



Institute for Fiscal Studies

Country Studies: Inequalities in Europe and North America
A parallel study to the IFS Deaton Review

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Inequality in Canada: 1976 - 2022



Inequality in Canada: 1976–2022

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1. Executive summary

1.1 Overview of trends

We summarise key facts about the labour market and the evolution of inequality in Canada over the period from 1976 to the present utilising various data sources, principally the monthly Labour Force Survey (LFS).

During this time period income and wealth inequality rose substantially – for example, the Gini coefficient of individual market income (for both genders) increased by about 22% between the late 1970s and the late 1990s, and subsequently declined modestly (see Figure 19). Similar changes took place for inequality in family income adjusted for family size (see Appendix Figure 49). However, the rise in inequality was very uneven over this time period. Cyclical changes in economic activity played an important role, as did changes in the tax and transfer system that in some periods strongly offset – and in others exacerbated – changes in market income inequality.

Canada experienced two major recessions during this period – one in the early 1980s and the other in the early 1990s. By most measures the 1981–82 downturn was the worst of the post-war period until the COVID shock in 2020. The 1990–92 recession was shallower but longer in duration, and recovery was much slower than in the early 1980s. Both downturns left income inequality permanently higher (Figure 19). In the early 1980s the Gini of market income increased between 1981 and 1983 and gradually declined during the subsequent boom – but even at the cyclical peak in 1989 the Gini had not returned to its pre-recession level. This ‘ratcheting up’ was more pronounced during the 1990s, with the market income Gini rising from 1990 to 1992 and then continuing to increase in the subsequent recovery and expansion.

Offsetting the growth in market income inequality in the 1980s and early 1990s were increases in transfers from income support programmes, especially provincial social assistance (‘welfare’) and federal unemployment insurance (UI, now called ‘Employment Insurance’ or EI). In addition, new personal income tax surcharges on high earners helped dampen inequality growth. Thus, for example, disposable family income inequality was unchanged between 1976 and 1996, despite an increase in market income inequality of over 14% during those two decades (Appendix Figure 49).

However, in the late 1990s policymakers’ concern about high debt levels and the rising share of the population receiving social assistance and EI led to major cutbacks in both major income support programmes, as well as removal of the income tax surcharges on those earning high incomes. The consequences of this sharp reversal are evident in Appendix Figure 49. Between 1995 and 2001 the Gini of disposable family income inequality rose by 8.5%, substantially more than the 2% increase in market income inequality.

The Canadian and US economies are highly integrated, and trade with the US constitutes a substantial amount of Canada’s economic activity. However, Canada’s economy is only one-tenth the size of that of the US, so is heavily influenced by developments south of the border. As former Prime Minister Pierre Trudeau stated, ‘When the US sneezes, Canada catches a cold.’ This statement certainly applied in the 1980s and 1990s, but since 2000 downturns have hit much harder south of the border. In 2001 the US experienced a recession associated with the IT crash; Canada, meanwhile, had a mild slowdown that lasted only one quarter. During the 2008–09 global financial crisis, unemployment increased substantially more in the US and many other countries than in Canada. An important factor contributing to relatively favourable aggregate performance was the resource boom of 1999–2014. By raising wages in the vicinity of the bottom of the earnings distribution (particularly low-skilled men) the resource boom was inequality-reducing, contributing to the modest decline in the market income Gini from its 1998 peak of 0.45 to 0.43 at the end of the resource boom.

Another key factor in the evolution of income inequality has been the minimum wage. As noted in the Section 5, minimum wages are principally set at the provincial (and territorial) level so vary regionally at a point in time and in evolution over time. Nonetheless, in some time periods the weighted average real minimum wage has fallen steadily over time, and in other time periods the reverse has occurred (see Figure 3 in Foley, Green and Riddell, forthcoming). Allowing minimum

wages to fall in real terms from the late 1970s to the late 1980s contributed to rising inequality; likewise, substantial growth in the real minimum wage in recent years has contributed to the levelling off and modest decline in income inequality since 2000. The recent reduction in wage inequality is especially large (see Figure 11).

2. Institutional setting

Canada is a federal state, with 10 provinces – with populations ranging in size from Prince Edward Island's 150,000 inhabitants (less than most Canadian cities) to Ontario with a population of over 14 million – as well as three territories located in the northern part of the country. Most labour market policies and programmes such as minimum wages and other labour standards fall under provincial (or territorial) jurisdiction, though there are exceptions as noted below. In addition, about 10% of the workforce – those employed in activities with a national or inter-provincial dimension such as rail, inter-provincial trucking, shipping, airports and banking – are federally regulated. Our summary of institutions necessarily provides a broad overview of a heterogeneous system. Also noteworthy is that there is considerable federal government financial involvement in some areas of provincial jurisdiction such as healthcare and education. This involvement came with spending requirements before the mid-1990s but now comes in the form of block grants.

Canada is a small open economy with major export markets being the US and Asia. It also has a substantial resource sector, so its economy is subject to the booms and busts of natural resources, especially oil and natural gas in recent decades. These periods have pronounced regional effects and tend to be associated with wage and employment increases.

A good 'rule of thumb' is that both labour market policies and outcomes in Canada fall between the extremes of the free-market orientation of the US and the highly developed and relatively generous welfare states of the Scandinavian countries. While this is a useful starting point in many cases, there are exceptions as discussed below.

Unemployment insurance (called Employment Insurance since a major reform in 1996), is an exception to both of these generalisations. First, it is a federal rather than a provincial programme. Second, although comparing UI systems across countries is challenging due to the many parameters involved, most such assessments conclude that since major reforms to the programme in the 1990s Canada has one of the least generous UI programs among the OECD countries (e.g. Banting, 2012). Relative to most OECD countries, Canada's EI program has relatively short qualifying periods for entitlement, but benefit levels are lower and benefit durations shorter (Van Audenrode et al., 2005). It also includes a 2-week waiting period before receiving benefits that is longer than most countries. EI is a contribution-based programme with covered employees contributing about 2% of 'insurable earnings' (up to a threshold) and employers contributing about 2.8% of earnings. This places Canada among the OECD countries with the lowest combined contribution rates.

The UI/EI program has evolved substantially over time, with the period from its inception in 1940 to the mid-1970s being one of expansion of coverage and increased generosity of benefits. A major reform in the early 1970s greatly expanded access, eased eligibility rules for seasonal workers, increased generosity and added sick-leave and maternity benefits. A particularly important change was the introduction of a benefit structure based on the unemployment rate in narrowly defined 'UI regions' such that the entrance requirement (number of weeks of work needed to qualify for benefits) was lower and the maximum duration of benefits higher in regions with high unemployment rates. Kuhn and Riddell (2010) utilise the natural experiment yielded by the relatively homogeneous region of the US state of Maine and the Canadian province of New Brunswick – but separated by a border – to examine the impacts of the different evolution of UI programs in the two countries. Seasonal employment, especially in fishing and forestry, was traditionally important on both sides of the border. They conclude that the 1971–72 changes greatly increased the incidence of part-year work in New Brunswick relative to the control state of Maine. Although some of the 1971–72 provisions were subsequently amended, regional variation in both entrance requirements and maximum duration of benefits – and the generous subsidies to part-year seasonal employment – remains a prominent feature of Canada's EI programme.

For the 20 years following 1976, the EI system contracted, with reduced benefit generosity and more restrictive eligibility criteria. A major reform in 1996 led to further restrictions, including the

disentitlement of people who quit their job. The fraction of the unemployed receiving EI benefits – a common measure of coverage – averaged about 80% between 1976 and 1990 but fell to 45% by 1997 and has since drifted down to below 40%. Thus, the importance of UI/EI in Canada's social safety net has declined significantly over time.

Income or social assistance (IA/SA) is the other major income support programme for the working-age population. Like EI, these programmes underwent substantial change over our sample period. Unlike EI, they fall under provincial jurisdiction and are operated by the provinces/territories. The introduction in 1966 of the federal Canada Assistance Plan (CAP) which provided for 50–50 cost-sharing of IA/SA expenditures to provinces that complied with the CAP provisions (which all provinces chose to do)² was a major step forward in the expansion of the 'welfare state' in Canada. It also resulted in substantial homogeneity of provincial welfare programmes. However, following the severe recessions of the early 1980s and 1990s, by the mid-1990s over 12% of the population under age 65 were receiving IA/SA versus approximately 6% in the late 1970s. There was considerable concern at the time about growing dependence on IA/SA. The federal government withdrew from the CAP and replaced it with block funding of healthcare, education and IA/SA (referred to as the Canada Health and Social Transfer). As a result, provinces had much more flexibility in the design of their IA/SA programmes and these programmes had to compete with healthcare and education for provincial funding. Provinces responded by restricting entry and encouraging more rapid exit from welfare, including greater use of financial incentives to 'make work pay'. Federal incentives to encourage work were also added through childcare benefits for families with working parents. The consequences of these policy changes were dramatic – the social assistance rate fell from over 12% in 1994 to less than 6% in 2008, and has remained in the 6–7% range since that time. Currently, in many provinces the main demographic group receiving IA/SA are those receiving disability benefits (see Foley, Green and Riddell, forthcoming, for the case of the province of British Columbia).

Minimum wages and other labour standards such as those relating to hours of work, overtime pay, holidays, and occupational health and safety principally fall under provincial jurisdiction, with the exception of industries engaged in activities with a national or inter-provincial nature such as rail, inter-provincial trucking, airports, and banking (about 10% of the workforce). Large changes over time in the real minimum wage are evident in all provinces (see Foley, Green and Riddell, forthcoming), with rapid increases in the early 1970s before peaking in late 1970s and then falling dramatically for more than a decade, a result of not adjusting the nominal minimum wage during a period of high inflation. After bottoming out in the late 1980s, there were modest ups and downs in the real minimum wage until the early 2000s. Since 2003 the employment-weighted real minimum wage has increased steadily and substantially from about \$8 per hour in 2003 to \$13 in 2019 (in 2018 dollars), with the most dramatic changes taking place since 2017. Although overall trends have been broadly similar across provinces, there are some noteworthy exceptions in the larger provinces. Annual updating of the provincial minimum wage, as well as adjustments for increases in the cost of living, are more common in the four Atlantic provinces and the prairie provinces of Manitoba and Saskatchewan.

Laws and regulations relating to unions and collective bargaining also fall under provincial jurisdiction, with the exception of the federally regulated sector. Although laws relating to unions and strike activity date back to the 1800s, Canada did not legally recognise the rights of workers to form and join unions until the Second World War, during which time the federal government had nationwide jurisdiction over labour matters under the emergency provisions of the War Measures Act. During the war unionisation in Canada grew rapidly, and this continued in the early post-war period as provinces implemented legislation similar to the Wartime Labour Legislation order. Unlike the US, where unionisation began its long decline in the mid-1950s, the Canadian unionisation rate reached a peak of over 35% in the mid-1980s and has been slowly declining since. By 2019, prior to the COVID shock, overall union coverage was below 30%. Over the past five decades unionisation has declined substantially in the private sector but remained stable or

² Two key provisions of the CAP were that families that demonstrated they were in need of assistance could not be denied and families migrating into a province from another province be treated the same as those living in the province.

grown in the public sector, resulting in an enormous gap in union coverage – less than 16% in the private sector versus 76% in the public sector. Almost 60% of the unionised workforce are now employed in the public sector even though that sector accounts for only about 20% of total employment.

Canada is also a heavily immigrant nation, with the proportion of 25–54-year-olds who were born outside of Canada increasing steadily from 22% in 2006 to 30% in 2022. There is little evidence of immigration having effects on the wages of non-immigrants, but its sheer size has altered the growth rate and skill composition of the workforce. Through the use of its point system and other controls, Canada's immigrant workforce is more skilled than is observed in the US.

Finally, both health and education are mainly publicly provided in Canada. The nationalised health system is almost unique in having not only public provision of services but also a restriction to only allowing the government to pay for healthcare. In education, almost all universities are publicly funded and only 7.6% of high school students attended private schools in 2019.

3. Notes on measurement and definitions

Unit of analysis and sample:

The sample is individuals aged between 25 and 59 inclusive, except where otherwise indicated. For figures on wages and earnings, the sample is further restricted to individuals (or households where applicable) with strictly positive wages or earnings, respectively. There are no further restrictions for the household income figures.

Individuals are the unit of analysis throughout. For example, for equivalised household income, each individual is allocated their respective equivalised household income, so that income is counted as many times as there are individuals aged 25–59 in the household.

In the figures where we winsorise, we allocate all observations above the 99th percentile the amount equal to the 99th percentile. Otherwise, distributions are not trimmed.

Outcome definitions:

Employment rate: the fraction of the population that is employed according to self-reported employment status.

Earnings: gross annual real individual earnings among those who are employed (including self-employed) and have strictly positive real earnings. Annual earnings, from all employment, are self-reported or taken directly from tax records. See the data appendix for further details on differences in reporting of annual earnings.

Hours of work: usual/ typical paid hours worked in the reference week in all jobs, excluding paid overtime, among those who are employed and have strictly positive real earnings. Excludes self-employed workers. The reference week is the week that contains the 15th of the month.

Wages: individual real gross hourly wages in the respondent's main job. Excludes self-employed workers. Hourly wages are directly reported for those paid by the hour and are constructed for others using usual hours worked.

Disposable household income (household equivalised income after deducting taxes and adding benefits and tax credits)

- The main measure of household income used in this report is income before housing costs have been deducted, and after direct taxes and transfers have been deducted from or added to household income.
- Income includes total annual earnings from employment, profit or loss from self-employment, government transfers, including tax credits, Employment Insurance Benefits and Child Benefits, income from public and private pensions, investment income, maintenance payments, and income from grants and scholarships.
- Income is net of total federal and provincial income tax payable, after taking into account exemptions, deductions, non-refundable tax credits, and the refundable Quebec abatement.
- Incomes are equivalised using the modified OECD equivalence scale, normalised to a single individual.

Splits:

Sex: female, male

Education: Education is split into three groups: low, medium, and high education, corresponding to ISCED 0–2, ISCED 3–5, and ISCED 6–8, respectively. ISCED 3–5 includes high school graduates, post-secondary non-graduates, and graduates with a trade certificate or diploma from a vocational school or apprenticeship training, non-university certificate or diploma from a community college or collège d'enseignement général et professionnel (CEGEP), or university certificate below bachelor's level. ISCED 6–8 includes graduates with a university degree or certificate above bachelor's degree.

Household type: Single without dependent children; single with dependent children; couples without dependent children; couples with dependent children; adult child; other. Parents of adult children go in the 'other' category. A dependent child is a child aged 0–15 or 16–19 and in full-time education, living with parents.

Unavailable measures:

Employer labour costs and contributions to social security are not observed in the data sources we use. As such, we are unable to show the following figures:

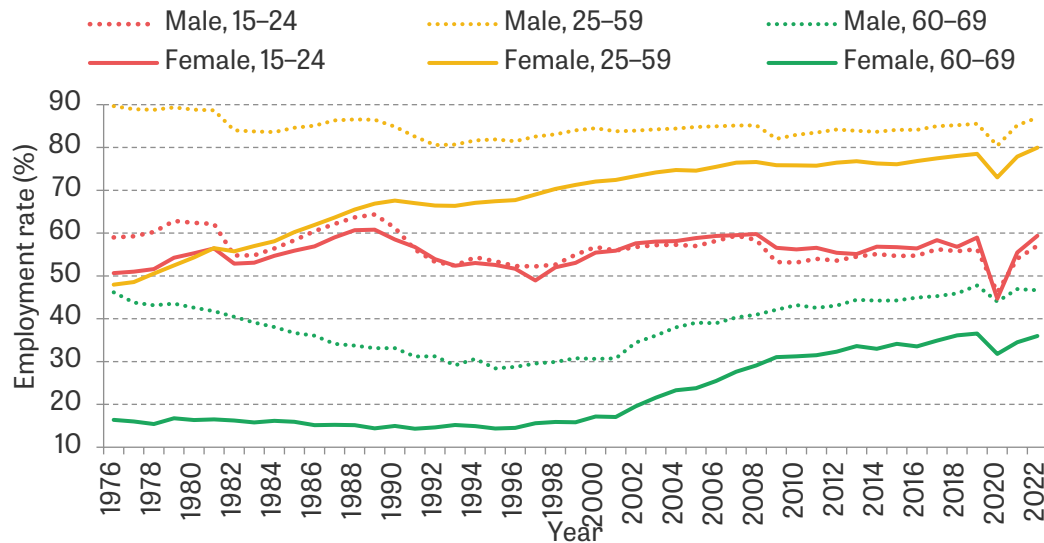
- Gini coefficient of gross individual earnings and total employer cost, over time
- Growth in gross earnings and employer cost by earnings percentile
- Disposable income as a proportion of gross income and employer social security contributions, by net household income quartile.

4. Individual employment and earnings

4.1 Trends in employment

This section looks at trends in individual employment, education, wages, and earnings. With respect to earnings, we first look separately at hourly wages and hours worked, before bringing them together in a set of charts on earnings inequality. Due to a lack of reliable data on hours worked for the self-employed, we restrict the analysis of wages and hours to employees, but include both employees and the self-employed in the analysis on total earnings.

Figure 1. Employment rates by age and sex, over time



Note: Sample is individuals aged 15–69.

Source: Authors' calculations using May and November LFS for 1976–2022.

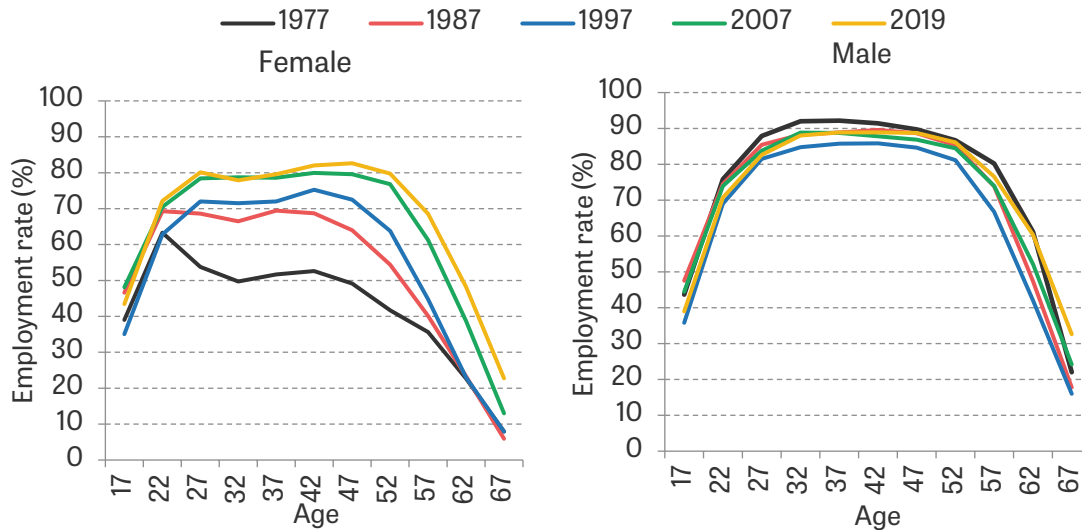
Figure 1 reports employment rates from 1976 to 2022 for youth, prime-aged, and older individuals, separately for men and women. Broadly, the figure reveals a convergence in the employment gap between men and women. For the youngest group, this male–female difference is relatively small in the mid-1970s and is virtually non-existent by the early 1990s. For both older and prime-aged individuals, the convergence in the male–female employment gap slows down considerably after 2000. In the period prior to 2000, the gap in employment rates narrows for individuals aged 60–69 because employment rates were falling among men. By contrast, the narrowing within the prime-aged group is driven by rising employment among women and a slow decline in employment among men. Another aggregate trend evident in the figure is the rise in employment rates among older men and women since 2000. More recently, the declines in employment rates that coincide with the COVID-19 pandemic are sharpest for young men and women, but in all groups by 2022 employment levels have generally rebounded to or above their pre-2020 levels.

The age profiles in employment rates are compared across men and women in Figure 2. In each panel, employment rates by age are plotted for five different cross-sections: 1977, 1987, 1997, 2007, and 2019. For men, in the right-hand panel, the shape of the profile is very similar in different years, especially when contrasted with the changing profile shapes for women (left-hand panel). Between 1977 and 1997, the profile shifts down for men; employment rates were falling over these decades at all ages. This trend reverses and the profiles are at higher employment levels in both 2007 and 2019. This coincides with the commodity boom that benefited the resource sector with positive spillovers into other sectors (Green et al., 2019).

The changing shape in women's employment profiles reflects an evolution in the propensity to exit the labour market in prime childbearing and childrearing ages. In 1997, there is a sharp

decline in employment rates for those older than 22. For those aged 22–57 in 1987, similar-aged women were far less likely to be employed in 1997. Keeping in mind that women who are 32 in 1977 are 42 in 1987, the comparison of these two cross-sections suggests that successive cohorts were both less likely to exit employment and more likely to return to employment. By 2007 and 2019, the profile for women has a similar shape to the profiles for men, though at lower levels.

