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LABOUR MARKET ASSESSMENT – 2020



OFFICE OF THE PARLIAMENTARY BUDGET OFFICER
BUREAU DU DIRECTEUR PARLEMENTAIRE DU BUDGET

The Parliamentary Budget Officer (PBO) supports Parliament by providing economic and financial analysis for the purposes of raising the quality of parliamentary debate and promoting greater budget transparency and accountability.

This report provides parliamentarians with an assessment of the state of the labour market in Canada.

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Executive Summary

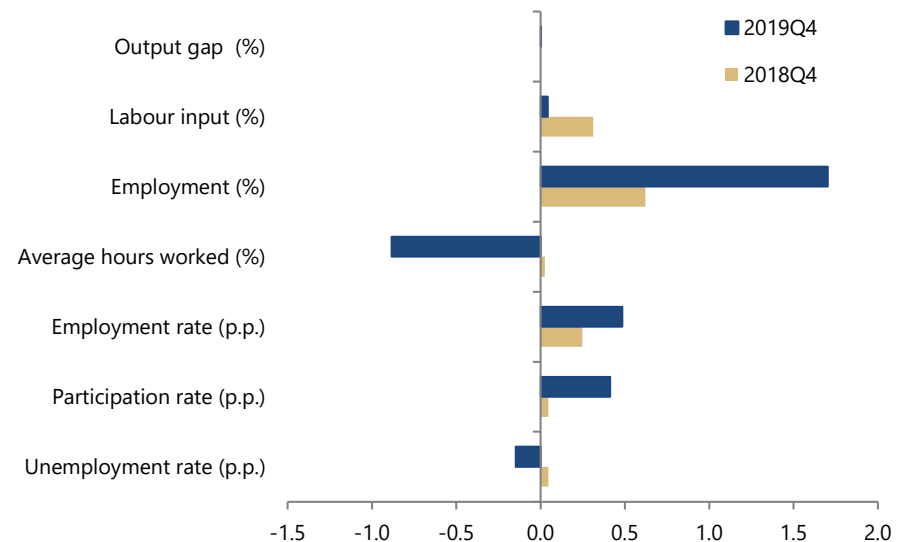
This report provides parliamentarians with an assessment of the state of the labour market in Canada. It examines labour market indicators relative to their trend estimates, that is, the level that would be observed if cyclical fluctuations were excluded. PBO also compares Canada's labour market performance with that of other advanced economies. In addition, in this report we examine the rise in the labour force participation of the baby boom generation.

PBO finds that at the national level, total labour input (that is, total hours worked in the economy) converged toward its trend level in the fourth quarter of 2019.

While employment rose sharply above trend over the past year, average weekly hours worked decreased in the first quarter of 2019 and remained below trend. The decrease in average hours worked over the past year was largely due to the goods sector, reflecting both reductions in average hours worked as well as employment losses in that sector. That said, average hours worked in the service sector also declined but its impact was dampened by robust employment gains in that sector.

Summary Figure 1

Labour market indicators relative to trend



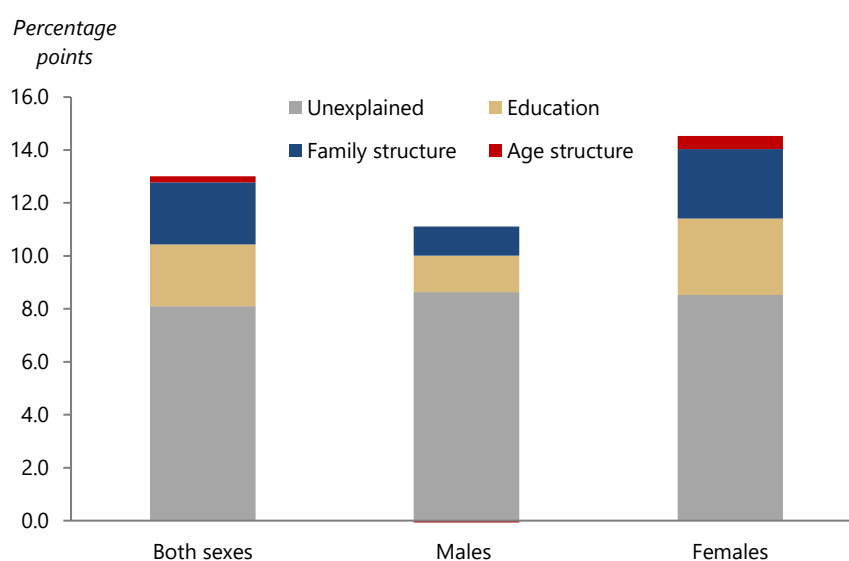
Sources: Statistics Canada and Parliamentary Budget Officer.

Internationally, the increase in Canada's employment rate over the past year (2018Q3 to 2019Q3) surpassed increases in other G7 and OECD countries. The decline in Canada's unemployment rate over this period also outperformed international benchmarks. However, at 5.6 per cent, unemployment in the third quarter of 2019 remained higher in Canada than the 4.2 per cent average of the G7 countries, reflecting Canada's higher rate of labour force participation.

Our report also examines the increase in the participation rate of the baby boom generation in Canada. We found that changes in age structure, educational attainment and family structure account for 38 per cent (5 percentage points) of the 13-percentage point increase in the participation rate of the population aged 55 and older over 1999 to 2019.

Summary Figure 2

Change in the 55-and-older participation rate, 1999 to 2019



Sources: Statistics Canada and Parliamentary Budget Officer.

While demographic factors explain a sizeable portion of the observed increase in the 55-and-older participation rate, most of the increase is attributable to other causes. Other factors correlated with the increase in participation of older Canadians are considered such as: life expectancy and lower morbidity; increased financial obligation; changes in the industrial structure of the economy. However, substitution of part-time work for retirement does not appear to contribute to the increase in the 55-and-older participation rate.

1. Trend analysis

This section examines various labour market indicators relative to their respective trends. PBO analyzes labour utilization variables relative to trend in order to determine whether changes in observed indicators are due to cyclical economic conditions or structural factors.

The methodology used by the PBO to develop its trend estimates is detailed in the 2018 report *PBO's Approach to Measuring Potential GDP*.¹ The information in this assessment is current as of 31 January 2020.

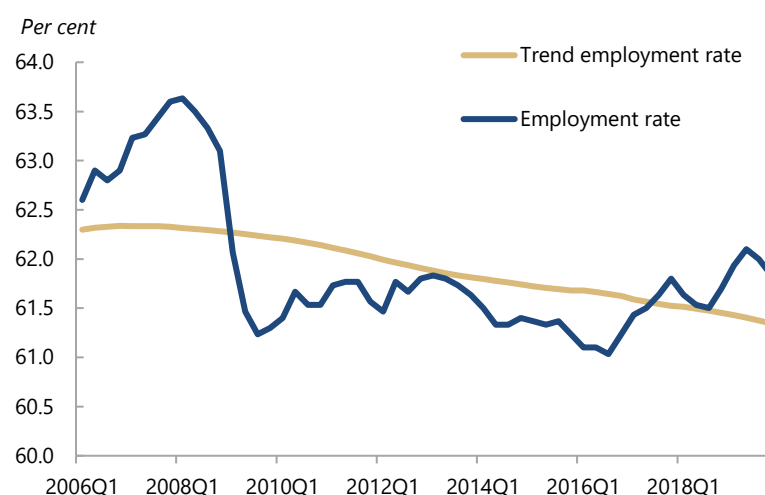
Employment rate rises above trend

The employment rate represents the share of the working-age population aged 15 years and older that is employed.

