

Income inequality in the United States, 1975–2022

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Abstract

We examine trends in household disposable income inequality and potential mechanisms shaping inequality through changes to work, wages, earnings, marriage, and the tax and transfer system in the United States over the nearly five-decade period from 1975 to 2022. Overall after-tax and transfer income inequality increased more than 25 per cent since the mid-1970s, and by as much as 50 per cent when comparing the 90th and 10th percentiles. While there has been substantial upgrading in formal education credentials among both men and women – an inequality-reducing development – those with fewer credentials have increasingly been less likely to work and marry, each of which could result in higher inequality. The latter effects are exacerbated by those selecting into marriage and cohabitation being more likely to partner with those holding similar educational credentials and earning power. Moreover, the decline in work among the less skilled coincided with the transformation of the safety net to rewarding work. These demographic and policy changes have resulted in a pulling apart of the US income distribution.

KEYWORDS

employment, marriage, income transfers, taxes

JEL CLASSIFICATION

I3, H2, J1

1 | INTRODUCTION

The economy in the United States during the past five decades has whipsawed between some of the deepest economic contractions and longest economic expansions on record, including the recession of 1981–82, the Great Recession of 2008–09 and the COVID-19 pandemic starting in March 2020. Over this time period, there have also been major demographic and policy shifts, including dramatic

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changes in family structure with the share of non-marital births rising from 15 out of every 100 live births to nearly 40 (Cancian and Reed, 2009), a radical redirection of cash and near-cash safety net programmes from out-of-work to in-work support (Blank, 2002; Moffitt, 2003; Bitler and Hoynes, 2016; Hardy, Smeeding and Ziliak, 2018), and a move away from a highly progressive federal income tax with steep marginal tax rates to one with fewer and lower rates (Auerbach and Slemrod, 1997; Piketty and Saez, 2007). These public policy changes shifted more idiosyncratic and business-cycle risk on to families, and have negative welfare consequences if they fall predominantly on those who face liquidity constraints and are less able smooth income shocks (Kniesner and Ziliak, 2002; Blundell, Pistaferri and Preston, 2008; Gottschalk and Moffitt, 2009; Guvenen and Smith, 2014). Pieces of this agenda have been studied extensively – most notably the sources of wage inequality (e.g. Juhn, Murphy and Pierce, 1993; Katz and Autor, 1999; Card and DiNardo, 2002; Lemieux, 2006; Autor, Katz and Kearney, 2008; Autor, Dorn and Hanson, 2021) – yet with few exceptions there has not been a comprehensive examination of all these changes on disposable household income levels and inequality (Blundell et al., 2018).

In this paper, we use data from the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) for calendar years 1975–2022 to document trends in US after-tax and transfer income inequality and its correlates including education, employment, earnings and family structure. Our analysis, which focuses on prime-age adults aged 25–60, derives from the wider IFS Deaton Inequalities Review Country Studies initiative whereby 17 countries from across Europe and North America have collaborated on data and measurement harmonisation to understand the drivers of economic inequalities across high-income countries. Here we focus on key outcomes and determinants in the United States, with the full set of analyses available online in an accompanying report.¹

We begin our analysis in Section 2 by briefly describing the economic and policy landscape over the past five decades, highlighting changes to the tax and transfer systems. After the data in Section 3, this discussion helps set the context for Section 4 that documents the evolution of disposable income inequality using both summary measures of the whole distribution as well as percentile ratios. Here we see that despite numerous changes to the tax and transfer systems over the past five decades, disposable income inequality has been increasing steadily over this period. The systems are effective at reducing the level of inequality, but they do not reverse underlying trends of wider dispersion in economic well-being.

Section 5 of the paper then explores the possible correlates and mechanisms of widening inequality. We note that the secular increase in education attainment among both men and women should lead to lower inequality. However, there were three additional developments exacerbating inequality across households – the decline of both work and marriage among those with low and middle levels of education attainment, and, among those sorting into marriage, an increase in partnering with those from similar education levels. As the college educated are increasingly more likely to marry relative to those without a college education, and employment rates of college-educated men and women remain high, this assortative mating among the highly skilled has pulled the top of the income distribution away from the middle. A formal decomposition of the Gini index suggests that over the 48-year period of our sample these between-group differences have become increasingly important in accounting for inequality.