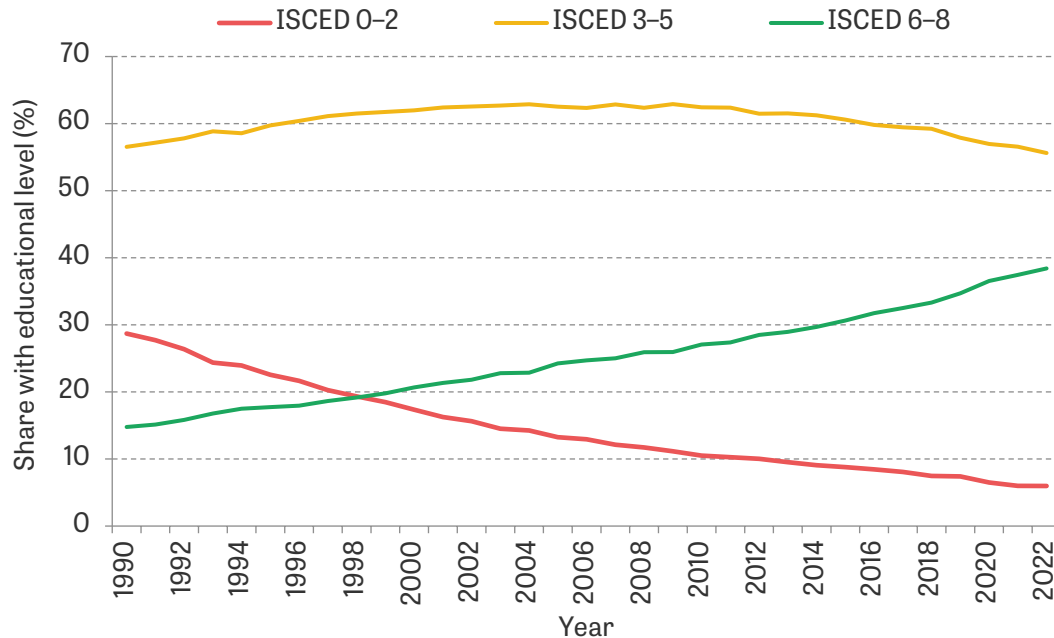
Figure 2. Employment rates over life cycle by sex, selected years



Note: Sample is individuals aged 15–69. Ages are grouped in 5-year bins, and the midpoint of the bin is labelled on the horizontal axis.

Source: Authors' calculations using May and November LFS for 1977–2019.

Figure 3. Educational attainment over time



Note: Sample is individuals aged 25–59.

Source: Authors' calculations using May and November LFS for 1990–2022.

We show how the education shares evolved in Figure 3; we begin in 1990 because the way that the highest level of completed education was collected in the Canadian Labour Force Survey substantially changed in 1990. We report three categories of completed education

corresponding to International Standard Classification of Education (ISCED) levels 0–2, 3–5, and 6–8. Canada has a particularly large share of working-aged individuals who have completed levels 3–5, which corresponds to what would be referred to as high school, college, or CEGEP in the Canadian context. This share changes little between 1990 and 2022, particularly in comparison to the lower and higher levels of education. Figure 3 reveals a steep decline in the share with levels 0–2, falling from nearly 30% in 1990 to roughly 6% in 2022. Mirroring the falling share of less-educated individuals is a large increase in the share with an undergraduate degree or higher (ICED levels 6–8), rising roughly 24 percentage points to reach nearly 40% by 2022.

In Figure 4, we show how these aggregate trends vary by sex. The lowest-education share is roughly the same in both sexes in 1990, but falls more rapidly for women. Women are less likely than men, in 1990, to have completed ISCED levels 6–8, but that reverses in the mid-2000s. By 2022, 42% of women have completed a university degree compared to 35% of men. Of that roughly 7 percentage point difference, 2 points are because men are more likely to have completed only ISCED levels 0–2. Because the share with ISCED levels 0–2 is very small, proportionately the difference is large. Although women are 67% less likely than men to obtain at most ISCED level 2, as will become clear in the next set of figures, the negative consequences – in terms of wage and employment outcomes – of low levels of education are more substantial for women.

Figure 4. Educational attainment by sex, over time

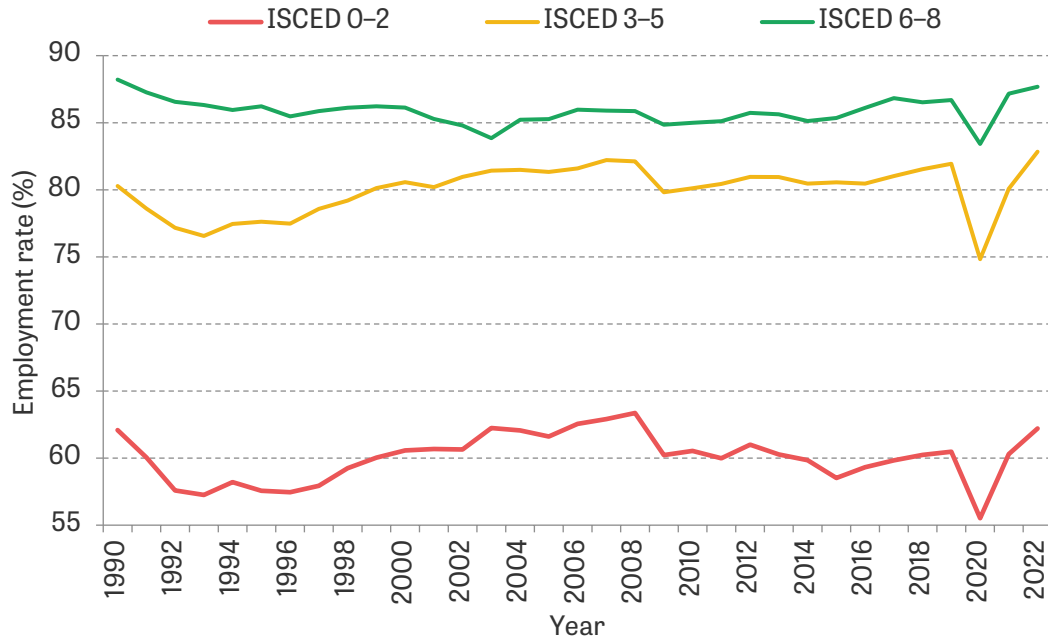


Note: Sample is individuals aged 25–59.

Source: Authors' calculations using May and November LFS for 1990–2022.

With those education trends in mind, we now show employment rates over the same time period for each of the three education levels first for men and women combined in Figure 5 and then separately in Figure 6. Employment levels are substantially higher for the most-educated group and the effects of the economic downturns that occurred in 1990, 2008, and the COVID-19-related shutdowns are muted in this group relative to the other two groups. Employment rates are substantially lower for those with less than a high school diploma (ISCED 0-2), falling below 65% throughout this period.

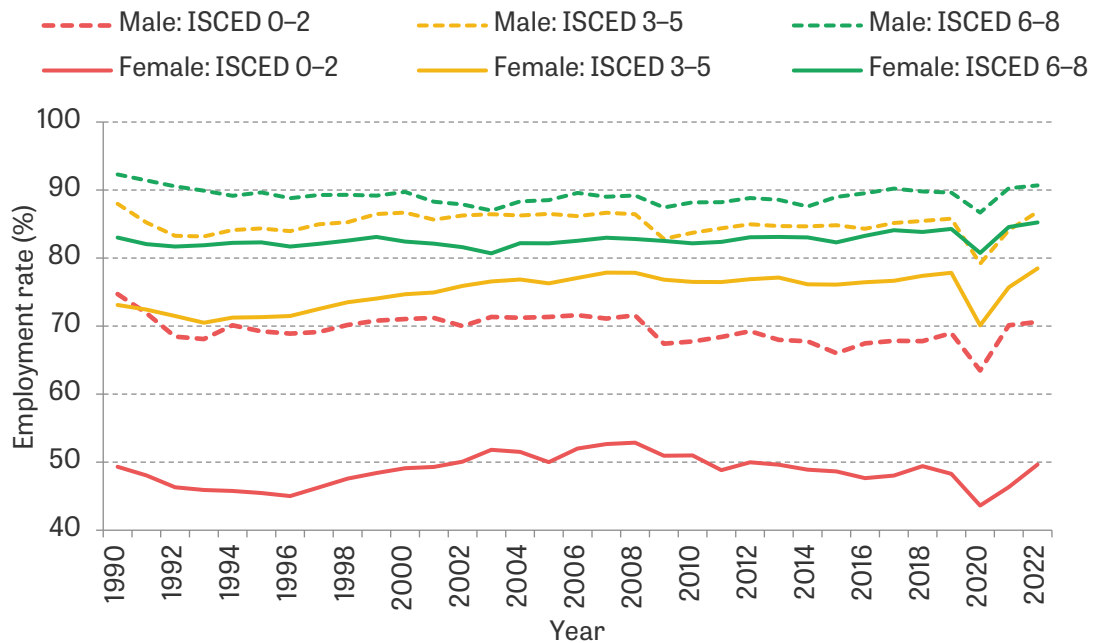
Figure 5. Employment rates by education, over time



Note: Sample is individuals aged 25-59.

Source: Authors' calculations using May and November LFS for 1990-2022.

Figure 6. Employment rates by sex and education, over time

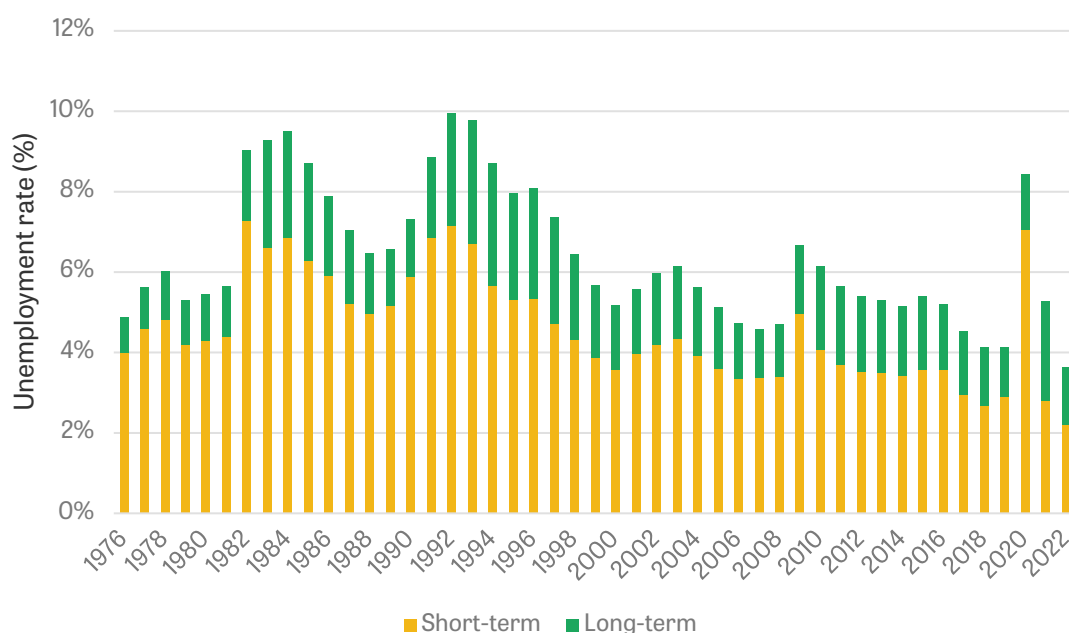


Note: Sample is individuals aged 25-59.

Source: Authors' calculations using May and November LFS for 1990–2022.

When we disaggregate by sex in Figure 6, the same general trends over time persist, with the exception of a roughly 10 point increase, between 1990 and 2020, in the employment rate among women who have achieved ISCED levels 3–5. What is most striking about Figure 6, however, is the male–female gap in employment rates in the less-educated group, particularly when contrasted with the analogous gap in the other groups. In 2019, the employment rate was 20 percentage points lower for women with less than a high school diploma than for men in the same education group. Figure 6 also reveals that the post-COVID recovery in employment rates was slowest for women with lower levels of education.

Figure 7. Unemployment rate by duration of unemployment over time



Note: Sample is individuals aged 25–59. Unemployment rate is calculated as the fraction of labour force aged 25–59, split between short-term (less than 1 year) and long-term (1 year or longer) duration of unemployment.

Source: Authors' calculations using May and November LFS for 1976–2022.

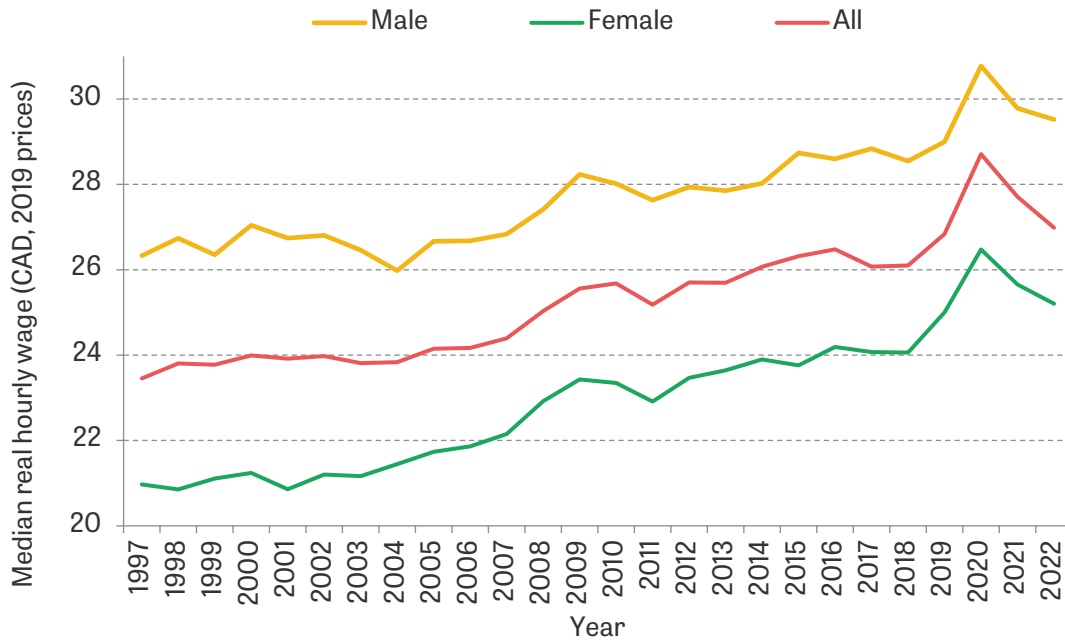
Figure 7, which shows the short- and long-run employment rates between 1976 and 2022, demonstrates how severe and persistent the 1980 and 1990 recessions were. Compared to an average of 6.4% across this period, total unemployment remains above 9% for the three years spanning 1982–84 and reaches nearly 10% at the peak of the 1990s recession. As short-run unemployment began to recover after 1992, the stock of long-run unemployment continued to increase, remaining at more than 3% in 1993 and 1994. The Great Recession, in contrast, was much milder in large part because there were no bank failures in Canada and because high commodity prices generated labour demand in the resource sector that spilled over into other sectors of the economy. Finally, Figure 7 shows the large spike in unemployment in 2020 that results in a larger than average long-term unemployment in 2021, but by 2022 overall unemployment is at its lowest point in the period shown in the figure.

4.2 Trends in hourly wages (employees only)

In the Canadian Labour Force Survey wage data were first collected in 1997; consequently, all of our figures reporting wages cover the period 1997–2022. In this period, the broad changes over time in median real hourly wages are similar for men and women, as seen in Figure 8. In the late 1990s and early 2000s, real wages were flat, though inflation was low and stable during this

period. Beginning in the mid-2000s (and earlier for women), median wages grew steadily, even through the 2008 recession. Much of the rising wages in the 2000s and the first half of the 2010s can be attributed to the resource boom that apparently 'lifted all boats'. The large spike in 2020 was due to a large change in the composition of the workforce during the COVID shock together with a corresponding dip in employment levels. Specifically, lower-wage workers – who were less able to work from home – were less likely to be employed in 2020, raising the median wage. The sharp decline after 2020 reflects both the return to a more typical workforce composition and the higher than usual inflation rates. Inflation was below 1% in 2020 and reached 6.8% in 2022.

Figure 8. Median real hourly wage among employees, overall and by sex, over time

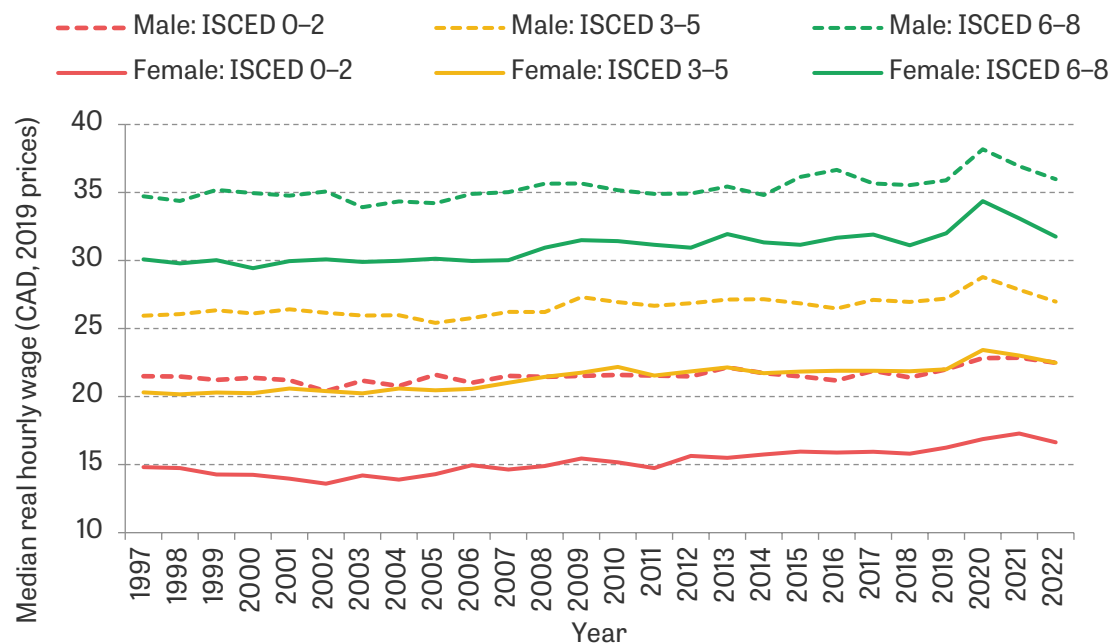


Note: Sample is employees aged 25–59.

Source: Authors' calculations using May and November LFS for 1997–2022.

When we disaggregate by education levels in Figure 9, it becomes apparent that real wages were falling in the late 1990s for less educated men and women and this was a period when the weighted average of real minimum wages was also falling. On the whole, however, comparing the trends in Figures 8 and 9 reveals that differences in median wages between men and women and between employees with different levels of education are substantially larger than any changes over time during this period. As was also the case with employment, lower levels of education are associated with much lower median wages for women than for men. Education premiums are much lower for men in Canada because wages are quite high for men with lower levels of education. Indeed, in Figure 9, the median wages for men with less than a high school diploma (ISCED 0–2) essentially overlap with the median wages for women who have completed high school or a shorter post-secondary credential (ISCED 3–5).

Figure 9. Median real hourly wage among employees, by sex and education, over time

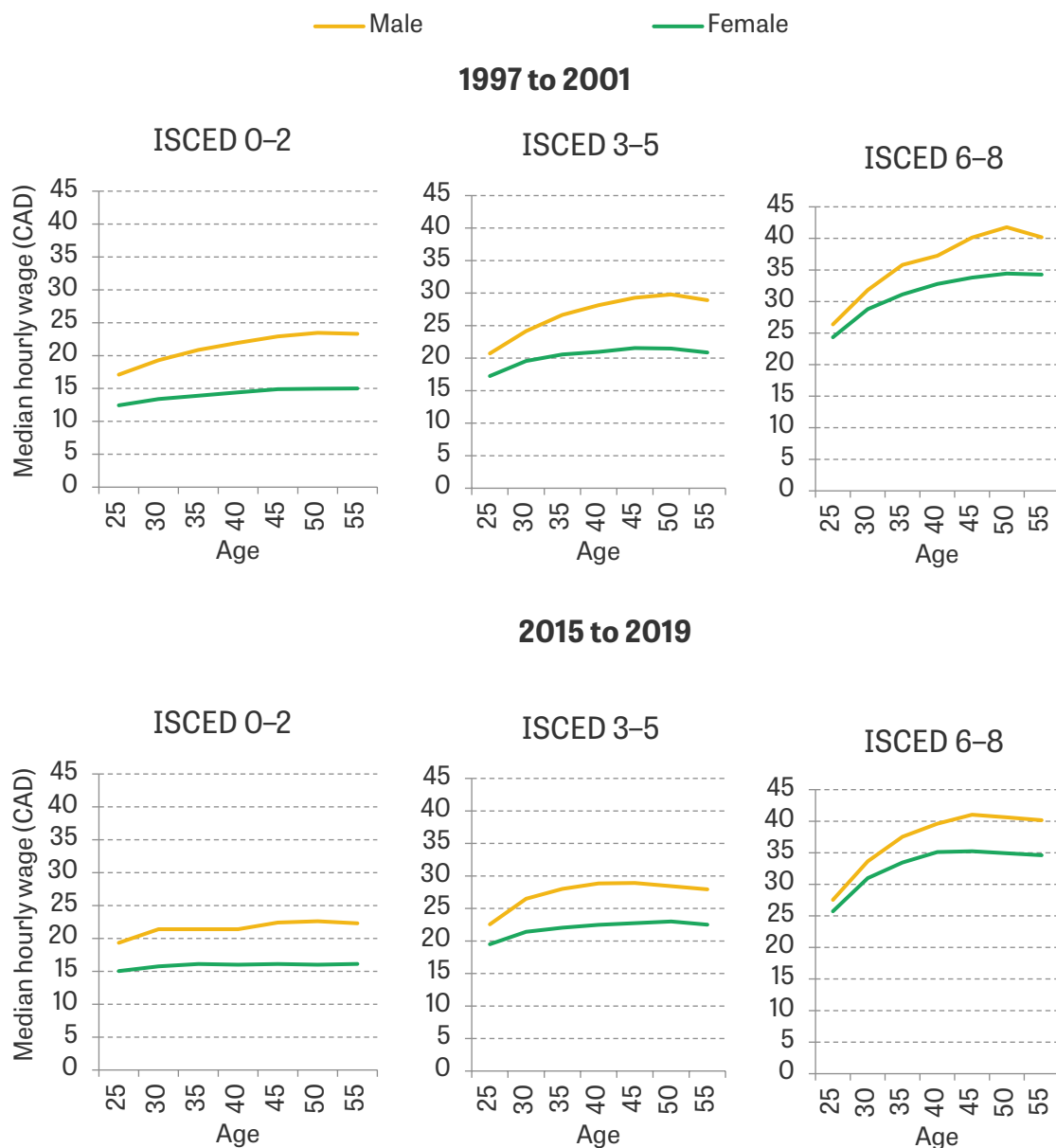


Note: Sample is employees aged 25–59.

