IFS

Institute for Fiscal Studies

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

Bradley Hardy
Shria Holla
Elizabeth Krause
James Ziliak

Inequality in the United States: 1975-2022

Inequality in the United States: 1975–2022

Bradley L. Hardy, Georgetown University
Shria Holla, University of Kentucky
Elizabeth Krause, University of Kentucky
James P. Ziliak, University of Kentucky

Contents

1.   Executive summary

We use data from nearly five decades of the Current Population Survey Annual Social and Economic Supplement to examine trends in employment, hours worked, wages, earnings, and after-tax and transfer income levels, growth and inequality in the United States from 1975 to 2022.

Among prime-age individuals aged 25–60 there has been substantial convergence in employment rates of men and women, from a 30 percentage point gap in the mid-1970s to about a 10 point gap in 2022. The gender convergence in employment came both from an increase in work among women until the 1980s, as well as a long secular decline in work among men with less than a college degree.

The employment gains of women were accompanied by rising median real hourly wages among those with some post-secondary education, while the corresponding wages of men were either stagnant or declining among those with fewer advanced education credentials, and rose modestly for those with at least a college degree. The consequence of the wage disparities across education groups is a strong increase in wage inequality over the past four decades in the US among both men and women, with the overall Gini index of wage inequality increasing by one-fifth and by 40% among men.

Because real wages of women increased over the sample period, and average hours worked rose modestly, median earnings for women increased by 70% in real terms since the mid-1970s, resulting in a narrowing of the gender earnings gap in the middle. The story for men is more about stagnant earnings in the middle of the distribution, consistent with stable wages and hours, but because the wages at the top of the male distribution were increasing relative to the bottom, earnings inequality of men increased sharply over time. The exact opposite occurred among women, with sharp declines in earnings inequality, at least until the year 2000.

The declines in the real minimum wage and in union coverage have often been attributed to the rise in male earnings inequality in the US. We examine how the minimum wage has evolved in relation to the median of the net wage, finding that it falls dramatically from nearly 0.75 in 1980 to 0.4 by 2022. An equally dramatic decline of 50% in terms of union density or coverage by a collective bargaining agreement is likewise observed over the past four decades.

An important aspect of understanding inequality requires understanding how individuals and families are able to bundle resources, that is, to what degree they are able to rely on labour market income as opposed to income from social insurance and means-tested transfers, and how this varies across the income distribution. We find that households in the bottom quartile of the net income distribution draw about 1 dollar in every 5 from benefits, rising to almost 1 in 3 during recent severe recessions. In the US, though, much of the redistribution comes via the tax code with refundable in-work tax credits, and most recently, with substantial direct payments from the Department of Treasury during the COVID-19 pandemic. This resulted in dramatic reductions in average tax burdens in the bottom half of the income distribution, becoming negative in fact for lowest-income households during the Great Recession and COVID-19.

There has been a long-term retreat from marriage in the US, especially among those with less than a college education. This then begs the question of whether there is assortative matching in marriage markets; that is, whether marriage rates are increasing in the earnings distribution, and earnings of the partner increasing in the earnings distribution of the spouse. The answer to both of these questions is a definitive yes. The gradient of the partner's earnings has increased sharply since the 1970s, resulting in greater divergence in household incomes among the highly educated than among those with fewer formal credentials. A consequence has been rising inequality in after-tax and transfer household incomes (the 90:10 ratio increasing by 50%) despite expansions in the social safety net supporting families (especially those with children) in the lower third of the income distribution. The importance of the safety net in redistribution was laid bare in COVID-19 with the whipsawing of 90:10 disposable income inequality sharply falling in 2020 and 2021 and then rebounding in 2022 when the temporary expansion of refundable tax credits, unemployment insurance and stimulus payments expired.

2. Institutional background

In this section we briefly summarise some of the key institutional features of the US social safety net and tax system, and labour market policies.

Safety net programmes in the US fall into one of two broad categories of social insurance and means-tested transfers, where social insurance generally has a tie to employment, military service or old age and means-tested transfers are conditioned on low incomes and low assets. The major social insurance programmes are Social Security retirement and survivors benefits, Medicare, Social Security Disability Insurance (SSDI), Workers' Compensation, Unemployment Insurance (UI), and Veterans Benefits. The key means-tested transfer programmes are Medicaid, Supplemental Security Income, Temporary Assistance for Needy Families, housing assistance, and the Supplemental Nutrition Assistance Program (SNAP). The other key means-tested programmes that are directly tied to employment are the Earned Income Tax Credit (EITC) and the Additional Child Tax Credit.

Social insurance

Social Security retirement is targeted to workers who have accumulated at least 40 quarters of covered employment, and monthly cash benefits are paid out as a progressive function of pre-retirement earnings. The normal retirement age is 67 for persons born after 1959 (65 for earlier cohorts), though early receipt starting at age 62 is possible subject to a 30% benefit penalty. Funding for the programme comes from an earnings tax of 12.4% up to a cap ($160,200 in 2023), which is shared equally by the employer and employee. Self-employed persons pay the full 12.4%, but can deduct half of that from their federal income tax.

Medicare is an in-kind transfer that provides health insurance for persons aged 65 and over, as well as some disabled persons under age 65, regardless of previous work history. Basic coverage is available to all seniors, but most purchase expanded coverage via a monthly premium, the size of which increases with income. Financing of Medicare comes from an earnings tax (the rate is a lower 2.9% and it applies to all labour market earnings), general federal income tax, and premiums.

SSDI is restricted to those workers under normal retirement age who have worked in at least five of the last 10 years and can no longer hold gainful employment owing to medically certified disability, which may or may not have been work-related. The monthly cash benefit amount is proportional to average lifetime earnings prior to disability, and it is financed out of the same Social Security payroll tax revenues that cover retirement benefits. Another disability insurance programme is Workers' Compensation for those suffering a work-related injury. Most of the benefits paid out are to cover medical expenses, though roughly one-fourth are paid out for lost wages. Workers' Compensation programmes vary from state to state, and benefits are financed by what is known as an experience-rated tax on employers, that is, the tax rate is higher for those firms with greater workplace injuries and benefits claims. Finally, the Veterans Benefits programme provides disability benefits to those armed-forces members injured during service, and it also provides medical benefits, cash and educational assistance to qualifying veterans.

UI is available to workers in covered employment who have worked at least four out of the last five calendar quarters, are unemployed through no fault of their own, and are actively seeking work. Benefit amounts vary widely across states, though typically it is a function of past wages, subject to a cap. Normal UI receipt lasts up to 26 weeks, but the Extended Benefits Program that is triggered by Congressional action in periods of high unemployment allows for extensions up to 13 weeks, and the latter can be renewed such as in the Great Recession of 2007–09 when UI eligibility lasted up to 99 weeks. The programme is administered at the state level and funded by an experience-rated tax on employers, with those employers with greater propensity to lay off workers facing higher rates. Historically the programme has not been open to the self-employed and seasonal workers, but this was temporarily extended during the COVID-19 pandemic, eligibility returning to pre-COVID rules by the later part of 2021.

Means-tested transfers

Medicaid is an in-kind health insurance programme that was established in 1965 alongside Medicare, but unlike Medicare, the programme is targeted to low-income and low-asset individuals and families. Many parameters relating to eligibility and benefit coverage are set at the state level, with funding for the programme from a federal and state matching grant programme where the state's share is declining in state per capita personal income and capped at 50%. During the COVID-19 pandemic the federal government picked up a larger share of the cost of Medicaid, with normal sharing rates resuming in January 2024. States also were not allowed to remove participants from the programme regardless of changes in economic status, but this provision ended in March 2023.

The Supplemental Security Income programme provides cash assistance to low-income elderly persons, the blind, and the disabled, where the latter do not require a work history to qualify and thus children are included among the populations served. The programme has substantial federal oversight, with funding, benefit and eligibility criteria set at the federal level. Most states supplement the federal grant for individuals living independently.

The Temporary Assistance for Needy Families programme provides a mix of cash and in-kind benefits to low-income and asset families with dependent children under age 18. Most features of programme design are controlled by the states, but primary funding comes from a federal block grant to each state that has been fixed in nominal terms since 1997. States are obligated to support the programme out of their own funds as well, leaving inflation-adjusted total spending relatively constant since 2000. Eligibility for the programme does require work or work-related activities, though families can be exempt for certain child- or dependent-care duties, or other hardship.

The Supplemental Nutrition Assistance Program provides in-kind food assistance to low-income and low-asset persons regardless of age and family structure. The benefit is delivered monthly via a debit card, and it is redeemable for food from certified outlets for preparation and consumption in the home. Benefits and primary income and asset limits are federally financed and determined, though states are responsible for part of the cost of programme administration and eligibility. There is no formal work requirement for eligibility except for a limited group of non-disabled prime-age adults without dependents. During the COVID-19 crisis there were several temporary changes to the programme, including lifting all recipients to the maximum benefit amount for their household size, and subsequently a 15% increase in the maximum benefit. These expansions expired in 2021, but a permanent increase in the maximum benefit averaging about 21% was enacted in October 2021.

Housing assistance is an in-kind programme where most of the benefits are provided in the form of vouchers redeemable in the private rental housing market. Responsibility is devolved to local housing authorities, which number over 3,300 nationally. Individuals are expected to cover the first 30% of monthly rent, and then the voucher covers the remainder subject to a cap. Eligibility varies across housing authorities, but the basic income test requires family income to be less than some percentage of county median income, typically set at 50%. Funding comes from a fixed annual federal appropriation, meaning the programme is not an entitlement and thus most income-eligible families receive no assistance.

Income tax

Income tax is assessed at the federal, state, and in some cases local levels. The federal income tax rates and base are established by the US Congress, with administration by the Internal Revenue Service. The rates and applicable base vary by tax filing status, including married filing a joint return, married filing a separate return, head of household (e.g., lone parent with children) and single. Gross income subject to tax includes, among others, labour market earnings from employers or self, most forms of rental, interest, and dividend income and realised capital gains, as well as some forms of social insurance income such as UI. Means-tested transfer income are exempt from tax. Gross income is reduced to so-called taxable income via deductions, which can either be a set amount depending on tax filing status, known as the standard deduction, or itemised by the taxpayer such as interest expense on home mortgage, charitable donations, and a portion of state and local income tax. The federal return is filed annually by the taxpayer, with tax withheld each pay period for employees, and quarterly tax payments by the self-employed. The federal tax structure has been reformed several times over the past four decades, including

in 1981, 1986, 1990, 1993, 1997, 2001, 2003,and 2017. At the onset of the 1981 reform there were 16 marginal tax brackets, but these were reduced to four after the Tax Reform Act of 1986, and currently number seven. The 1980s reforms also expanded the base subject to taxation, though subsequent reforms have in some cases contracted the base and in other cases expanded it. On top of the federal income tax, 41 states plus the District of Columbia levy a state income tax, which in some cases is a flat tax and in others a higher progressive tax structure. Typically the state anchors its taxable base to that subject to federal tax.

The tax code is used to provide additional (means-tested) assistance to low-income tax filers via tax credits. The EITC is a refundable credit available to low-income families and individuals with labour market earnings. The credit first phases in as earnings increase until a maximum is reached, then the credit is held constant over a range, and finally the credit is tapered away as earnings increase beyond the maximum. The generosity of the maximum credit increases with the number of qualifying children up to three (e.g., the maximum in 2023 is $6,604 for two children). If the value of the credit exceeds the amount of tax owed then the difference is refunded to the taxpayer. Funding for the credit is from federal tax revenues, though about one-half of the states have a separate state EITC funded from state revenues. The other refundable tax credit is the Child Tax Credit (CTC). Families with annual earnings of at least $2,500 are eligible for a $2,000 tax credit for each dependent child under age 17, with eligibility phasing out with income above a threshold. If the tax credit results in negative tax liability then those with very low incomes, or a large number of dependents, are eligible to have up to $1,500 per dependent refunded. During the COVID-19 pandemic the EITC was nearly tripled in value for single, childless workers, and eligibility for that population lowered to age 19 (provided they were not full-time students) from the current age 25. The refundable portion of the CTC was doubled during COVID, was made available to non-workers, and was payable monthly. Both the EITC and CTC expansions were only for the 2021 tax year, and returned to typical programme rules in 2022. Another tax credit targeted specifically at working taxpayers with children under age 13 (or older disabled dependents) with out-of-pocket childcare expenses, the Child and Dependent Care Tax Credit (CDCTC), was also doubled in generosity and made refundable in 2021, but the extension expired after that tax year.

Labour market institutions

Labour markets in the United States are governed by a host of federal and state regulations affecting hiring, firing, and compensation practices, though in general US labour markets are regarded as being flexible among advanced economies. Indeed, with the exception of the state of Montana, employment is 'at will' in the US, meaning that employees may be terminated for any reason, except those that are illegal such as based on race, religion, age, or some other protected class. There is a federally set minimum wage of $7.25 per hour that affects most places of work, except for very small enterprises and some family-owned businesses and farms. This federal minimum was last changed in 2009 and is not tied to inflation, thus severely eroding the real value of the wage floor. Twenty-nine states and the District of Columbia have set minimum wages above the federal rate, and in some instances cities have set wages above the state rate. Lastly, workers have the right to organise in labour unions, and while employers are required to negotiate with union representatives, firms do reserve the right to permanently replace workers who engage in strike activity.

3. Notes on data and measurement

The data for the analysis come from the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) for survey years 1976–2023 (calendar years 1975–2022). The ASEC serves as the official source of income and poverty statistics for the United States, and has been the workhorse dataset for research on earnings determinants and inequality in the US.

Unit of analysis and sample:
- For most of the analysis we restrict to those individuals aged 25–60, though for select charts we expand the age range to 16–74, and 25–74 in the Appendix.
- We exclude any observation with imputed earnings or hours of work, or with the entire ASEC imputed.
- The sample begins in calendar year 1975 because of the addition of hours worked per week to the survey to construct hourly wages.
- All statistics are weighted using the ASEC person supplement weight.

Definitions:
- **Employment rate**: the fraction of the population that is employed during the prior year, defined as those persons with positive earnings from paid or self-employment, as well as positive hours worked per week and weeks worked per year. The prior year is used to align the employment rate with the wage and salary income reference period. Levels of employment rate are lower when using survey week employment, but trends are little changed.
- **Earnings**: gross (pre-tax) annual real individual earnings from all jobs (includes business and farm self-employment).
  o Top-coded values for years prior to 2011 survey are replaced by rank-proximity swap values provided by the US Census Bureau.
  o The period to which earnings data refer is the prior calendar year.
  o All nominal values are converted into real terms using the Consumer Price Index – All Urban Consumers (CPI-U) with 2019 base year.
  o In most calculations we include all workers regardless of their wage level, but where noted, in a couple of figures we exclude workers in the top and bottom 1% of the earnings distribution to minimise the influence of outliers.
- **Hours of work**: usual/ typical paid hours worked per week in the prior calendar year, including paid overtime. Excludes self-employed workers.
- **Wages**: The ratio of individual real pre-tax annual earnings divided by annual hours of work, the latter of which is defined as the product of usual hours worked times number of weeks worked. Excludes self-employed workers.
- **Disposable household income (household equivalised income after deducting taxes and adding benefits and tax credits)**
  o Income includes: annual earnings from employment, profit or loss from self-employment, income from private pensions, investment income, income from educational grants and scholarships, cash welfare payments, cash social insurance payments, cash value of in-kind food assistance (SNAP).
  o Income is net of taxes paid to federal, state, and Social Security/Medicare payroll taxes, inclusive of refundable tax credits. Taxes are estimated using the National Bureau of Economic Research TAXSIM program.
  o 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 based on International Standard Classification of Education (ISCED) classifications. ISCED 0–2, ISCED 3–5 and ISCED 6–8. In the typical nomenclature used in US-based analyses, these groupings refer those who drop out of high school, those with a high school diploma or some college, and those with at least 4 years of college, inclusive of graduate education. We use the following mapping and define ISCED 0–2 as low education attainment, ISCED 3–5 as medium education attainment, and ISCED 6–8 as high education attainment:

Years of education	ISCED
0–11	ISCED 0–2
12–15	ISCED 3–5
16+	ISCED 6–8

- **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 0–18 or 19–23 and in full-time education, living with parents.

4. Individual employment and earnings

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 of total earnings.

4.1   Trends in employment

Figure 1 depicts employment rates in the US for persons aged 16–74 from survey years 1976–2023 (calendar years 1975–2022). In general, the trends show a convergence of female employment relative to male employment over time, especially among teens and young adults. However, among prime-age and older adults the convergence abated by 1990 and the within-age gender employment gaps have been quite stable for the past three decades. The other notable trend in the figure is a decline in employment post 1990 among teens and prime-age workers, but an increase among older adults. For example, teen and young adult male employment fell by over 30 percentage points, and by 10 points among 25–60-year-old men, and it was this strong decline in employment among men that led to the narrowing of the gender employment gap. We note that if we instead focus on survey week employment instead of work any time in the prior year then the level of employment rates falls by about 5-10 percentage points in any given year, but the trends are not altered (see Figure 47 in the Appendix).

**Figure 1. Employment rates by age and sex, over time**
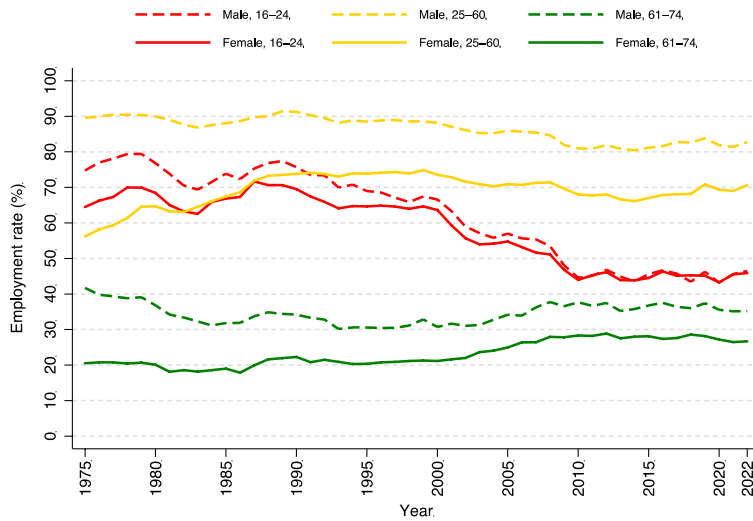
Life-cycle employment patterns for select years are summarised in Figure 2. Here, the patterns across gender follow the basic pattern of a Mincer-style life-cycle model of rising, steady and then declining employment over the life cycle. Employment rates generally peak by the early 30s and hold steady before a steep decline as retirements and other types of labour force exits such as disability occur from the early 50s onward. There are also a number of interesting life-cycle patterns across decades. Middle-age employment among women increased substantially from 1976 to 1986 and again in 1996, before falling back starting in 2006. Among men the figure shows that after 1996 it took several more years for men to reach peak employment rates, possibly because of greater shares acquiring post-secondary education.