2 | THE ECONOMIC AND POLICY LANDSCAPE

The peaks and troughs of business cycles in the United States have, on average, been longer and deeper since the 1970s compared with the preceding four decades after the Great Depression. Figure 1 presents trends in unemployment rates of prime-age workers aged 25–60 by duration of unemployment, where duration is defined as short term if the spell is less than 12 months and long

¹ The US report is available for download at <https://ifs.org.uk/inequality/country-studies-us/>.

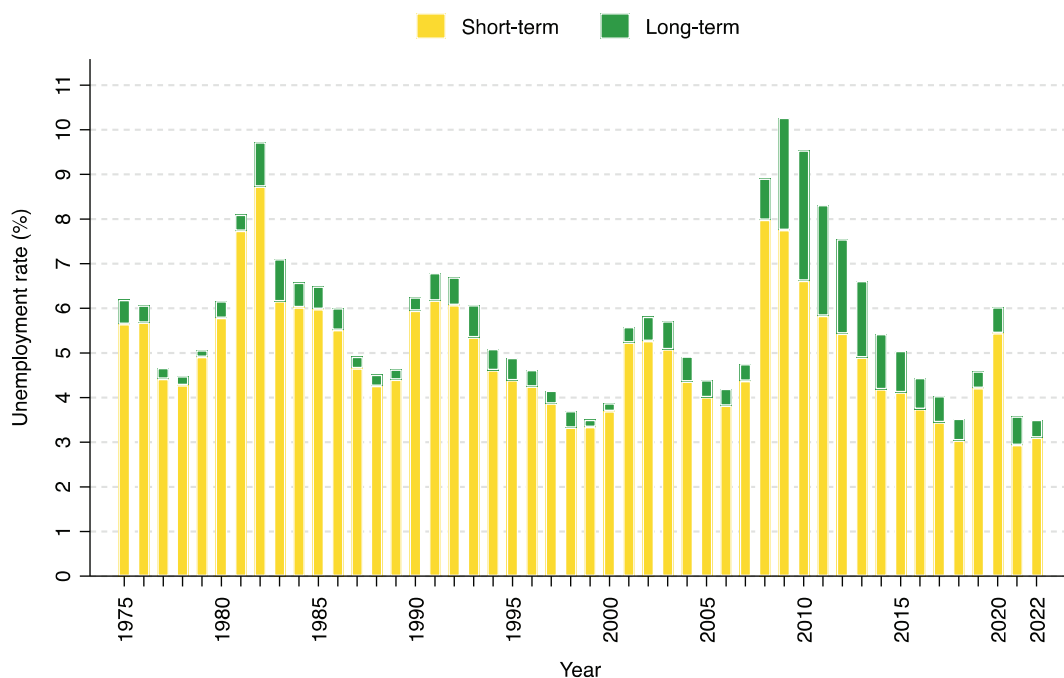


FIGURE 1 Unemployment rate by duration. *Note:* Sample is individuals aged 25–60 from the CPS ASEC, 1976–2023. The unemployment rate is calculated as the fraction of labour force unemployed as of the survey week, split between short-term (<1 year) and long-term (>1 year) duration of unemployment. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

term if it is at least 12 months in length. After a brief recession in 1980, the United States was hit with a major recession in 1981 that lasted two years and at the time resulted in the highest unemployment since the 1930s Depression. The vast majority of that unemployment was short in duration, and the economic recovery was quite robust and long lasting over the ensuing six years. While the recessions of 1991 and 2001 were shorter in length, it took longer for the labour market to recover than in the early 1980s recession. The Great Recession was markedly different in severity, with many more spells of unemployment lasting over a year, and the recovery even more sluggish. However, even though the recovery after the Great Recession took longer to gain traction, it ultimately resulted in the longest economic expansion on record, only to be cut short by the COVID-19 pandemic. The shock from the global public health emergency resulted in a peak aggregate unemployment rate of 14.8 per cent in April 2020, but as Figure 1 makes clear, this negative shock was quite short in duration and resulted in annual unemployment rates more typical of the milder recessions of the 1970s.