Source: Authors' calculations using May and November LFS for 1997–2022.

In Figure 10, we show how median wages grow over the lifecycle separately by sex and education levels. We report these profiles for two different cross-sections pooling five years in each to increase the sample sizes. In the top panel, we show profiles for 1997–2001 (a period where wages were relatively low and stagnant) and in the bottom panel for 2015–2010 (a period where wages were higher and growing). In both cross-sections, there is relatively little life-cycle wage growth for the less-educated group, particularly for women. Mean wages among women in the ISCED 3–5 group grow more over the lifecycle than less educated women but grow substantially less than similarly educated men. Wage growth is much steeper for both men and women with at least one university degree (ISCED 6–8). Some of this steepness, however, can be attributed to compositional changes in the late 20s. Individuals pursuing graduate or professional degrees will not have completed their education by age 25 and may be missing from the sample in these first ages. Because these workers would have higher wages than those with only an undergraduate degree, when they join the sample at later ages that exaggerates the slope.

Figure 10. Median real hourly wage among employees over lifecycle, by sex and education

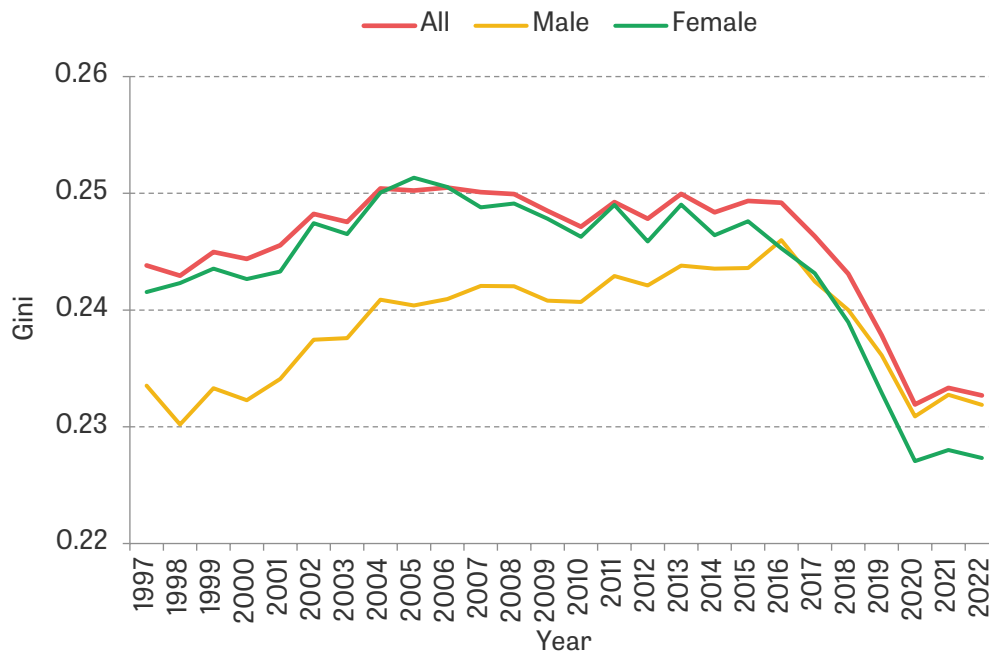


Note: Sample is employees aged 25–59. Ages are grouped in 5-year bins, and the youngest age in the bin is labelled on the horizontal axis.

Source: Authors' calculations using May and November LFS for 1997–2019.

We turn to a number of measures of wage inequality in the next two figures. In Figure 11, we report the Gini coefficient for men and women separately and pooled together. Overall, wage inequality was growing until roughly 2007; however, over this decade the Gini coefficient increased by only 1 percentage point. The coefficient for women closely tracks the pooled measure. Wage inequality among men was almost 1 point lower in the late 1990s, but inequality grew steadily until it was roughly equal with the Gini among women in the mid-2010s. Beginning in 2016, inequality fell by 2 points within 4 years. This fall coincides with rising minimum wages. As noted in Section 2, the real minimum wage has been rising since its low point in 2003, with the most dramatic increases occurring since 2017. A noteworthy feature of Figure 11 is that the decline in wage inequality in recent years has been more pronounced for women – who are more likely to be working in minimum-wage jobs – than for men.

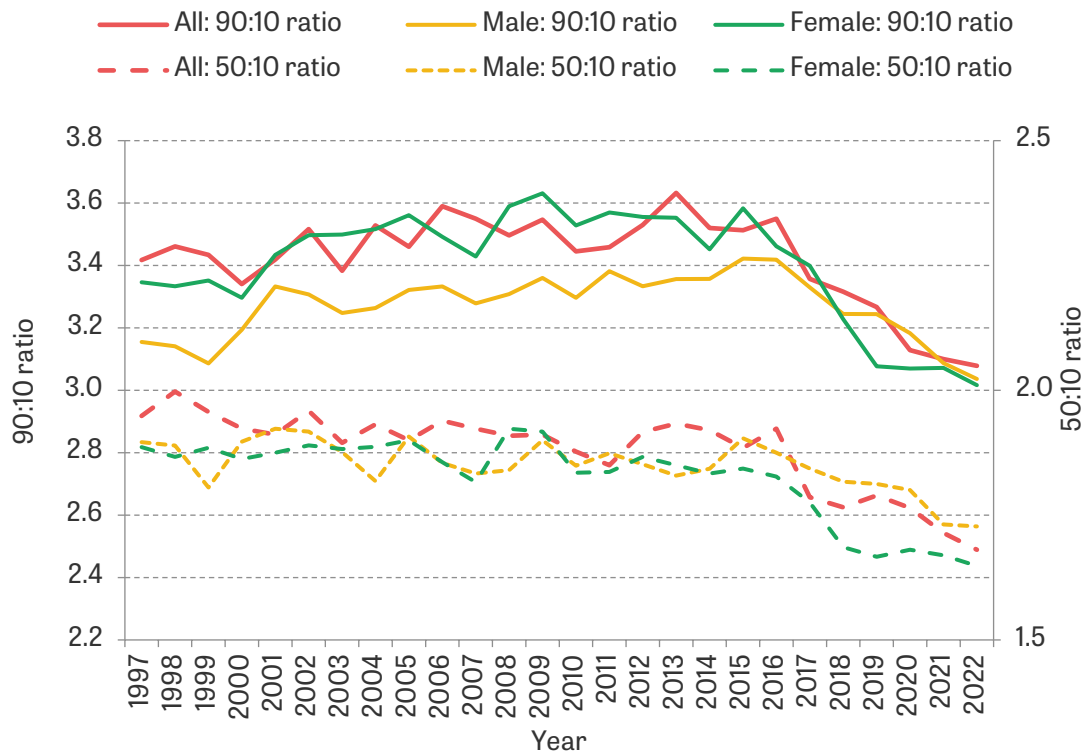
Figure 11. Gini coefficient of hourly wages among employees, overall and by sex, over time



Note: Sample is employees aged 25–59.

Source: Authors' calculations using May and November LFS for 1997–2022.

Figure 12. 90:10 and 50:10 ratios of hourly wages among employees, overall and by sex, over time



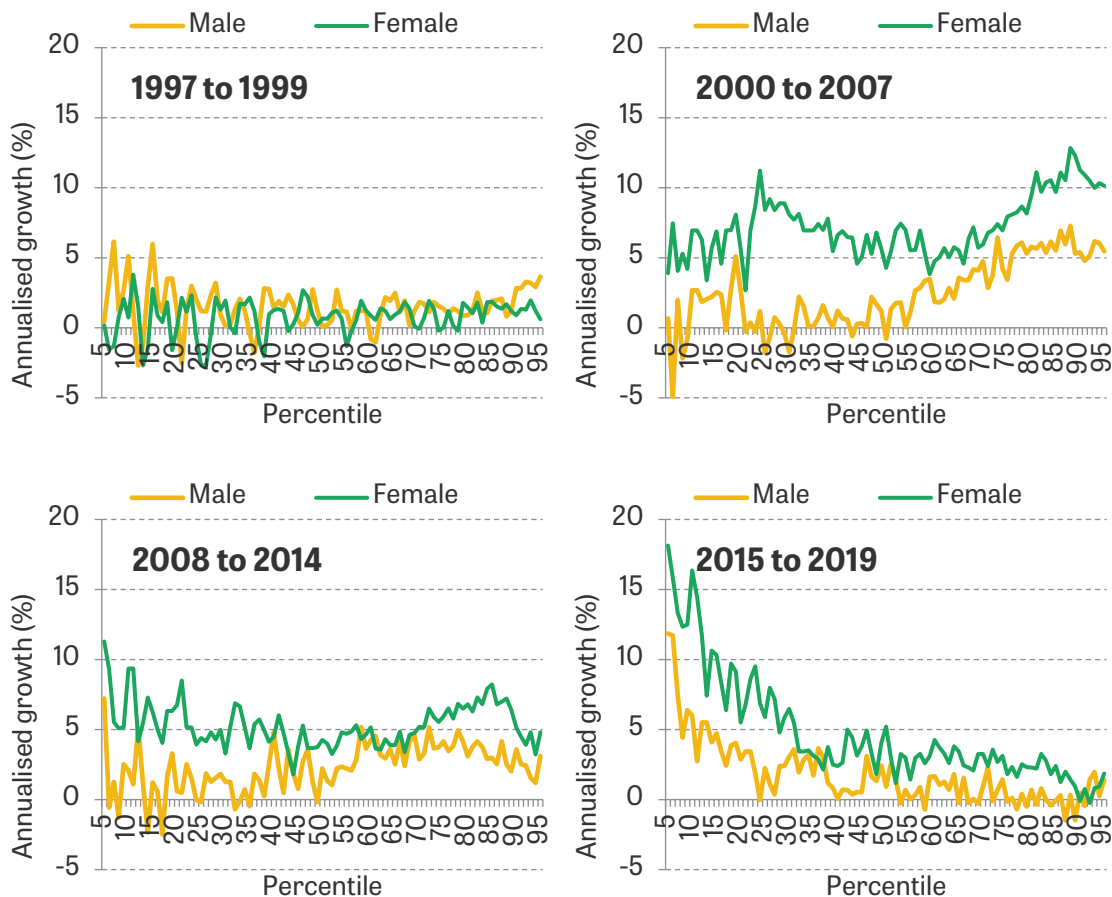
Note: Sample is employees aged 25–59.

Source: Authors' calculations using May and November LFS for 1997–2022.

The Gini coefficient is most sensitive to differences in the middle of distributions, so in Figure 12 we show the ratio of the 90th to the 10th percentile and the 50th to the 10th percentile, which can better reveal movements in the tails of distributions. The 50:10 ratio is relatively flat for the period between 1997 and 2016, while the 90:10 ratio is increasing. This suggests that the increasing Gini coefficient was driven by growth in wages at the top of the distribution. After 2016, both ratios fall steeply; again, this is likely driven by substantial increases in minimum wages in large provinces that increase wages at the 10th percentile but do not spill over into median wages.

Figure 13 directly shows wage growth, for men and women, at each percentile for selected time periods. The effect of minimum wages is most evident in the bottom right-hand panel, which shows wage growth between 2015 and 2019. Growth at the bottom of the distribution is much larger in percentage terms for women, who are more likely to be employed in minimum-wage work. The top right-hand panel shows changes in wage growth from 2000 to 2007, while the bottom left shows wage growth in the post-Great Recession years from 2008 and 2014. In both of these periods, for men growth is stronger at the top of the distribution, though, particularly between 2008 and 2014, growth in the middle is nearly as strong as at the 90th percentile. This is likely due in large part to the resource boom. Commodity prices were at their highest during this period. In contrast, during the 2000s women's wages show some polarisation.

Figure 13. Annualised growth in hourly wages among employees by wage percentile, overall and by sex, selected periods



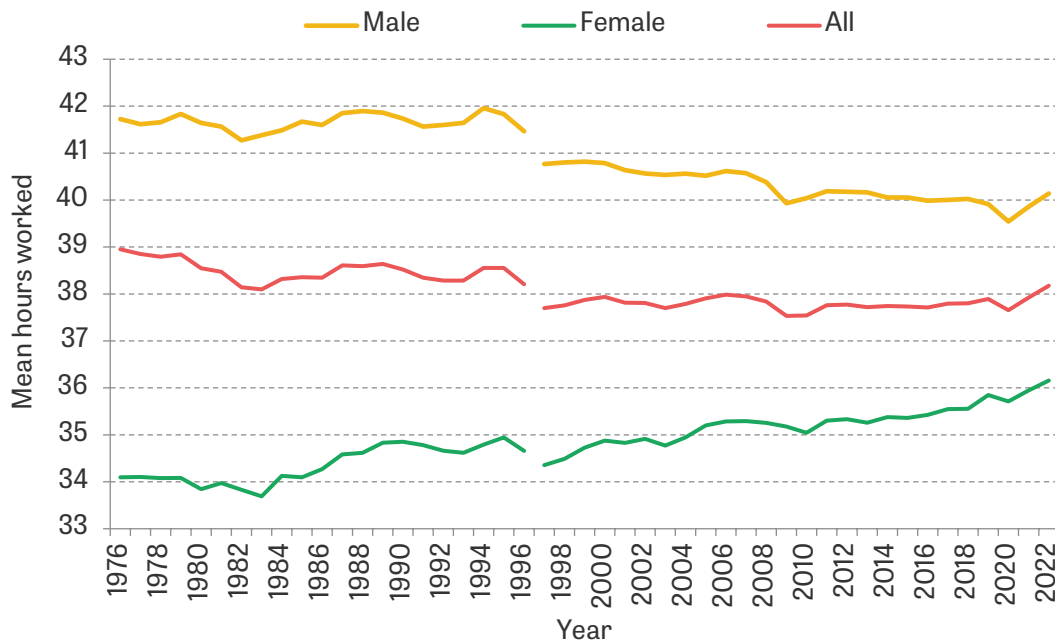
Note: Sample is employees aged 25–59.

Source: Authors' calculations using May and November LFS for 1997–2019.

4.3 Trends in hours worked (employees only)

In this section, we show broad trends in hours worked among employees. Average hours among men are falling gradually between 1976 and 2022, while average hours are rising for women; this is shown in Figure 14. Because the share of employees who are women is growing overtime, overall average hours are initially falling but are quite stable after 2000. In Figure 15, when we disaggregate by education level, the same general patterns are evident. It is notable in this figure that men who have less than a high school diploma work more hours, on average, than men with higher levels of education; whereas among women, the less-educated group have the lowest average hours. Finally, in Figure 16 we show changes in hours worked by wage ventile for the decade between 1998 and 2008 in the top panel and between 2008 and 2018 in the bottom panel. This figure reveals that the declines in hours for men are concentrated among lower-wage employees. For women, changes occur at all wage levels in the later decade and are somewhat more likely at the bottom of the distribution for the earlier decade.

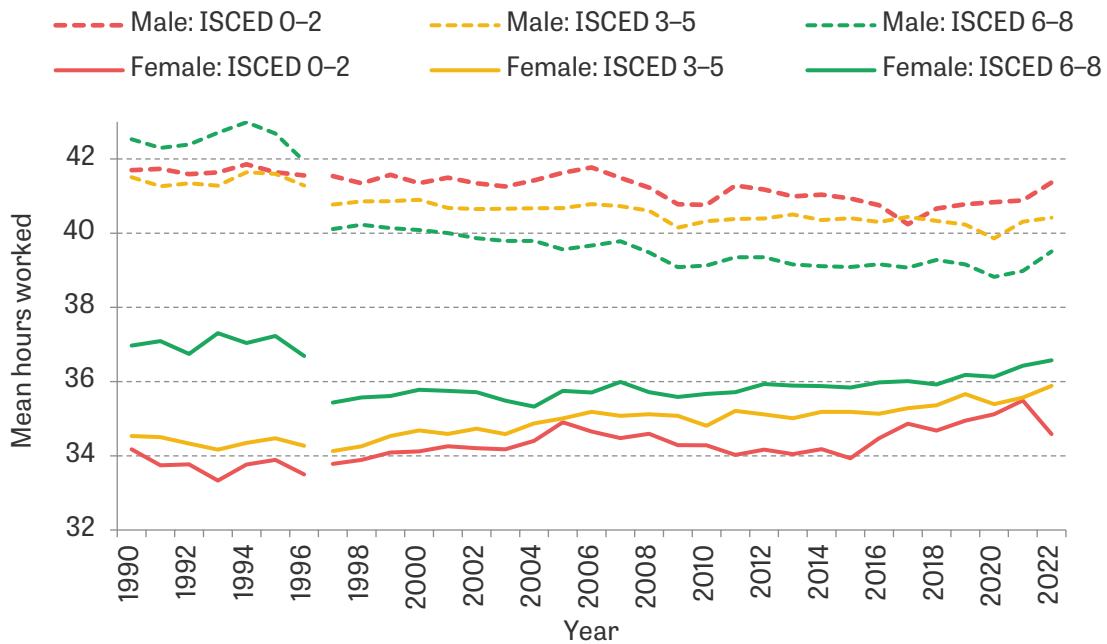
Figure 14. Mean hours worked among employees, overall and by sex, over time



Note: Sample is employees aged 25–59. Hours are total usual hours at all jobs. Hours worked prior to 1997 may include overtime if that overtime was usual for the typical week. After 1997, the usual hours worked include only the 'normal' or 'contract' hours and do not include overtime.

Source: Authors' calculations using May and November LFS for 1976–2022.

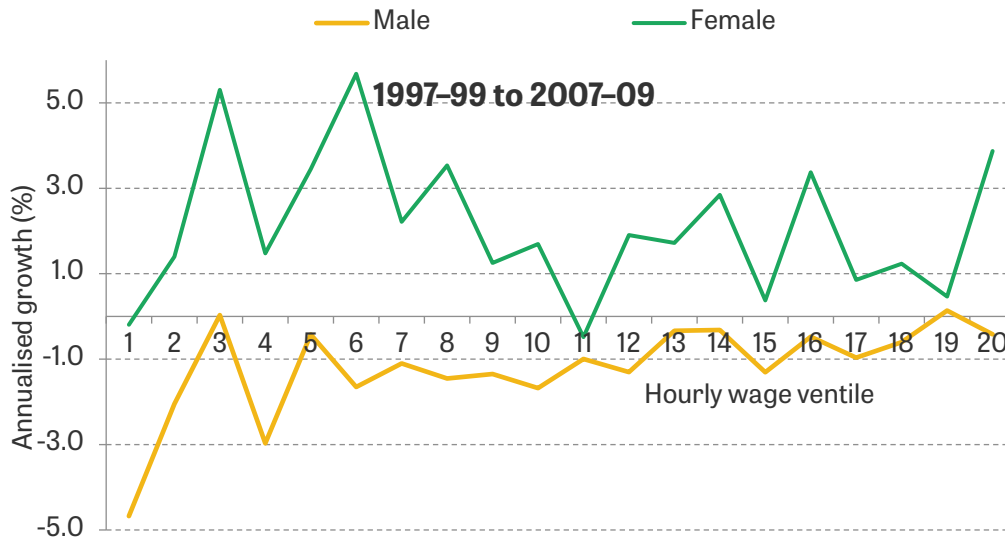
Figure 15. Mean hours worked among employees, by sex and education, over time

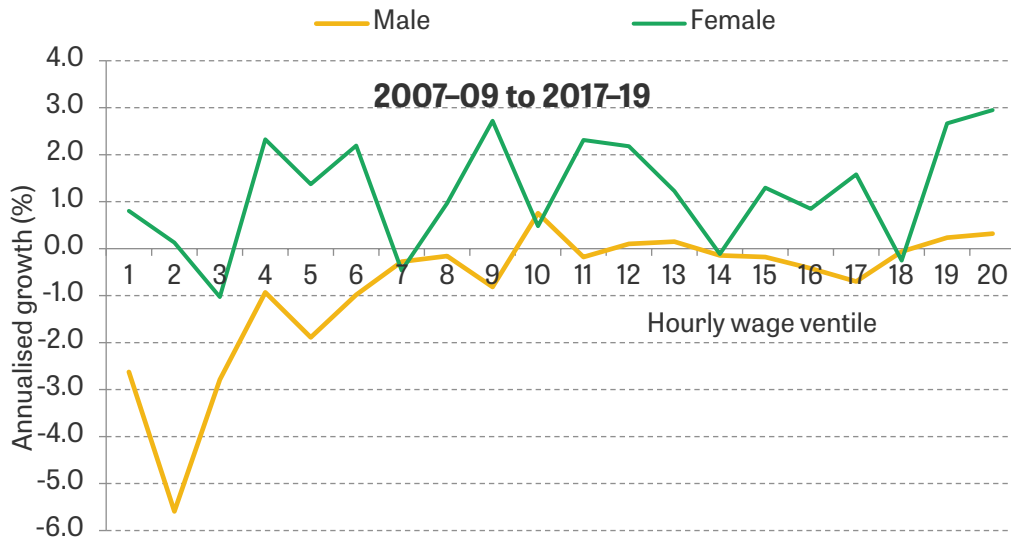


Note: Sample is employees aged 25–59. Hours are total usual hours at all jobs. Hours worked prior to 1997 may include overtime if that overtime was usual for the typical week. After 1997, the usual hours worked include only the 'normal' or 'contract' hours and do not include overtime.