Through 2019, growth in employment outpaced robust growth in the working-age population, which lifted the employment rate above its estimated trend (Figure 1-1). Despite a moderation in employment gains in the second half of 2019, the employment rate remained 0.5 percentage points above trend in the final quarter of 2019. In 2019Q4, the employment rate stood at 61.8 per cent, down from 62.1 per cent in 2019Q2, which was the highest level observed since the 2008-2009 global financial crisis.

Figure 1-1

Employment rate, 2006Q1 to 2019Q4



Sources: Statistics Canada and Parliamentary Budget Officer.

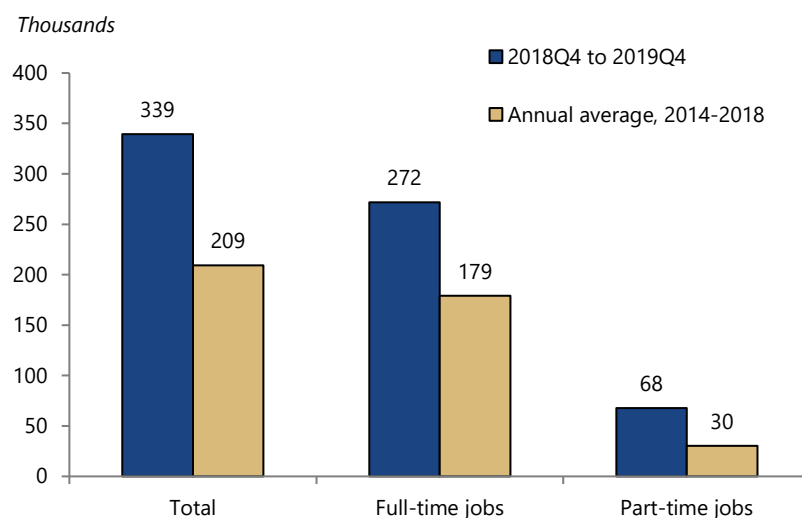
Note: The employment rate is defined as the level of employment divided by the population 15 years of age and older.

Employment growth fuelled by full-time gains

The Canadian economy created 339,500 (net) jobs over the past year (2018Q4 to 2019Q4)—an increase of 1.8 per cent (Figure 1-2). The pace of job creation in the past year well exceeds the average annual gain observed over the previous five years (2014 to 2018).

Growth in employment over the past year was fuelled by gains in full-time employment. The number of full-time jobs increased by 272,000, accounting for 80 per cent of all employment gains and outperforming the pace over the previous five years. Part-time employment increased by 68,000 over the past year and also outpaced average gains over the past five years.

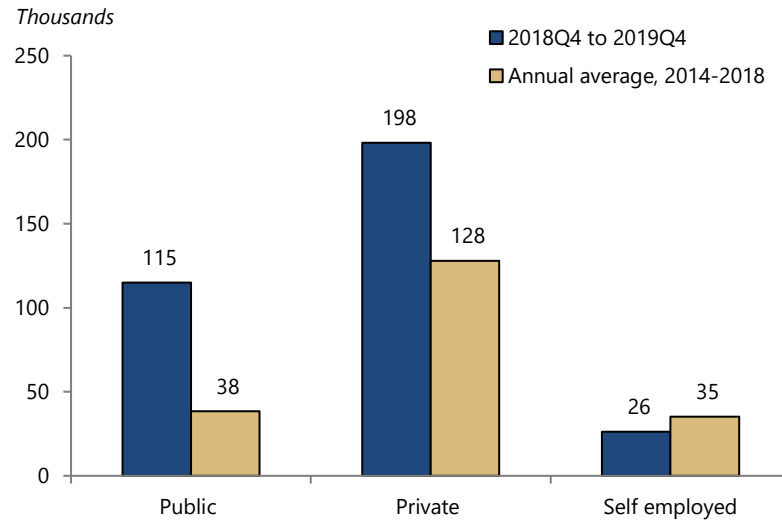
Figure 1-2 Full-time and part-time employment gains



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The average of the previous five years is calculated from changes in the employment level between the last quarters of each year (Q4/Q4).

Private sector employment increased by 198,000 over the past year, surpassing the average pace of gains over 2014 to 2018 (Figure 1-3). The public sector accounted for roughly a third of all employment gains over the past year, contributing 115,000 net jobs to the labour market. The pace of public sector hiring over the past year is double the average observed over the previous five years.

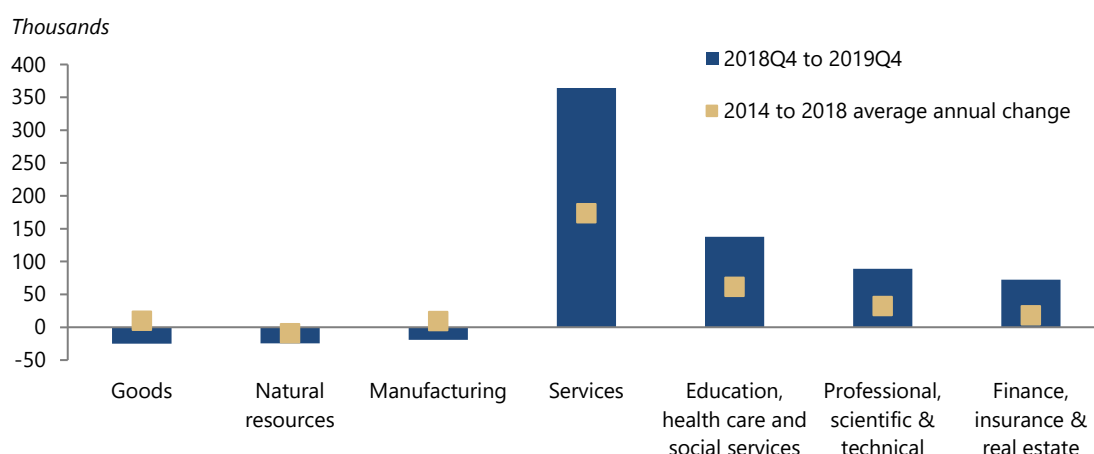
Figure 1-3**Employment gains by type of employment**

Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The average of the previous five years is calculated from changes in the employment level between the last quarters of each year (Q4/Q4).

The service sector continues to drive employment gains

The service sector continues to be the main driver of employment growth in Canada (Figure 1-4). Supported in part by strong growth in health care and social services, as well as retail and wholesale trade, the gains in this sector over the past year were almost double their average over the previous five years. However, the goods-producing sector experienced a slight decrease in employment over the past year, with most of the job losses coming for the natural resources sector (which includes forestry, fishing, mining, oil and gas) and the manufacturing sector. That said, their performance is roughly in line with the average observed over the previous five years.

Figure 1-4 Change in employment by select industry groups

Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The average of the previous five years is calculated from changes in the employment level between the last quarters of each year (Q4/Q4). The natural resources sector includes forestry, fishing, mining, oil and gas. The trade sector includes retail and wholesale trade.

