the extent the development of Canada's economy requires labour force growth at or in excess of population growth, the medium growth population projection combined with both the constant and increasing participation rates in the 50 plus female population will mean significant tightening of labour markets Canada over the next decade and significant labour shortages in the longer term.

VII. Implications and Conclusions

To fully project the conditions that will prevail in Canada's labour markets over the next quarter century, it will be necessary to also prepare a projection of the demand for labour, something that will be presented in the next report in this series. The population projection is for an increase of 18% (5,448,000 people), and specifically for the population 45 years of age and older to increase by 60.2% (6,349,000 people) and the population under the age of 45 to decline by 909,000 people (2%). The demand for goods and services, and hence the demand for labour, will, at the least, increase by the rate of population growth: as this growing population will require increasing income from exports, the labour force will have to increase faster than the population. This means, in short, that the potential demand for labour will increase faster than the labour supply generated by the medium growth population and increasing labour force participation rate scenario. This will mean significant change in the labour market.

a. Unemployment. Over the long term (i.e., moving through the cycles of global economic slowdown and recovery) unemployment rates will continue the pattern of decline observed over the 1993 to 2000 period. Getting more economic activity out of the labour force by increasing the portion of the labour force that is working will help to narrow the gap between the potential demand for, and supply of, labour. Note, however, that unemployment will not ever decline to zero, and is likely to bottom out at a rate of between 3% and 4% of the labour force. The reasons that there will always be some unemployment are: 1) mismatches between the skills of those seeking employment and the employment that is available (the labour supply is homogeneous, a surplus of recreation coordinators does not meet a shortage of welders), 2) mismatches between the location of those seeking working and places of employment (the labour force is not absolutely mobile, two labour force participant households cannot easily move to meet the labour demands for one of their skills), 3) job search times between jobs for job leavers and job losers, 4) institutional constraints that limit entry into a industry based on membership or certification rather than competence.

b. Increased Participation. Labour shortages will increase the opportunity for people not in the labour force enter it, and hence may increase labour force participation beyond the levels projected here (constant male and constant female under the age of 50, increasing in the 50 plus age groups). May – but not necessarily, for two general classes of reasons. The first class of reasons was that the decline in unemployment rates from 1993 to 2000 greatly reduced the number of people not in the labour force who wanted or were available for work. In 2000, there were 368,300 job losers not in the labour force, the lowest number since 1978, and 63% of 1992's 585,200 job losers that were not in the labour force in 1992. In 2000, the 368,300 job losers not in the labour force equaled 2.3% of the labour force: this share has declined continually since 1992's 4.1%, and has set successive record lows since 1997. In short, there is not an enormous pool of people outside the labour force who want work, and some of these lack the skills and/or location to obtain work should it emerge. Falling unemployment will reduce this pool, as it has since 1993, but it has already been reduced by a third.

The second class of reasons has to do people participation rates of people who do not want employment. Participation rates would be increased if there were reductions in the propensity of people to leave jobs and the labour force and in the length of time people stayed out of the labour force. Certainly the labour force was much larger in 2000 than it would have been if people's propensity to leave the labour force had remained as high as it was in 1976. Again, while there may be a marginal reduction in these propensities, it is necessary to acknowledge the facts that these propensities have already declined significantly and remained relatively stable over the plunge in unemployment rates from 1992 to 2000. The skills based job market of the future and the fact that propensities of the 15 to 24 population to go to school from 1997 to 2000 were below the 1987 to 1997 supports an argument that labour force participation from this age group will increase, rather than decline in the future.