Source: Authors' calculations using May and November LFS for 1990–2022.

Figure 16. Annualised growth in mean hours worked among employees by hourly wage ventile, overall and by sex, selected years





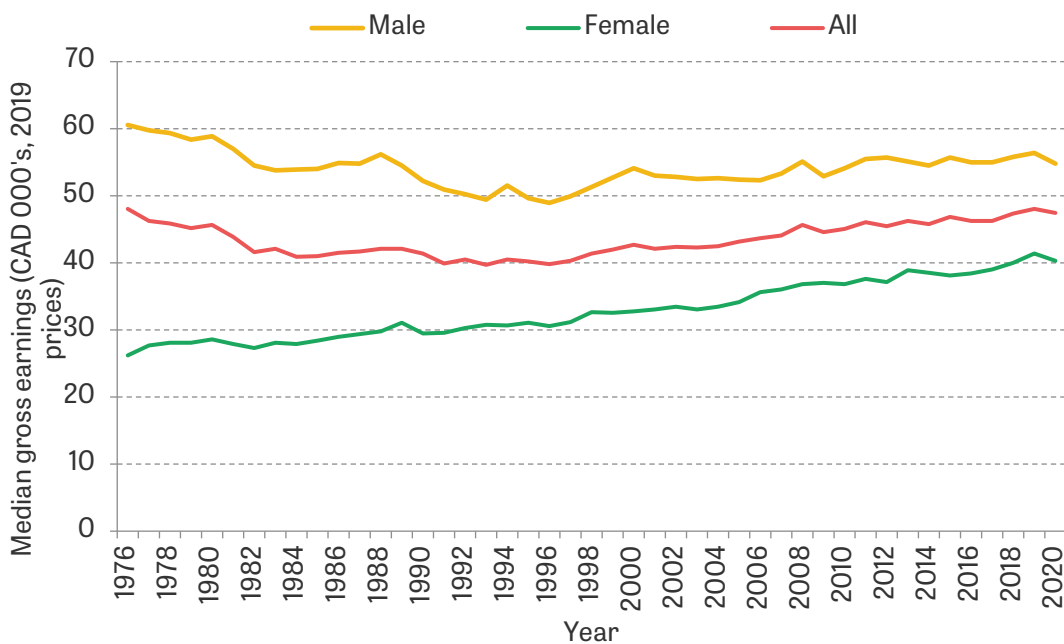
Note: Sample is employees aged 25–59. Hours are total usual hours at all jobs. We average mean hourly wage for each year across the three years to obtain hourly wage for each 3-year period.

Source: Authors' calculations using May and November LFS for 1997–2019.

4.4 Inequality in individual earnings among those in work (employees and self-employed)

We now investigate how levels of earnings and measures of earnings inequality have evolved over time. Because of a major change in how income data were collected in the Canadian Census in 2006, we are frequently constrained in the number of years we can report in the figures. When possible, we draw on aggregate data from Statistics Canada. More information on these issues can be found in the Data Appendix.

Figure 17. Median real gross individual earnings, overall and by sex, over time



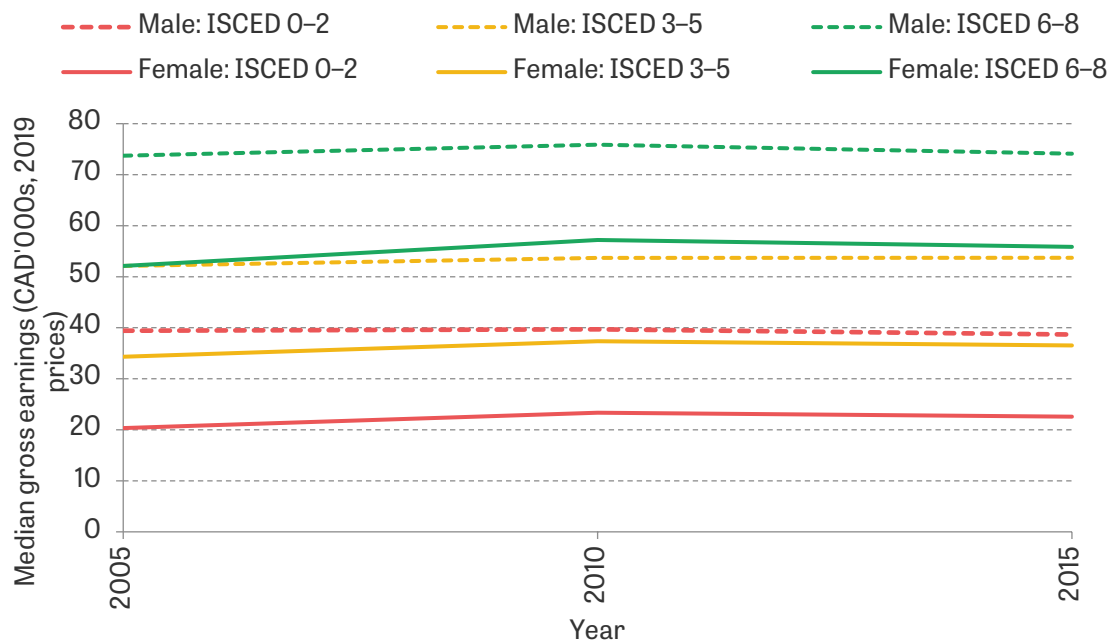
Note: Sample is individuals in work aged 25–54.

Source: Statistics Canada. Table 11-10-0239-01: Income of individuals by age group, sex and income source, Canada, provinces and selected census metropolitan areas.

We begin with median gross earnings, reported in Figure 17 from 1976 to 2020. While women’s earnings have been growing steadily at the median, men’s earnings were seemingly affected by the two deep recessions beginning in the 1980s and 1990s. There is also a substantial gap when comparing median earnings for men and women. The gap narrows in the 1970s and 1980s but then remains fairly consistently around \$18,000 in the 1990s and 2000s. After 2000, another period of narrowing begins, and by 2019 the gap is around \$15,000 or 27% of men’s median earnings.

In Figure 18, we stratify by education and sex, but are only able to report median earnings for three years: 2005, 2010 and 2015. This figure further demonstrates one of the most robust characteristics of Canadian labour markets: less-educated men fare relatively well, particularly in comparison to similarly educated women. Indeed, in all three years among men without a high school diploma median earnings are higher than among women who have achieved ISCED levels 3–5.

Figure 18. Median real gross individual earnings, by sex and education, over time

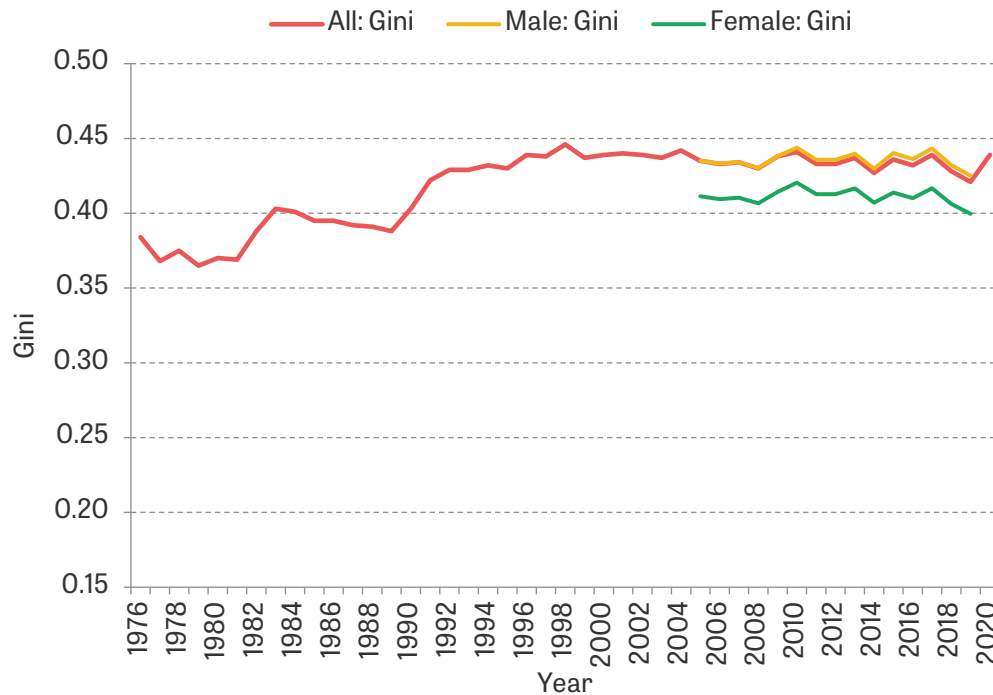


Note: Sample is individuals in work aged 25–59.

Source: Authors’ calculations using the Canadian Census for 2006, 2016, and the 2011 National Household Survey.

In order to report a longer time series, we use aggregate data reported by Statistics Canada for Figure 19. Gini coefficients for earnings were not available, so instead we show the overall Gini coefficient for adjusted market income, and we extrapolate for men and women. This is further described in the Data Appendix. We do not observe employer costs in the data set we use, and as such are unable to report the Gini coefficient of total employer cost, over time. The economic downturns occurring in the 1980s and 1990s resulted in permanent increases in market income inequality, as depicted in Figure 19. From 1981 to 1983, there was a spike in the Gini coefficient, which then gradually decreased during the subsequent economic upturn. However, by 1989, the Gini coefficient had still not reverted to its level before the recession. This trend of increasing inequality was even more evident in the 1990s. The Gini coefficient climbed from 1990 to 1992 and kept rising during the recovery phase. From the late 1990s onwards, it remained relatively unchanged.

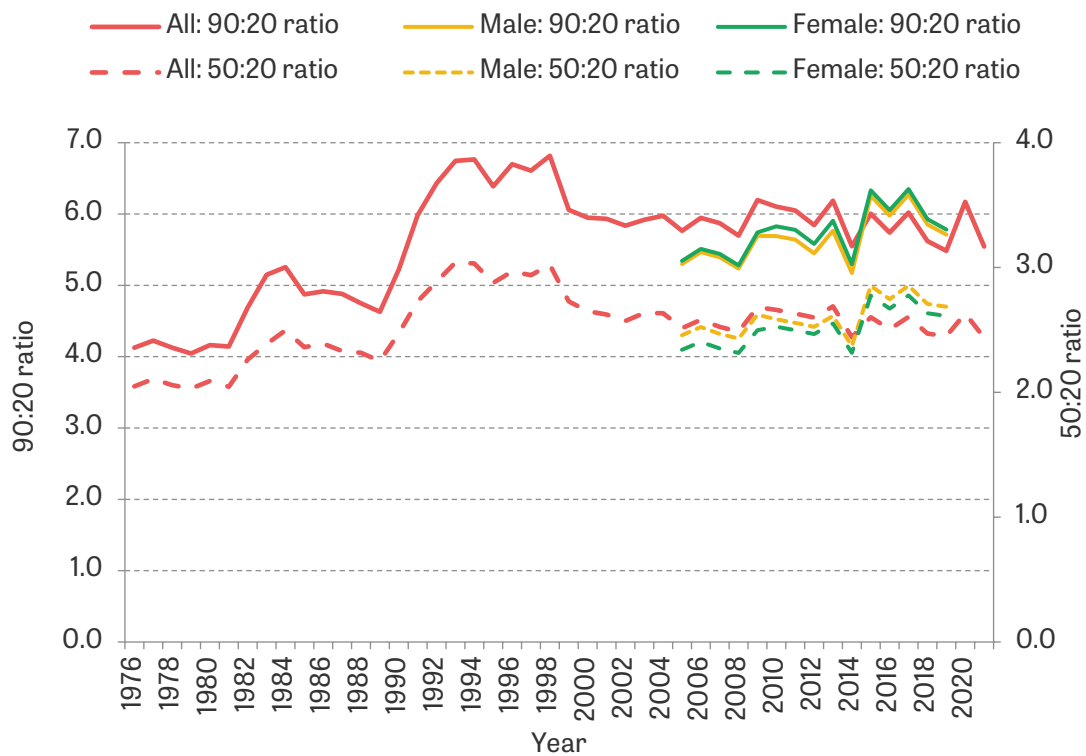
Figure 19. Gini coefficient of adjusted market income, overall and by sex, over time



Note: Sample is individuals aged 15 to 16 and over. See Data Appendix for explanation of sample.

Source: The Gini coefficient for all is taken from Statistics Canada, Table 11-10-0134-01: Gini coefficients of adjusted market, total and after-tax income. Adjusted market income is plotted. Household market income is adjusted by dividing by the square root of the number of individuals in the household. Market income includes earnings from employment and net self-employment, net investment income, and private retirement income. To impute the Gini coefficient for men and women, the Gini coefficient from Table 11-10-0134-01 is multiplied by the ratios of male to overall and female to overall Gini coefficients, which were estimated using individual gross earnings in the Canadian Census for 2006 and 2016, and the 2011 National Household Survey. Data are representative of individuals in Canada.

Figure 20. 90:20 and 50:20 ratios of adjusted market income, overall and by sex, over time

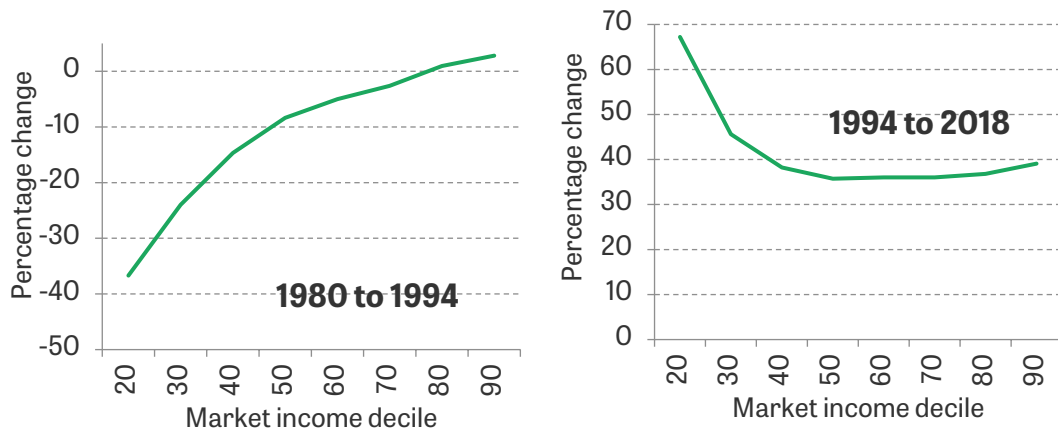


Note: Sample is individuals aged 15 to 16 and over. See Data Appendix for explanation of sample.

Source: The 90:20 and 50:20 ratios for all are taken from Statistics Canada, Table 11-10-0193-01: Upper income limit, income share and average of adjusted market, total and after-tax income by income decile. The 20th decile is used because the 10th decile is not reported with sufficient data quality. Ratios for adjusted market income are plotted. Household market income is adjusted by dividing by the square root of the number of individuals in the household. Market income includes earnings from employment and net self-employment, net investment income, and private retirement income. To impute the ratios for men and women, the 90th, 50th, and 20th percentiles of market income from Table 11-10-0193-01 are multiplied by the ratios of male to overall and female to overall market-income percentiles, which were estimated using individual gross earnings in the Canadian Census for 2006 and 2016, and the 2011 National Household Survey. The ratios are then calculated using the imputed percentiles for men and women. Data are representative of individuals in Canada.

The quantile ratios that are plotted in Figure 20 give an indication of whether inequality is changing most at the top or bottom of the market income distribution. We report the 90:20 and 50:20 ratios because the quality of the estimated 10th percentile was too low. Figure 20 shows the same pattern that inequality ratchets up with the 1980 and 1990 recessions, driven by declining market income at the bottom of the distribution. The 50:20 market income ratio does not rise as quickly as the 90:20 ratio because median market income is also falling in both recessions, though the median decline is proportionately smaller than the decline at the 20th percentile. By contrast with Figure 19, which showed that the Gini coefficient remained consistently high following the 1990 recession, Figure 20 shows some reductions in both the 90:20 and 50:20 ratios following 2000. Again, the resource boom is likely playing a role in these post-2000 trends raising market incomes at the bottom of the distribution. These broad patterns are even more evident in Figure 21 which plots marketing income growth by decile. From 1980 to 1994, the recessionary period, market incomes are falling for all but the highest incomes and the greatest declines in market income occur at the lowest incomes. In the period following the 1990 recession recovery, market incomes were increasing, and increasing the most for the bottom 40%. We are not able to show growth in employer costs, by earnings percentile.

Figure 21. Growth in real adjusted market income by earnings percentile, selected periods



Note: Sample is individuals aged 15 to 16 and over. See Data Appendix for explanation of sample.

Source: Statistics Canada, Table 11-10-0193-01: Upper income limit, income share and average of adjusted market, total and after-tax income by income decile. Growth in adjusted market income is plotted. Household market income is adjusted by dividing by the square root of the number of individuals in the household. Market income includes earnings from employment and net self-employment, net investment income, and private retirement income.

4.2 Self-employment

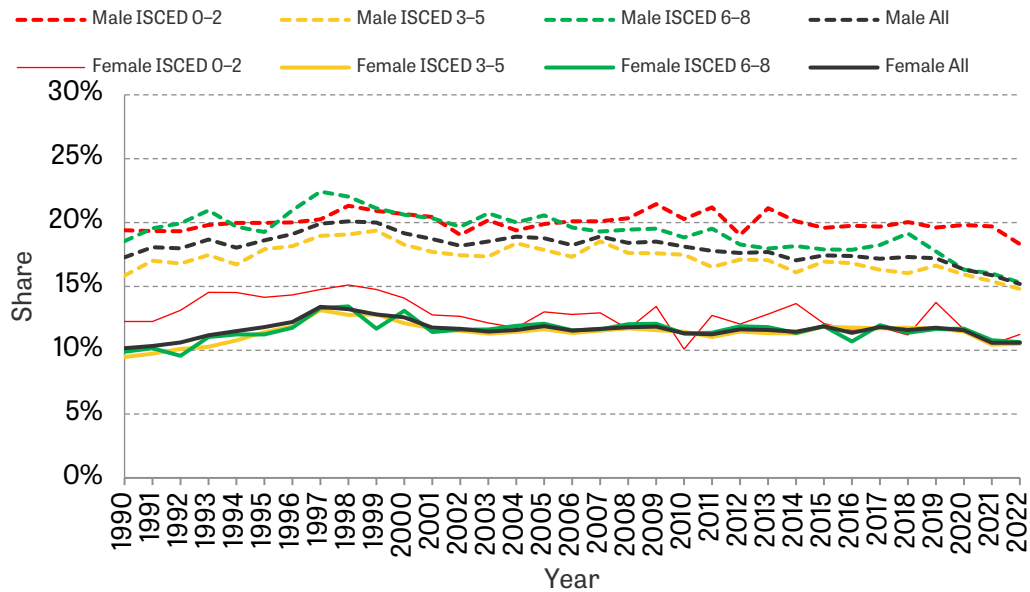
In this section, we report the shares of self-employment, by type in Figure 22, by sex and education in Figure 23, and by earnings percentile in Figure 24. As shown in Figure 22, the share of workers who are employees is fairly constant between 1976 and 2019, while there is a shift in the composition of self-employed workers. Over the 1990s, the share of solo self-employed workers rose (while other forms of self-employment fell) and remained relatively flat in the next two decades. Figure 23 further reveals that, between 1990 and 2020, men at all education levels are more likely to be self-employed than women. In the 1990s, self-employment was more common among women in the ISCED 0–2 groups, but this difference disappeared in the mid-2000s as self-employment rates for less-educated women fell in the first half of that decade. After 2010, for men, the rate of self-employment is highest in the ISCED 0–2 group, primarily because self-employment falls beginning in 2000 among men with higher levels of education.