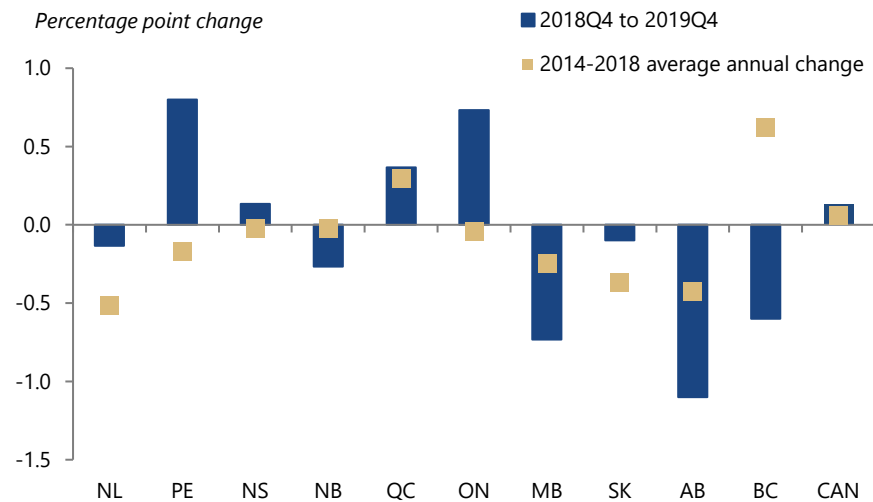
Disparities in regional labour market performance

Of the 339,500 net jobs created over the past year, Ontario accounted for almost 70 per cent (235,900). However, given the variation in the growth of the working-age population across provinces, it is useful to compare changes in their employment rates to assess overall employment performance (Figure 1-5).

The provinces of Ontario, Prince Edward Island and Quebec experienced the largest increases in their employment rate over the past year. Compared to the average change in employment rates observed over the previous five years, Prince Edward Island, Ontario and Newfoundland and Labrador had the strongest outperformance. In contrast, Alberta, Manitoba and British Columbia experienced the largest employment rate declines, over the past year and relative to their average over the previous five years.

Figure 1-5

Change in employment rate by province



Sources: Statistics Canada and Parliamentary Budget Officer.

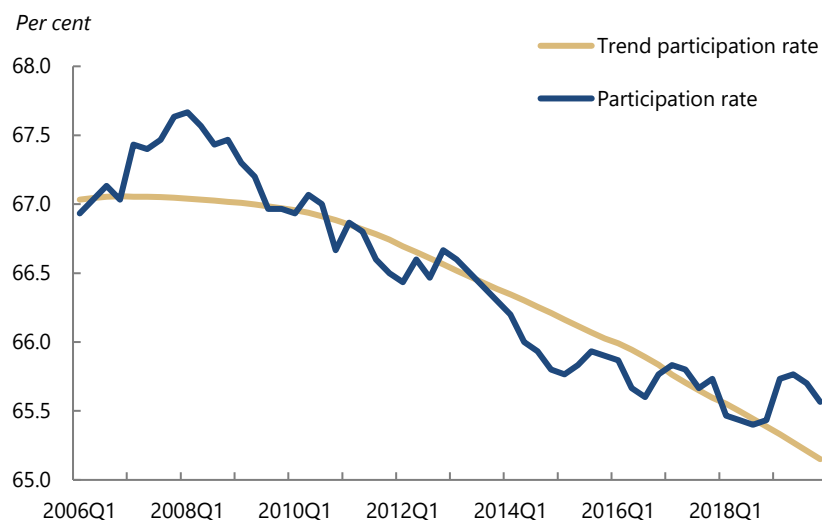
Note: The average of the previous five years is calculated from changes in the employment rate between the last quarters of each year (Q4/Q4).

The participation rate climbs above trend

The participation rate represents the share of the working-age population (15 years and older) that is in the labour force, either employed or unemployed but actively looking for work.

Over the course of 2019, the participation rate remained above its estimated trend, averaging 65.7 per cent (Figure 1-6). Compared to 2018, the participation rate increased across all age groups. That said, the participation rate has trended downward over the past decade, mainly due to the ageing of the population, which limits the number of workers and the number of people looking for work relative to the working-age population.

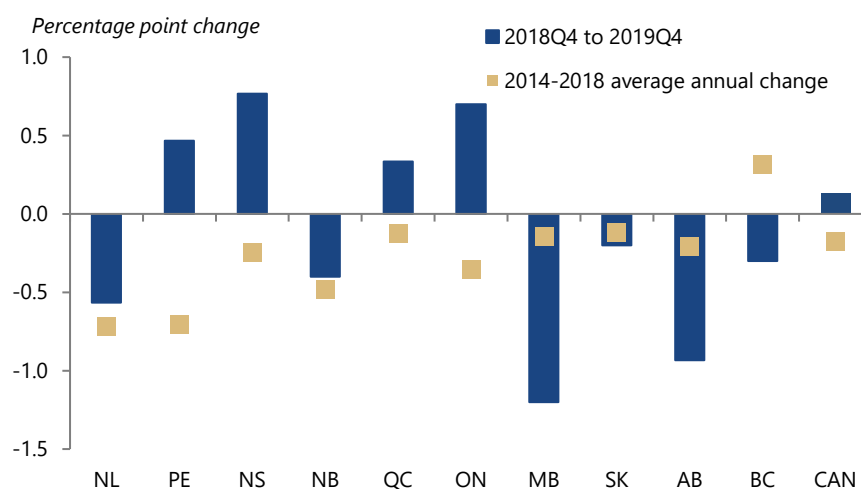
Figure 1-6 Participation rate, 2006Q1 to 2019Q4



Sources: Statistics Canada and Parliamentary Budget Officer.

Over the past year, the largest increases in participation rates were observed in Nova Scotia, Ontario and Prince Edward Island, as well as compared to their average over the previous five years. Manitoba and Alberta experienced the largest declines in participation over the past year. Moreover, provinces west of Ontario all underperformed relative to their average change over the previous five years.

Figure 1-7 Change in participation rate by province



Sources: Statistics Canada and Parliamentary Budget Officer.

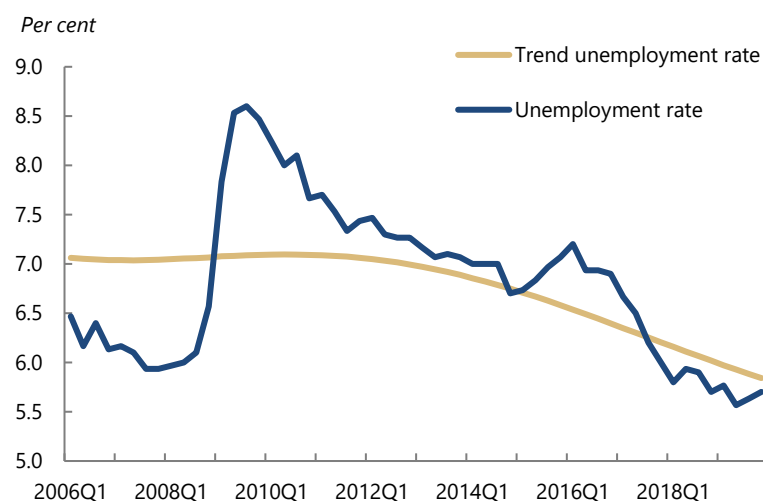
Note: The average of the previous 5 years is calculated from changes in the participation rate between the last quarters of each year (Q4/Q4).