While the economy of the United States convulsed with the onset of large shocks, the changes to the tax and transfer system were no less dramatic. The United States relies heavily on the collection of tax on incomes at the federal, state and, in some cases, local levels. In the late 1970s, the federal income tax had 16 marginal tax brackets with the highest at 70 per cent. The election of Ronald Reagan as president in 1980 set in motion a series of tax reforms reducing both the level and number of tax rates, and expanding the income base subject to tax. The 1981 tax reform lowered the top rate to 50 per cent, while the 1986 reform slashed the top rate even further to 28 per cent and cut the number of tax brackets to four. The 1986 reform also contained the first significant expansion of the earned income tax credit (EITC), a refundable tax credit for low-income workers and families with qualifying children that was subsequently further expanded in 1990, 1993 and 2009. Subsequent tax reforms in the ensuing three decades gradually increased the number of tax brackets to seven – with a current

top rate of 37 per cent – and changed the base subject to tax, in some cases expanding it and in other cases contracting it. Included in the latter base contraction was the addition of the partially refundable child tax credit (CTC) in 1997 for households with children under age 17 to help defray costs of child rearing (subject to income limits). The general spirit of the 1980s reforms toward lower federal rates prevails in the current economic climate and policy discourse. This was exemplified in the recent temporary expansions of both the EITC and CTC during the COVID-19 pandemic at the lower end of the income distribution, and the 2017 Tax Cuts and Jobs Act that lowered some marginal taxes for some businesses and high-income filers.

Complementing the federal income tax is a payroll tax on gross earnings assessed by the Social Security Administration. Revenue from the payroll tax is used to support retirement income and health insurance in old age, as well as the income benefits from the major disability insurance programme for the non-aged disabled. The payroll tax rate of 15.4 per cent (7.65 per cent on employer, 7.65 per cent on employee; self-employed pay full amount) has not been changed since 1991. The portion of the payroll tax that is used for retirement and disability income is not assessed on all earnings, while the portion for health insurance is assessed on all earnings. The capped portion is increased annually by the consumer price index and reached a level of \$142,800 in the last year of our sample. Capital income is exempt from the payroll tax. In addition to the federal income and payroll taxes, 41 states plus the District of Columbia levy a state income tax, which in some cases is a flat tax and in others a highly progressive tax structure. States typically anchor their taxable income base to that subject to federal tax. Roughly one-half of the states supplement the federal EITC with a state EITC, often set as a percentage of the federal credit.

Redistribution in the United States comes not only from the tax system, but also from an extensive social safety net that provides assistance to individuals and households both in the form of cash assistance and in-kind transfers. Safety net programmes in the United States fall into 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 health care for the aged and disabled, disability insurance for those with a work history, workers' compensation for employees injured on the job, unemployment insurance (UI) for workers displaced from employment for no fault of their own, and veterans' benefits for former members of the Armed Forces. The key means-tested transfer programmes are Medicaid health insurance for low-income children and adults, supplemental security income (SSI) for the aged poor and non-aged disabled with no work history, cash and in-kind welfare from Temporary Assistance for Needy Families (TANF), housing assistance, and food assistance from the Supplemental Nutrition Assistance Program (SNAP). The online report contains additional details on each programme.