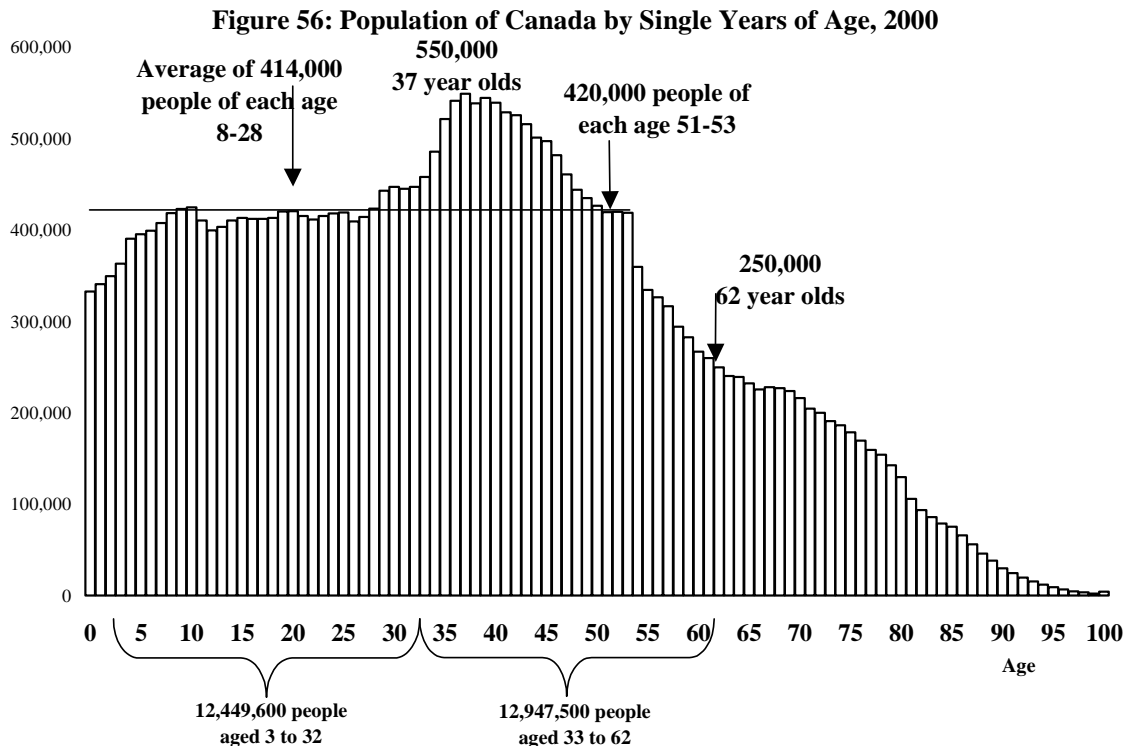
Similarly, the big decline in female propensities to leave the labour force for family and personal responsibilities in the 15 to 49 age groups occurred in the 1970s and 1980s, with the rates being generally stable during the 1990s. It is likely that any further reduction in this propensity as the result of declining birth rates will be offset by women who do have children remaining out the labour force longer due to the changes in the EI provisions with respect to maternity leave. If anything, it would be reasonable to anticipate (modest) declines in participation rates for women in these age groups, rather than assuming that they remain constant at their 2000 level. Increases in participation rates for women in the 50 plus age groups are already included in the projection.

In the cases of the propensity of people to leave the labour force for reasons of illness and disability, dissatisfaction and other reasons, the history of declines in these reasons, their relative stability over the past decade, and the fact that they are not significant must all be considered: when they are, it is very difficult to argue that future reductions in these rates will occur or that they will have any noticeable impact on labour force participation.

Which brings us to retirement. It is often argued that the problems of future labour supply will be solved by people not retiring as early and/or people coming out of retirement to re-enter the labour force. This is exactly contrary to what has happened over the past decade in the fact of a 50% decline in unemployment rates. The median age at retirement of people employed in the private sector dropped by 3.7 years, and of people employed in the public sector by 7.6 years between 1976 and 1999. The propensity for males to retire in the 55 to 64 age group increase by 66% and for females in the age group to retire by 87%, over the same period. With maturing of employment pension plans and the federal government's commitment to the sustainability of the Canada Pension Plan it is hard to argue that somehow behaviour with respect to retirement, particularly in the high skills sectors, will change and people will forego the opportunity to retire when it presents itself: the evidence shows that retirement works for many people.

c. Immigration. To the extent that reduced unemployment and increased participation occur, they will partially ameliorate the impact of labour shortages, but they will not solve them. The fundamental issues of labour supply are demographic, not behavioural. Statistics Canada’s medium growth population projection is for an increase of 5,441,000 people (18%) in the country between 2000 and 2026. This increase is comprised of a 928,000 person (5%) increase in the number of people in the 20 to 59 prime working age groups; a 662,000 person (8%) decline in the 0 to 19 age group; and a 5,175,000 person (101%) increase in the 60 plus population. The impact of increases in participation and reduction of unemployment are marginal in comparison to the reality that there are not enough people in the population today to replace, or more importantly, support the demographic wedge of today’s 33 to 62 year olds who while leave the labour force and the net contributory stage of the life cycle and enter the retirement and net beneficiary stage of the life cycle over the next quarter century.

The problem is inherent in today’s age profile (Figure 56)⁶⁵. In 2000 there were 12,947,500 people in Canada aged 33 to 62 (the demographic wedge), and 4,270,800 aged 63 to 92. With today’s life expectancies, the aging of the demographic wedge into the 63 to 92 age group will ensure that it more than double in size, doubling the load of that this population in the net beneficiary stage of the life cycle puts on the people in the net contributory working age stage of the life cycle. There are only 12,449,600 people in the 3 to 32 years of age group today, who will make up most of the contributory population over the next thirty years. Fewer people, a shrinking labour force and contributory population, and double the load!