Figure 2. Employment rates over life cycle by sex, selected years
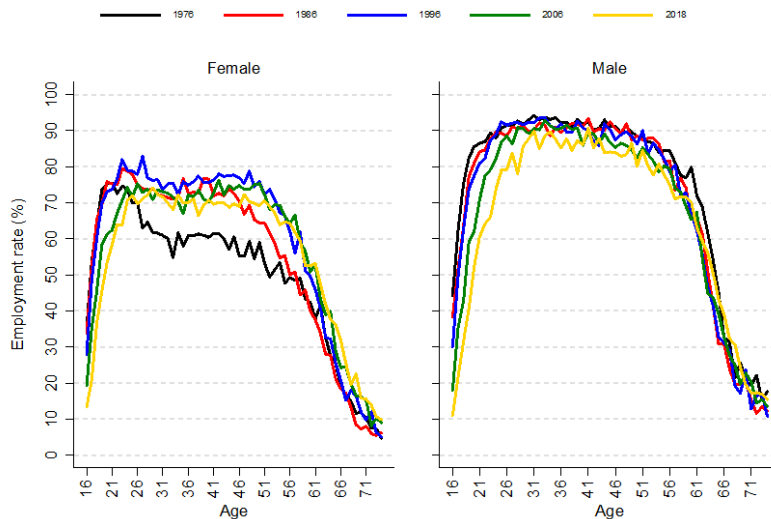
Education is a strong correlate and determinant of social and economic inequality. In Figure 3, we focus on the prime-age population of 25–60-year-olds to trace out attainment trends over time. The figure shows that workers with very low education (ISCED 0–2) are a declining share of the workforce over time, from about 30% in 1975 to just under 10% in 2022. Perhaps surprisingly, the share of adults aged 25–60 with a high school diploma or some college peaked in the early 1990s at about 60%. The implication is that there has been a strong secular growth in the share of persons with a college degree or more, with that share more than doubling to just over 40% by 2022.

Figure 3. Educational attainment over time
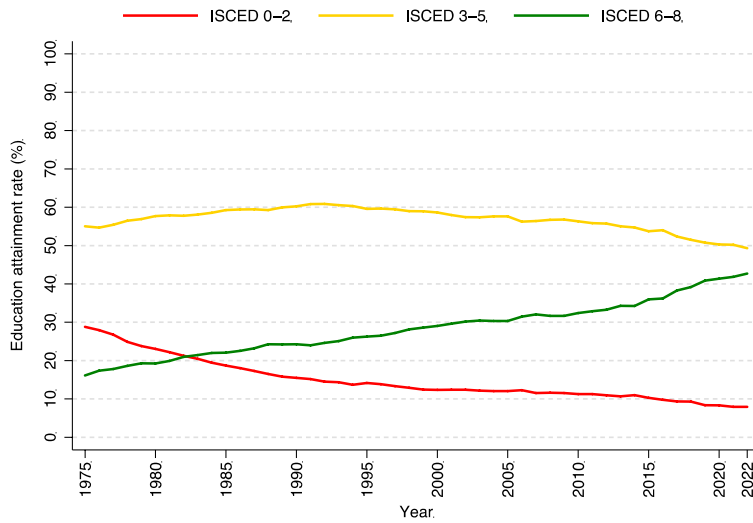
Note: Sample is individuals aged 25–60.

We further explore educational attainment by stratifying by gender in Figure 4. We broadly find that educational attainment patterns follow the same path for men and women. What these trends also confirm is the stylised fact in the US during the early 2000s of women overtaking men in completing at least 4 years of post-secondary education.

Figure 4. Educational attainment by sex, over time
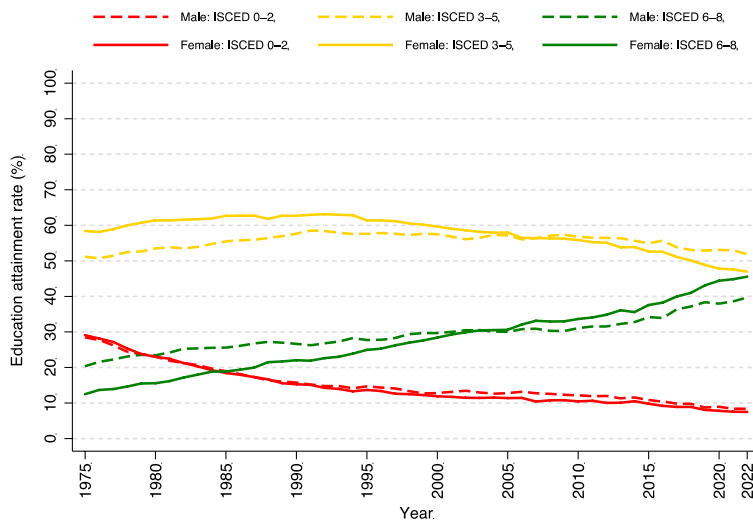
Note: Sample is individuals aged 25–60.

In Figure 5 we expand upon Figure 1 and explore employment trends across the three educational groups. There we see that the post-2000 decline in employment pervades education attainment, but is particularly pronounced among those with lower education. Individuals with less education than a college degree experience a 10 percentage point decline in employment in the last two decades from 60% to 50% for ISCED 0–2 and from 80% to 70% for ISCED 3–5.

Figure 5. Employment rates by education, over time
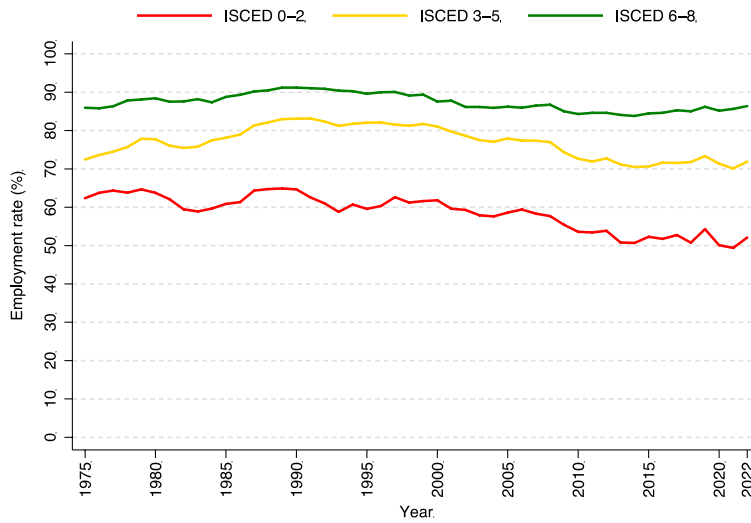
Note: Sample is individuals aged 25–60.

In Figure 6, we explore differences in employment across education and sex. This series reveals important heterogeneity. In particular, increases in employment occur among females up until the year 2000, followed by a two-decade secular decline of about 10 percentage points among woman with less than a college education, but only a couple of percentage points among the highly educated group. Men with the lowest education (ISCED 0–2) mostly exhibit reduced employment over the last five decades, from over 80% employed in the prior year to 60%, while those with middle-level education have stable employment until the mid-1990s, followed by a steady decline of about 10 points to 80%. Higher-educated men likewise have stable employment until the mid-1990s, and then lose only a few points over the remaining sample period. These within-sex employment gaps across education groups point to widening labour market inequality among the highly educated and everyone else.

Figure 6. Employment rates by sex and education, over time
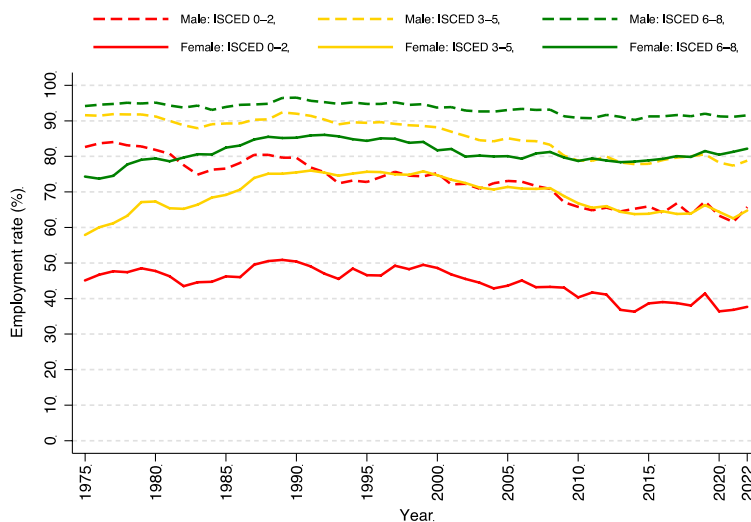
Note: Sample is individuals aged 25–60 who have completed full-time education.

The labour force consists of those employed and those unemployed. In the United States to be considered unemployed the person must be actively seeking employment in the month preceding the survey, but how long that search for work takes varies over time and the business cycle. Figure 7 presents trends in the unemployment rate by duration of unemployment. The sample is 25–60-year-olds who reported being unemployed during the survey week, split by those whose

spell of unemployment is considered short-term (52 weeks or fewer) and those whose spell is considered long-term (more than 52 weeks). In the typical year, most unemployment is short-term, though there was a noticeable uptick in long-term unemployment during the Great Recession of 2007–09 that persisted for several years afterwards. This stands in stark contrast to the severe recessions of 1981–82 and the COVID-19 pandemic, where the spikes in unemployment were mostly less than a year in duration.

Figure 7. Unemployment rate by duration of unemployment over time
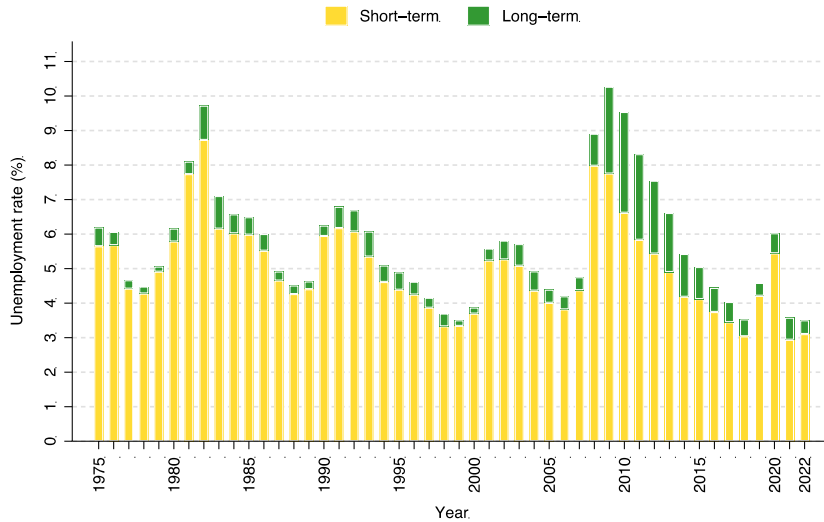
Note: Sample is individuals aged 25–60. Unemployment rate is calculated as the fraction of labour force unemployed as of the survey week, split between short-term (1 year or less) and long-term (more than 1 year) duration of unemployment.

4.2   Trends in hourly wages

Figure 8 depicts inflation-adjusted median average hourly wages, disaggregated by sex, from 1975 to 2022. The sample is 25–60-year-olds who were employed in the prior year at positive earnings, but who report no self-employment earnings. The self-employed are dropped because of challenges separating hours of work into those reflecting production and those reflecting investment. The series reveals that male hourly wages fell sharply from the late 1970s to the early 1990s from $28 per hour to about $24 per hour. Male median wages remained fairly stable over the next two decades outside the brief increase in the late 1990s, and then accelerated sharply after 2013 to $27 by 2020 as labour markets tightened (Figure 7). However, the onset of rapid inflation in 2022 pulled real wages back down by $2 to levels found in the mid-1980s. On the other hand, female hourly earnings – while at a consistently lower level – converged towards those of their male counterparts from the 1970s to 2000, and then the gap at the median stabilised for the subsequent two decades. Median hourly wages overall fluctuated between $20 and $22 per hour for the first four decades of the sample, but did exhibit real growth in the half decade prior to the COVID-19 pandemic, albeit no faster than male wages and thus keeping gender gaps constant.

Figure 8. Median real hourly wage among employees, overall and by sex, over time
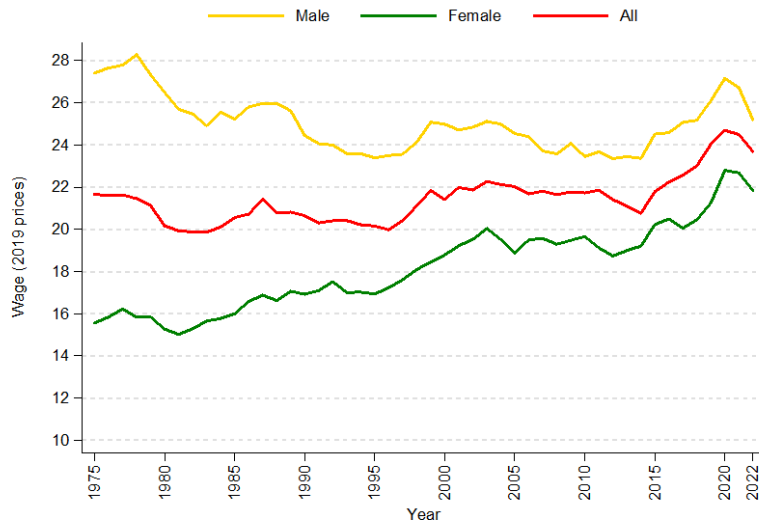
Note: Sample is employees aged 25–60. Wages are in 2019 prices.

Examining trends in hourly wages by sex and education in Figure 9, we find that the previously described decline in male hourly wages is driven by men below ISCED group 6–8 – those with less than a college degree. However, the lowest education group actually did experience substantial real wage growth from 2014 to 2021, bringing them closer to levels from the mid-1980s. Conversely, men in ISCED group 6–8 experience episodic real growth in the late 1980s, late 1990s, and late 2010s, although these periods are characterised by tepid growth so that median real wages only change by about $3 over the course of nearly 50 years. And regardless of education level, men experience declining median real wages in 2022. While females below ISCED group 6–8 do not show the same reduction over time in hourly wages as do men, their trend is relatively flat. Females in group 6–8 move from an hourly wage of $23 in 1975 to an hourly wage about $29 by 2022. Notably, though, most of that growth occurred in the 20 years from 1980 to 2000, after which wages stabilised until the late 2010s.

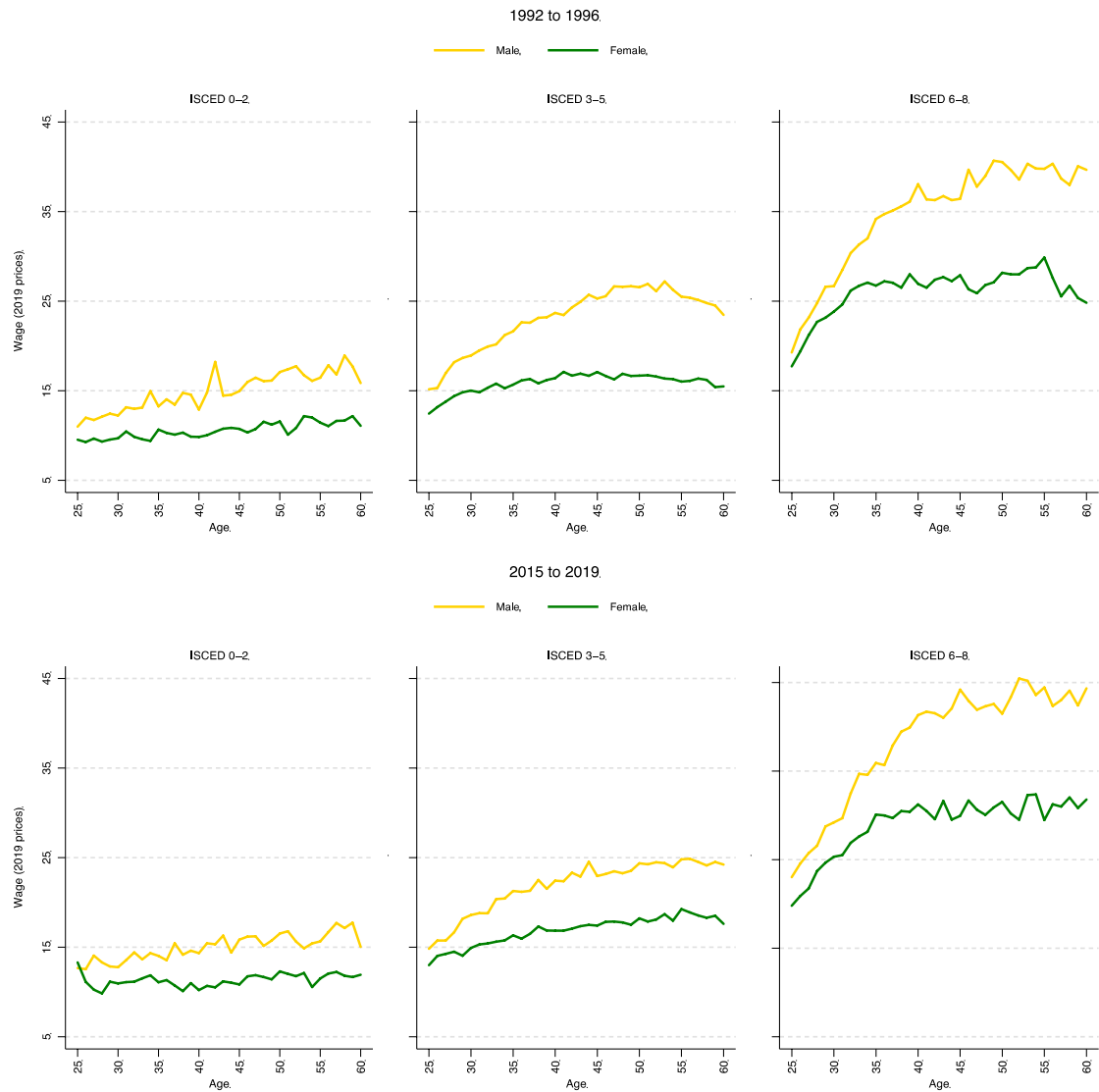**Figure 9. Median real hourly wage among employees, by sex and education, over time**
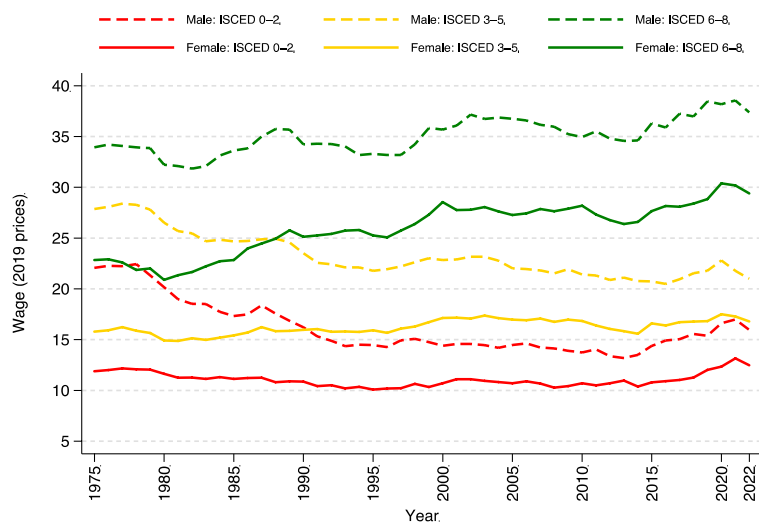
Note: Sample is employees aged 25–60. Wages are in 2019 prices.