The basic eligibility and benefit structure of the social insurance programmes have changed little since the 1970s.² On the contrary, fundamental reforms were made across most of the major means-tested transfers (Moffitt and Ziliak, 2019). Like tax reform, the seeds for welfare reform were sown with the election of President Reagan, who espoused the virtues of work over welfare. The 1981 legislation that brought large cuts to taxes at the top also brought retrenchment in the generosity of welfare at the bottom of the distribution. The real reforms to welfare, however, were in the 1990s when states began to experiment with eligibility requirements for assistance from the predecessor to the TANF programme by introducing work requirements, time limits on benefit receipt, and sanctions for failure to comply with programme rules. Not all the changes were punitive, and included expansions in the generosity of the EITC, the introduction of the CTC, and expansions in eligibility for Medicaid, SNAP and SSI. The result of the roaring economy of the late 1990s and reforms to welfare was a large reduction in cash assistance from TANF, but also huge new outlays on the other means-tested

² A notable exception is UI during the COVID-19 pandemic. There were new classes of workers made eligible for benefits (e.g. contract, gig and self-employed), and a large expansion of federal benefits. These additions were temporary and were phased out in the second year of the pandemic.

transfers. This accelerated after the Great Recession with new classes of insured groups receiving health insurance from Medicaid and federal subsidies, and again with the onset of the COVID-19 pandemic with Congressionally mandated Economic Impact Payments and a tripling in the generosity of the CTC, though the latter two transfers were temporary. At the same time, an increasing number of states began lifting state minimum wages well above the federal level, which has been fixed in nominal terms since 2009.

We aim to understand how these changes to the tax and welfare systems and labour-market institutions over the past 50 years have affected the economic inequality across households, and the correlated decisions to invest in education, work and marriage.

3 | DATA

The data for the analysis come from the CPS ASEC for survey years 1976–2023 (calendar years 1975–2022). The ASEC is a repeated cross-sectional survey of roughly 90,000 household addresses (60,000 households before 2001) and contains detailed information on annual earnings and incomes from the prior calendar year, employment, hours worked, demographics and family structure. The CPS ASEC serves as the official source of income and poverty statistics, and has been the primary source for inequality research in the United States.

The sample we select consists of individuals between the ages of 25 and 60 (inclusive), which captures the time after formal schooling is completed for most individuals and prior to retirement. We exclude any individuals whose earnings or hours worked are imputed by the Census Bureau (Bollinger et al., 2019) and utilise consistent income top codes for those high-income individuals whose incomes are capped for confidentiality purposes, which should better capture changes in incomes among the top 1 per cent of the household income distribution.³

The focal outcome variable in our analysis is equivalised disposable (i.e. after-tax and transfer) household income. We define disposable income as the sum of: earnings; non-labour non-transfer income such as rent, interest and dividend income; cash welfare transfers such as TANF; social insurance inclusive of unemployment, disability, workers compensation, retirement/survivors benefits and veterans benefits; and in-kind near-cash transfers such as SNAP. We do not include less liquid in-kind transfers such as Medicaid and Medicare, or capital gains and losses. From gross income, we subtract payroll, federal and state tax payments. The federal and state taxes include refundable EITC and CTC credits, as well as stimulus payments that were distributed during the COVID-19 pandemic. We use NBER's TAXSIM programme to estimate tax payments and credits. The rates and applicable base vary by tax filing status, including married filing a joint 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 rent, interest and dividend income, as well as some forms of social insurance income such as UI. Means-tested transfer income is exempt from tax. Gross income is reduced to so-called taxable income via deductions, which can either be a standardised amount depending on tax filing status or itemised by the taxpayer such as interest expense on home mortgage, charitable donations and a portion of state and local income tax. TAXSIM uses information on income, tax unit structure and filing status to determine whether to apply the standard deduction or to impute itemised deductions. Tax liability is assessed at the tax unit level, which in most cases is the same as the household, but is aggregated up to the household level for those containing multiple filing units. Importantly, although we focus on individuals aged 25–60, we include income information in the household of those younger than 25 and older than 60 prior to constructing tax liability in TAXSIM.

³ The top codes are based on rank-proximity swapping whereby individuals with earnings above the top code are ordered from lowest to highest and randomly assigned earnings of the individual within a small neighbourhood of the person's own earnings. See <https://www.census.gov/content/dam/Census/library/working-papers/1996/adrm/tr96-4.pdf>. The dataset can be found at <https://www2.census.gov/programs-surveys/demo/datasets/income-poverty/time-series/data-extracts/asec-incometopcodes-swappingmethod-corrected-110514.zip>.