Figure 22. Share of employees and self-employed workers, over time



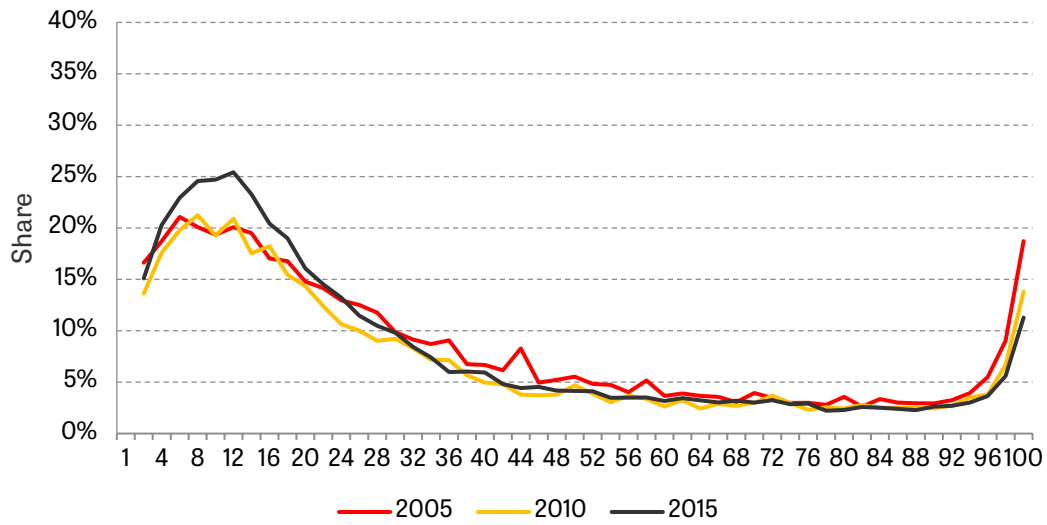
Note: Sample is individuals aged 25–59. ‘Solo self-employed’ are self-employed without employees, ‘other self-employed’ include self-employed with employees and family workers.
 Source: Authors’ calculations using May and November LFS for 1976–2022.

Figure 23. Share self-employed by sex and education, over time



Note: Sample is individuals aged 25–59.
 Source: Authors’ calculations using May and November LFS for 1990–2022.

Figure 24. Share self-employed by percentile of individual earnings, selected years



Note: Sample is individuals aged 25–59. Workers are defined as self-employed if they receive more income from self-employment than they do from employment.

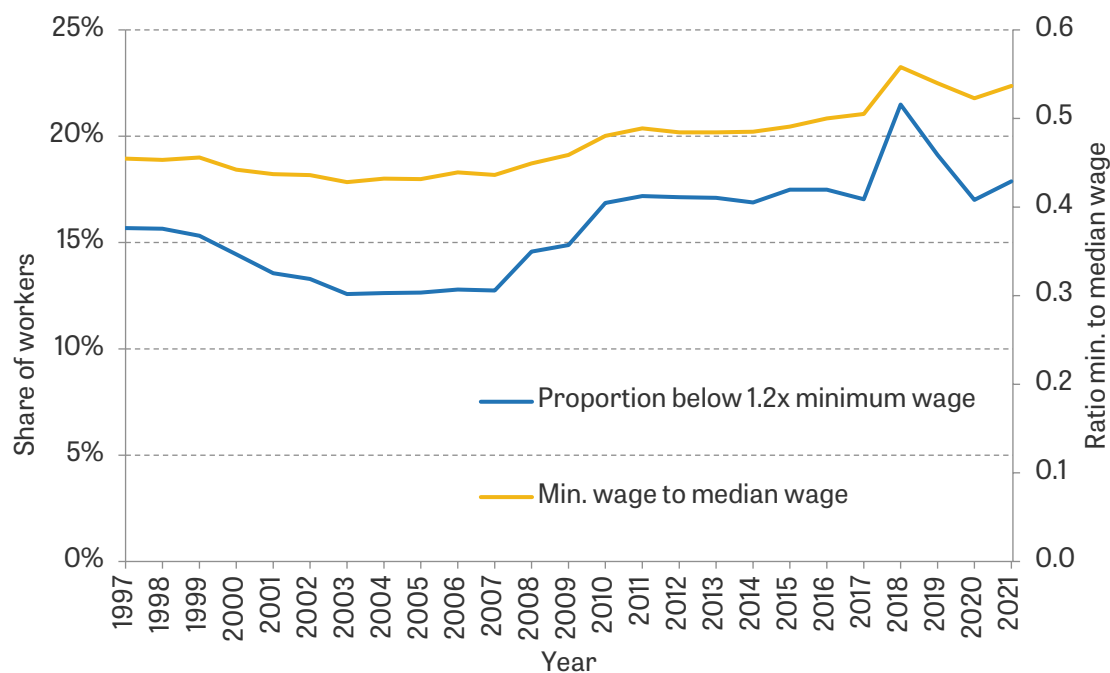
Source: Authors' calculations using the Canadian Census for 2006, 2016, and the 2011 National Household Survey. Data are representative of individuals in Canada.

5. Institutions

This section looks at labour market institutions that affect earnings and incomes: minimum wages and collective bargaining, self-employment, and social insurance. As in most of the report, all analysis is restricted to workers aged 25–59.

5.1 Minimum wage and unions

Figure 25. Bite of the minimum wage over time

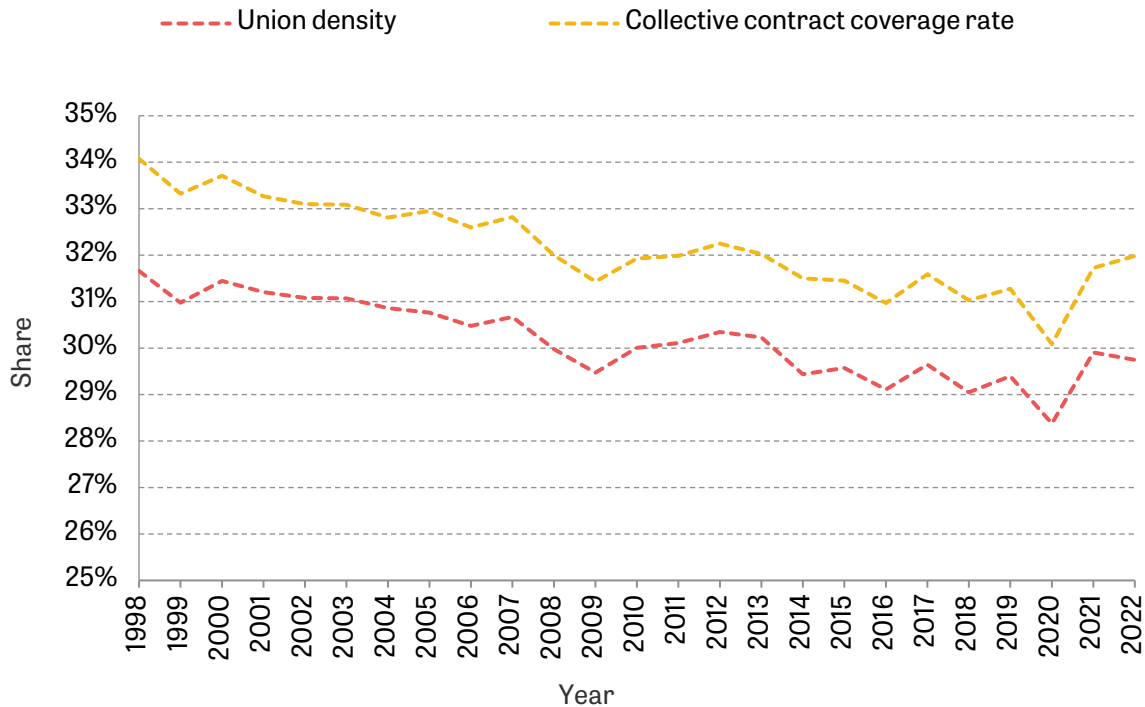


Note: Sample is employees aged 25–59. The figure presents the share of workers with a wage less than 1.2 times the minimum wage (yellow line, left-hand-side scale). The green line represents the ratio of the minimum wage to the median wage. Minimum wages are set at the provincial level for most industries. We use the average minimum wage weighted by the share of employment in each province.

Source: Authors' calculations using May and November LFS for 1997–2021.

Figure 25, which reports two measures of how much minimum wages 'bite', reveals the movements in minimum wages that are driving many of the changes at the bottom of the wage distributions reported in Section 4. The yellow line, reporting the share of employees earning less than 1.2 times the minimum wage, and the green line, reporting the ratio of the minimum to median wages, follow the same general trends. Median wages are growing slowly before 2018, such that most of the movements depicted in Figure 25 are driven by changes in real minimum wages. After 2015, several large provinces introduced substantial increases in pursuit of a \$15 minimum wage and this is reflected in the spike at 2018 in both measures. The sharp decline in 2020 is likely the result of compositional changes in employment and particularly low inflation associated with the economic shutdowns during the COVID-19 pandemic.

Figure 26. Union density and fraction of workers covered by collective bargaining agreements, over time



Note: Sample is individuals aged 25–59.

Source: Authors' calculations using May and November LFS for 1998–2022.

Figure 26 shows the steady decline in the share of workers covered by unions or collective contracts; this is a continuation of a trend that began in the 1980s, and which is discussed further below. More recent fluctuations in unionisation rates are likely driven by changes in the workforce associated with the pandemic.

5.2 Role of direct taxes and benefits (financial transfers from the state)

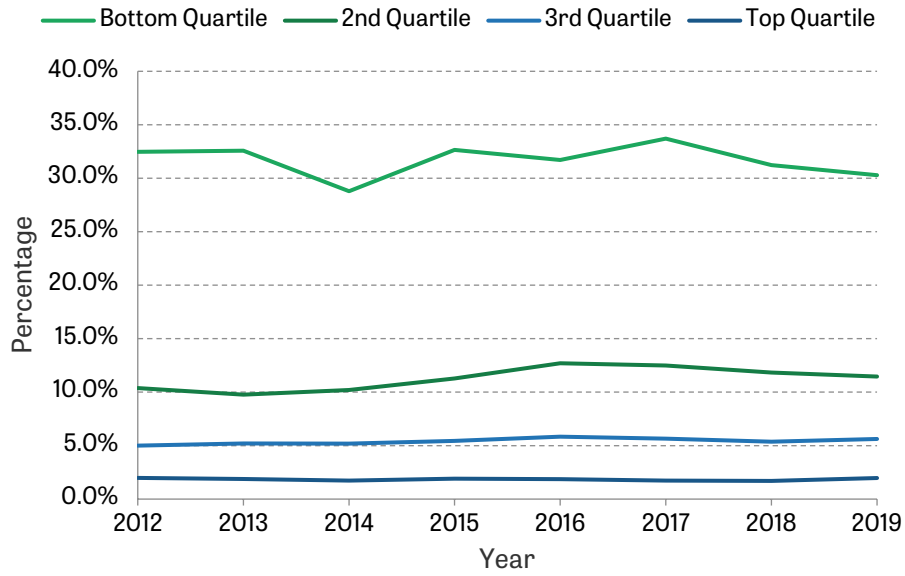
In this section we report the magnitudes of financial transfers to and from the state by quartiles of the net household income distribution. The data source is the recently introduced Canadian Income Survey, so our analysis is limited to the time period 2012–19.

Figure 27 shows benefits received from the state by net household income quartiles. Benefits display a high degree of progressivity that is fairly stable over this time period. The lowest quartile receive government benefits of the order of 29–34% of household income, while for the second quartile these benefits range from 10% to 13% of net household income, for the third quartile 5%, and for the top quartile 2–3%.

Figure 28 focuses on direct income taxes and social security contributions as a proportion of gross income by net household income quartile. Again, substantial progressivity is evident, with the bottom quartile contributing 6–8% to taxes and social security contributions, versus 23–34% for the top quartile. The second and third quartiles contribute approximately 15% and 18–19%,

respectively. Apart from a slight increase in direct income taxes paid by the bottom three quartiles since 2017, there is no evident trend over this period.

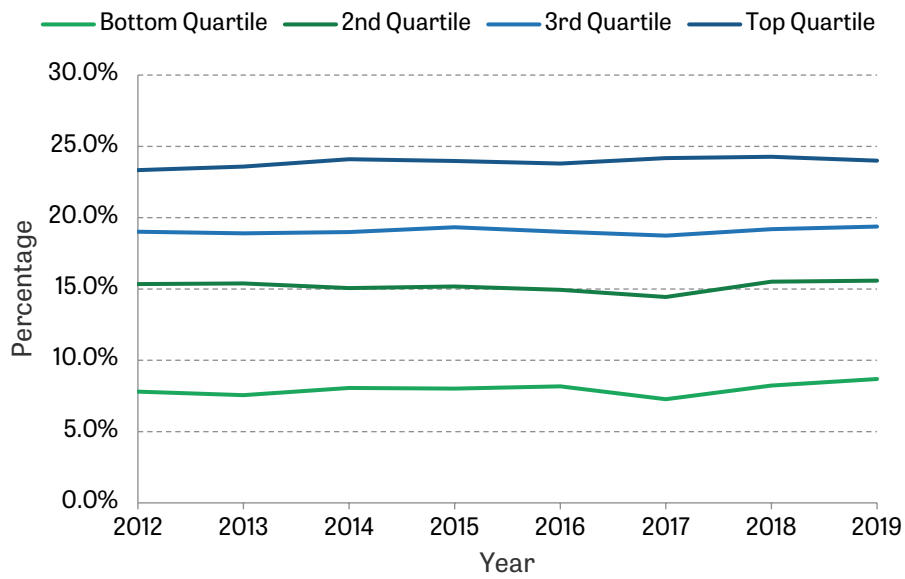
Figure 27. Benefits as a proportion of gross income, by net household income quartile



Note: Sample is individuals aged 25–59. All incomes have been equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Canadian Income Survey 2012–19.

Figure 28. Direct income taxes and social security contributions as a proportion of gross income, by net household income quartile

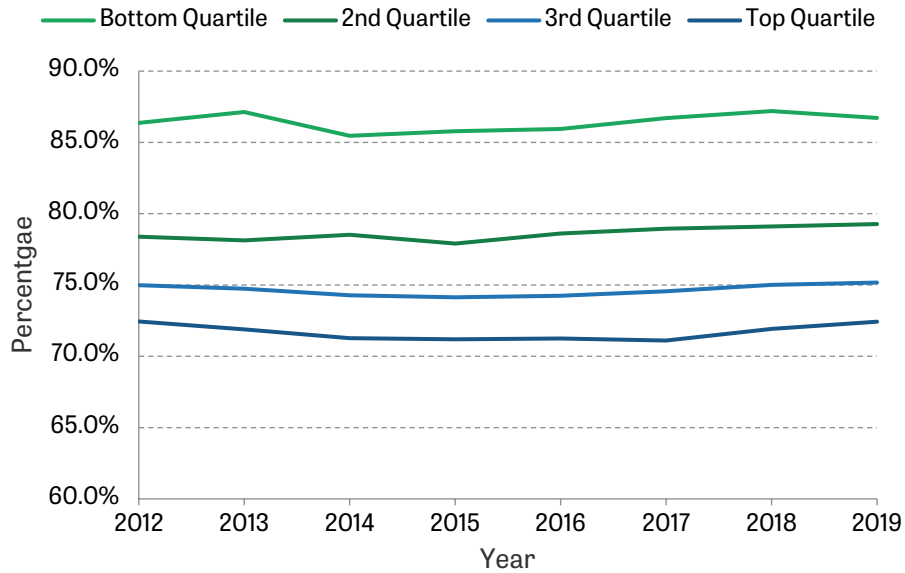


Note: Sample is individuals aged 25–59. All incomes have been equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Canadian Income Survey 2012–19.

A succinct way of illustrating the combined effect of the impacts of benefits received (Figure 27) and taxes paid (Figure 28) is to express net income as a proportion of total income, as is done in Figure 29. The bottom quartile keep over 85% of their gross income versus about 78% for the third quartile, 75% for the second quartile and approximately 71–73% for the top quartile. We do not observe employer contributions to social security and thus cannot report the ratio of disposable income to gross income and employee and employer social security contributions.

Figure 29. Net income as a proportion of gross income, by net household income quartile



6. Household incomes

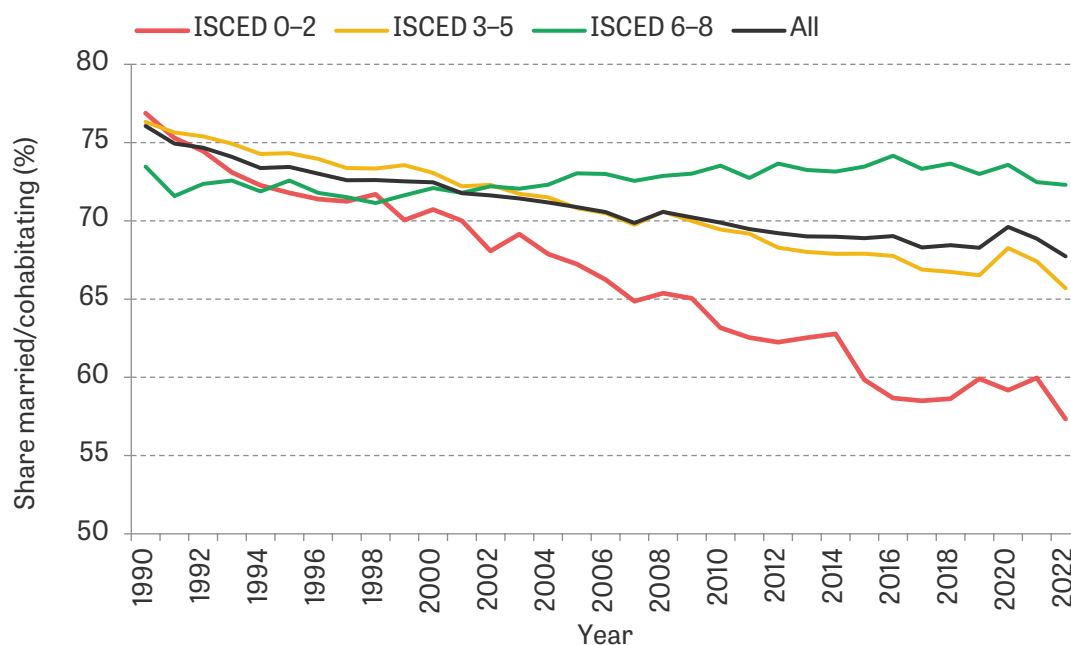
This section looks at trends in household incomes. We start by looking at trends in household composition and the degree of assortative matching, which influence household earnings. We then compare trends in household earnings and household disposable income for working households, drawing out the role of the tax and transfer system over time. Finally, we show a set of charts on trends in household income inequality across all households (including those where no one is in work).

6.1 Trends in household composition

Two features of the time series behaviour of the share of adults married or cohabiting are evident in Figure 30. First, for the overall adult population age 25–59 the share married/cohabiting declines steadily over this period from 76% in 1990 to 65% in 2022. Second, there are large differences by educational attainment in the trends over time, with the share married/cohabiting falling dramatically for the least educated – from 76.3% (the highest of any educational group) in 1990 to 57% in 2022 (by far the lowest of any educational group), whereas the share remains fairly stable over time in the 72–73% range for the most highly educated group. The middle educational group displays declining shares married/cohabiting from about 76% in 1990 to 66% in 2022.

Of course, the composition of these groups has been changing over time. With rising educational attainment the least educated group has become a smaller fraction (and probably a more select subset) of the overall population and the group with the highest educational attainment has grown in size relative to the adult population. Another factor that may affect the interpretation of these trends is that the age at first marriage has been rising over time.

Figure 30. Share married/cohabiting, overall and by education, over time

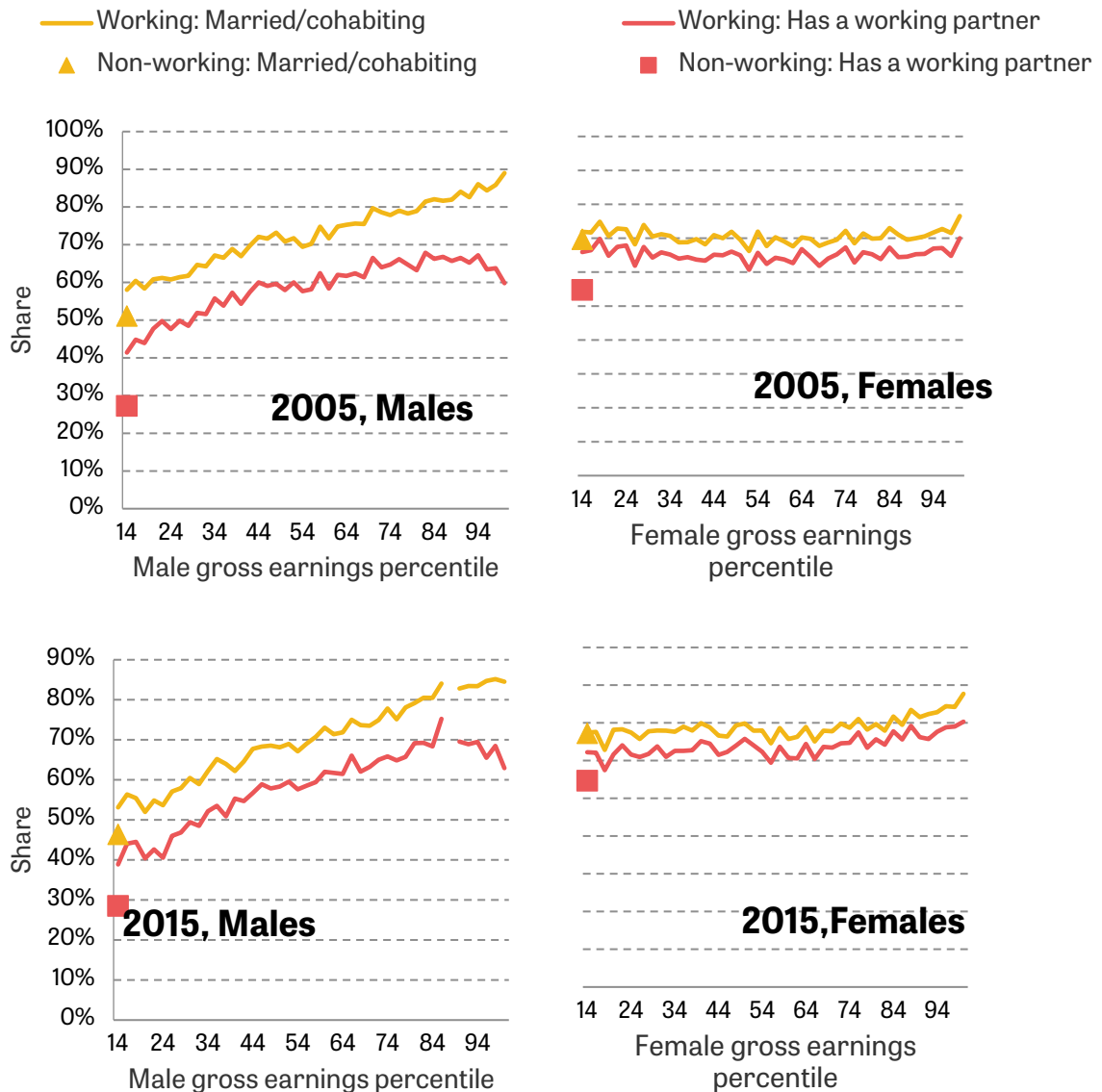


Note: Sample is individuals aged 25–59.