“Unemployed” refers to the number of persons who are without work but who are actively looking for work. The unemployment rate represents the share of the labour force that is unemployed.

Since the increase in the employment rate over the past year was matched by a similar increase in the participation rate, the unemployment rate in 2019Q4 remained unchanged from its 2018Q4 level of 5.7 per cent, which is 0.1 percentage points below its estimated trend (Figure 1-8).

Figure 1-8

Unemployment rate, 2006Q1 to 2019Q4



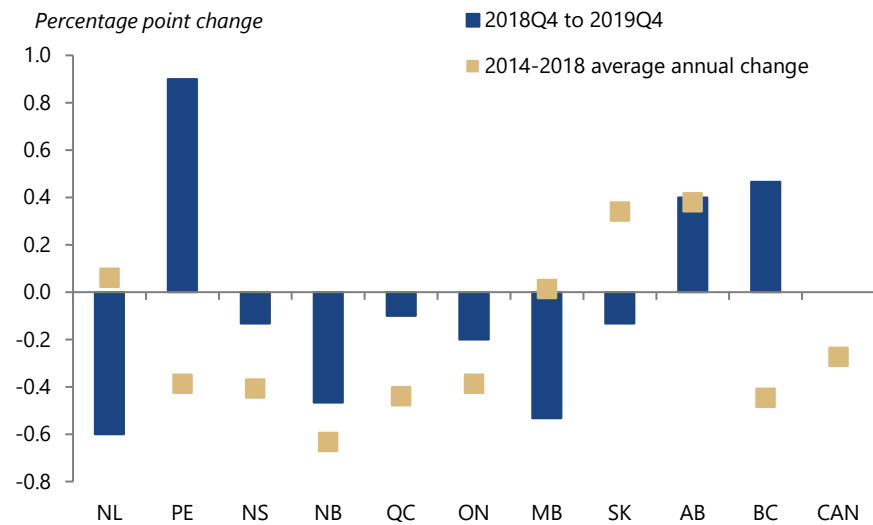
Sources: Statistics Canada and Parliamentary Budget Officer.

Unemployment continues to fall in Quebec and Ontario, but increase in Alberta and British Columbia

Over the past year, Newfoundland and Labrador, Manitoba and New Brunswick experienced the largest declines in their unemployment rates while Prince Edward Island, British Columbia and Alberta saw the largest increases (Figure 1-9).

Figure 1-9

Change in unemployment rate by province



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The average of the previous five years is calculated from changes in the unemployment rate between the last quarters of each year (Q4/Q4).

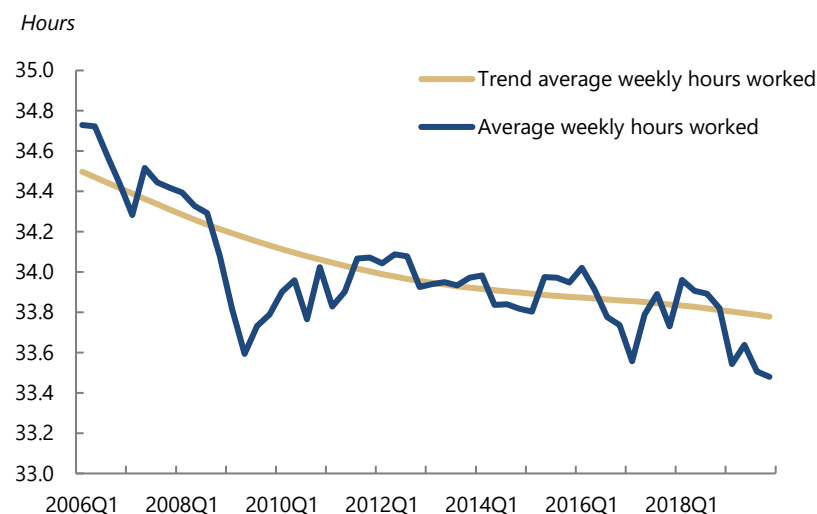
Average hours worked per week falls below trend

Average hours worked per week provides a measure of the intensity that labour is utilized. Since 2006, average hours worked has trended down, due in part to rising employment in the service sector, which typically has lower hours worked per week than the goods sector, as well as increases in post-secondary enrollment rates (Figure 1-10). Average weekly hours worked in the last quarter of 2019 was 33.48 hours, lower than our estimated trend of 33.78 hours.

Average hours worked per week decreased sharply in the first quarter of 2019 and remained below trend. The decrease observed over the past year was largely due to the goods sector, reflecting both reductions in average hours worked in that sector, as well as employment losses. That said, average hours worked in the service sector also declined but this impact was dampened by robust employment gains in that sector.

Figure 1-10

Average weekly hours worked, 2006Q1 to 2019Q3



Sources: Statistics Canada and Parliamentary Budget Officer.

Total labour input returns to trend

PBO combines employment and average weekly hours worked to produce a broader measure of labour input: total hours worked (annualized). Total labour input (L) is both an essential driver of economic growth and well-being and an important consideration in monetary and fiscal policy decision making. It is expressed as:

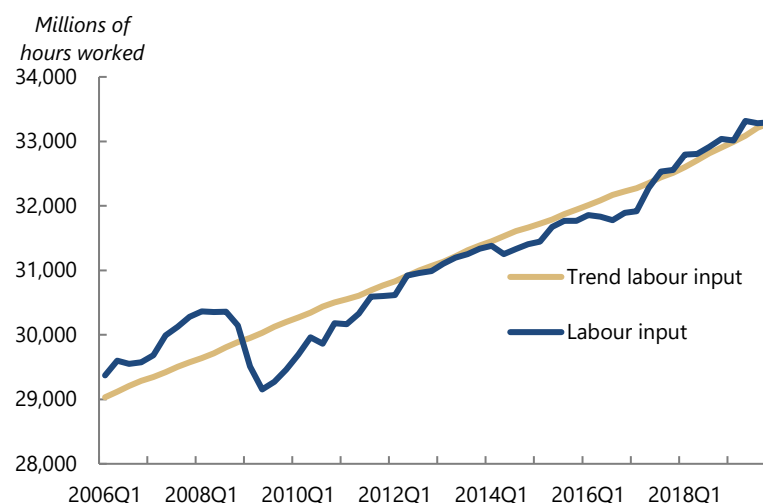
$$L = LFPOP \cdot LFER \cdot AHW \cdot 52$$

where: LFPOP is the working-age population (15 years and older); LFER is the employment rate; and, AHW is average weekly hours worked.

Total labour input converged to its trend over the past year. Despite the robust employment gains made over the past year, the reduction in average weekly hours worked tempered the increase in total labour input (Figure 1-11).