As the labour supply projections indicated, the problems will become sever by 2010, because there are currently more people in every age group from age 29 to 53 than there are from age 8 to 28. There are not enough young people in Canada’s population to maintain either the size or the contributory capacity of the labour force after 2010. There is no echo boom waiting to pour into the labour force to carry the load of the retiring demographic wedge.

There are only two ways to increase the number of young people in the population. The first, increasingly the number of births, will not help with Canada's labour shortages because increasing births will reduce labour force participation (as mothers leave the labour force for some period of time) in the near term for a contribution to the labour force does not occur for 15, 20 or 25 years when the kids finish their schooling.

The second way is to increase net immigration. As 70% of the immigrants to Canada are under the age of 35, they provide much quicker contribution to the labour supply. The 225,000 immigrants per year included in the medium growth projection, however, is not sufficient to ensure an adequate labour supply in Canada, as even with this addition to the population, the labour force increases only at the rate of the population over the next decade, and then grows much more slowly and finally declines. The annual rate of immigration to Canada must be higher than 225,000, and must increase at a rate greater than that of the population, if Canada is to have an adequate labour supply in the future.

d. Increased Productivity. Given the global competition for immigrants, with European countries in particular aggressively entering the immigrant recruitment business, it is not likely that Canada will be able to solve its labour shortages through reduced unemployment, increase participation and immigration. Thus there will also be the need to ensure that the productivity of the work force in Canada increases significantly in the future. Some productivity gains will occur smoothly, with workers having more and more capital (both physical and technological) to use in their production of goods and services. Other productivity gains will occur only with conflict and complexity, as workers are replaced by technology, and collective agreements and institutional practices are re-written to obtain the productivity increases that labour shortages will dictate. And some areas of employment do not lend themselves to productivity increases: the health care industry involves health, where productivity gains may be realized, and care, which is very definitively labour intensive.

Endnotes:

¹ "The concepts of employment and unemployment are derived from the theory of the supply of labour as a factor of production. The production referred to is in turn defined as those goods and services included in the System of National Accounts. For this reason, unpaid housework and volunteer work are not counted as work by the survey, although these activities need not differ from paid work, either in purpose or in the nature of the tasks completed.

"While the logical and precise unit of measurement of total labour supply is person-hours, the conceptual terms of reference for the survey require that individual members of the population be classified as employed, unemployed, or not in the labour force. Accordingly, persons who are supplying services in the reference period, regardless of the quantity supplied, are classified as employed while those who provide evidence that they are offering their labour services to the market (again regardless of quantity) are classified as unemployed. The remainder of the population, those neither currently supplying nor offering their labour services, are referred to as persons not in the labour force. The concepts and definitions of employment and unemployment adopted by the survey are based on those endorsed by the International Labour Organisation (ILO)."

Statistics Canada, *Guide to the Labour Force Survey*, (Statistics Canada, Ottawa, 2001), page 5, as contained on Statistics Canada, *Labour Force Historical Review 2000*, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB.

² Statistics Canada, *1996 Census Dictionary*, (Statistics Canada, Ottawa), www.statcan.ca, accessed August 8, 2001, Page 64. The Labour Force Survey definition is "LABOUR FORCE: Civilian non-institutional population 15 years of

age and over who, during the survey reference week, were employed or unemployed". Statistics Canada, Guide to the Labour Force Survey, page 11.

³ Statistics Canada, 1996 Census Dictionary, Page 48-49. The Labour Force Survey definition is:

“EMPLOYMENT: Employed persons are those who, during the reference week:

(a) did any work at all at a job or business, that is, paid work in the context of an employer-employee relationship, or self-employment. It also includes unpaid family work, which is defined as unpaid work contributing directly to the operation of a farm, business or professional practice owned and operated by a related member of the same household; or (b) had a job but were not at work due to factors such as own illness or disability, personal or family responsibilities, vacation, labour dispute or other reasons (excluding persons on layoff, between casual jobs, and those with a job to start at a future date).”

Statistics Canada, Guide to the Labour Force Survey, page 5.

⁴ Statistics Canada, 1996 Census Dictionary, Page 64-65. The Labour Force Survey definition is:

“UNEMPLOYMENT: Given the concept of unemployment as the unutilized supply of labour, the operational definition of unemployment is based primarily on the activity of job search and the availability to take a job. In addition to being conceptually appropriate, job search activities can, in a household survey, be objectively and consistently measured over time. The definition of unemployment is therefore the following:

“Unemployed persons are those who, during reference week:

a) were on temporary layoff during the reference week with an expectation of recall and were available for work, or

b) were without work, had actively looked for work in the past four weeks, and were available for work, or

c) had a new job to start within four weeks from reference week, and were available for work.