In Figure 10, we explore how hourly wages evolve over the life cycle, and how this evolution varies by sex and education. We further stratify to understand how these patterns change over three

distinct time periods: 1978–82, 1992–96 and 2015–19. What we observe is a pattern wherein women do not experience anything approaching a standard Mincer-type increase in wages over the life cycle in the 1978–82 period. Men with low education, on the other hand, experience hourly wage growth over the working life, while those with middle and high education experience wage growth until at least their mid-30s. This growth is especially strong from the ISCED 6–8 group of men. By the 1990s, there is more broad-based hourly earnings growth over the life cycle across sex in ISCED groups 3–5 and 6–8. Those with high school graduation or some college show a clear disparity in hourly wage growth across the life cycle between men – who exhibit growth between ages 25 and 55 – and women, whose wages are relatively flat after age 35. By the 2015–19 period, there is more descriptive evidence of a more bifurcated economy in the US that disproportionately rewards workers with higher educational credentials. An interesting stylised fact that emerges here is a widening of the hourly wage gap for higher educated workers across sex over the life cycle. For workers with college degrees, male earnings continue to rise over the life cycle through the mid- to late 40s, whereas female earnings plateau around age 35. In contrast, the gender wage gap among high school dropouts (ISCED 0–2) is attenuated in recent decades because of the much worse life-cycle wage growth of low-skilled men.

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

1992 to 1996

Male, Female,

| ISCED 0–2 | ISCED 3–5 | ISCED 6–8 |

2015 to 2019

Male, Female,

| ISCED 0–2 | ISCED 3–5 | ISCED 6–8 |
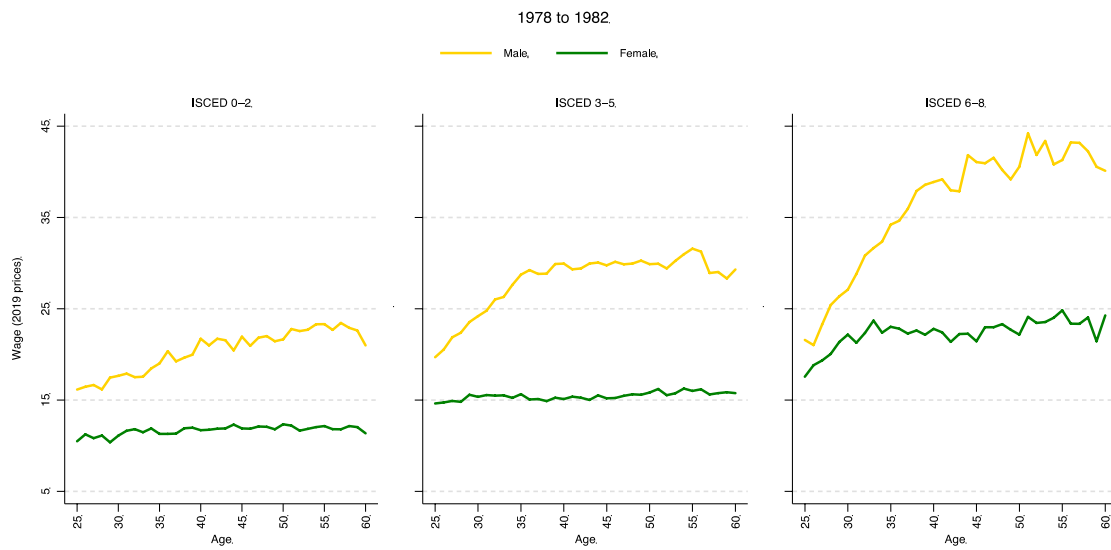
Note: Sample is employees aged 25–60. Wages are in 2019 prices.

In Figure 11, we tabulate estimates of hourly wage inequality by calculating Gini coefficients, both separately by sex, and also pooled. The sample excludes the self-employed and those with hourly wages in the top and bottom 1% of the gender-specific distribution. Here, what is revealed is a consistent increase in hourly wage inequality over time, from 0.29 in 1975 to 0.35 in 2022, or about a 21% increase. Initially, Gini wage inequality is roughly equivalent among men and women up until mid-1990s, after which point male hourly earnings inequality rises above that of women. As a consequence, male wage inequality increased by a more aggressive 10 Gini points.

Figure 11. Gini coefficient of hourly wages among employees, overall and by sex, over time
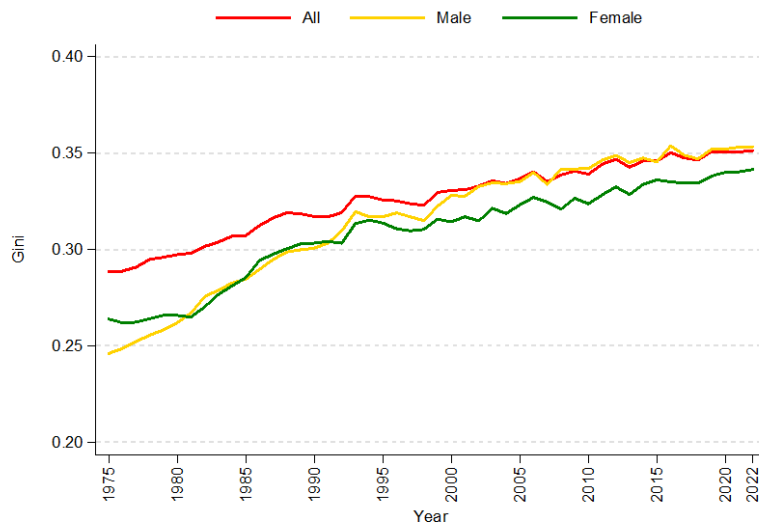
Note: Sample is employees aged 25–60. The top and bottom 1% of the gender-specific wage distribution are excluded.

Taking another snapshot at hourly wage inequality, in Figure 12 we depict 90:10 and 50:10 ratios of hourly earnings, across sex. In this case, we do not exclude those workers in the top and bottom of the wage distributions. Here what we reveal by looking within the distribution is that inequality is being driven more by growth at the top end of the hourly wage distribution. 90:10 hourly wage inequality (left-hand axis) is higher for both men and women than 50:10 inequality (right-hand axis) and increasing over time. The trend increase in 90:10 inequality is most pronounced in the 1980s, but it persists throughout the sample for both men and women, whereas 50:10 inequality is fairly flat from 1990 onward.

Figure 12. 90:10 and 50:10 ratios of hourly wages among employees, overall and by sex, over
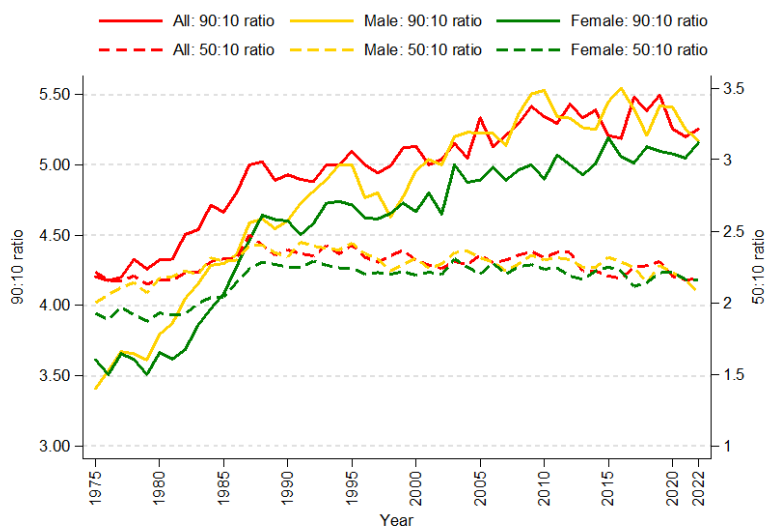
time
Note: Sample is employees aged 25–60.

Wage stagnation is a related topic of interest to inequality researchers and policymakers alike. We tabulate average annual growth rates for select years (1975–93, 1993–2006 and 2006–18) across the wage percentile distribution. This allows us to assess how, for example, wages have grown for the typical male or female employee at the 30th percentile of the wage distribution from the mid-1970s to the mid-1990s. What we find is fairly striking: throughout the 1970s, 1980s and 1990s, hourly wage growth is negative throughout most of the male wage distribution, and positive but very small for women above the 25th percentile. Average annual growth improves throughout the 1993–2006 period, though for both men and women the highest rates of growth

occur at the tails of the hourly wage distribution. Finally, the 2006–18 period follows a similar U-shaped trend in wage growth, though with a level shift downward for both men and women. In each time period, women's hourly wage growth exceeds men's. In Figure 48 in the Appendix we expand the age range to 25–74 and report identical patterns.

**Figure 13. Growth in hourly wages among employees by wage percentile, by sex, selected periods**
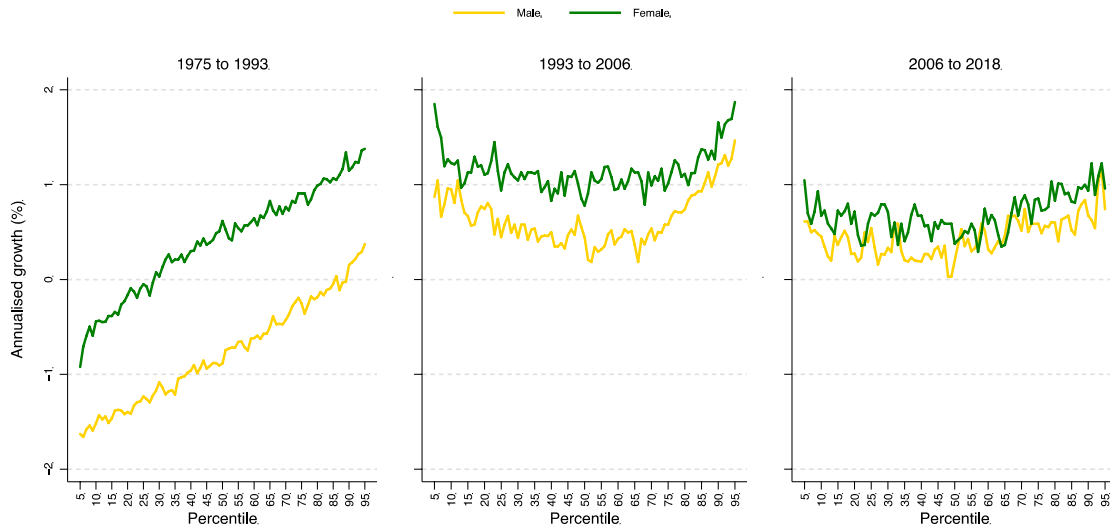
Note: Sample is employees aged 25–60.

4.3 Trends in hours worked

We now turn to an examination of the levels and growth of weekly hours of work among non-self-employed workers. As presented in Figure 14, men consistently report a higher level of average weekly hours worked than women. This gap was about 8 hours per week, or that men worked on average a full day more than women, in the 1970s, but after the severe recession of 1981–82 this gender gap in hours worked started to narrow. This accelerated during the Great Recession so that by the end of the period women had closed the gap by about half.

Figure 14. Mean weekly hours worked among employees, overall and by sex, over time
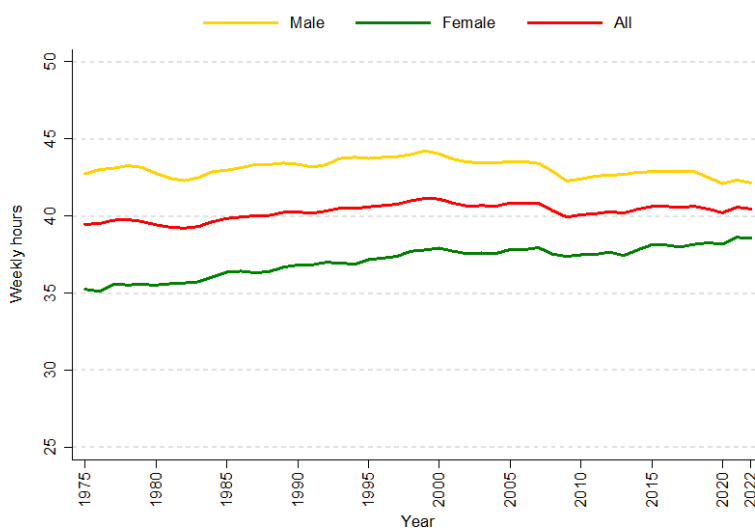
Note: Sample is employees aged 25–60.

Further disaggregating hours worked by sex and education in Figure 15, there are important gaps in hours worked for men and women based on educational attainment. Over much of the sample period, for both men and women, gaps in educational hours worked widen over time, starting in

the early 1980s. For men, however, this gap narrows after 2000 because of the decline in hours worked among the most educated (ISCED 6–8) from 46 hours per week to 43 hours. Indeed by 2022 there is little difference between hours worked of men across education. On the other hand, the education gap among women widened after the Great Recession from the decline among the least skilled workers, though the latter group regained some ground in the post-COVID recovery of 2022.

Figure 15. Mean weekly hours worked among employees, by sex and education, over time
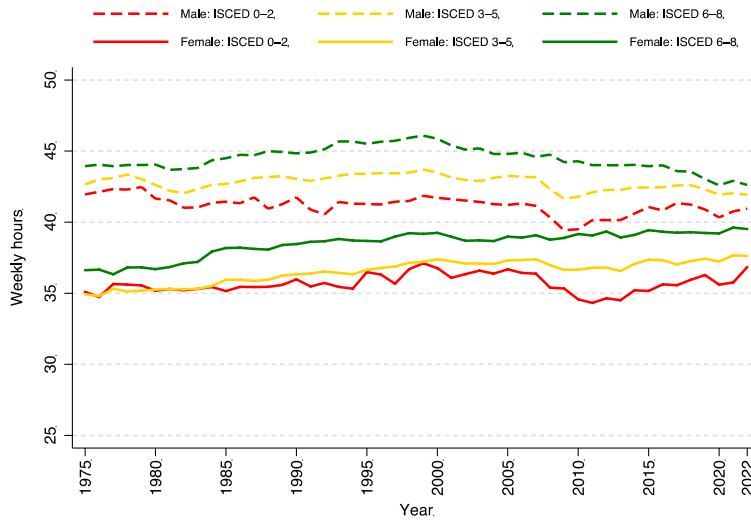
Note: Sample is employees aged 25–60.

Taking a series of meaningful snapshots, we aim to understand the changes in hours worked over various time periods in Figure 16. The figure presents total growth rates in hours worked across ventiles of the hourly wage distribution for workers aged 25–60. We select those workers whose hourly wages lie between the 1st and 99th percentiles, and in constructing growth rates we take 3-year means to further minimise noise. With the exception of the 1979-1995 window, men have exhibited little growth in hours worked across the wage distribution, and in the latter case this was only among men in the top half of the wage distribution. During that same period women's hours grew by 5% over most of the distribution, but otherwise the growth of female hours resembled that of men. The one exception is the 1993–95 to 2004–06 series that features substantial hours growth across the lower ventiles of the wage distribution. This period coincides with broad-based economic growth, and expansions in refundable tax credits that lead to reduced poverty and higher work participation among relatively lower-income women. A series of robustness versions of Figure 16 are presented in the Appendix (Figures 49–51), where we widen the age of the sample (25–74) and where we trim or leave untrimmed the top and bottom 1% of the hourly wage distribution. In general, the patterns in the main text are little changed with the expanded age or wage sample.