To account for household size and composition, we equalise household disposable incomes using a modified OECD scale.⁴

Beyond disposable income, we also quantify the level of and trends in employment, hourly wages, annual earnings, education and marriage (as the proxy for family structure). The employment rate is the fraction of the population that is employed during the prior year, defined as those persons with positive earnings from paid work or self-employment, as well as positive hours worked per week and weeks worked in the past year. Hourly wages are constructed as the ratio of pre-tax annual earnings divided by annual hours of work, the latter of which is the product of usual hours worked times number of weeks worked. Education is measured as years of formal schooling completed and is allocated into one of three groups as defined by the International Standard Classification of Education (ISCED): ISCED 0–2 for 0–11 years of school; ISCED 3–5 for 12–15 years of school; and ISCED 6–8 for 16 or more years of school. Finally, marriage is defined as those couples who are married or cohabiting, regardless of whether they are living together or apart. Because of data limitations, marriage does not include cohabiting couples prior to 1994.

In some cases, the data series will include all households, such as disposable income inequality, and in other cases (e.g. hourly wages) we restrict to workers only. Unless noted otherwise, for parsimony we refer to equalised disposable income as ‘income’. Consistent with the other papers in this special issue, we convert nominal earnings and incomes real 2019 prices with the consumer price index (for all urban consumers) – the CPI-U.

4 | TRENDS IN INCOME INEQUALITY

We begin our analysis by presenting trends in overall income inequality in Figure 2 using four different measures: Gini inequality (index times 100); a winsorised version of the Gini that trims outliers; relative poverty defined as the share of households with incomes less than 60 per cent of the median income; and the share of overall income held by the top 1 per cent. Three of the measures show rising inequality over the last 50 years, with the Gini rising from 0.30 to 0.39, and relative poverty rates increasing from 20 per cent to about 25 per cent, until retreating back to 24 per cent by 2022. 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 are assigned the 99th value and anyone with negative disposable incomes are assigned 0), then we still see rising inequality in the Gini.

The top 1 per cent share rises from 4 per cent to over 6 per cent, though this is likely due to a measurement change starting in 1993, which explains the gap in the series in Figure 2. As discussed in the online report, although we account for top-coding with rank-proximity swap values, these are based on internal top codes at the Census Bureau. In 1993, those internal top codes increased from \$299,999 to \$1,099,999, resulting in a jump discontinuity in the top 1 per cent (and to a lesser extent the Gini) in 1993 when not winsorising the data. The stability of the top 1 per cent share post-1993 aligns with recent work of Auten and Splinter (2023) who find little trend in the top share since 1960, though this is at odds with the work of Piketty, Saez and Zucman (2018). However, the Piketty et al. (2018) series likewise changes little from the mid-1990s, though the levels are higher than those reported by Auten and Splinter, and both are higher than the estimates here. The online report shows that the lower levels of the top 1 per cent share in Figure 2 stem in part from the top coding of earnings in the ASEC survey, but the remainder of the difference likely comes from the additional sources of national income (e.g. non-wage benefits from health insurance) ascribed to top income earners in Piketty et al. and Auten and Splinter.

⁴ We divide household income by a factor $\phi = 0.67 + 0.33 [_n(\text{adults} - 1)] + 0.2n_{\text{(child 0-13)}} + 0.33n_{\text{(child 14+)}}$, where $_n(\text{adults} - 1)$ is the number of adults in the household less the householder, and $n_{\text{(child 0-13)}}$ and $n_{\text{(child 14+)}}$ are the number of dependent children in the household aged 0–13 and 14 and above, respectively.