Source: Authors' calculations using May and November LFS for 1990–2022.

Figure 31 adds the share with a working partner to the mix and reports both share married/cohabiting and share with a working partner by gender at different percentiles of the gross earnings distribution for three years: 1994 (females only), 2005 (both genders) and 2015 (males only). Both working and non-working individuals are shown on each graph. Shares married/cohabiting exceed those with a working partner throughout the earnings distribution in all three years. The gap between the two is larger for males and widens at the upper end of the earnings distribution. Shares married/cohabiting rise with earnings for males in 2005 and 2015 but those for females are relatively flat, especially in 2005. The gap between those married/cohabiting and those with a working partner is also evident for non-workers and wider for male than female non-workers.

Figure 31. Share married/cohabiting and share with working partner, by sex and individual gross earnings percentile, selected years

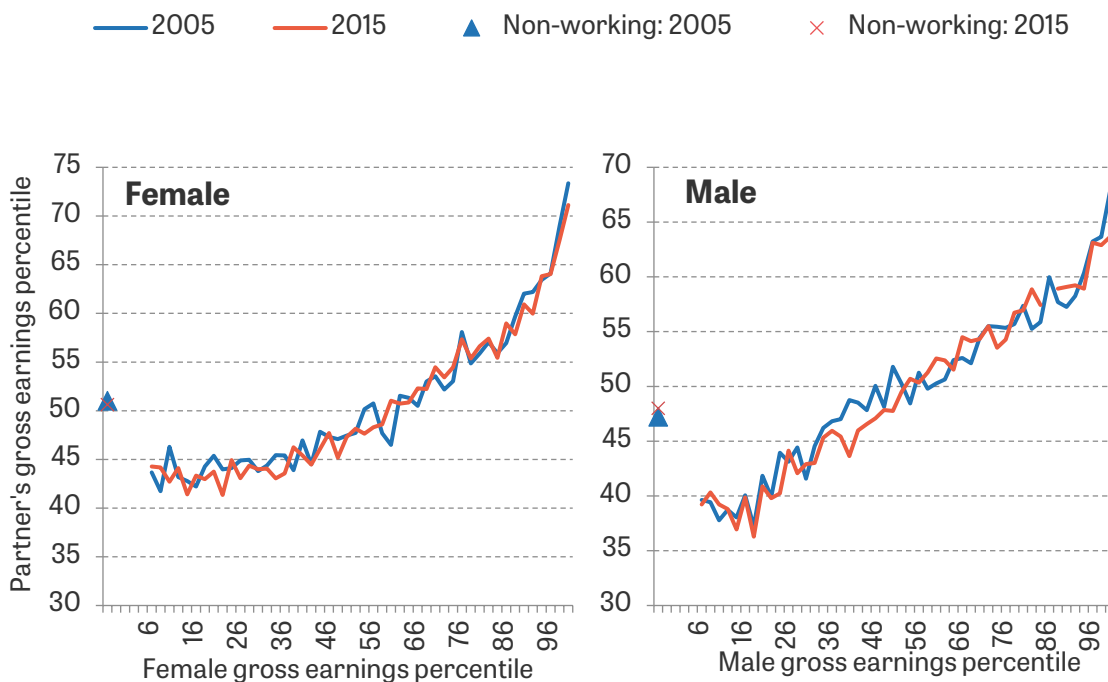


Note: Sample is individuals aged 25–54. Married/cohabitating also includes civil partnerships. The proportion with a working partner is conditional on being married/cohabiting.

Source: Authors' calculations using 2006 and 2016 Canadian Census Hierarchical Files.

Figure 32 shows the relationship between an individual's gross earnings percentile and the earnings percentile of their partner or spouse by gender for the years 2005 and 2015. Several striking features are evident. For both males and females the relationship is strongly upward sloping and these strong relationships are almost identical in both 2005 and 2015. Both figures imply a strong degree of assortative matching in terms of earnings. For males, the relationship between the percentile of their earnings and that of their partner is approximately linear, while for females the relationship is upward sloping and convex, indicating a stronger relationship at the margin at higher percentiles of the female's earnings percentile. Among non-working women their partner's earnings are at the median of the male earnings distribution, while for non-working men their partner's earnings are a bit below the median of the female earnings distribution. These relationships for non-working partners are very similar in both 2005 and 2015.

Figure 32. Mean gross earnings percentile of partner/spouse by individual's gross earnings percentile, selected years

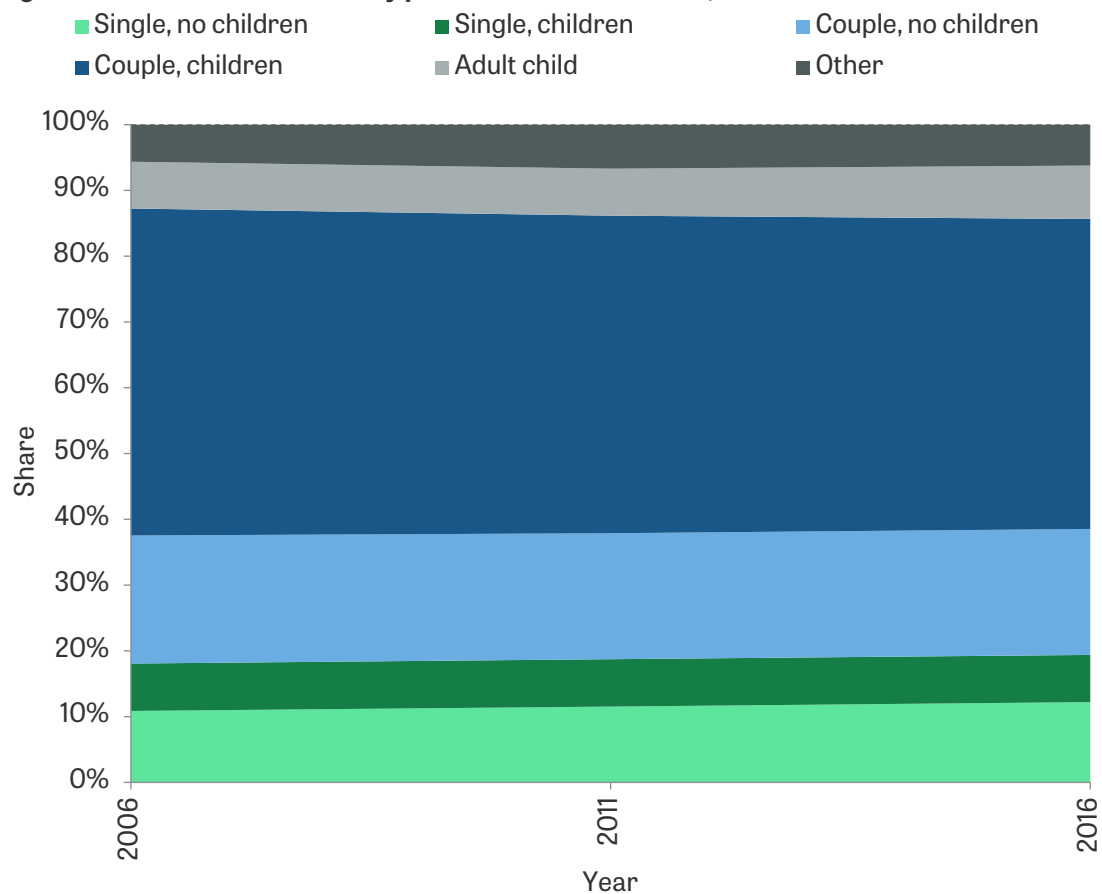


Note: Sample is individuals aged 25–54 (with strictly positive earnings for defining earnings percentiles). Married/cohabitating also includes civil partnerships.

Source: Authors' calculations using 2006 and 2016 Canadian Census Hierarchical Files.

Figures 33 and 34 show the shares of individuals by position in the household in 2006, 2011, and 2016, first for all households (Figure 33) and then by gender and education (Figure 34). Some moderate growth is evident in the proportion of single, no-children households with an accompanying modest decline in couples with children (Figure 33). There is also some growth in the share of households with an adult child. Growing proportions of households headed by singles, with and without children, are also reported in Figure 34, trends that are most evident for males and females with low and medium levels of education. Shares of individuals by position in the household are relatively stable for the high-education group compared to the other two education groups.

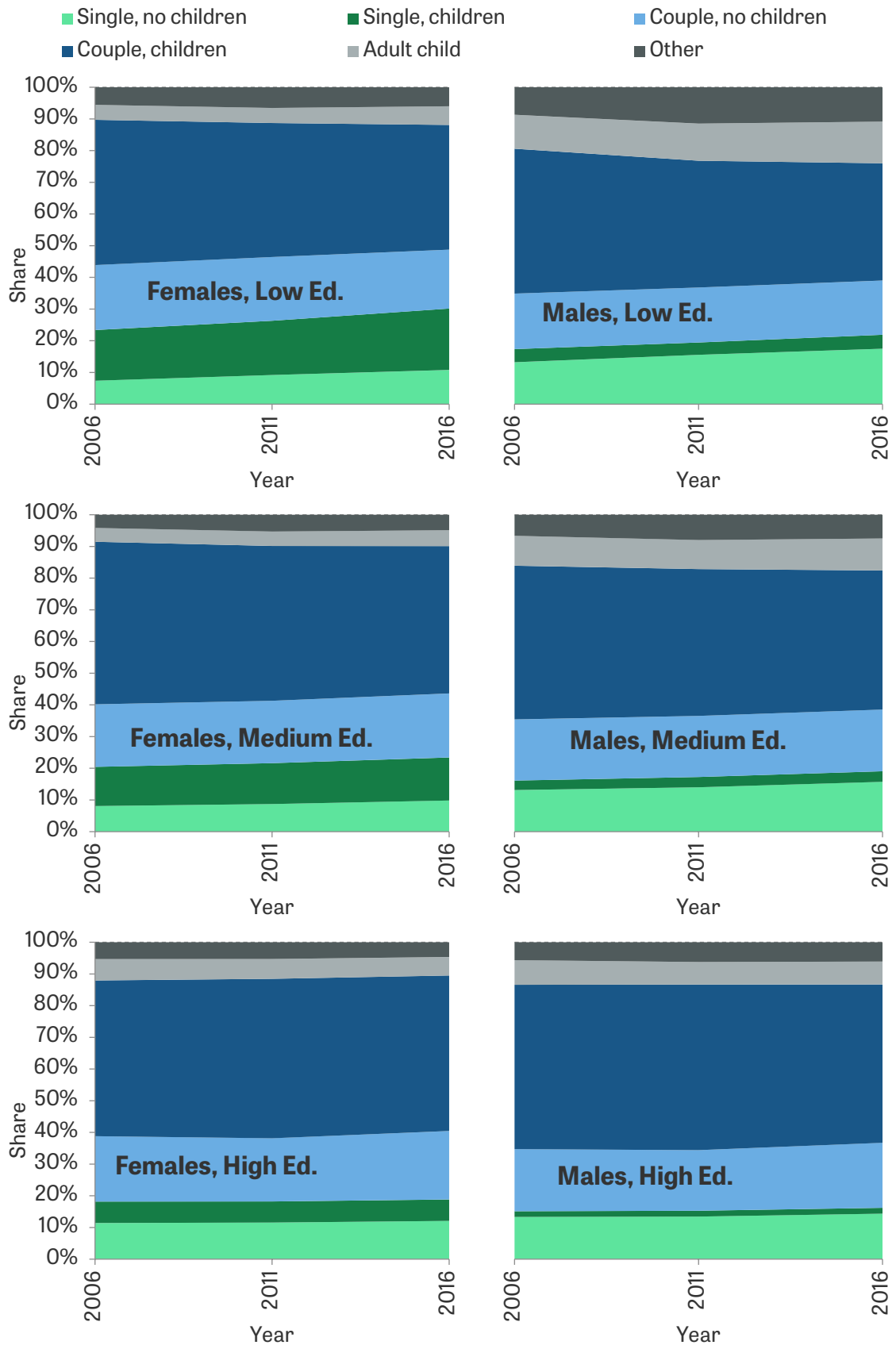
Figure 33. Share of individuals by position in the household, over time



Note: Sample is individuals aged 25-54

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.

Figure 34. Share of individuals by position in the household, by sex and education, over time



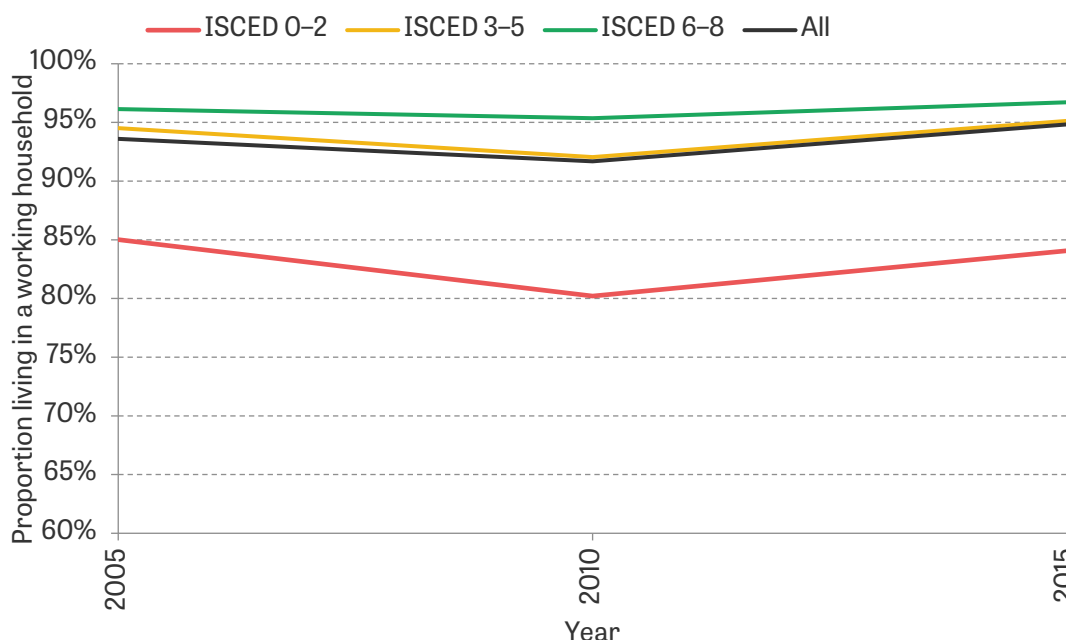
Note: Sample is individuals aged 25–54

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.

6.2 Earnings and incomes among working households

This section focuses on the earnings and incomes of working households. To begin, Figure 35 reports the share of individuals in a working household for the years 2005, 2010, and 2015, overall and by educational attainment. Overall, over 90% of individuals live in a working household, a proportion that is stable over this time period. The share of less-educated individuals who live in working households is more than 5 percentage points lower than in the other two groups with higher levels of education. For all three education groups, the shares in working households dipped in 2010; however, this could be because the 2011 Census was collected differently. More information on the differences is included in the Data Appendix. Between 2005 and 2015, there were slight increases in the share of high- and medium-educated individuals living in working households, while the same share fell slightly for the less-educated group.

Figure 35. Share of individuals in a working household, overall and by education, over time



Note: Sample is individuals aged 25–54. A working household is defined as a household in which at least one adult is in work.

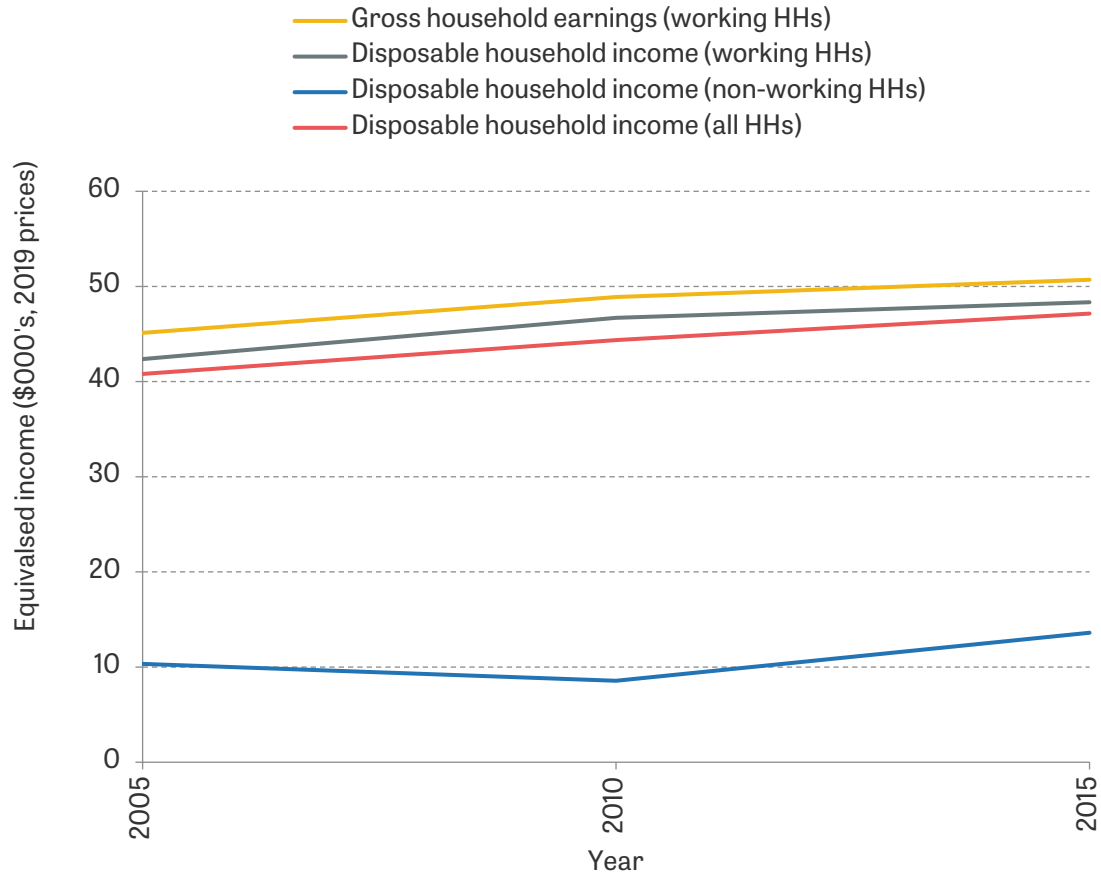
Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.

Figure 36 compares median real household incomes of working and non-working households over the same three years 2005, 2010, and 2015, while also showing gross household earnings for working households. For working households, disposable household income and gross earnings have grown over the period. Disposable real household income of non-working families is substantially lower (less than one-quarter in size) but median income has grown from \$10,300 in 2005 to \$13,000 in 2015.

Figure 37 further investigates the evolution of real household earnings of working households by plotting annualised growth rates of gross and disposable household incomes by percentiles of the earnings distribution over the 2005–10 and 2010–15 periods. In the earlier 2005–10 period,

both household earnings and income growth were stronger below the 40th percentile, with growth increasing at lower percentiles. At all percentiles above the 40th, growth is roughly the same. Moreover, between 2005 and 2010, the growth rates for disposable income are higher than those for gross household earnings at all percentiles. Relative to the earlier period, there is much less growth between 2010 and 2015 for earnings and incomes along the whole distribution. There are modest signs of increasing inequality as growth rates are somewhat positively correlated with percentiles.