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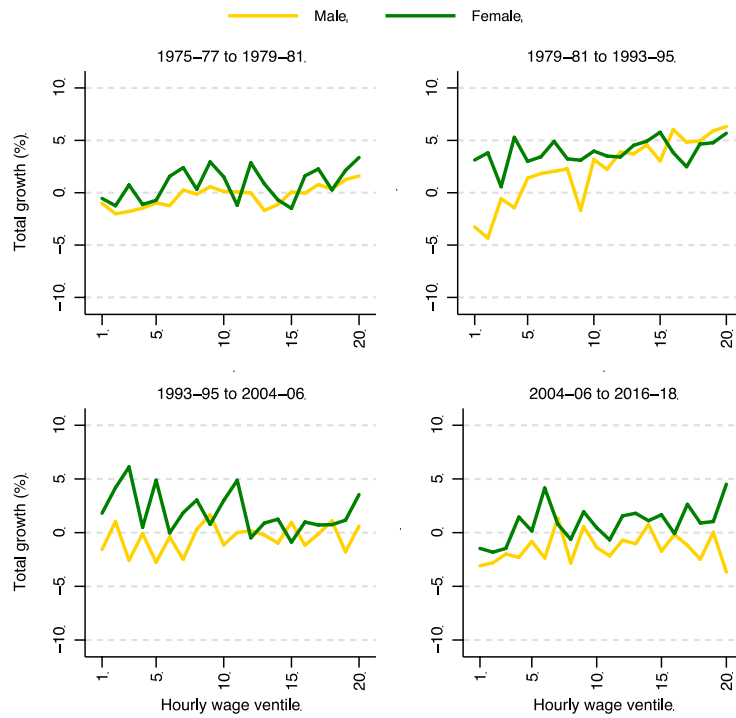

Note: Sample is employees aged 25–60. We trim the bottom and top 1% of the gender specific wage distribution. We average mean hourly wage for each year across the three years to obtain hourly wage for each 3-year period.

4.4 Inequality in individual earnings among those in work

In Figure 17, we move to documenting trends in individual median earnings by sex from 1975 to 2022. The sample is of 25–60-year-old workers who are in either paid employment or self-employment. The figure shows that real earnings of men peaked around $60,000 in the late 1970s, and then oscillated between $50,000 and $55,000 in the last four decades, rising and falling with business-cycle expansions and contractions. Women experienced steady growth in real earnings from the mid-1970s to 2000, before plateauing for a decade and then resuming the upward march. The gender earnings gap was $30,000 in the mid-1970s and this narrowed substantially to about $11,000 by 2022, demonstrating real progress of women at the median.

Figure 17. Median real gross individual earnings, overall and by sex, over time
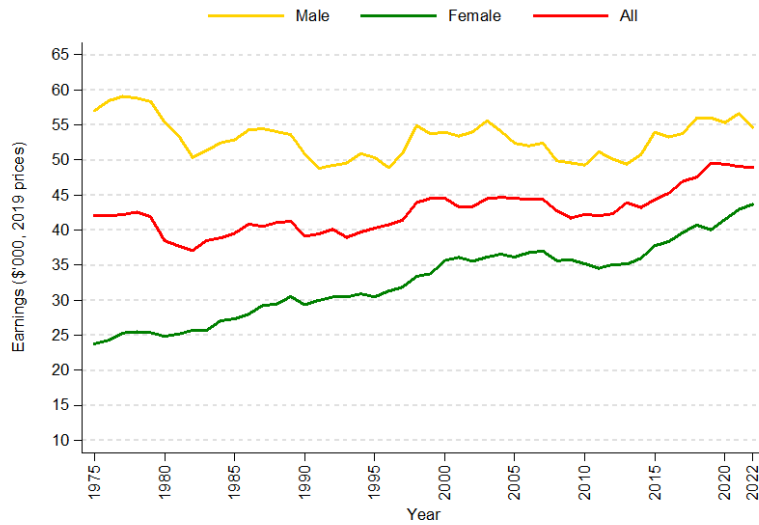
Note: Sample is individuals in work aged 25–60. Gross earnings are in 2019 prices.

Further disaggregating the results by sex and education in Figure 18, we find substantial, but narrowing, earnings gaps across educational attainment and sex. Men and women with fewer formal educational credentials show convergence in earnings, with male earnings falling towards those of females in ISCED 0–2. There is also some male–female convergence among highly educated workers (ISCED 6–8), with women experiencing real growth of $20,000 from 1975 to 2022, while their male counterparts experience negligible growth over the same period. Still, the overall picture is one of divergence within gender: non-college-educated workers in the US do not make progress over this period, with men experiencing a reduction in real earnings over time.

Figure 18. Median real gross individual earnings, by sex and education, over time
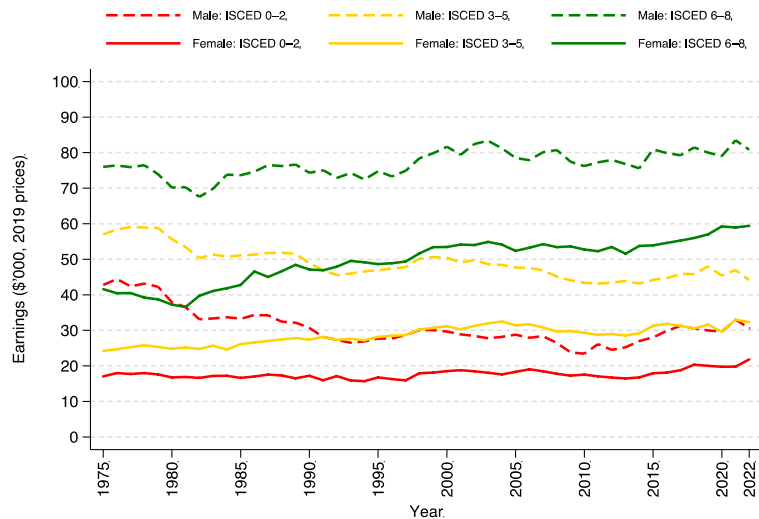
Note: Sample is individuals in work aged 25–60. Gross earnings are in 2019 prices.

We move on to looking at earnings inequality using the Gini coefficient in Figure 19, overall and by sex (see Figure 52 in the Appendix for an expanded age range of 25–74). In this case, we uncover that lower median earnings among women relative to men potentially mask higher within-group earnings inequality among women when compared to men, at least in the first two decades of the sample period. The gender inequality gap is highest in the mid-1970s, and steadily converges by the mid-1990s. The source of this convergence is not a large-scale reduction in earnings

inequality among women, but instead high and rising earnings inequality among men.[1] This is certainly coincident with skill-biased technological change in the economy and the decline in many 'blue-collar' employment opportunities that provided relatively competitive compensation packages for workers with fewer formal credentials.

Figure 19. Gini coefficient of gross individual earnings, overall and by sex, over time
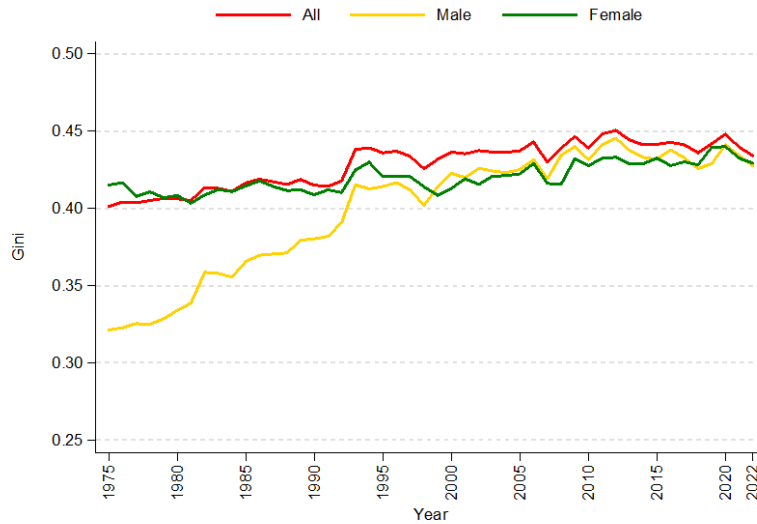
Note: Sample is individuals in work aged 25–60.

Compensation packages entail more than earnings, and it is important to incorporate other employer costs within our assessment of inequality. We do so in Figure 20 by adding the employer cost of the payroll tax to gross earnings. There we find that there is some modest divergence in inequality between individual earnings and employer costs over time. Still, both series rise only slightly from the 1960s.

Figure 20. Gini coefficient of gross individual earnings and total employer cost, over time

Note: Sample is individuals in work aged 25–60.

---

[1] The Census Bureau top-codes earnings and income values prior to public release, and indeed also top-codes the data (albeit at higher values) in restricted-access internal versions. Although we use rank-proximity swap values provided by the Census Bureau for a consistent method of top-coding across the sample period, there was a data collection and processing change in 1993 (1994 survey year) from paper survey to computer-assisted survey that enabled the use of higher internal top codes, rising from $299,999 to $1,099,999. This results in a jump discontinuity in the Gini in 1993 when not winsorising the data.

We now turn to assessing inequality between the top and the bottom (90:10, left-hand axis) and also between the middle and the bottom of the earnings distribution (50:10, right-hand axis). Secular accounts of rising inequality are accounted for when we observe the case for men. Here, 90:10 inequality is on the rise since 1980, though the 50:10 ratio has been flat over that same period. On the other hand, female earnings inequality declined from a very high level in the mid-1970s. By the mid-2000s and onward, the inequality series run fairly close together across gender. For both men and women the onset of COVID-19 saw a sharp increase in both upper- and lower-tail inequality in 2020, only to be followed by a sharp reduction in 2022, bringing male 90:10 earnings inequality on par with levels last seen in 2000. Indeed, female earnings and the combined distribution saw the lowest rate of upper-tail inequality in 2022 compared to the five decades of our sample.

Figure 21. 90:10 and 50:10 ratios of gross individual earnings, overall and by sex, over time
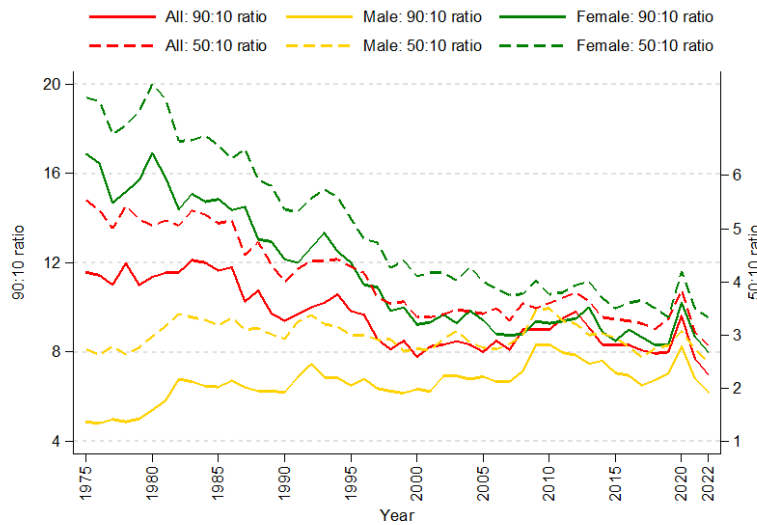
Note: Sample is individuals in work aged 25–60.

Earnings growth, when conditioned on position in the earnings distribution, takes on distinct forms for men and women. In Figure 22 we depict total growth in earnings of men and women across the distribution for selected periods. For both men and women, the late 1970s were a period of no earnings growth across the distribution. Over the next 15 years, however, women had very strong earnings growth across the distribution, while men experienced negative growth in the bottom 70% of the distribution. The situation was notably improved for men between 1993 and 2006 with positive growth across all percentiles, albeit at modest levels from the 25th to 75th percentiles. Earnings growth of women continued to exceed that of men. The subsequent dozen years until 2018 saw earnings growth rates of men return to near zero, and levels not much better for women in the upper half of the earnings distribution but with strong growth in the bottom half.

In Figure 23 we repeat the exercise but now pool genders to examine total growth in the overall labour market, both in direct wage payments and with the broader compensation index that includes employer cost of the payroll tax. The combined earnings growth is a weighted average of the series in Figure 22, and as such each panel is similar, though the negative growth among men in the 1979–93 period is masked in the pooled sample. Adding in employer payroll tax cost has no substantive effects on growth rates, which is perhaps not surprising since it is a flat tax over the wage distribution in the US (with the retirement portion capped but the Medicare portion uncapped after 1991). Figure 53 in the Appendix shows that these patterns do not change when we expand the age range to 25–74.

Figure 22. Growth in gross earnings by earnings percentile, overall and sex, selected periods
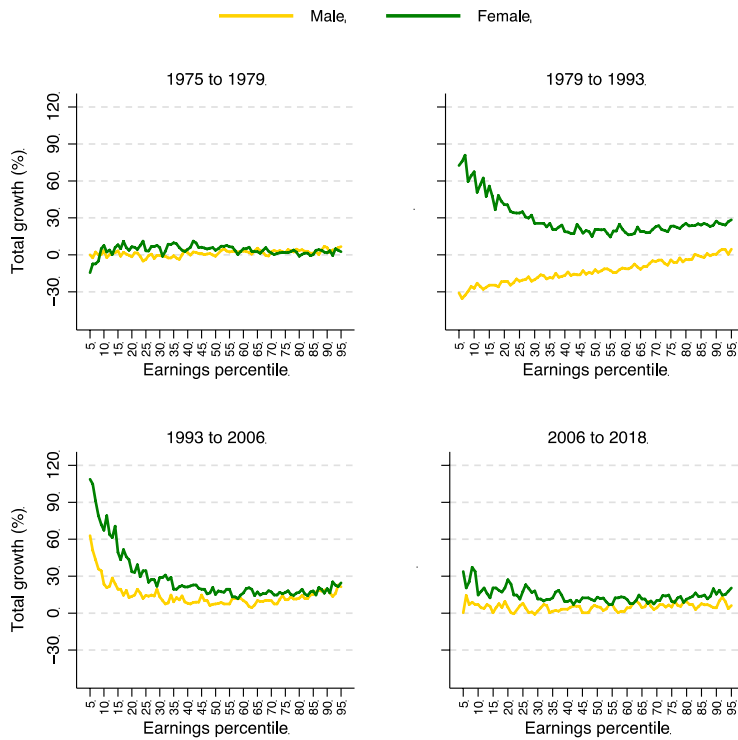
Note: Sample is individuals in work aged 25–60.

Figure 23. Growth in gross earnings and employer cost by earnings percentile, selected
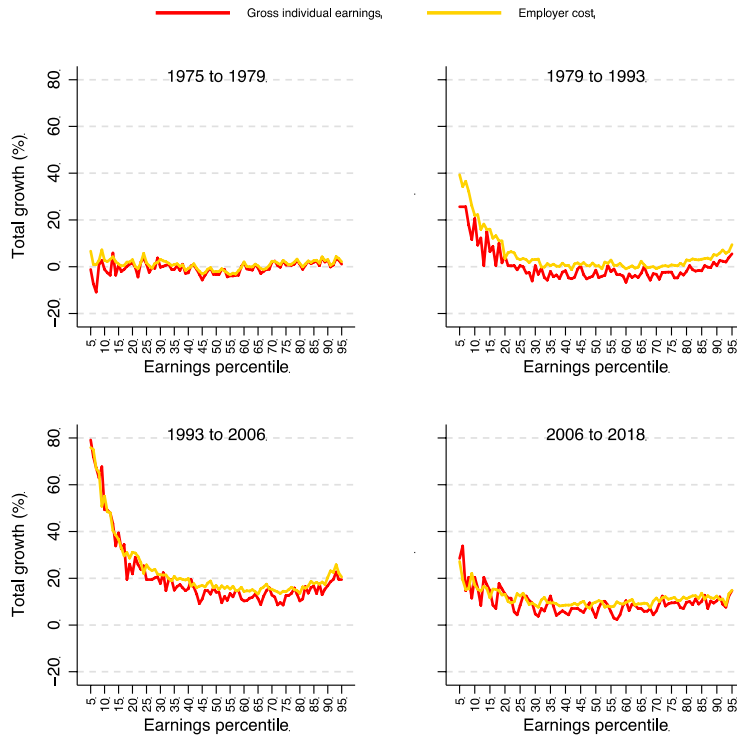
periods

Note: Sample is individuals in work aged 25–60.

4.5   Self-employment

Figure 24 documents the proportion of workers who are considered self-employed at any time in the prior year versus employees of firms – which has been the standard arrangement for most US workers. The self-employed group is further disaggregated into those who are solely self-employed and those who both work for an employer and also do self-employment work. The data suggest that the overall level of self-employed workers is fairly stable and, if anything, even gently declining since the mid-1990s. Figure 54 in the Appendix shows that this pattern is unchanged if we use self-employment status as of the survey week instead of in the prior year.

Figure 24. Share of employees and self-employed workers, over time

Note: Sample is individuals in work aged 25–60.

The overall flat trend in self-employment masks important heterogeneity across sex and education. Men with less education have increased their participation in self-employment since the early 2000s, which is consistent with growth in the contingent workforce (e.g., low-wage gig economy), whereas men and women with higher educational credentials (ISCED 6–8) have decreased their participation in self-employment since 1987. In general, self-employment is in decline for all groups shown except – as described previously – for men in ISCED category 0–2 and women of the same educational category whose self-employment rate has held steady around 5%.

Figure 25. Share self-employed by sex and education, over time
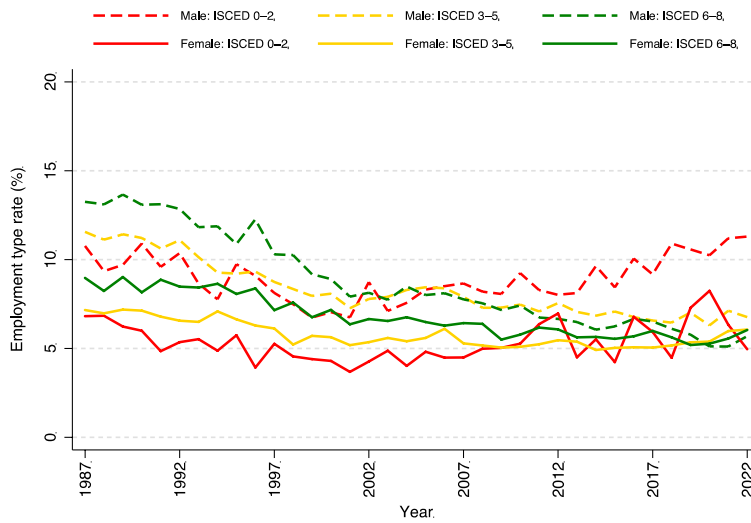
Note: Sample is individuals in work aged 25–60.

Figure 26 demonstrates that self-employment involves vastly different occupations and returns, depicting the share self-employed across ventiles of the earnings distribution. The figure shows a U-shaped pattern with self-employment rates highest at low earnings, but the U-shape has flattened out over time to become more L-shaped in recent years. The figure also shows that while self-employment has decreased since 1987, the post 1999 stability seen in Figure 24 pervades most of the earnings distribution.