“Persons are regarded as available if they reported that they could have worked in the reference week if a suitable job had been offered (or recalled if on temporary layoff); or if the reason they could not take a job was of a temporary nature such as: because of own illness or disability, personal or family responsibilities, because they already have a job to start in the near future, or because of vacation (prior to 1997, those on vacation were not considered available). Full-time students currently attending school and looking for full-time work are not considered to be available for work during the reference week. They are assumed to be looking for a summer or co-op job or permanent job to start sometime in the future, and are therefore not part of the current labour supply.

“Note that in the above definition there are two groups for which job search is not required: persons on temporary layoff and persons with a job to start at a definite date in the future. Persons on layoff are included among the unemployed on the grounds that their willingness to supply labour services is apparent in their expectation of returning to work. A similar argument is applied for persons who will be starting at a new job in four weeks or less.

“Finally, for the purposes of measuring job search as part of the identification of the unemployed, the LFS uses a four-week search period although the reference period for identifying the employed is that of one week. The justification for the difference is that delays inherent in job search (for example, periods spent awaiting the results of earlier job applications) require that the active element of looking for work be measured over a period greater than one week if a comprehensive measure of job search is to be obtained.

Statistics Canada, Guide to the Labour Force Survey, page 5.

⁵ Statistics Canada, 1996 Census Dictionary, Page 58. The Labour Force Survey definition is:

“NOT IN THE LABOUR FORCE: Persons not in the labour force are those who, during the reference week, were unwilling or unable to offer or supply labour services under conditions existing in their labour markets, that is, they were neither employed nor unemployed.” Statistics Canada, Guide to the Labour Force Survey, page 5.

⁶ Statistics Canada, 1996 Census Dictionary, Page 62.

⁷ Statistics Canada, Guide to the Labour Force Survey, page 10-11.

⁸ Based on data from Statistics Canada, Census of Canada, for census years indicated on figure.

⁹ From data in Statistics Canada, Labour Force Historical Review 2000, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB, Table CD1t01an.

¹⁰ Based on data from Statistics Canada, Census of Canada, for census years indicated on figure.

¹¹ Based on data from Statistics Canada, Census of Canada, for census years indicated on figure.

¹² Based on data from Statistics Canada, Census of Canada, for census years indicated on figure.

¹³ From data in Statistics Canada, Labour Force Historical Review 2000, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB, Table CD1t01an.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

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- ²³ Ibid.
- ²⁴ From data in Statistics Canada, Labour Force Historical Review 2000, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB, Table CD2t13an.
- ²⁵ Ibid.
- ²⁶ Ibid.
- ²⁷ Ibid.
- ²⁸ From data in Statistics Canada, Labour Force Historical Review 2000, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB, Table CD2t8an.
- ²⁹ Ibid.
- ³⁰ Ibid.
- ³¹ Ibid.
- ³² Ibid.
- ³³ Ibid.
- ³⁴ Ibid.
- ³⁵ Ibid.
- ³⁶ Ibid.
- ³⁷ Ibid.
- ³⁸ Ibid.
- ³⁹ Ibid.
- ⁴⁰ Ibid.
- ⁴¹ Ibid.
- ⁴² Ibid.
- ⁴³ Ibid.
- ⁴⁴ Ibid.
- ⁴⁵ Ibid.
- ⁴⁶ Ibid.
- ⁴⁷ Ibid.
- ⁴⁸ From data in Statistics Canada, Labour Force Historical Review 2000, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB, Table CD1t28an.
- ⁴⁹ Ibid.
- ⁵⁰ Ibid.
- ⁵¹ Ibid.
- ⁵² From data in Statistics Canada, Labour Force Historical Review 2000, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB, Table CD1t01an.
- ⁵³ Projection by The Urban Futures Institute
- ⁵⁴ Statistics Canada, Population Projections for Canada, Provinces and Territories, 2000-2026 (Ottawa, Statistics Canada, 2001).
- ⁵⁵ Data from Ibid and from the Census of Canada for the referenced dates.
- ⁵⁶ Data from Statistics Canada, Population Projections for Canada, Provinces and Territories, 2000-2026 (Ottawa, Statistics Canada, 2001).
- ⁵⁷ Ibid
- ⁵⁸ Projection by The Urban Futures Institute
- ⁵⁹ Ibid
- ⁶⁰ Ibid
- ⁶¹ From data in Statistics Canada, Labour Force Historical Review 2000, (Statistics Canada, Ottawa, 2001) CDROM 7170004XCB, Table CD1t01an, and Statistics Canada, Annual Demographic Statistics 2000 (Statistics Canada, Ottawa, 2001)
- ⁶² Projection by The Urban Futures Institute
- ⁶³ Ibid
- ⁶⁴ Ibid
- ⁶⁵ Data from Statistics Canada, Annual Demographic Statistics 2000 (Statistics Canada, Ottawa, 2001)