Figure 1-11

Total labour input, 2006Q1 to 2019Q4



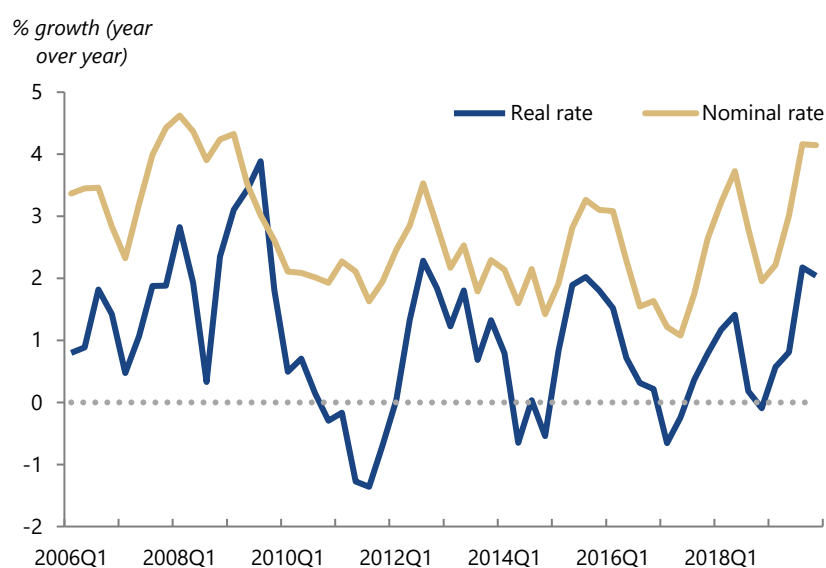
Sources: Statistics Canada and Parliamentary Budget Officer.

Wage growth has picked up sharply

Since the last quarter of 2018, both nominal and real average hourly wage gains, on a year-over-year basis, have picked up sharply, reaching 4.1 per cent and 2.0 per cent, respectively, in 2019Q4 (Figure 1-12). The average nominal hourly wage reached \$28.23 in the last quarter of 2019.

Figure 1-12

Nominal and real hourly wages, 2006Q1 to 2019Q4



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The Consumer Price Index is used to deflate the nominal hourly wage.

Since the global financial crisis, increases in real hourly compensation for employees have exceeded labour productivity gains (Figure 1-13). More recently, with labour productivity stagnating since early 2017, the rebound in wage gains has widened the gap.

Figure 1-13

Real hourly employee compensation and labour productivity, 2006Q1 to 2019Q3

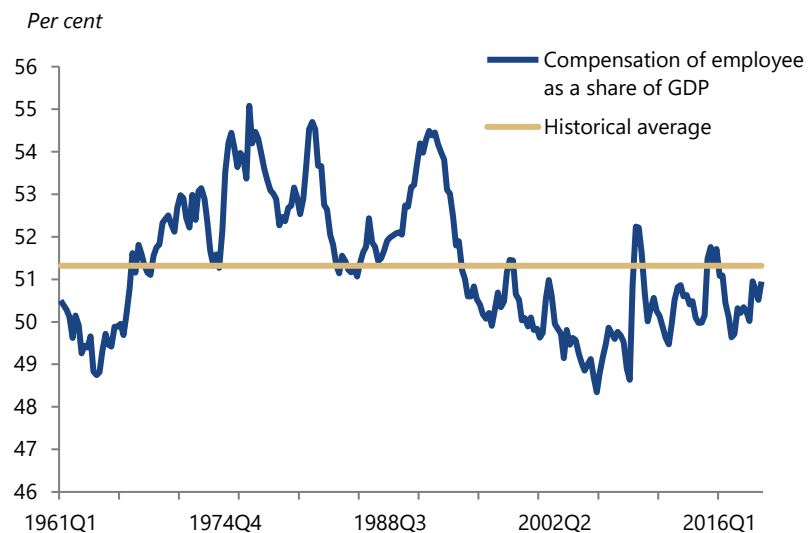


Sources: Statistics Canada and Parliamentary Budget Officer.

Note: Total hourly compensation is calculated as compensation of employees from the National Accounts divided by total economy hours worked from the Productivity Accounts and is deflated using the GDP price index. Labour productivity is calculated as real GDP in the National Accounts divided by total economy hours worked from the Productivity Accounts.

With growth in real wages exceeding growth in labour productivity since the beginning of 2006, the share of employee compensation in nominal GDP has rebounded from its historical low at the end of 2005 and is approaching its historical long-term average (Figure 1-14).

Figure 1-14 Share of employee compensation in GDP



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: This figure covers the period from the first quarter of 1961 to the third quarter of 2019.

2. International comparison

As in past reports, PBO compares Canada's labour market performance with that of other advanced economies (G7 and OECD countries). It uses data compiled by the Organisation for Economic Co-operation and Development (OECD) that were submitted by national statistical agencies.

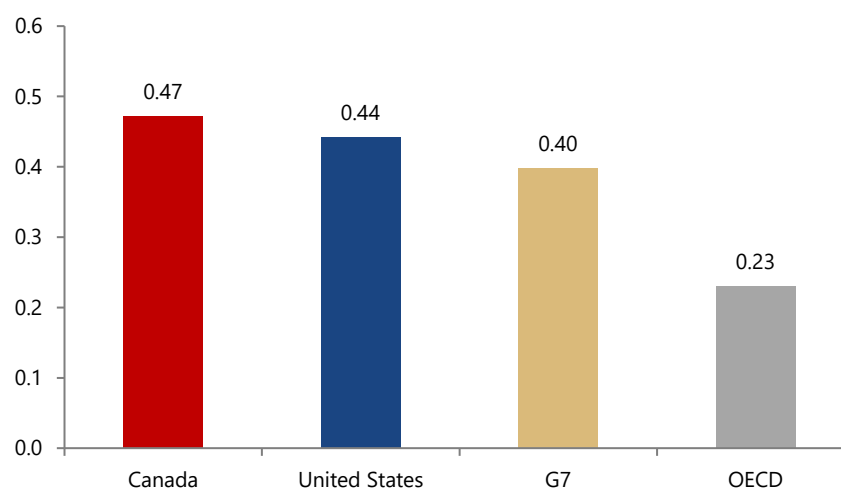
Canada's recent employment performance ahead of other G7 countries

Similar to our provincial assessment, given the variation in the growth of the working-age population across countries, it is useful to compare changes in employment rates to assess overall employment performance.

From 2018Q3 to 2019Q3, the increase in Canada's employment rate exceeded increases observed in the United States and in G7 countries excluding Canada, as well as OECD countries (Figure 2-1).

Figure 2-1 Change in employment rates from 2018Q3 to 2019Q3

Percentage point change from 2018Q3 to 2019Q3

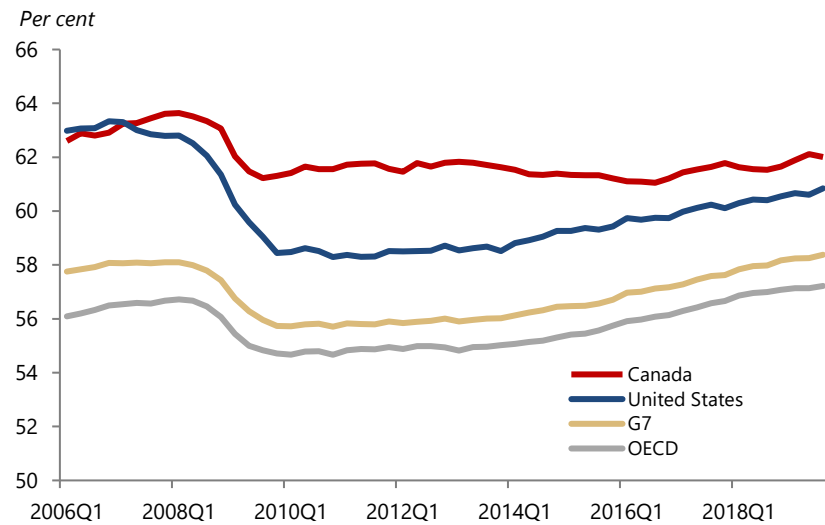


Sources: Organisation for Economic Co-operation and Development and Parliamentary Budget Officer.