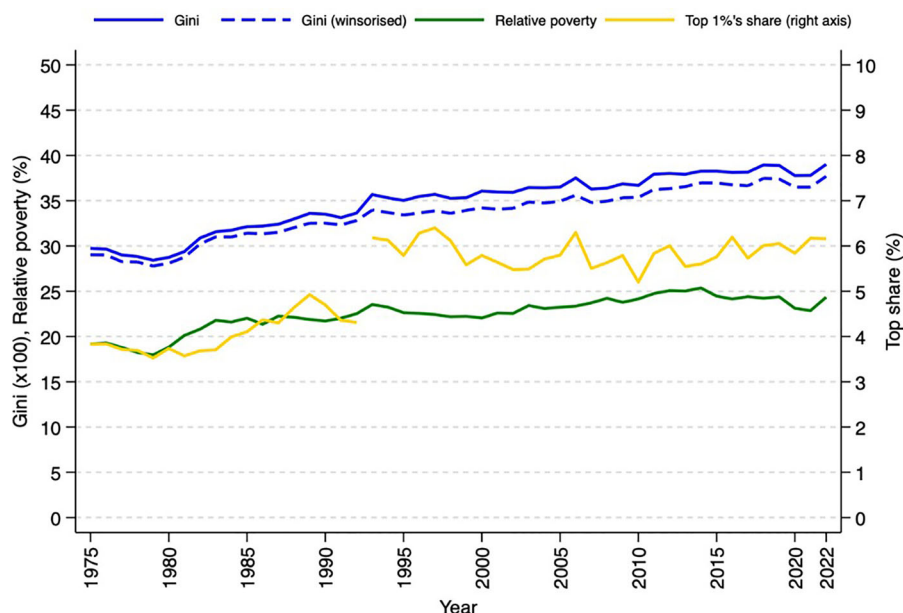


FIGURE 2 Gini, relative poverty and top 1 per cent share of disposable household income. *Note:* Sample is all individuals aged 25–60 from the CPS ASEC, 1976–2023. The Gini inequality index is multiplied by 100. The relative poverty rate is defined as the proportion of people living in households with less than 60 per cent of contemporaneous disposable median income. All disposable incomes have been equalised using the modified OECD equivalence scale. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-5890.12368)]

Figure 3 takes an alternative look at inequality, comparing the 90th percentile to the 10th percentile of incomes and also decomposing into upper-tail (90:50) and lower-tail (50:10) inequality of incomes. Overall 90:10 inequality increased consistently since 1980 until the COVID-19 pandemic, which is most attributed to a rise in upper-tail 90:50 inequality, at least after 1990. The figure also reveals an abrupt decline in 90:10 inequality in 2020 and 2021, followed by sharp rebound in 2022. As discussed in the next section, this decline in 90:10 inequality (and 50:10) is likely due to aggressive fiscal policy expansions amid the COVID-19 pandemic, including the aforementioned increases in UI, SNAP, CTC and Economic Impact Payments.⁵ The remainder of the analysis aims to unpack the mechanisms underlying the four-decade long trend toward rising income inequality. Prior to proceeding, however, it is important to highlight that the level of inequality – whether measured by the Gini or percentile ratios – is higher in the United States in most years than the other 16 countries in the wider IFS Deaton Inequalities Review Country Studies project in this special issue, and, excepting the Nordic countries, is alone with a sustained trend increase in inequality.

5 | UNPACKING RISING INCOME INEQUALITY

Work is a clear mechanism underlying income inequality as exemplified in Figure 4, which depicts trends in equalised real median household earnings and disposable incomes by work status.

⁵ A concern with 90:10 inequality is the well-known problem of underreporting of transfer income in survey data in the left tail of the income distribution (Meyer, Mok and Sullivan, 2015), which could exacerbate inequality measures. As noted in the text, most of the trend increase has been in the upper-half of the income distribution that is not affected by income transfers, and because tax payments and credits such as the EITC and CTC are simulated via TAXSIM, they are not subject to the same under-reporting concerns. Indeed, Figure 3 shows the results of those tax benefits reducing inequality at the height of the COVID-19 pandemic.