Figure 24. Share self-employed by ventile of individual earnings, selected years
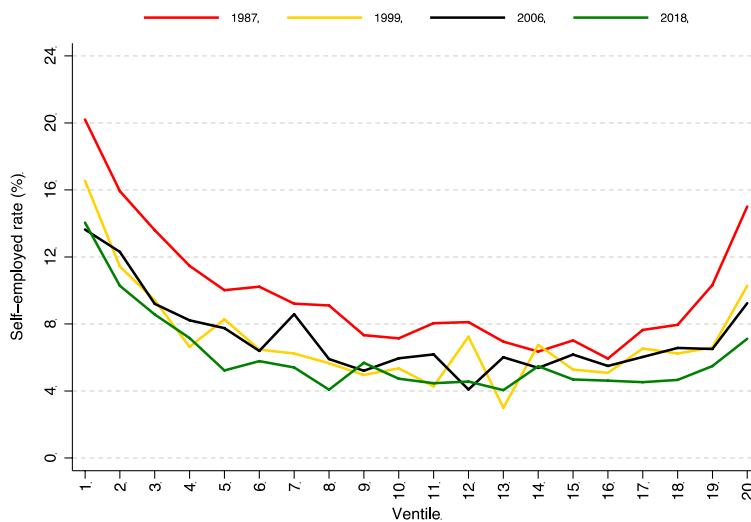
Note: Sample is individuals in work aged 25–60.

5.   Labour market institutions

This section looks at labour market institutions that affect earnings and incomes: minimum wages and collective bargaining, and benefits from the state. As in most of the report, all analysis is restricted to individuals aged 25–60.

5.1   Minimum wage and unions

Figure 27 shows the share of the non-self-employed workforce since 1979 whose hourly pay falls below 120% of the federal minimum wage (left-hand axis) and the generosity of the federal minimum wage *vis-à-vis* the median hourly after-tax wages and hourly gross labour cost (right-hand axis). There is substantial volatility in the series depicting the proportion of workers below 120% of the minimum wage based on periodic upward adjustments in the federal minimum wage; still, the proportion falls over time from 19% in 1979 to approximately 4% by 2022. The series on the right-hand axis shows that the ratio of the minimum wage to the 50th percentile of the net wage distribution falls from nearly 0.75 in 1979 to 0.4 by 2022. Accounting for payroll tax labour costs (yellow trend), the minimum wage likewise falls from 0.45 to 0.25 of gross labour cost. Taken together, this suggests that the real value of the minimum wage has severely eroded over the past four decades, and that employers have had to steadily increase their internal wage floors above and beyond the federal level to attract and retain workers.

Figure 27. Bite of the minimum wage, over time
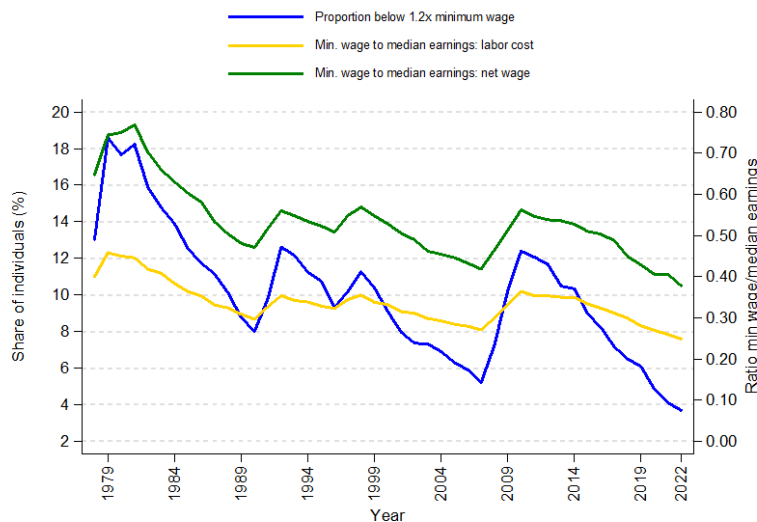
Note: Sample is employees aged 25–60. The figure presents the share of workers with a wage below 1.2 times the minimum wage (left-hand side). The right-hand side shows the ratio of the minimum wage to the median wage for the net wage and the labour cost.

Worker earnings are generally higher when covered by a union bargaining agreement, whether or not the individual is a dues-paying member of the union. Figure 28 presents trends in the share of individuals belonging to a union (union density) and the share covered by a collective bargaining agreement. In the late 1970s just over one in five workers belonged to a union and one in four were covered by collective bargaining. Over the ensuing four decades the shares of each group fell by half to about 10%. This decline has been attributed to some of the wage losses of low- and medium-skilled men over this period.

Figure 28. Union density and fraction of workers covered by collective bargaining agreements, over time
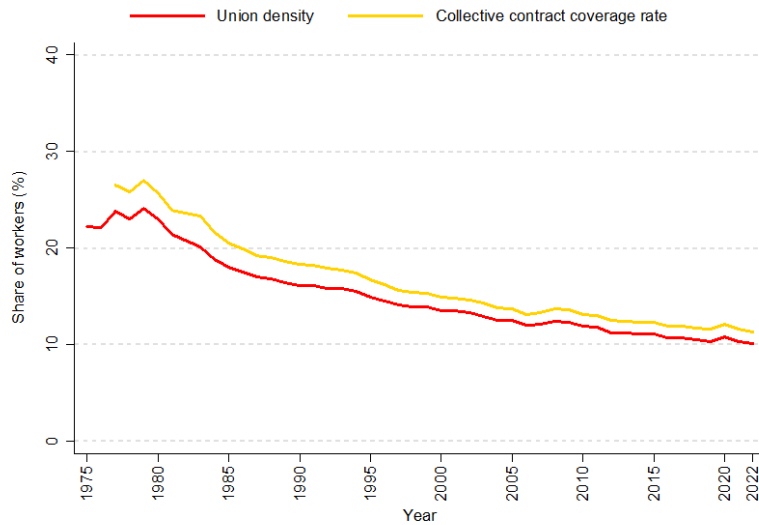
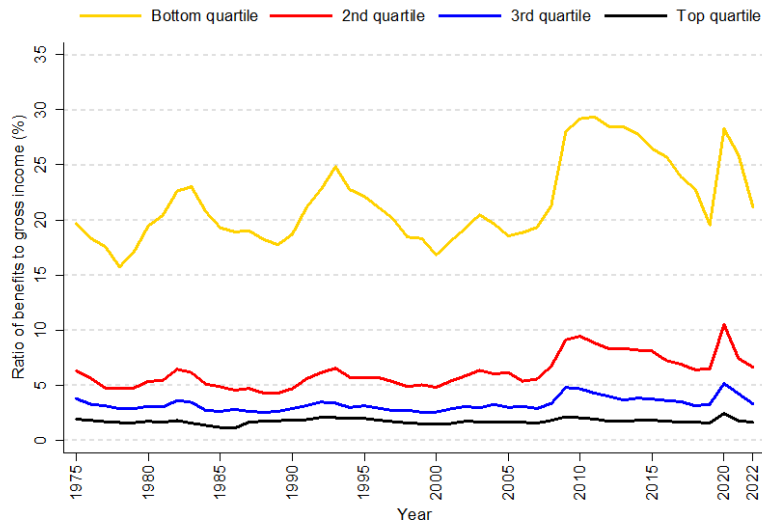*Note*: Sample is individuals 25–60 years of age.

5.2   Benefits from the state

The next series of figures present evidence on the generosity of the tax, transfer and social insurance system in redistributing income towards lower-income households. Each figure sums up income and tax payments to the household level and splits the sample based on the quartile of the equivalised disposable (net) income distribution in each year.

Figure 29 presents the share of gross income received in the form of non-tax benefits. In this case benefits include social insurance such as Social Security, SSDI , UI, Workers' Compensation, and Veterans Benefits, and means-tested transfers such as Temporary Assistance for Needy Families, Supplemental Security Income, and SNAP. Gross income includes earnings and non-labour income, the latter of which is inclusive of benefits. The figure shows that safety net benefits flow primarily to low-income households – accounting for 20–30% of gross income in the first quartile – and there is a strong countercyclical component to assistance. The latter is expected as it reflects programmes such as UI and SNAP that are automatic stabilisers that support households during economic downturns, as well as direct Congressional action during severe downturns such as the Great Recession and COVID-19 pandemic. There is also a slight upward drift in the share of income in the first quartile in the form of transfers, driven in part from the strong uptick and long recovery from the Great Recession. Benefits that flow to the second, third and fourth quartiles of the net income distribution are primarily from social insurance (notably UI), and consequently a much smaller share of household net income.

Figure 30 offers a different look at redistribution through the tax code, depicting average tax rates by quartile of the equivalised disposable income distribution. Average tax rates are defined as the ratio of average total tax payments (inclusive of refundable tax credits like the EITC and CTC) to average gross income within each quartile, where gross income is defined as in Figure 29. Average tax rates trended downward for the bottom three quartiles, especially the first quartile starting in the mid-1990s with the expansion of the EITC. Average burdens actually fell below zero during the Great Recession, and then plummeted to nearly –20% in the COVID-19 pandemic with the Economic Income Payments in 2020 and then the broad expansion of the CTC in 2021. With their expiration, average tax rates in the first quartile returned to a positive 2.5% in 2022, the highest rate since 2002.

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

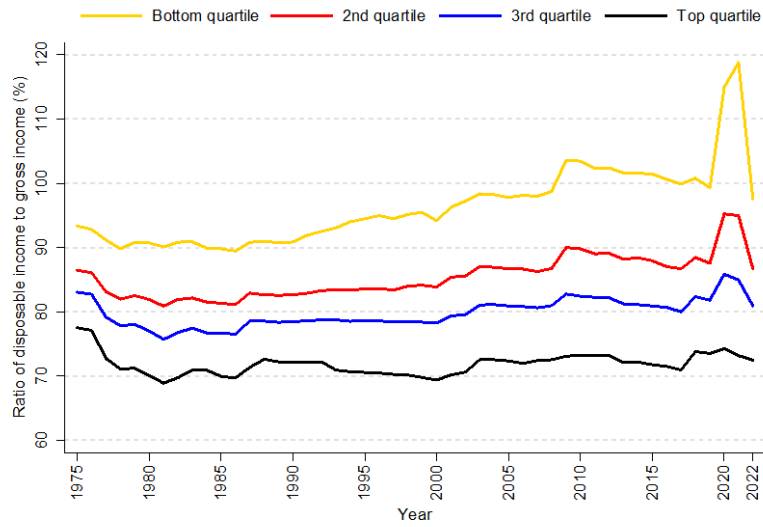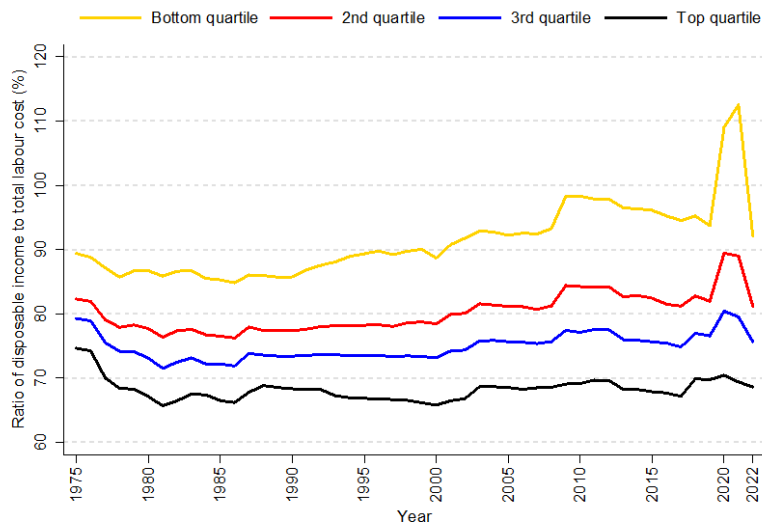*Note*: Sample is individuals 25–60 years of age.

Figure 30. Tax payments as a proportion of gross income, by net household income quartile
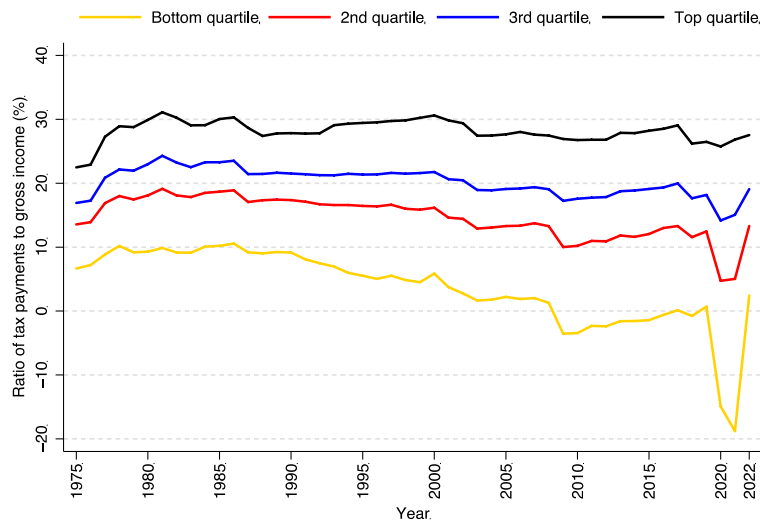
Note: Sample is individuals 25–60 years of age.

In the next two figures we present a related portrait of the total take of the tax system by plotting the ratio of disposable net income to gross income in Figure 31 and the ratio of disposable income to gross income inclusive of employer payroll tax cost in Figure 32. Both figures reveal that since the early 1980s disposable income as a share of gross income has increased sharply in the bottom half of the distribution, even prior to the unprecedented increase during the COVID period, rising from 90% to 100% in the first quartile and from 80% to 90% in the second quartile. Adding in employer payroll tax cost has no effect on trends, but reduces the disposable income share by 3–5 percentage points in a typical year.

Figure 31. Disposable income as a proportion of gross income, by net household income

quartile

Note: Sample is individuals 25–60 years of age.

Figure 32. Disposable income as a proportion of gross income plus employer payroll cost, by net household income quartile

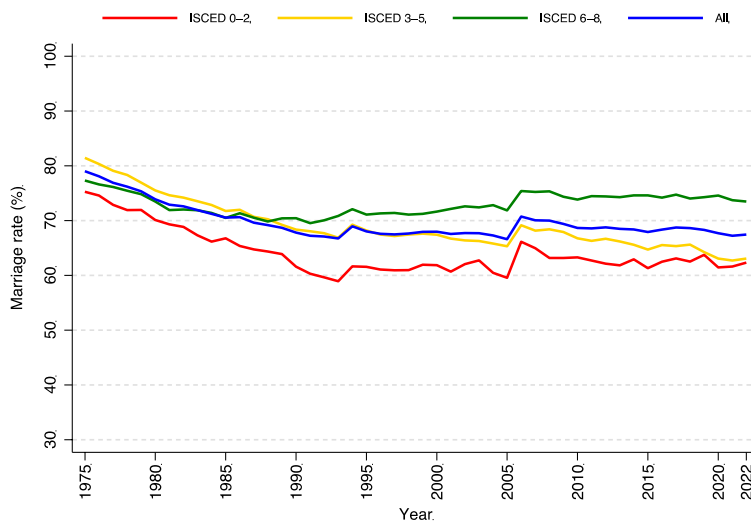*Note*: Sample is individuals 25–60 years of age.

6.   Household incomes

This section takes a deeper look at household composition and incomes. We start by looking at trends in household composition and the degree of assortative matching, which partly determine 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

One feature of US inequality is the changing structure of families. Families are increasingly more complex, and marriage rates overall have been on the decline, though as depicted in Figure 33 cohabitation (which is collected starting in 1994) slowed down some of that decline. One fact that emerges from the figure is that marriage and cohabitation have increasingly become the domain of highly educated adults; there is a roughly 15 percentage point difference in marriage and cohabitation rates between college-educated adults (ISCED 6–8) and those with less than a college degree by 2022. Omitting cohabitation exacerbates the marriage education gap by an additional 5 percentage points.

**Figure 33. Share married/cohabiting, overall and by education, over time**

Note: Sample is individuals aged 25–60. Prior to 1994 only married persons are included. There was a change in measuring cohabitation in 2006.

Reinforcing the findings of Figure 33, we find a very clear income gradient between marriage and cohabitation and earnings in Figure 34, though operating in opposing directions. Marriage and cohabitation rates for women are decreasing as their individual earnings rise in 1975, are relatively flat across the earnings distribution in 1993 and gently rising in 2018. Men's marriage and cohabitation rates rise with their individual earnings in all three periods depicted. Moreover, working men are more likely to have a working partner as we move up the earnings distribution, which we explore further below. This is suggestive of some asymmetry in the economic status of men and women within marital and cohabitation arrangements. The marital and cohabitation rates of women who do not work are relatively high in 1975, though these marital/cohabitation rates fall 10 percentage points over time (a 20 point decline if only include married women in 2018). Men's marital and cohabitation rates among those who are out of work are, conversely, lower than those of men who work at any point in the income distribution. The sample here trims the top and bottom 1% of the gender-specific earnings distribution. In Figure 55 in the Appendix, when we do not trim and retain zero earners, we see that this does not alter the slope of the series but it does alter the intercept as we do not enter positive wages until later in the distribution. Because of increases in women's employment, this falls from the 45th percentile in

1975 to the 25th percentile in 1993. At the same time, because of withdrawal from work among men, we move from the 6th percentile in 1975 to the 16th percentile in 2018.