The employment rate in Canada remains above that of the U.S., G7 (excluding Canada) and OECD countries (Figure 2-2). That said, this gap gradually narrowed during the recovery from the global financial crisis and appears to be stabilizing.

Figure 2-2

International comparison of employment rates



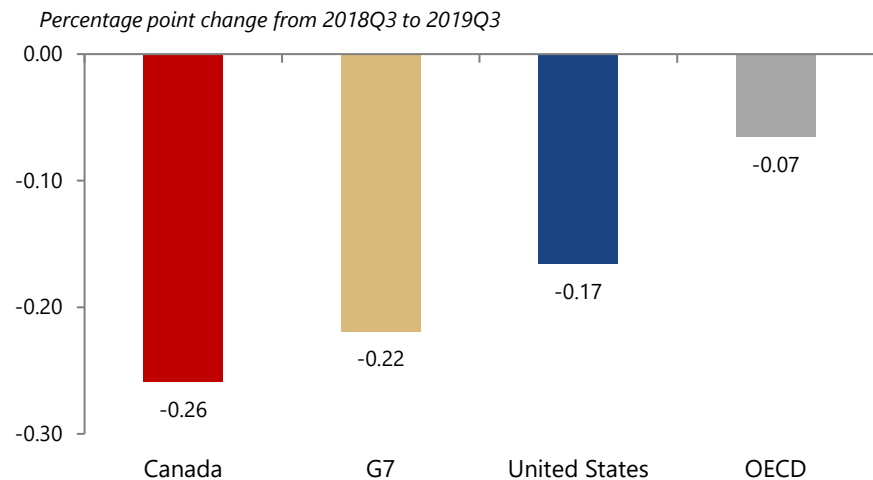
Source: Organisation for Economic Co-operation and Development.

Canada's unemployment rate declined more than in other advanced economies

In Canada, the unemployment rate declined by 0.3 percentage points over the past year, surpassing decreases observed in the United States, the G7 excluding Canada, as well as the OECD (Figure 2-3).

Figure 2-3

Changes in unemployment rates from 2018Q3 to 2019Q3

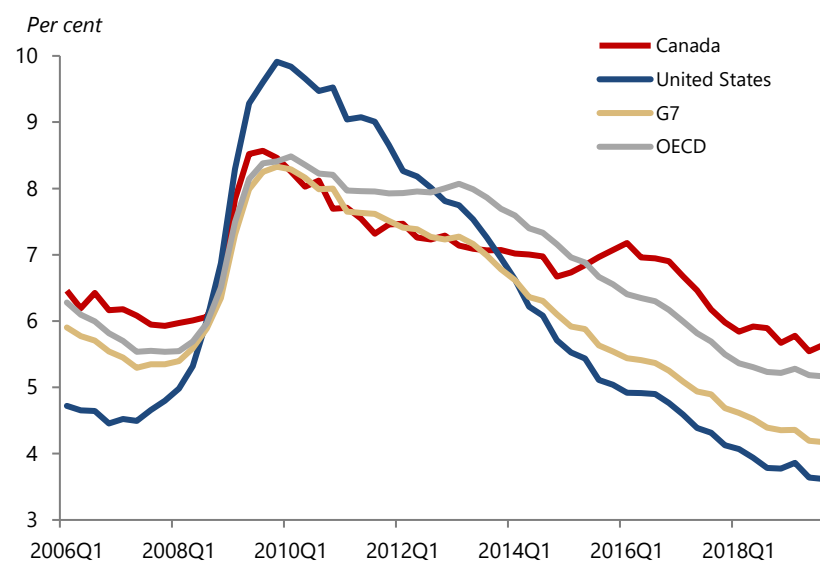


Sources: Organisation for Economic Co-operation and Development and Parliamentary Budget Officer.

In the third quarter of 2019, the unemployment rate in Canada was 5.6 per cent, compared to 3.5 per cent in the United States and 5.1 per cent in G7 countries excluding Canada. Despite the sharp decline over the past year, Canada's unemployment rate has remained higher than the average of the other advanced economies since the third quarter of 2015. This reflects Canada's higher labour force participation rate (Figure 2-4).

Figure 2-4

International comparison of unemployment rates



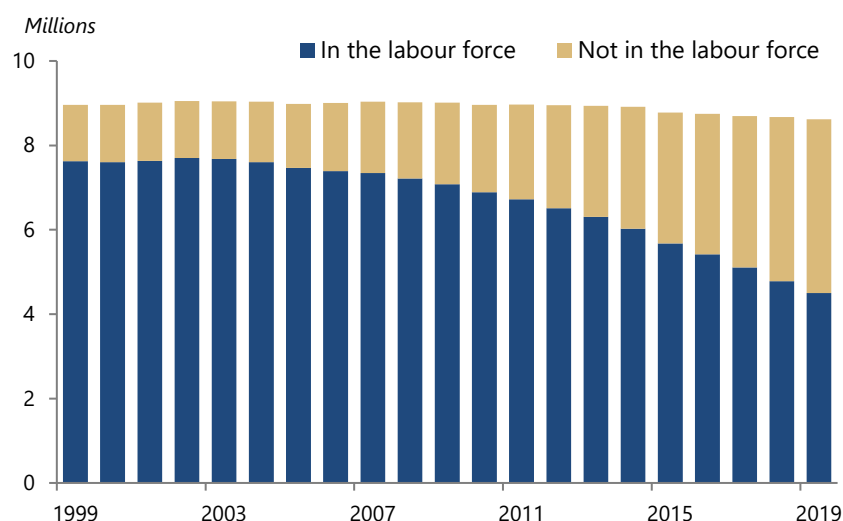
Source: Organisation for Economic Co-operation and Development.

3. Rising labour force participation of the boomer generation

As previously highlighted in Figure 1-6, the labour market in Canada has been facing a declining rate of participation. The participation rate has fallen by 2.1 percentage points since its peak in the first quarter of 2008. While cyclical factors can drive fluctuations in the participation rate, the magnitude of the decline observed over this period is also consistent with the reduction in its estimated trend. This is mainly due to the ageing of the population and more specifically to the baby boom generation transitioning into retirement.

In 2020, the youngest of the boomers will reach the age of 55 while the oldest will turn 74.² In 2019, the boomer generation counted 8.6 million individuals, roughly 20 per cent of the total population.