Figure 36. Median real gross household earnings and disposable household income among working households, over time

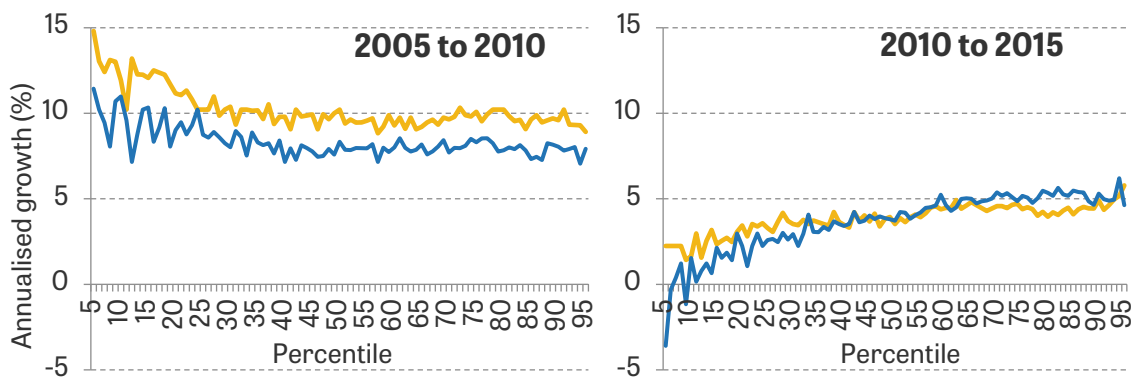


Note: Sample is individuals aged 25–54. A working household is defined as a household in which at least one adult is in work. For median gross household earnings we have restricted the sample to those with strictly positive household earnings. All incomes have been equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.

Figure 37. Annualised growth in real gross household earnings and household disposable income for working households, by percentile, selected years

— Disposable household income — Gross household earnings



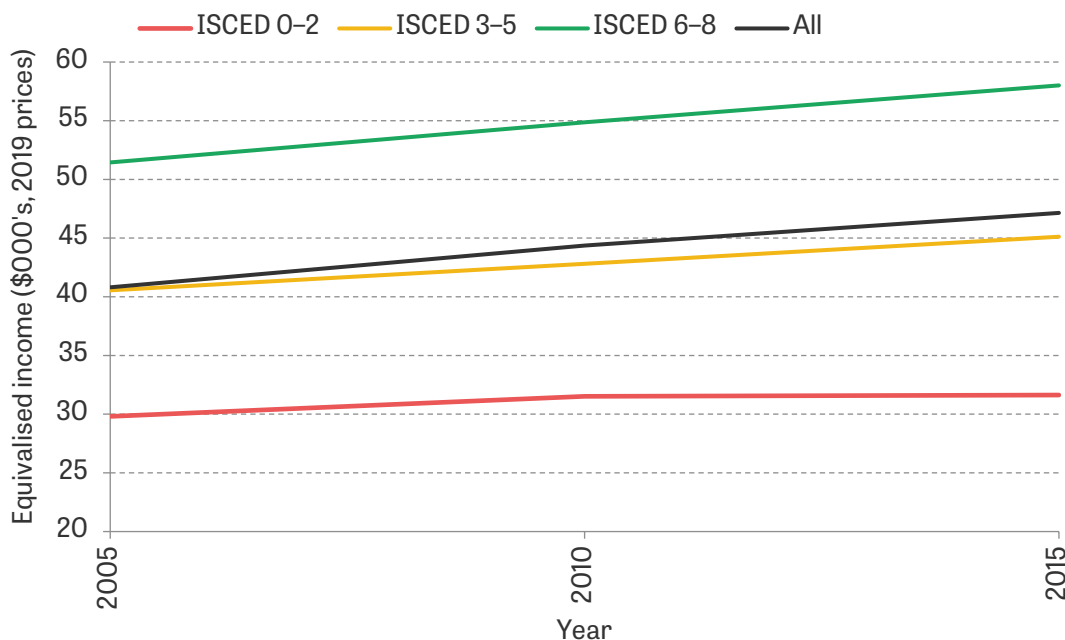
Note: Sample is individuals aged 25–54 in working households. A working household is defined as a household in which at least one adult is in work. For the household earnings series we have restricted the sample to those with strictly positive earnings. All incomes have been equalised using the modified OECD equivalence scale.

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census', Hierarchical Files.

6.3 Inequality in incomes among all households

This section examines trends in income inequality for all households over the 2005–15 period, beginning in Figure 38 with differences in levels and growth of real disposable income overall and by education. Differences in real disposable income across the three education groups are large in 2005 – for example, the income of the highest education category are more than 70% greater than the lowest education group – and widen further over this 10-year period, especially between 2010 and 2015. By 2015 disposable income of the highly educated group is 1.8 times that of the low-educated group.

Figure 38. Median real disposable household income for all households, overall and by education, over time



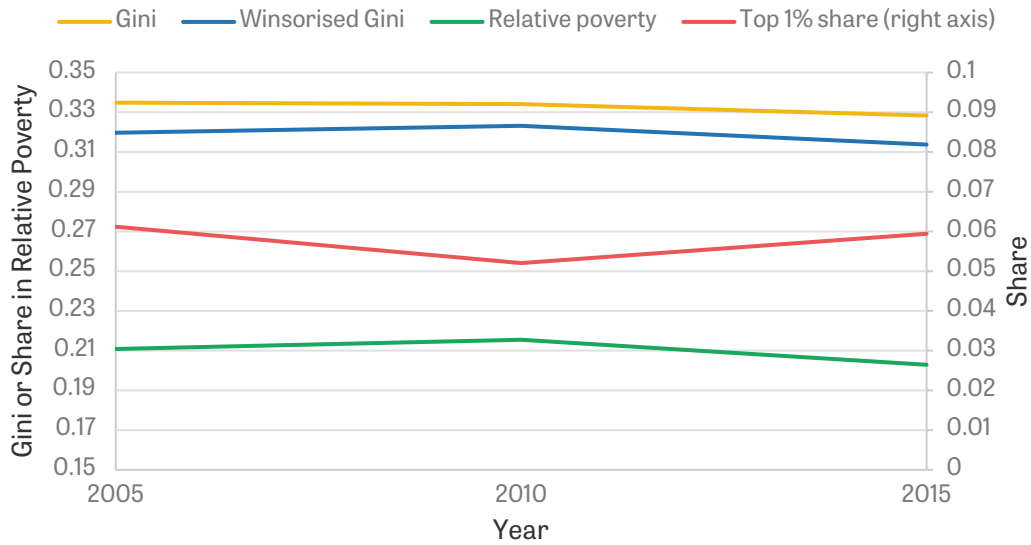
Note: Sample is individuals aged 25–54. Incomes are in 2019 prices. All incomes have been equalised using the modified OECD equivalence scale.

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.

Although the gap in median incomes between the most and least educated has been widening, in Figure 39 we show that inequality, as measured by Gini coefficients, has been constant over this period, whether we winsorise at zero and the 99th percentile or not. The top 1% share also shows little change during this 10-year period, declining by one percentage point in the first 5 years and then rising again in the latter 5 years. Relative poverty also rising slightly between 2005 and 2010, but declines overall from 21% to 20% between 2005 and 2015.

To further characterise inequality trends during this period, we plot quantile ratios for real disposable household income in Figure 40. Between 2005 and 2015, the 90:10 ratio falls slightly from 4.9 to 4.5, which is driven by changes in the bottom decile relative to the median. The 50:10 ratio falls from 2.6 to 2.4, while the 90:50 ratio is flat at 1.9.

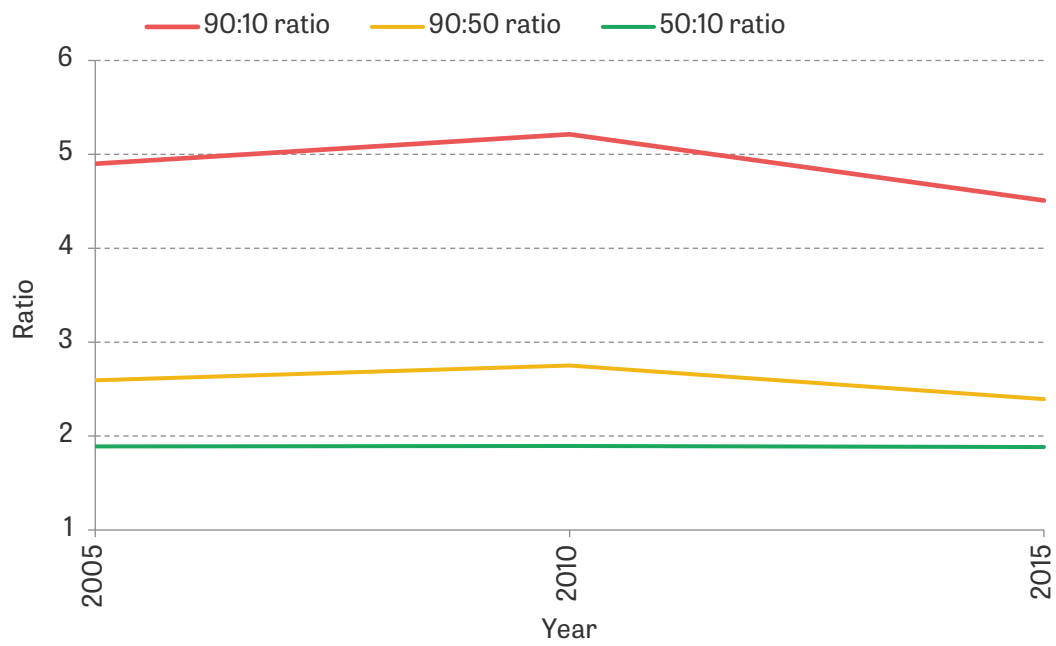
Figure 39. Gini, relative poverty and top 1% share of net household income for all households, over time



Note: Sample is individuals aged 25–54. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. The relative poverty rate is defined as the proportion of people living in households with less than 60% of contemporaneous median income. All incomes have been equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.

Figure 40. Percentile ratios of disposable household incomes for all households, over time



Note: Sample is individuals aged 25–54.

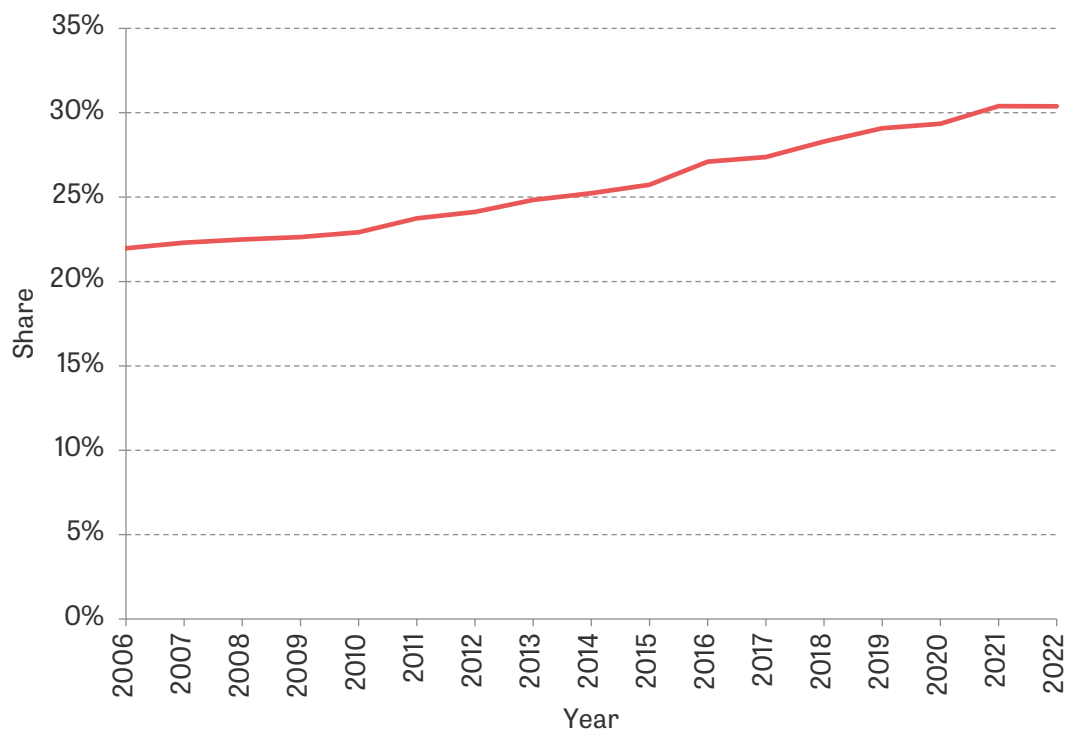
Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census', Hierarchical Files.

7. Immigration

This section provides some information on the extent of immigration in Canada's labour market since 2006 and some key labour market outcomes. Figure 41 shows that the share of immigrants in the adult population grew from 22% in 2006 to 30% in 2022. In a few years the share of immigrants grew by 1% or more (e.g., 2015–16 and 2020–21). Only during the COVID year 2021–22 did the rise in population from immigration match that from natural population increase.

Figure 42 shows that immigrants are fairly evenly distributed in the distribution of disposable income in recent years. Figure 43 compares immigrants to the native born on several labour market outcomes. Immigrants are much more highly educated than their native born counterparts, especially males (who are often the principal applicant in the immigrant selection system, which places considerable weight on educational attainment). Measures of immigrant work activity are similar to those of natives: employment rates of males match those of natives, and immigrant females' employment rates are 80% of their native counterparts. Hours worked by immigrant men and women match those of natives. Despite their higher (measured) education levels and similar levels of work activity, earnings of immigrant men and women are 80% of their native-born counterparts. Several studies conclude that the main reason is discounting of immigrants' work experience in their country of origin, though there is also some discounting of foreign education. Finally, although gross household incomes of immigrant families are 20% lower than those of natives, disposable household incomes are equal. This may reflect immigrants' greater use of social programmes, which some recent studies have found.

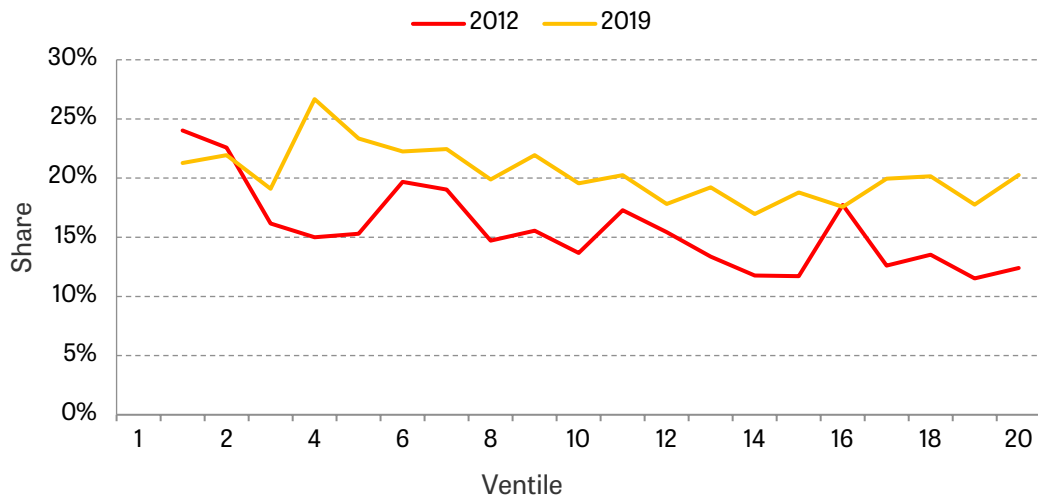
Figure 41. Share of immigrants in the population 25–54 years of age, 2006–22



Note: Sample is individuals aged 25–54. A migrant is defined as someone who was born outside of Canada.

Source: Statistics Canada, Table 14-10-0089-01: Labour force characteristics of immigrants by country of birth, annual. Estimates drawn from the Labour Force Survey.

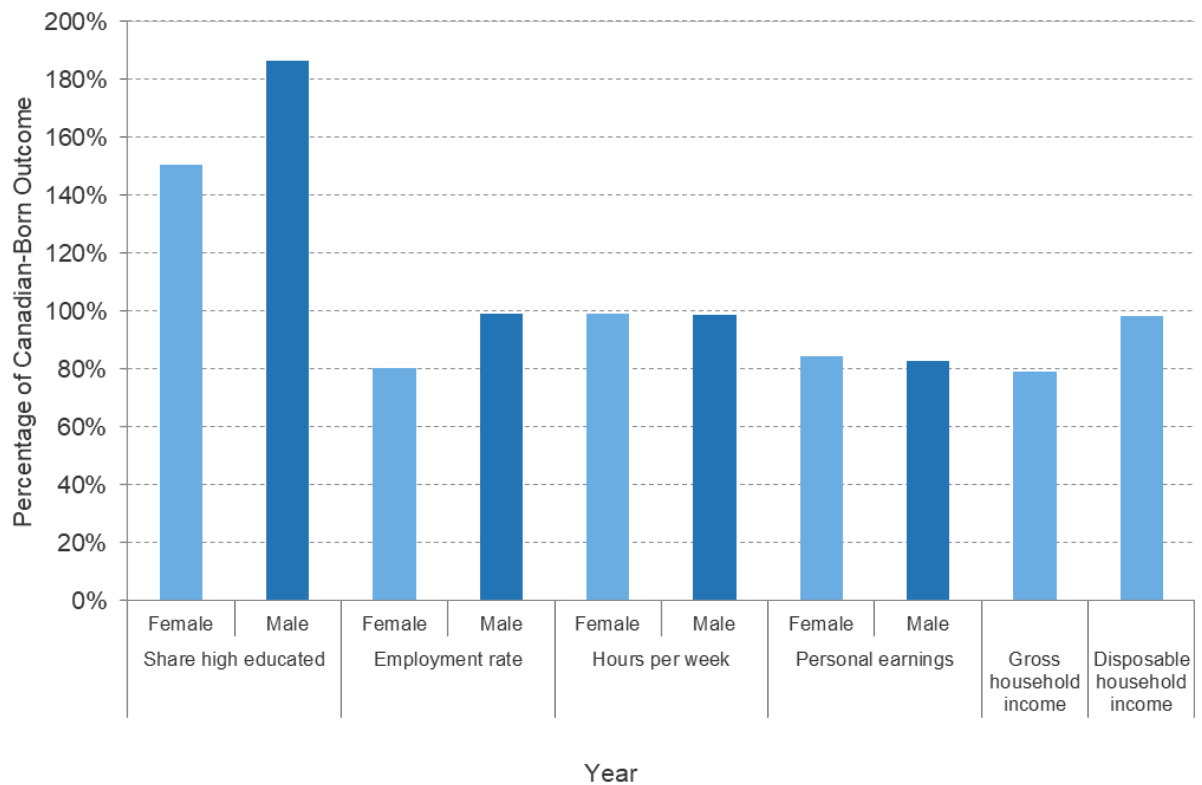
Figure 42. Share of immigrants in each disposable income ventile for 2012 and 2019



Note: Sample is individuals aged 25–59. All incomes have been equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Canadian Income Survey 2012, 2019.

Figure 43. Outcomes for immigrants relative to Canadian born, ages 25–54



Note: Sample is individuals aged 25–54. A migrant is defined as someone who was born outside Canada. Household incomes and earnings have been equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using May and November 2019 LFS for education, employment and hours outcomes, 2016 Canadian Census for earnings, and 2016 Canadian Census Hierarchical File for incomes.

8. References

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9. Data appendix

Surveys used

We draw on three primary sources of data: the Labour Force Survey, the Census of Population, and the Canadian Income Survey. Additionally, when longer time series are available, we rely on aggregate series constructed by Statistics Canada.

The *Labour Force Survey* (LFS) in Canada is a 6-month rotating panel; however, in the public use microdata files (PUMF) we do not observe the panel linkages. Individuals who do not switch employers are asked the wage questions only in the first month they enter the survey. This means that although we would observe wage changes for individuals changing jobs, we do not observe wage changes for those who remain in the same job. To avoid this, we use data from two months that are more than 6 months apart, guaranteeing that all sample members appear in the data only once. We choose May and November because these are the least seasonal months. The wage and employment series that we calculate using the PUMF are nearly identical to the analogous aggregate series published on Statistics Canada's website. Data from the LFS are representative of individuals in Canada, excluding those who are employed in the military full-time, who live on First Nations reserves, and who live in the Territories.

We use the LFS whenever possible; however, the LFS notably does not contain annual earnings or income data. We have LFS data from 1976 to 2022. Because of the way education data were collected when the LFS changed in 1990, all series that include education begin in 1990. Wage data begin in 1997.

We also draw on the *Canadian Census of Population* (the Census). The Censuses are undertaken in May, every 5 years. The most recent Census for which public use data are available is the 2016 Census. All income and earnings data are collected as totals for the year prior. For example, the income data in the 2016 Census cover 2015.

There was an important break in the way that data were collected between the 2001 and 2006 Censuses. Beginning in 2006, individuals were asked whether they would grant Statistics Canada permission to obtain income directly from Canada Revenue Agency (CRA), the Canadian tax authority. For consistency with CRA income definitions, some components of income were changed. Taxable allowances and benefits, as well as research grants and royalties, were included as wages and salaries for the first time in 2006. An additional significant change occurred in 2011 when the mandatory Census long form (which provides detailed information, including earnings and labour market information, on 20% of the population) was replaced by the voluntary Canadian Household Survey, which subsequent research concluded was not representative of the population (Veall, 2010).

Because of the change in the data collection and definitions beginning in 2006, we only combine the 2006, 2011, and 2016 Censuses. We use weights that control for observable non-random sampling in the 2011 data. The PUMF we use are subsamples of the full Census. For figures related to household income, we use data from the Hierarchical Files.