Figure 34. Share married/cohabiting and share with working partner, by sex and individual gross earnings percentile, selected years
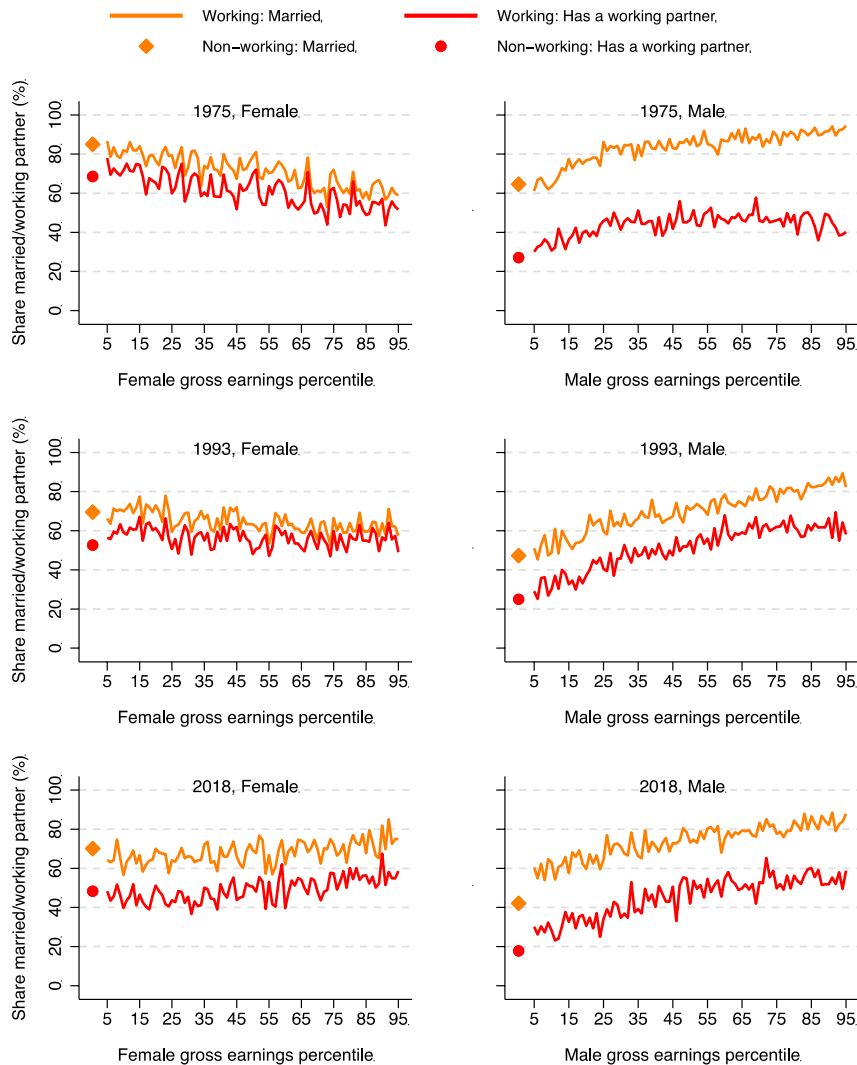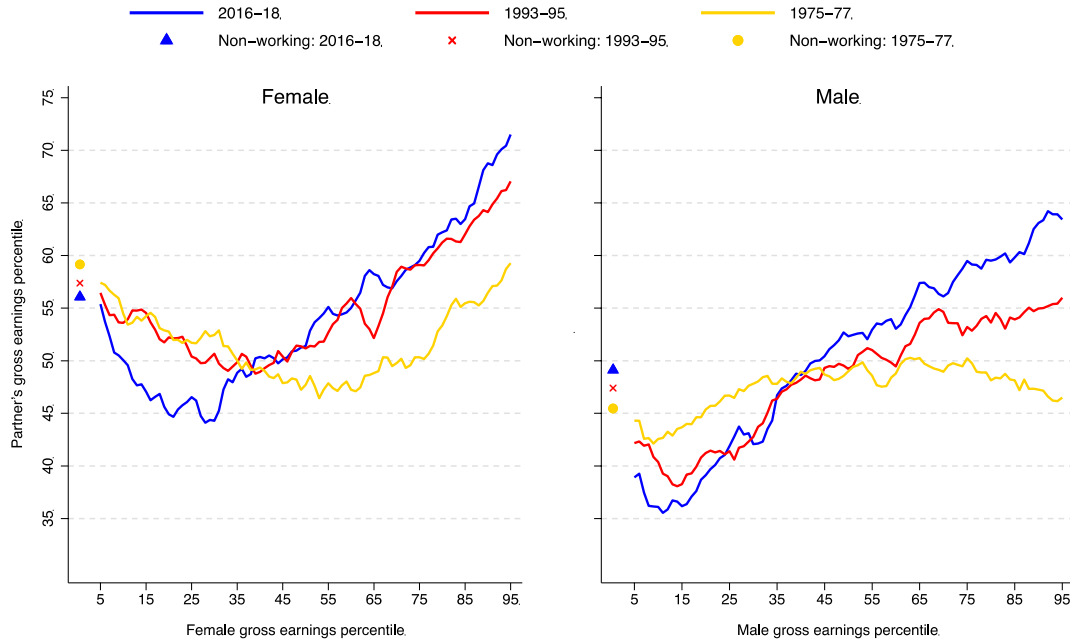

Note: Sample is individuals aged 25–60. We exclude the bottom and top 1% of the gender-specific earnings distribution. The proportion with a working partner is conditional on being married. The 2018 series includes cohabiting partners.

Do marriages and partnerships follow or diverge from assortative mating patterns over time? We explore this question in Figure 35, which depicts within each gender's earnings distribution where the earnings of the partner fall in their respective distribution. What becomes apparent from the figure is that over time the partner's earnings profile becomes steeper, which is consistent with assortative mating – high-wage men and women are partnering with high-wage partners. The transformation among women is quite dramatic as the pattern evolves from a symmetric U-shape in the mid-1970s with a strong leftward shift in the distribution in the mid-1990s and a further shift left in the late 2010s. No less dramatic is the change among men. In the 1970s the profile was an inverse U-shape, suggesting that high-earning men were more likely to partner with lower earners, perhaps working only part-time. By 2016–18 the profile is monotonically increasing after the 15th percentile of male earnings, suggesting that assortative matching spans the entire distribution. As in Figure 34, when we do not trim out the top and bottom 1% (see Figure 56 in the Appendix) then the slopes are the same, demonstrating an

increase in assortative matching over time, but again the series begins higher up in the distribution in earlier periods because of the prevalence of non-working women in the 1970s, and of non-working men in the 2010s.

Figure 35. Mean gross earnings percentile of partner/spouse by individual's gross earnings percentile, selected years

Note: Sample is individuals aged 25–60. We exclude the bottom and top 1% of the gender-specific earnings distribution. Mean earnings of partners are plotted as five-pt moving averages across the earnings distribution. Partners include both married and cohabiting persons in 1993-95 and 2016-18, but only married persons in 1975-77.

The next two figures shed light on the composition of households, including marital status by presence of dependent children, adult children, and other related or unrelated persons. Figure 36 decomposes households into the share of members by composition type, the latter of which in turn is determined by relationship to the household head. The figure shows that there has been a trend decline in the share of household members residing in a couple household with dependent children, only to be offset by a rise in the share of single-person households, childless couples, and of other household members. Figure 37 separates the figure by sex and education, where we see that among lower-educated women there is a higher share of persons residing in single-person households with children over time. Among low- and middle-education men there is a notable decline in residing in couples with children, and while there has been an increase in lone parenthood in these groups, much of the shift has been towards single-person households, childless couples, or adult children or 'other' members residing in the wider household. These men tend to have weaker labour force attachment, and when working, with lower earnings, each of which likely contribute to widening household inequality.

Figure 36. Share of individuals by position in the household, over time
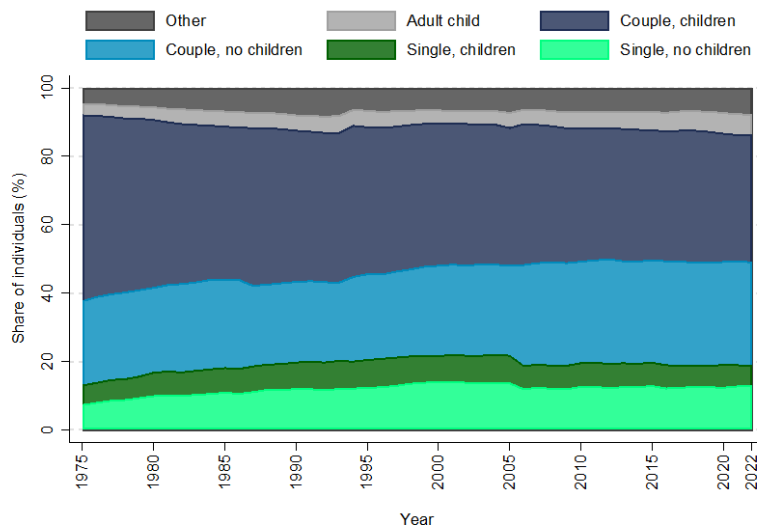
Note: Sample is individuals aged 25–60. 'Single, children' and 'couple, children' refer to dependent children only. Couples include cohabiting partners after 1993. There was a change in measurement of cohabitation in 2006.

Figure 37. Share of individuals by position in the household, by sex and education, over time
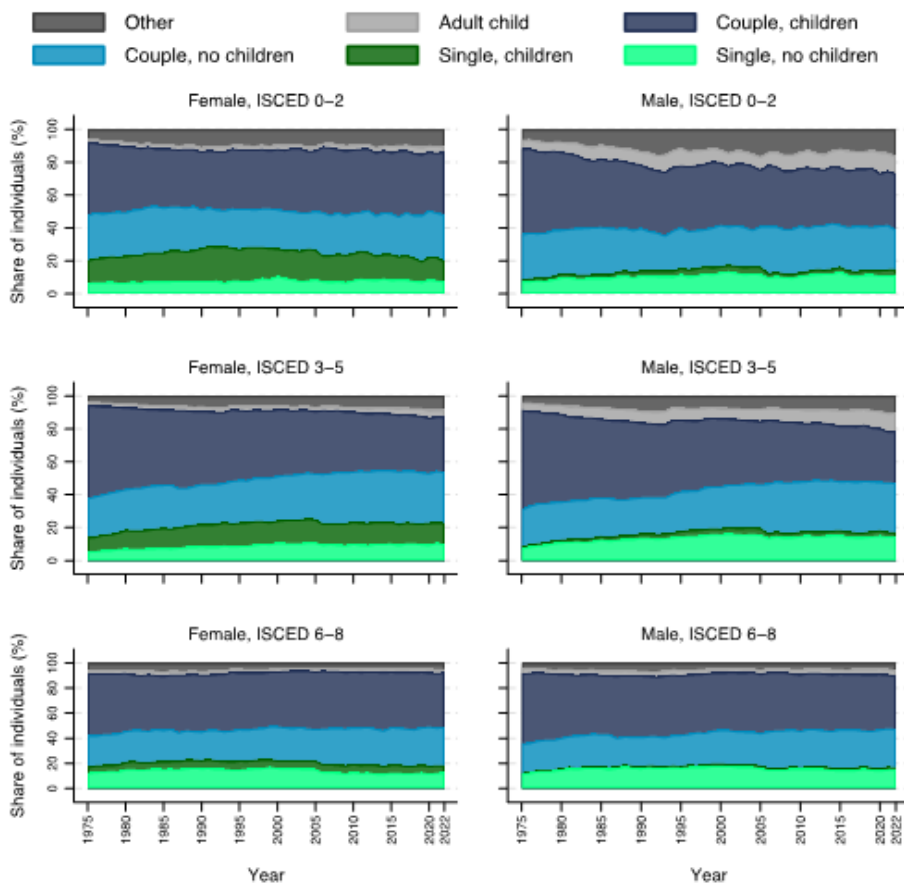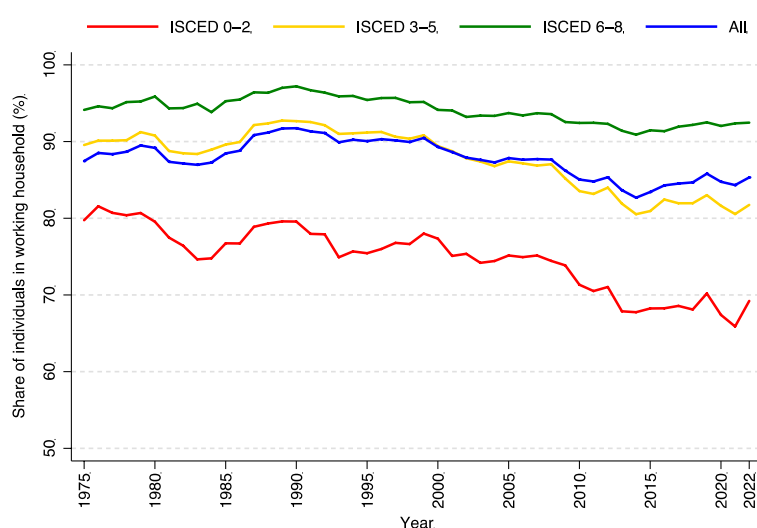

Note: Sample is individuals aged 25–60. 'Single, children' and 'Couple, children' refer to dependent children only. Couples include cohabiting partners after 1993. There was a change in measurement of cohabitation in 2006.

6.2   Earnings and incomes among working households

The share of individuals in a working household as seen in Figure 38 held steady at nearly 90% of the adult population for the 25 years from 1975 to 2000, before declining steadily over the next 15 years, only to recover slightly by 2022. Individuals with fewer formal educational credentials are less likely to reside in a household where at least one adult is working. This is most pronounced for those individuals without a high school diploma (ISCED 0–2) where the share declines by nearly 15 percentage points from 80% to 65%, and increasingly so for those with high school or some college (ISCED 3–5) where the share fell from 90% in 2000 to 80% two decades later. And as the labour market changes and skill-biased technological changes shift the composition of job opportunities – including a hollowing out of blue-collar, middle-skill jobs – the linkage between higher education and work sharpens. Importantly, though, much of the COVID-induced decline in working households recovered in 2022

Figure 38. Share of individuals in a working household, overall and by education, over time

Note: Sample is individuals aged 25–60. A working household is defined as a household in which at least one adult is in work.

Work is a clear pathway out of poverty, and Figure 39 reveals that median real equivalised disposable household income is noticeably lower among households that are out of work. Earnings growth occurs among households with at least one worker throughout the 1980s, the mid-1990s to the early 2000s, and then after 2014, with median earnings increasing by 42% over the last 45 years. Disposable income among working households grows even more than earnings, in part because of robust redistribution via refundable tax credits depicted previously. However, there is a remarkable decline for working households in 2022 with the expiration of the expanded CTC and CDCTC credits. For those prime-age households with no workers, median equivalised net income rebounded from lows of about $13,000 in the early 1990s to a within-period peak in 2021, only to fall back in 2022 to the level in 1980.

Figure 39. Median real gross household earnings and disposable household income, by household (HH) working status, over time
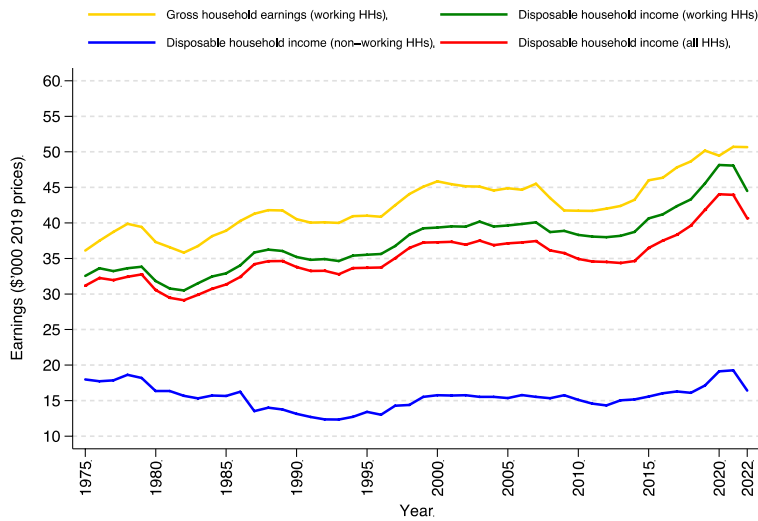
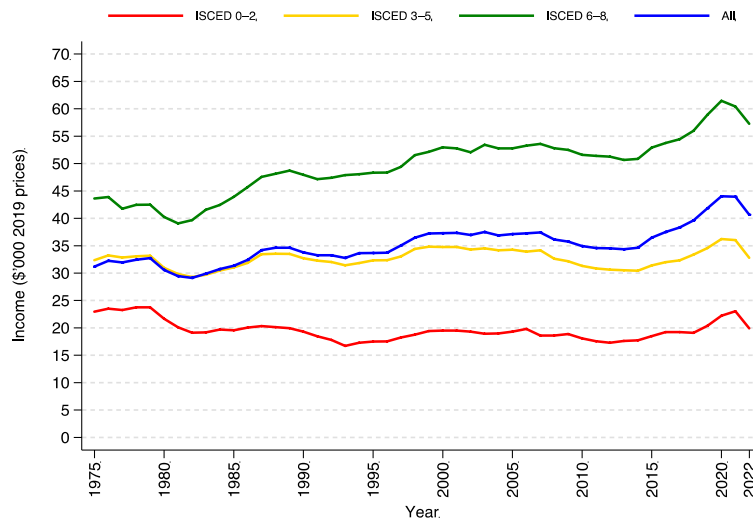*Note*: Sample is individuals aged 25–60. A working household is defined as a household in which at least one adult is in work. All incomes have been equivalised using the modified OECD equivalence scale.

Figure 40 reveals that income and earnings growth was fairly slow across the economic distribution. Still, contemporary income and earnings growth or stagnation in the US context depends on where households lie along the distribution. Households at the middle and upper ends of the distribution experience positive income and earnings growth, albeit at a fairly slow rate of about 1% per year. Households below the middle of the distribution are much more likely to experience some real decline in both earnings and income from 1979 to 1993, but then growth of about 0.5–1.0% thereafter.