Figure 3-1 Labour force status of the boomer generation



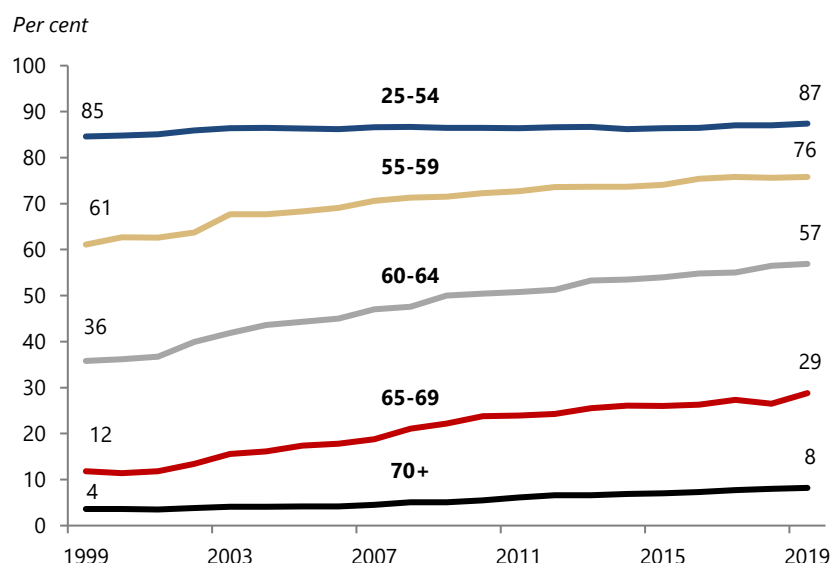
Sources: Statistics Canada and Parliamentary Budget Officer.

In 2019, 48 per cent of the boomer generation was participating in the labour market. However, based on the average of the last 5 years, roughly 300,000 boomers exited the market each year.

In contrast to the headline participation rate, the participation rate of older Canadians has been steadily increasing. Figure 3-2 shows that all age groups above 55 years of age have seen participation significantly increase over the

last 20 years while the prime age (25-to-54) participation rate has been relatively stable. The increase was particularly strong for the 55-to-59 age group, with participation rising by 21 percentage points from 1999 to 2019.³ Labour force participation has increased for both males and females, as well as across all provinces.

Figure 3-2 Labour force participation rate by age groups, both sexes



Source: Statistics Canada.

For the age group 55 and older, their labour force participation rate increased by 13 percentage points from 25.1 per cent in 1999 to 38.1 per cent in 2019.

Considering the demographic importance of the boomer generation, their decision to remain in the labour force has significant impacts on the economy-wide participation rate. For instance, if Canadians aged 55 and older in 2019 had participation rates equivalent to those observed in 1999 (of the same age), the headline participation rate would have been 5 percentage points lower in 2019. Thus, the increase in the participation rate of older Canadians has resulted in an extra 1.4 million workers participating in the labour market, which is equivalent to 7 per cent of all workers in Canada.

Using a methodology inspired by Fields et al. (2017) and microdata from Statistics Canada's Labour Force Survey, we decomposed the change in the participation rate of the 55-and-older age group from 1999 to 2019 to identify how much of this increase could be attributed to observable factors.⁴

We found that changes in age structure, educational attainment and family structure could account for 38 per cent of the increase in the participation of older Canadians between 1999 and 2019.⁵ In other words, those factors

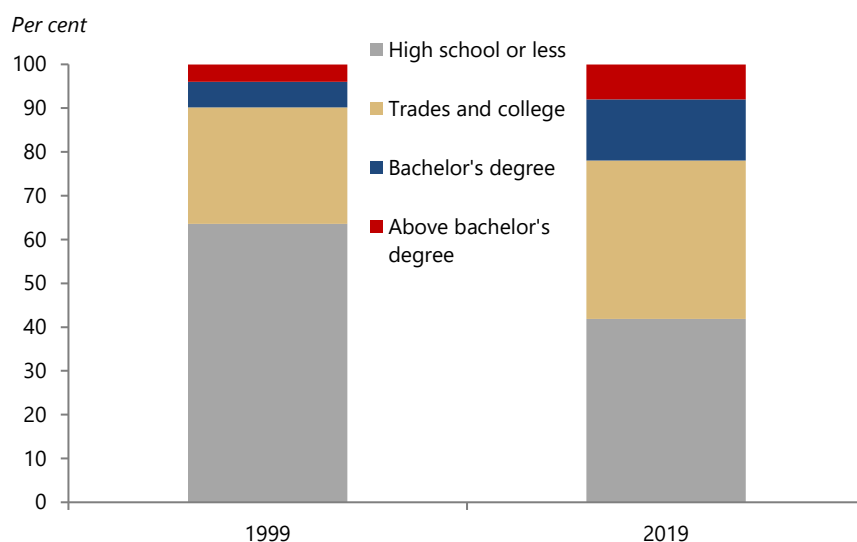
would explain 5 percentage points of the 13 percentage points increase in the 55-and-older participation rate.

Age is typically a key predictor of labour participation and as a result it was included in our model. However, the age distribution among the population 55 years of age and older has not changed significantly when compared to 1999. Consequently, changes in the age distribution do not explain a significant portion of the observed increase in the participation rate.

On the other hand, the change in educational attainment explains 18 per cent (2.3 percentage points) of the increase in the participation rate of the 55-and-older age group. Individuals with higher educational attainment are more likely to participate in the labour market, but also tend to stay in the labour market longer. In 2019, the participation rate of the population 55 and older with a university degree was 10 percentage points higher than those of the same age with only a high school degree.

Baby boomers are significantly more educated than previous generations. In 1999, 64 per cent of older Canadians had a high school degree or less versus 42 per cent in 2019. Similarly, the proportion of older Canadians with a university education has roughly doubled since 1999 (Figure 3-3). According to our model, the increase in university education alone would be responsible for 1.5 percentage points of the increase in the 55-and-older participation rate.

Figure 3-3 Distribution of highest educational attainments of the population aged 55 and older



Sources: Statistics Canada and Parliamentary Budget Officer.

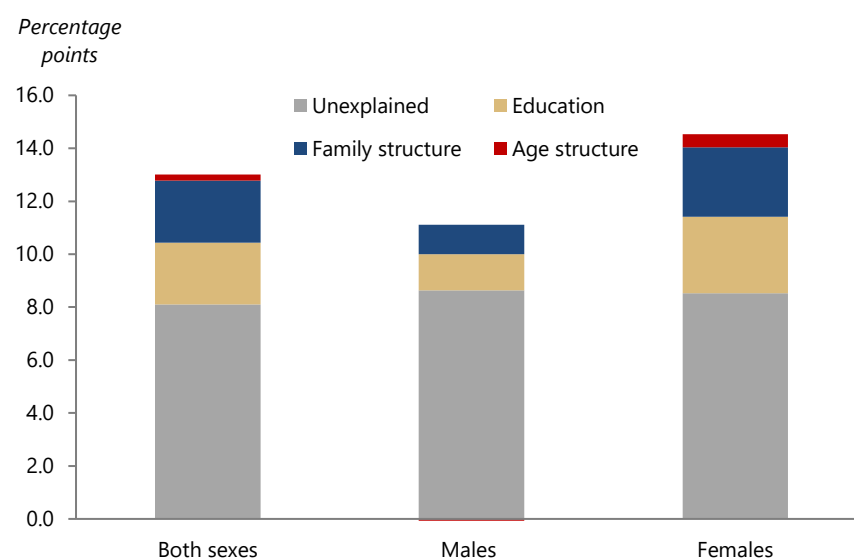
Changes in family structure also had a significant impact on the participation rate of older Canadians, accounting for 18 per cent (2.3 percentage points) of the increase in participation of the 55 and over. We found that having a working spouse significantly increased participation. This suggests that individuals prefer retiring at the same time as their partner. Consequently, the integration of women in the labour market has lengthened the working life of attached individuals as retirement decisions tend to be made jointly. This conclusion is in line with recent academic literature.⁶

Other familial factors such as the increase in the number of older individuals with children still living at home are found to have a small but statistically significant impact on the participation of the population 55 and older.