Because of the trend break in the earnings data in the Censuses, we use time series published by Statistics Canada whenever possible. These time series combine data from the Survey of Consumer Finances (SCF) from 1976 to 1992, a combination of the SCF and the Survey of Labour and Income Dynamics (SLID) from 1993 to 1997, the SLID from 1998 to 2011 and the Canadian Income Survey (CIS) from 2012 to the present. These time series are based on the population aged 15 and older when SCF data are used and 16 and older when CIS or SLID data are used.

When a Statistics Canada series is available for the population but not separately by gender we impute the values. To impute the 90:50 and 90:10 ratios for men and women, the 90th, 50th, and 10th percentiles of market income from the Statistics Canada series are multiplied by the ratios of male to overall and female to overall market-income percentiles, which were estimated using individual gross earnings in the Canadian Census PUMF for 2006 and 2016, and the 2011 National

Household Survey. The ratios are then calculated using the imputed percentiles for men and women.

In Section 5.3, which focuses on taxes and government transfers, we use data from the *Canadian Income Surveys* (CIS) 2012 to 2019. The CIS sample is a random sample of respondents to the LFS and includes detailed information about household incomes. The first year that the CIS was fielded is 2012 and the most recent public use data is 2019.

Price index used

We deflate all Canadian dollar values to 2019 prices using the all-items CPI from Statistics Canada – Table 18-10-0005-01: Consumer Price Index, annual average, not seasonally adjusted.

Differences in age groupings

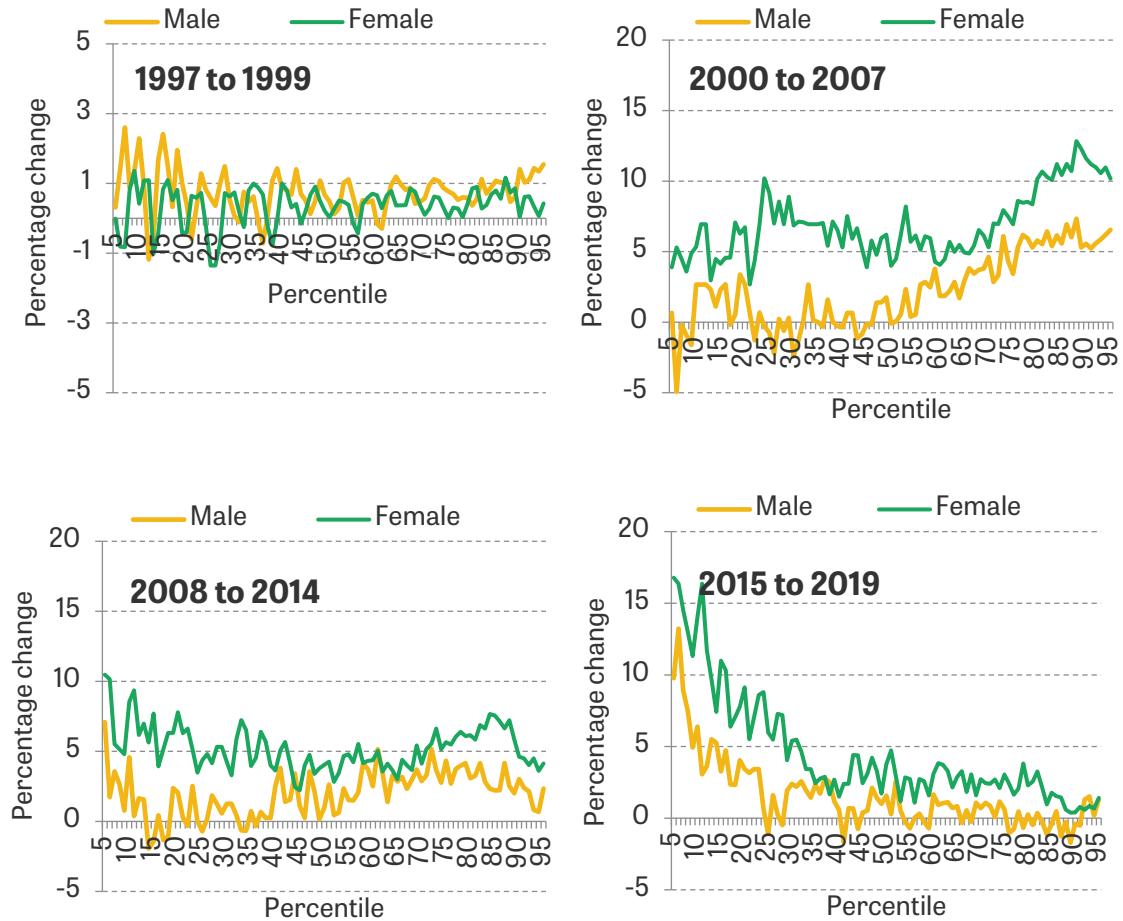
The age categories in the LFS PUMF are organised in five-year groups, and include 55–59, 60–64, 65–69, and 70+. For the main analysis, we use ages 25–59. Rather than include in the sample people older than 74, for the appendices, we use a sample of individuals ages 25–69. The Hierarchical Files for the Canadian Censuses have wider age bins; we use ages 25–54 when drawing on those data. For the figures relying on Statistics Canada aggregates, we are further constrained in the age ranges that are available. The specific age ranges are indicated in the notes to each figure.

Weighting

Throughout, in all graphs using public use microdata from Statistics Canada, we use weights provided by Statistics Canada that account for any stratified sampling or non-response along observed dimensions.

10. Appendix: 25–69 and 25–74 age groups

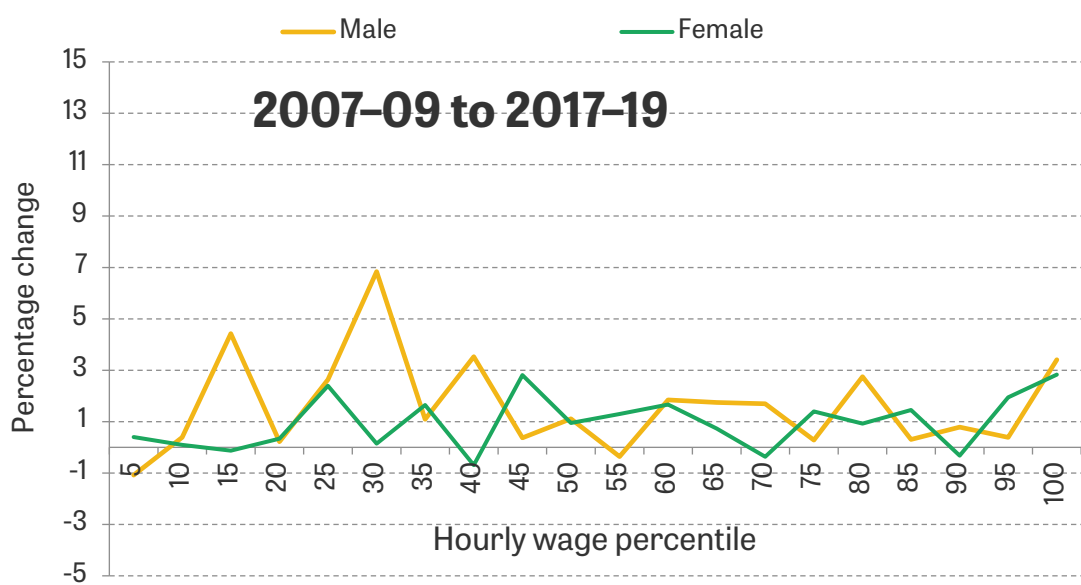
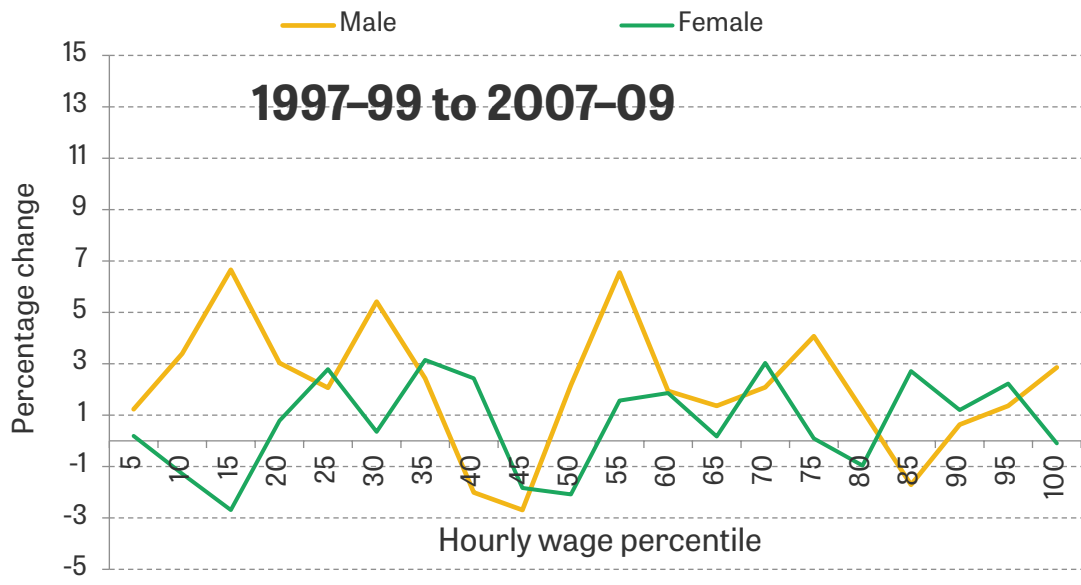
Figure 44. Growth in hourly wages among employees aged 25–69 by wage percentile, overall and by sex, selected periods



Note: Sample is employees aged 25–69.

Source: Authors' calculations using May and November LFS for 1997–2019.

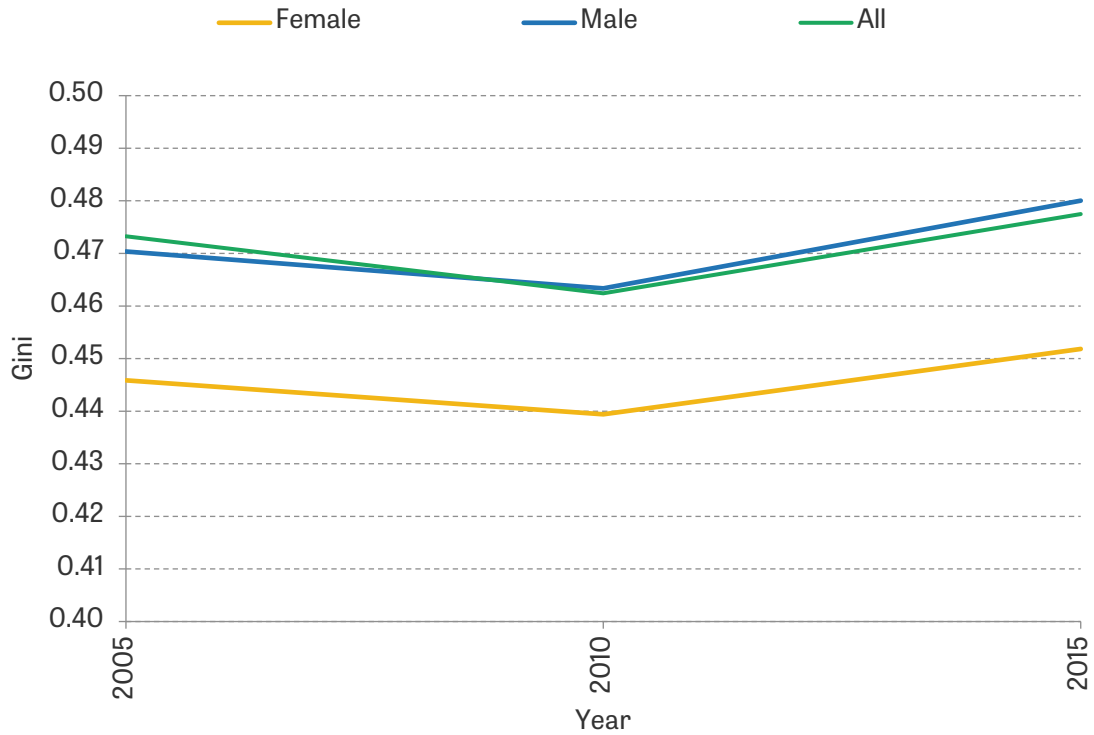
Figure 45. Growth in mean hours worked among employees aged 25–69 by wage percentile, overall and by sex, selected years



Note: Sample is employees aged 25–69. We pool data from across the three years to obtain hourly wage for each 3-year period.

Source: Authors' calculations using May and November LFS for 1997–2019.

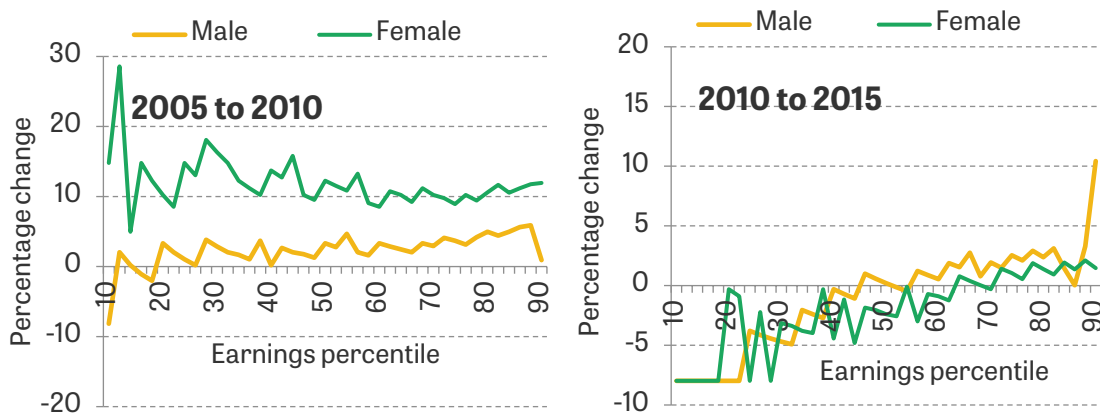
Figure 46. Gini coefficient of gross individual earnings, overall and by sex, ages 25–74, over time



Note: Sample is individuals in work aged 25–74.

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Censuses.

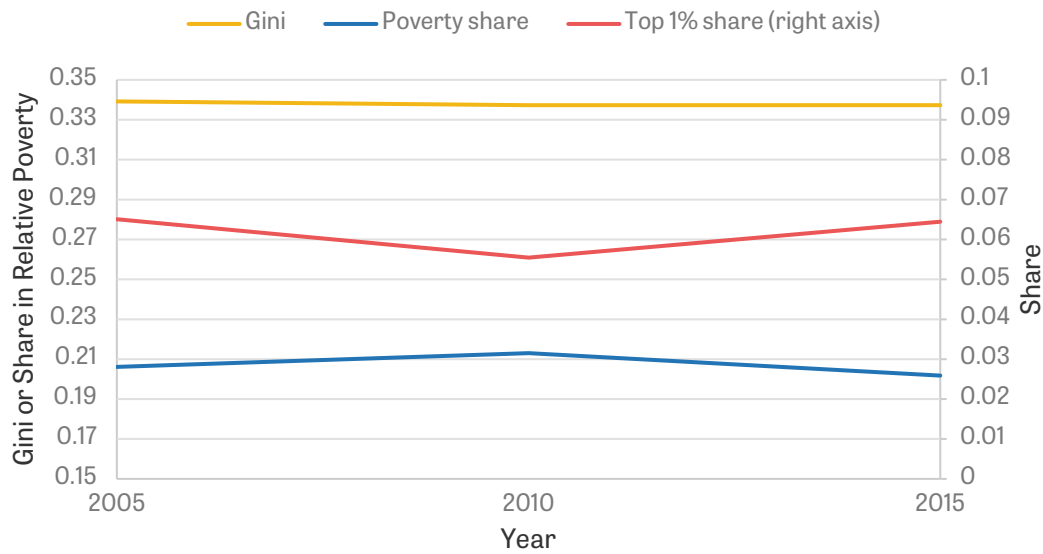
Figure 47. Growth in gross earnings by earnings percentile, overall and sex, ages 25–74, selected periods



Note: Sample is individuals aged 25–74.

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Censuses.

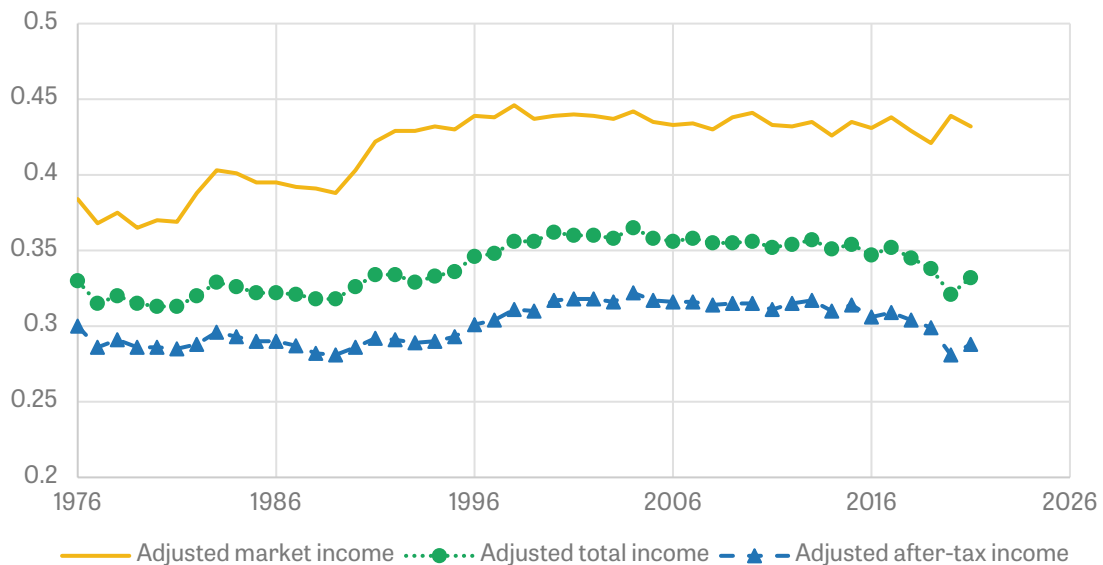
Figure 48. Gini, relative poverty and top 1% share of net household income for all households, ages 25–74, over time



Note: Sample is individuals aged 25–74. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. The relative poverty rate is defined as the proportion of people living in households with less than 60% of contemporaneous median income. All incomes have been equivalised using the modified OECD equivalence scale.

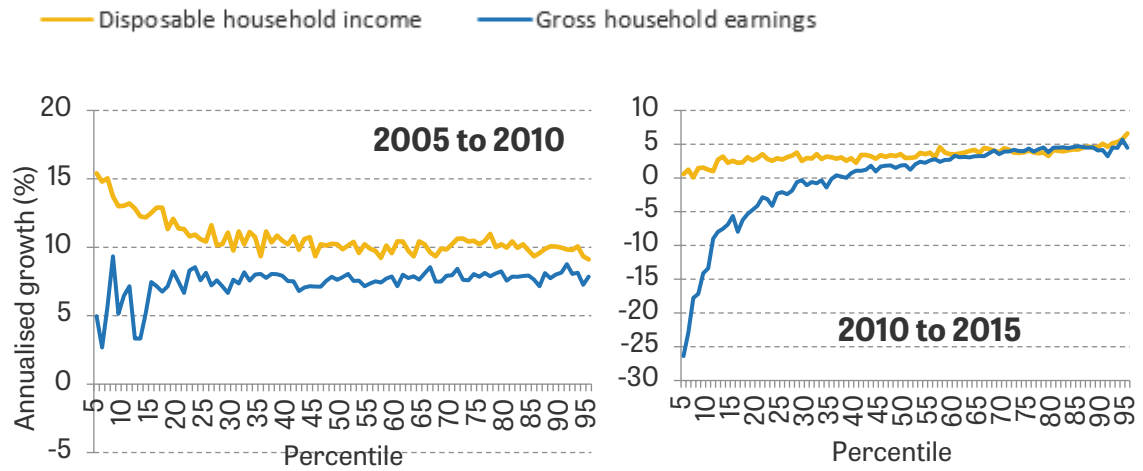
Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.

Figure 49. Gini coefficients for adjusted household income, Canada, 1976–2021



Note: Source is Statistics Canada Table 11-10-0134-01: Gini coefficients of adjusted market, total and after-tax income (formerly CANSIM 206-0033). Underlying data are from the Survey of Consumer Finances (SCF) from 1976 to 1992, a combination of the SCF and the Survey of Labour and Income Dynamics (SLID) from 1993 to 1997, the SLID from 1998 to 2011, and the Canadian Income Survey (CIS) beginning in 2012. Sample is individuals aged 15 or older in the SCF and aged 16 or older in the SLID and CIS. All incomes have been equivalised using the modified OECD equivalence scale.

Figure 50. Annualised growth in real gross household earnings and household disposable income for working households, by percentile, selected years



Note: Sample is individuals aged 25–74 in working households. A working household is defined as a household in which at least one adult is in work. For the household earnings series we have restricted the sample to those with strictly positive earnings. All incomes have been equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using the 2011 National Household Survey, and the 2006 and 2016 Canadian Census Hierarchical Files.