Figure 40. Annualised growth in real equivalised gross household earnings and household disposable income for working households, by percentile, selected years
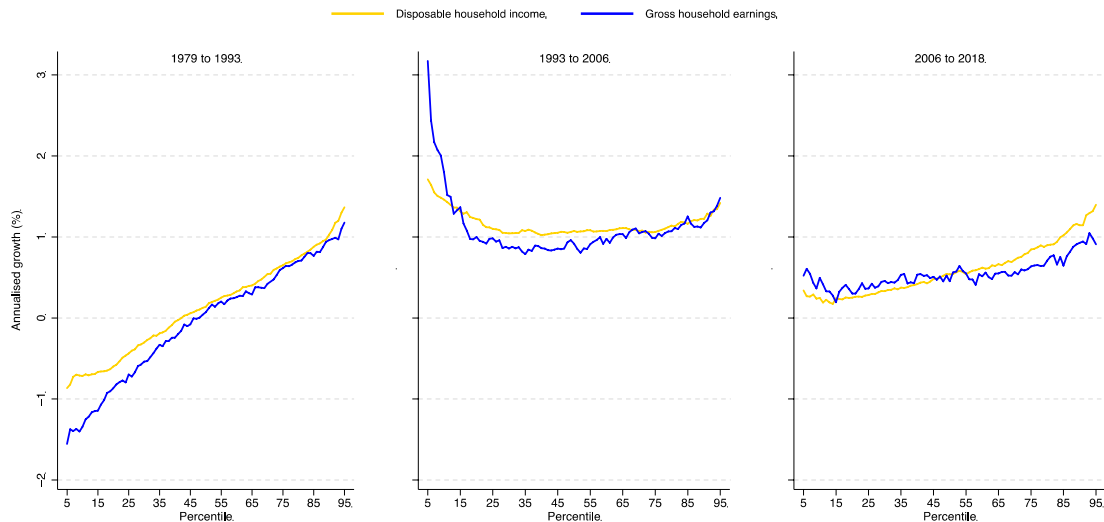
Note: Sample is individuals aged 25–60 in working households. A working household is defined as a household in which at least one adult is in work. All incomes have been equivalised using the modified OECD equivalence scale.

6.3   Inequality in incomes among all households

Figure 41 sheds further light on the evolution of household disposable incomes beyond Figure 39, both overall and with households separated by education attainment. Here it is clear that growth in after-tax and transfer incomes in the middle of the distribution has only occurred among those with college credentials (ISCED 6–8), where equivalised net income increases by one-third from

roughly $45,000 to nearly $60,000. For those with lower education credentials median net incomes have been remarkably flat for nearly five decades outside some undulations with the business cycle, including the COVID-19 pandemic that briefly lifted median disposable incomes. However, because of the secular upgrading of formal education credentials the overall median of equivalised disposable incomes increased by one-third along with the upper-education group.

Figure 41. Median real disposable household income for all households, overall and by education, over time

Note: Sample is individuals aged 25–60. Incomes are in 2019 prices and have been equivalised using the modified OECD equivalence scale.

Inequality is rising throughout the US economy, and this is shown in Figure 42 using four metrics of inequality in equivalised net incomes: Gini inequality (index times 100); a winsorised version of the Gini; relative poverty, defined as the share of households with incomes less than 60% of the median; and the share of overall income held by the top 1%. The Gini coefficient indicates disposable income inequality rising by 30% from 0.30 to 0.39. When we winsorise the data by censoring the top at the 99th percentile and the bottom at 0 (i.e., anyone with incomes above the 99th is assigned the 99th value and anyone with negative disposable incomes is assigned 0), we see some decline in the levels as expected, though the Gini is still rising just as much from 0.29 to 0.38. Figure 42 also shows that relative poverty deteriorates over the sample period, increasing from 20% to about 25%. Notably both the Gini and relative poverty fell in 2020 and 2021 with the expansions of refundable tax credits and Economic Impact Payments, but then returned to trend in 2022 when the extra payments expired. The figure reveals that the top 1% share rises sharply from 4% to over 6% from 1993 to 1994 and is stable thereafter. As explained in footnote 1, the jump in 1994 is an artefact of a data processing change. In Figure 57 in the Appendix we present the top 1% share for alternative income concepts ranging from individual earnings to household gross income and disposable income, with and without equivalising. There we see the top 1% share of around 10% of individual earnings since the mid-1990s, 8% for gross income, and 6% for disposable income. This decline reflects the progressive tax and transfer system in the US. We also show a top 1% share of equivalised disposable income based on the winsorised distribution, which admittedly defeats the purpose of documenting top income shares, but it avoids the change in top-coding in the early 1990s. While the levels are notably lower, the top 1% share still increases by 44% from 1975 to 2022. We also note that these levels are lower than what is found in tax data, but the shares are not directly comparable because the tax share is based solely on the population of tax filers, and also does not capture most income transfers, which are not taxable in the US.

Figure 42. Gini, relative poverty and top 1% share of net household income for all households, over time
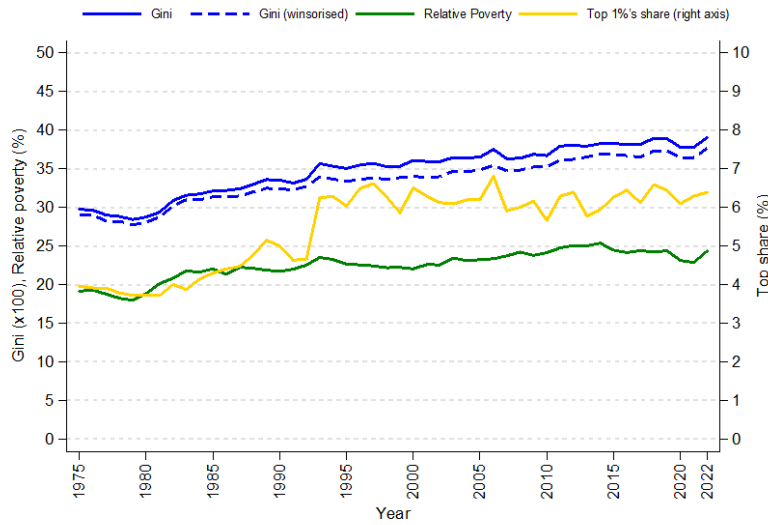
Note: Sample is individuals aged 25–60. The Gini inequality index is multiplied by 100. The relative poverty rate is defined as the proportion of people living in households with less than 60% of contemporaneous disposable median income. All incomes have been equivalised using the modified OECD equivalence scale.

Figure 43 takes an alternative look at inequality, showing upper- and lower-tail inequality of disposable incomes by taking ratios at the 90th, 50th, and 10th percentiles. These are unlikely to be affected by changes in top-code procedures that may impact the top 1% share. 90:10 inequality is rising consistently since at least 1980, though with a sharp decline from 2020 to 2021 and rebounding in 2022. This temporary decline in 90:10 disposable income inequality is likely due to aggressive fiscal policy expansions and a tight labour market amid the COVID-19 pandemic. Notably, rising 90:10 inequality from 1980 is mostly driven by an increase in upper-tail 90:50 inequality.

Figure 43. Percentile ratios of disposable household incomes for all households, over time
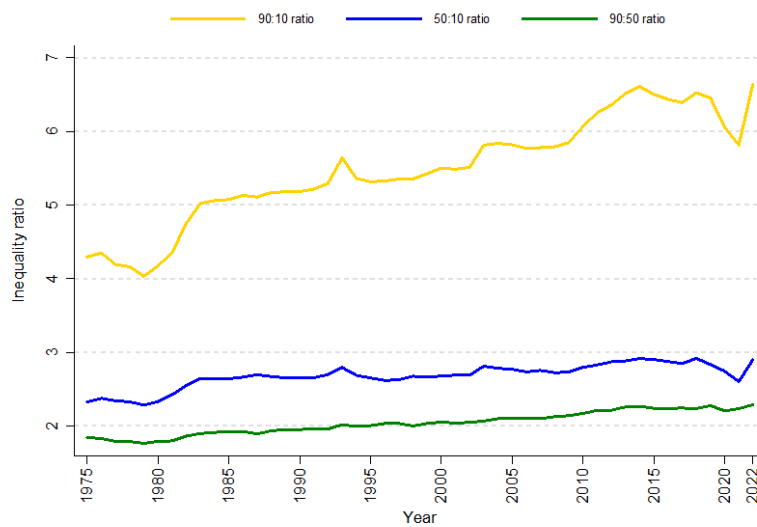
Note: Sample is individuals aged 25–60. All incomes have been equivalised using the modified OECD equivalence scale.

7.   Immigrant outcomes

We conclude our main analysis with a brief examination into the evolution of immigration in the United States, and the associated outcomes relative to native-born persons. The CPS ASEC did not start collecting information on immigration status until the 1994 survey year, and thus we are not able to speak to changes since the mid-1970s like the other outcomes in the analysis.

Figure 44 depicts the share of persons aged 25–60 born outside of the United States, who predominantly hail from Central and South America. The share has nearly doubled over the past three decades from just over 11% in 1993 to 20% in 2022. Figure 45 further shows that this growth in immigration has occurred throughout the disposable income distribution, albeit at higher rates in the bottom quartile. This suggests that immigration *per se* is unlikely to be a main driver of overall rising inequality, though it may have contributed to changes in the income distribution in the lower tail.

Figure 44. Share of immigrants in population, over time
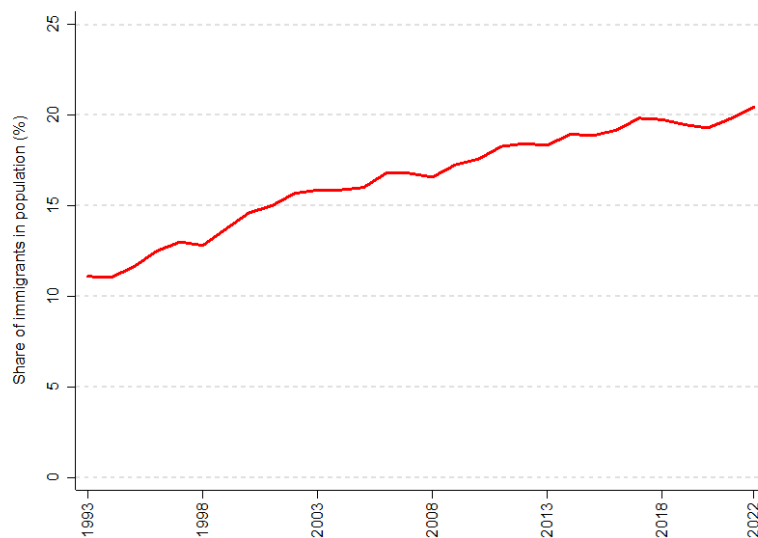
Note: Sample is individuals aged 25–60.

Figure 45. Share of immigrants in population, by disposable income distribution over time
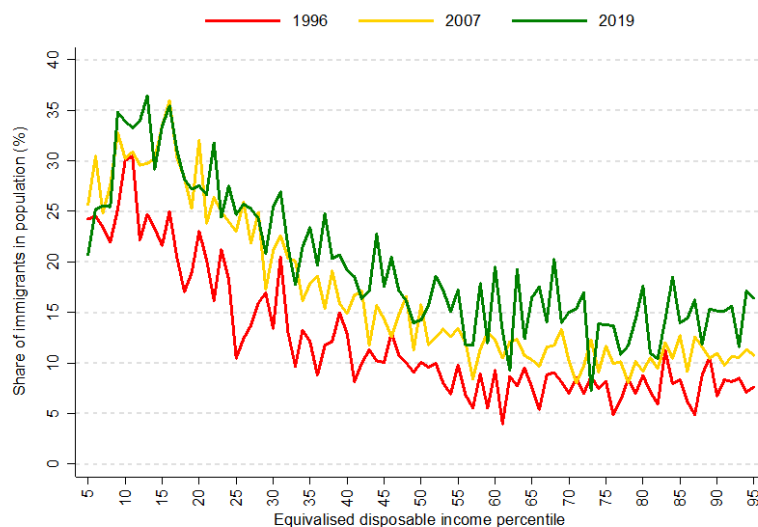
Note: Sample is individuals aged 25–60.

Lastly, in Figure 46 we present various outcomes of immigrants relative to the native-born population by sex and selected years. These are measured by normalising each outcome by the respective outcome among native-born persons. Among women, immigrants are less likely to be highly educated (ISCED 6–8), to be employed, to work as many hours, and to have similar earnings. For men, however, the share highly educated is similar; immigrants are more likely to be employed and to work as many hours, though their earnings fall substantially below those of native-born men. However, male immigrant earnings did improve relative to natives between 2007 and 2019, and thus we do observe some improvement in disposable household incomes, though they still fall below 80% of native-born net incomes. This likely stems from lower employment among female immigrants, lower wages for both male and female immigrants relative to native-born, and the fact that some immigrants (undocumented, legal recent arrivals) may not be eligible for certain transfer programmes and tax credits.

Figure 46. Outcomes of immigrants relative to native-born population, by sex and over time
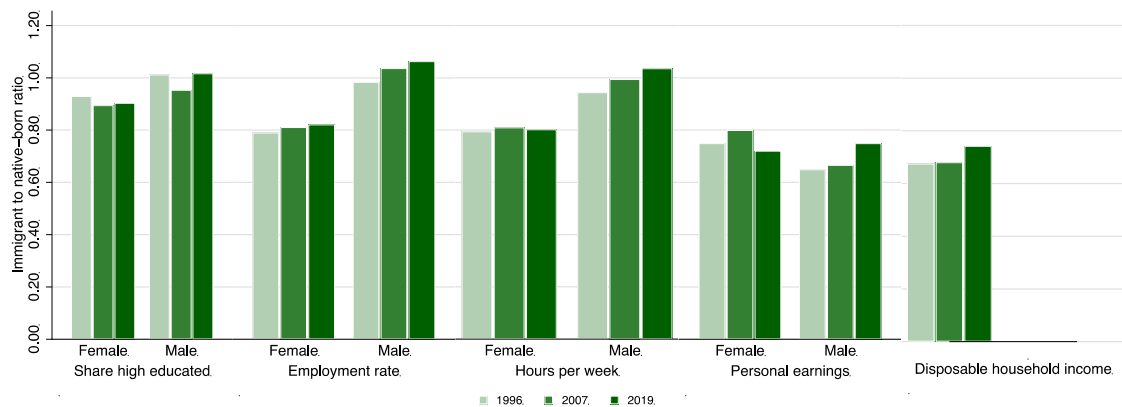
*Note*: Sample is individuals aged 25–60.

8. Appendix

In this Appendix we present selected figures using alternative samples and measures such as survey week employment in lieu of employment in the prior year, or charts using untrimmed samples instead of trimming the top and bottom 1% of the outcome distribution. In most cases the sample used is persons aged 25–74, instead of 25–60 in the main text.

**Figure 47. Employment rates by age and sex, over time – using survey week employment**
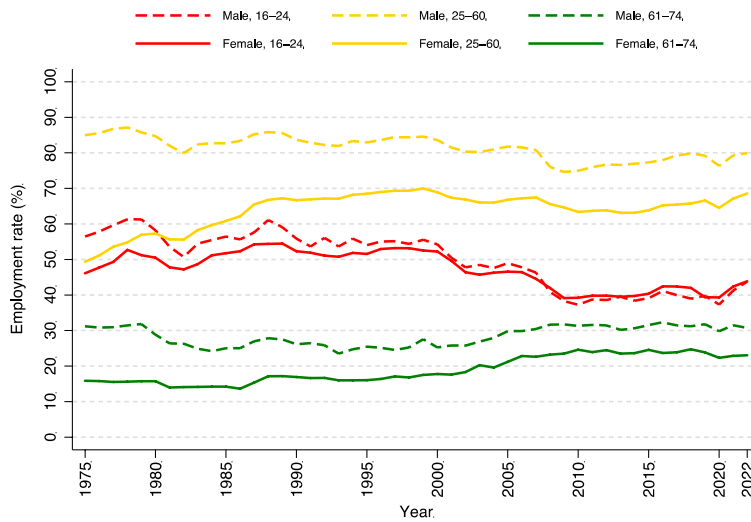
Note: Sample is individuals aged 16–74.

Figure 48 Growth in hourly wages among employees by wage percentile, by sex, selected periods – 25–74 age group
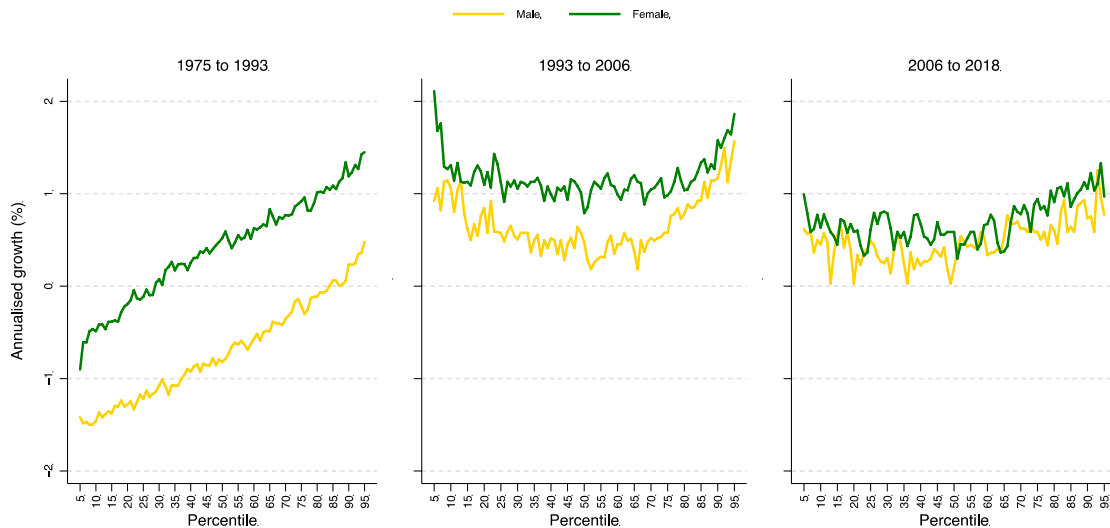
Note: Sample is employees aged 25–74.