All factors considered, we find that if older Canadians had the age, education and family structure of the previous generation, the participation rate of individuals aged 55 and older in 2019 would be 5 percentage points lower—33.2 per cent instead of 38.1 per cent.

Figure 3-4

Decomposition of the change in the 55-and-older participation rate, 1999 to 2019



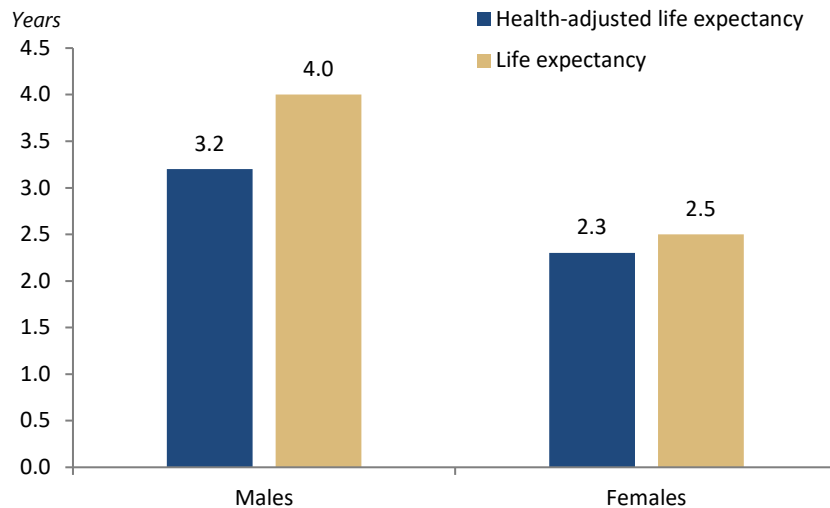
Sources: Statistics Canada and Parliamentary Budget Officer.

When comparing the change in 55-and-older participation rates for men and women, we find that in both cases, 9 percentage points of the increase is left unexplained by our model (Figure 3-4). However, a larger proportion of the increase seen in female participation can be explained by changes in educational attainment and changes in family structure. The larger contribution from education is directly related to the greater increase in educational attainment of women. In contrast, the impact of having a working spouse is similar for both men and women, although the increase of separated or divorced women is associated with a higher participation rate.

While demographic factors explain a sizeable portion of the observed increase in the 55-and-older participation rate, most of the increase is attributable to other factors.

One factor not directly captured in our model is the increase in life expectancy and similarly the increase in healthy life expectancy (Figure 3-5). In 2015, the health-adjusted life expectancy, that is the expected average number of healthy living years remaining, of a 55-year-old was 2.7 years longer than in 1995 (from 19.5 to 22.2 years). Concurrently, the average retirement age over the same period has increased by 1.5 years, suggesting that a greater number of healthy years is correlated with a longer working life.

Figure 3-5 Change in the life expectancy and health-adjusted life expectancy of 55-year olds between 1995 and 2015

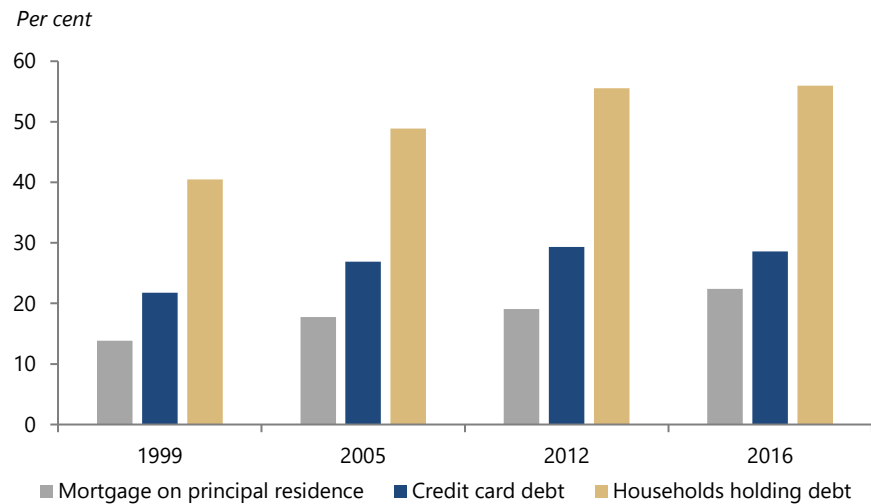


Sources: Statistics Canada and Parliamentary Budget Officer.

Financial obligations could be another factor behind increased participation of the boomer generation. Household debt of older Canadians has been steadily growing. The proportion of older Canadians with a mortgage on their principal residence has increased by 9 percentage points between 1999 and 2016 (Figure 3-6).

Figure 3-6

Percentage of 55+ households holding debts by type



Source: Survey of Financial Security, Statistics Canada.

Note: Includes only households with the economic family head 55 years of age and older.

We also found that individuals with a mortgage on their principal residence were more likely to participate in the labour market (Table 3-1). Other wealth related factors could have influenced participation decisions such as higher wages or greater employment opportunities.

Table 3-1

Labour participation rates by older age groups

<i>Per cent</i>	Individuals with a mortgage	Individuals without a mortgage
55 to 59	82	72
60 to 64	62	51
65 to 69	39	26
70 and older	11	6

Source: 2017 Canadian income Survey, Statistics Canada.

Correlated with the change in educational attainment is the transition of the Canadian economy from goods-producing industries, towards service-producing industries where the work is typically not as physically demanding. In 1999, 41 per cent of older workers were employed in goods-producing industries such as agriculture, construction or mining, compared to 21 per cent in 2019.

Another hypothesis would be that individuals are substituting retirement for part-time work. However, the preponderance of part-time work among adults over 55 has not significantly changed since 1999 with the proportion of workers working only part-time (30 hours or less) fluctuating around 22 per cent.

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Schirle, T. (2008). "Why Have the Labor Force Participation Rates of Older Men Increased since the Mid-1990s?" *Journal of Labor Economics*, vol. 26, no. 4, 2008, pp. 549–594. Retrieved from: www.jstor.org/stable/10.1086/589457.

Notes

1. Available at: https://www.pbo-dpb.gc.ca/en/blog/news/Measuring_Potential_GDP.
2. Statistics Canada defines the baby boom generation as those born between 1946 and 1965.
3. The year 1999 is used as a reference as it precedes the boomer generation transitioning into retirement age.
4. Our methodology differs from Fields et al. (2017) in terms of the definition of certain predictors. Moreover, we calculated the impact of each predictor (education, age structure, family structure) by summing up the specific endowment portions of the selected variables as part of the threefold Oaxaca-Binder decomposition.
5. Our model includes predictors for age, marital status and highest educational attainment. Having a child under 25 at home and having a working spouse are also included as binary variables.
6. For example, Schirle (2008) finds evidence from multiple countries that a significant portion of the increase in the participation of married older men can be associated to the increase in the participation of their wives.