Figure 49. Growth in mean hours worked among employees by wage ventile, overall and by sex, selected years – untrimmed
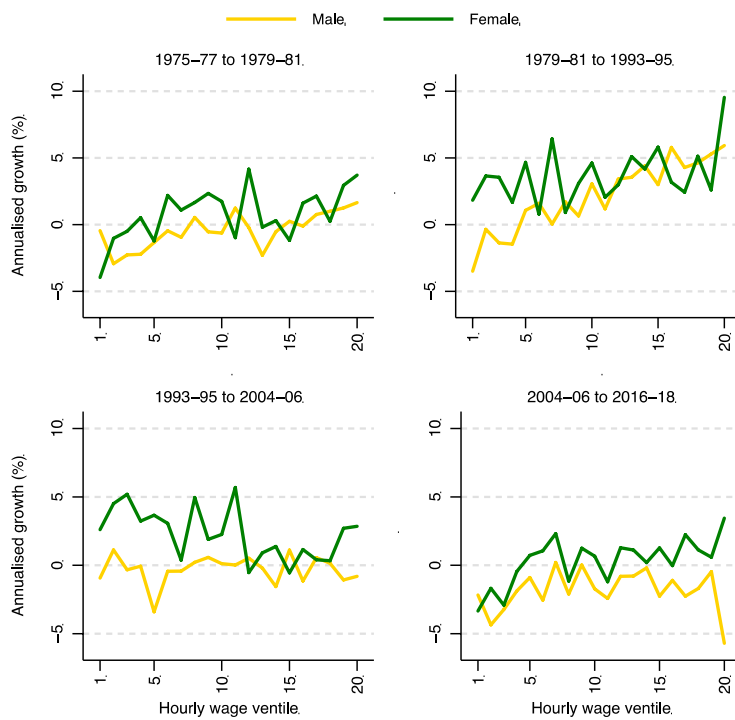
© Institute for Fiscal Studies
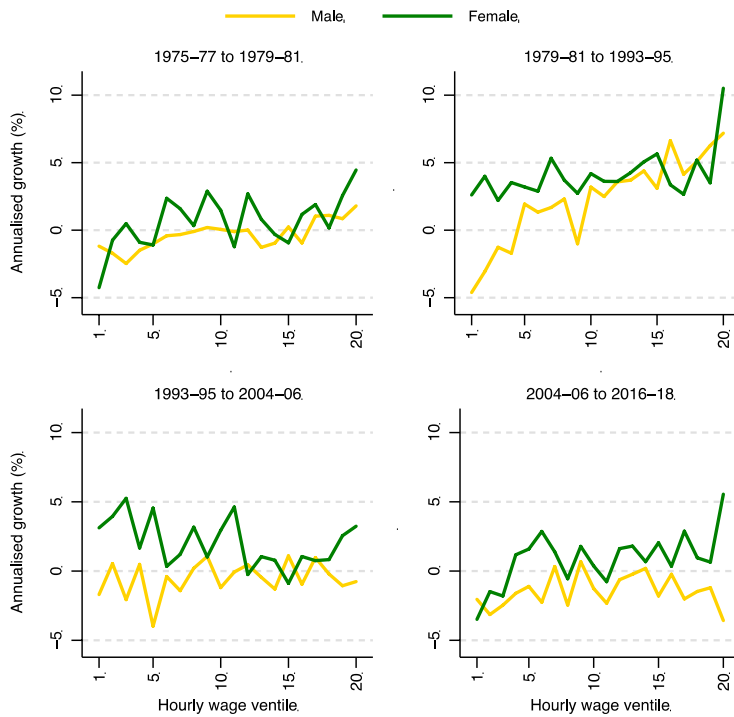
Note: Sample is employees aged 25–60. The gender specific wage distributions are untrimmed. We average mean hourly wage for each year across the three years to obtain hourly wage for each 3-year period.

Figure 50. Growth in mean hours worked among employees by wage ventile, overall and by sex, selected years – 25–74 age group
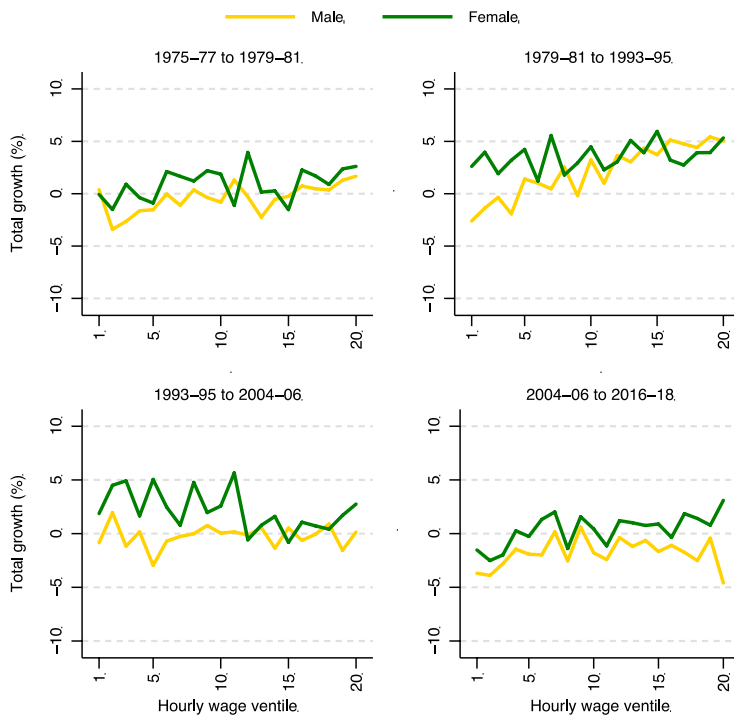

Note: Sample is employees aged 25–74. We trim the bottom and top 1% of the gender specific wage distribution. We average mean hourly wage for each year across the three years to obtain hourly wage for each 3-year period.

Figure 51. Growth in mean hours worked among employees by wage ventile, overall and by sex, selected years – untrimmed, 25–74 age group

Note: Sample is employees aged 25–74. The gender specific wage distributions are untrimmed. We average mean hourly wage for each year across the three years to obtain hourly wage for each 3-year period.

Figure 52. Gini coefficient of gross individual earnings, overall and by sex, over time – 25–74 age group
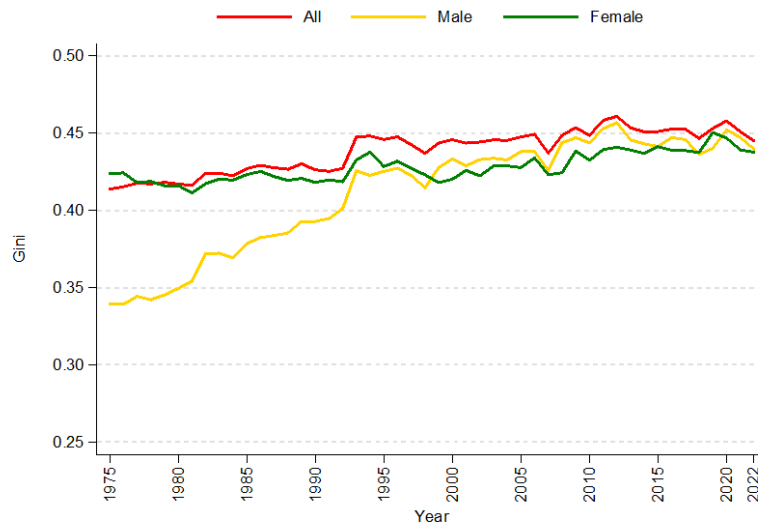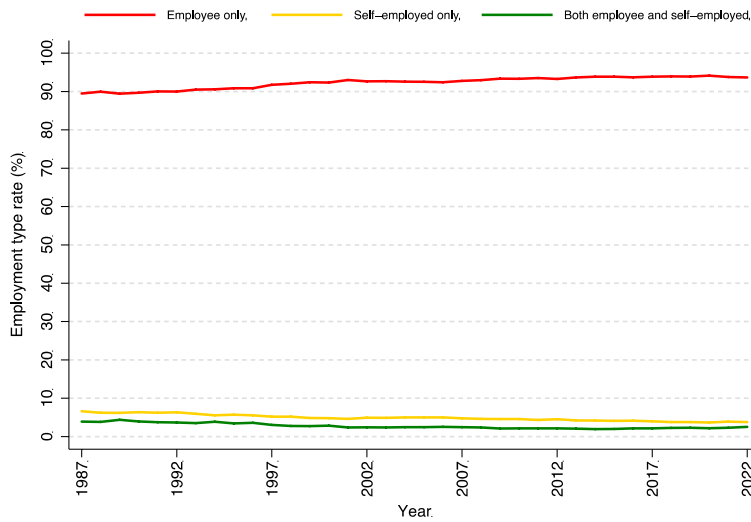

Note: Sample is individuals in work aged 25–74.

Figure 53. Growth in gross earnings by earnings percentile, overall and sex, selected periods – 25–74 age group
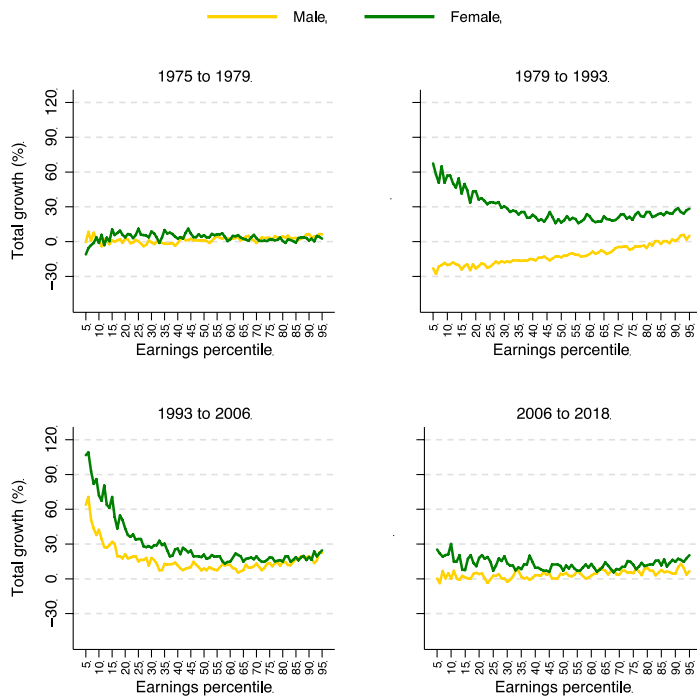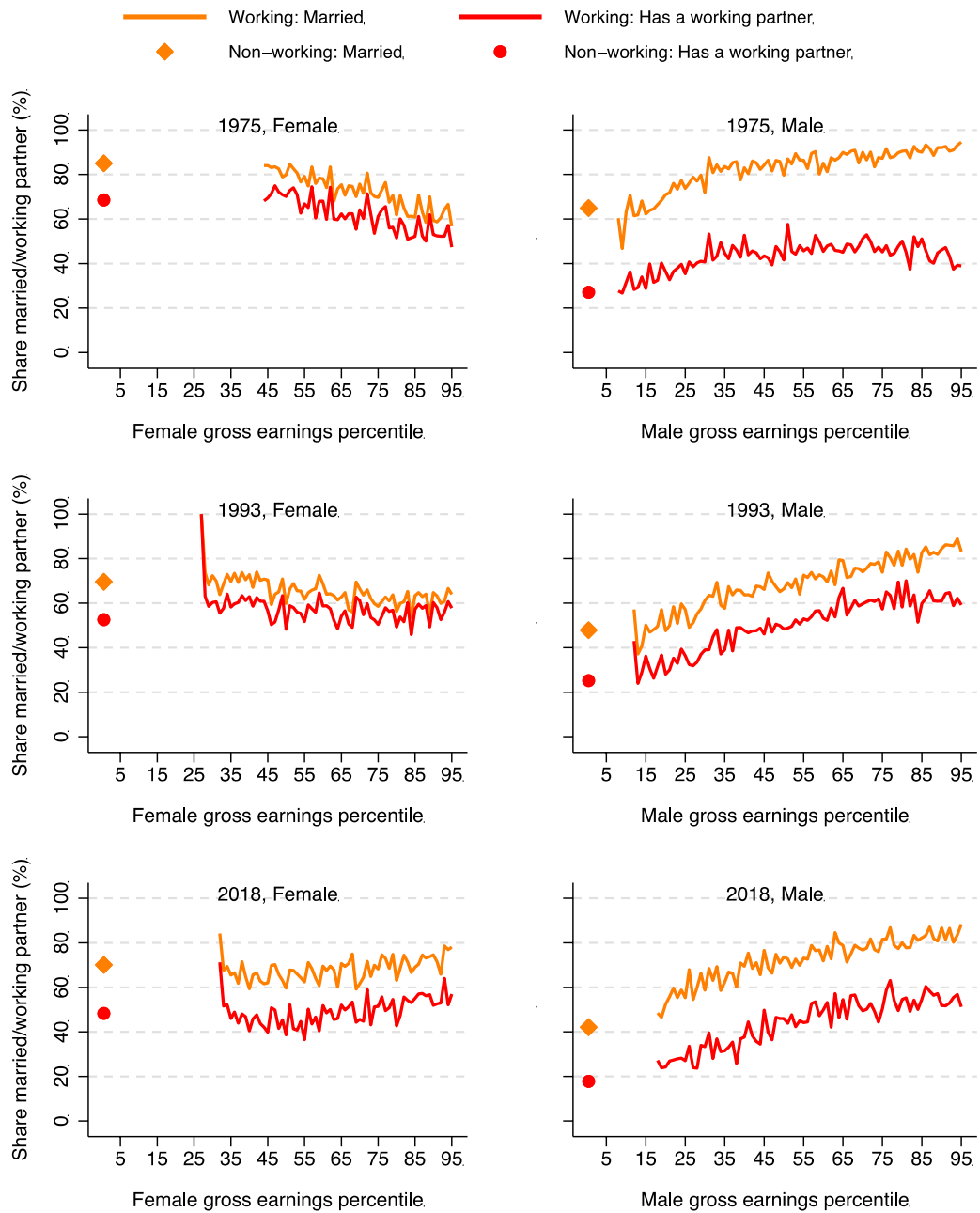

Note: Sample is individuals in work aged 25–74.

Figure 54. Share of employees and self-employed workers, over time, using survey week employment
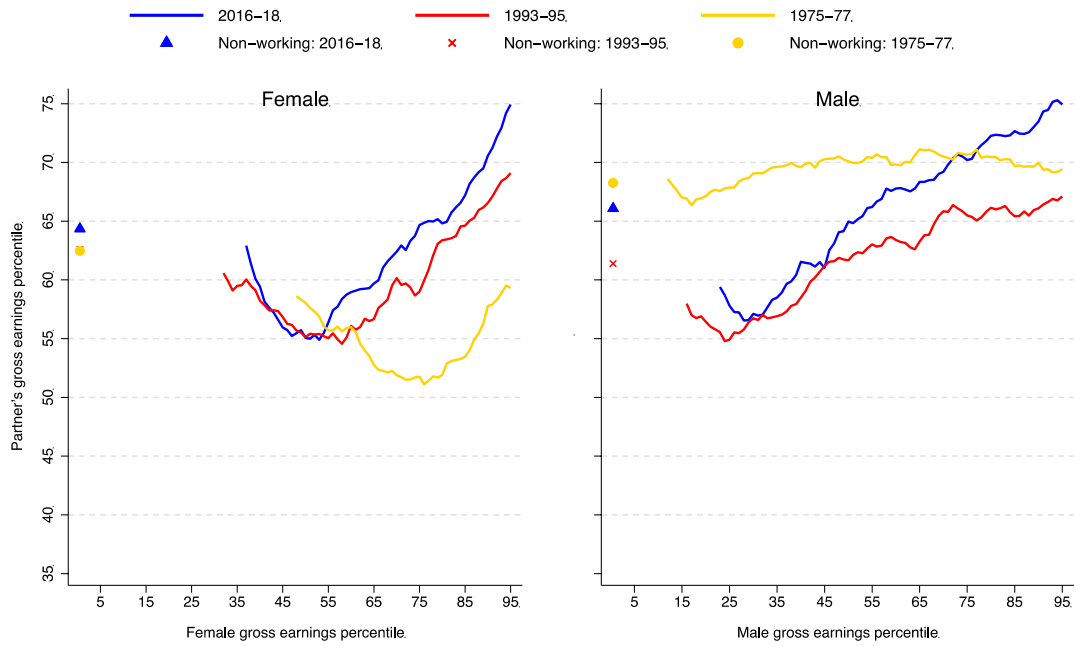

Note: Sample is individuals in work aged 25–60.

Figure 55. Share married and share with working partner, by sex and individual gross earnings percentile, selected years), untrimmed
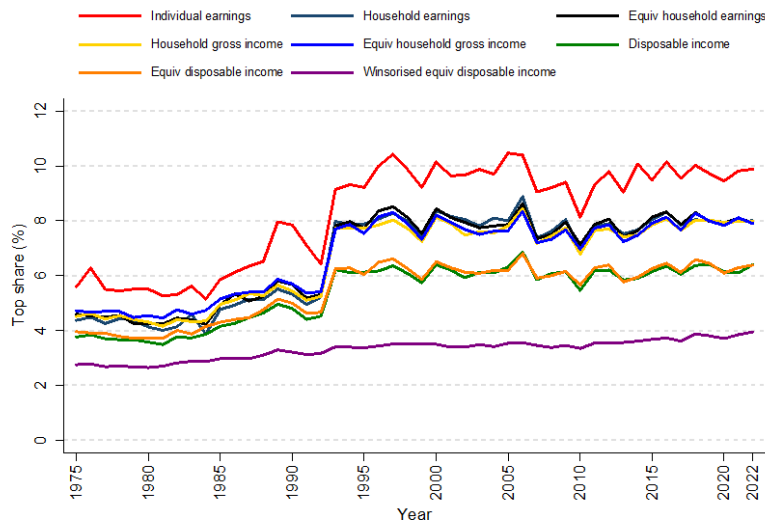

Note: Sample is individuals aged 25–60. The gender-specific earnings distributions are untrimmed. The proportion with a working partner is conditional on being married. Cohabiting partners are included in the 1993-95 and 2016-18 series.

Figure 56. Mean gross earnings percentile of partner/spouse by individual's gross earnings percentile, selected years), untrimmed

Note: Sample is individuals aged 25–60. The gender-specific earnings distributions are untrimmed. Mean earnings of partners are plotted as 5-pt moving averages across the earnings distribution. Cohabiting partners are included in the 1993-95 and 2016-18 series.

Figure 57. Top 1% share for alternative income definitions

Note: Sample is individuals aged 25–60. The top 1% share is computed by summing all income above the 99th percentile of the income-measure-specific distribution relative to total income in the population for the same Income measure. The winsorised share is based on the computing the top 1% share from the winsorised distribution.