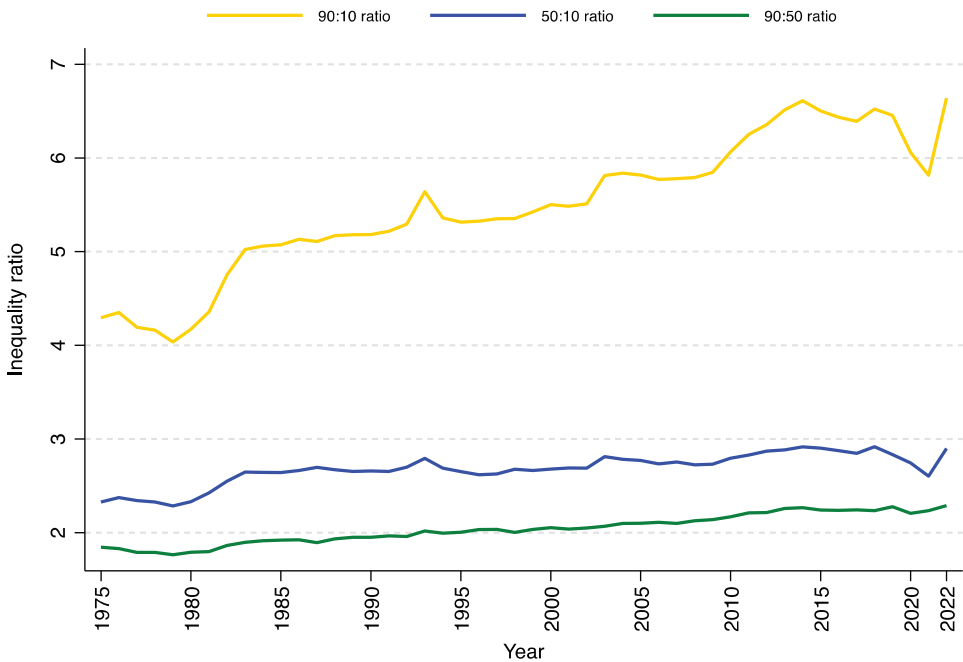


FIGURE 3 Percentile ratios of disposable household income. *Note:* Sample is all individuals aged 25–60 from the CPS ASEC, 1976–2023. All disposable incomes have been equalised using the modified OECD equivalence scale. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-5890.12368)]

Households with at least one worker experienced earnings growth of 40 per cent over the last 45 years, though it was episodic with growth periods throughout the 1980s, the mid-1990s to the early 2000s, and then after 2014. Disposable income among working households followed a similar path, increasing 37 per cent from 1975 to 2022. However, for those prime-age households with no workers, median disposable income fell in real terms for two decades until the mid-1990s. It recovered some of those losses, and by 2020 had finally surpassed the median value from the late 1970s. However, this was a transitory boost from COVID-19 relief payments, but the combination of expiring benefits and high inflation saw the median real disposable incomes in 2022 among non-working households 9 per cent below the level in 1975. As discussed further in the online report, the growth in household earnings stems primarily from increasing employment and wages among women, especially those with high education, and, as noted below, gains among highly educated dual-career households. The divergence between household real earnings and disposable incomes in 2022 is striking. As depicted below, real wages actually fell in 2022 from high inflation, but hours of work and the number of household workers increased to offset those wage declines and keep real household earnings stable. Disposable incomes surged in 2019–21 from a combination of increased non-transfer, non-labour income from robust equity markets and COVID-19 transfers, especially UI and economic impact payments. Both sources of non-wage income fell in 2022 in nominal and real terms, dragging down median disposable incomes.

Education is also a mechanism affecting inequality and, as labour market changes, such as trade and skill-biased technological changes, shift the composition of job opportunities – including a hollowing out of blue-collar, middle skill jobs (Autor, Katz and Kearney, 2008) – the linkage between higher education and income sharpens. As shown in the online report, the share of prime-age individuals with low credentials declined over the past 45 years from 30 per cent to 10 per cent, while those with high credentials more than doubled from just under 20 per cent to just over 40 per cent. The

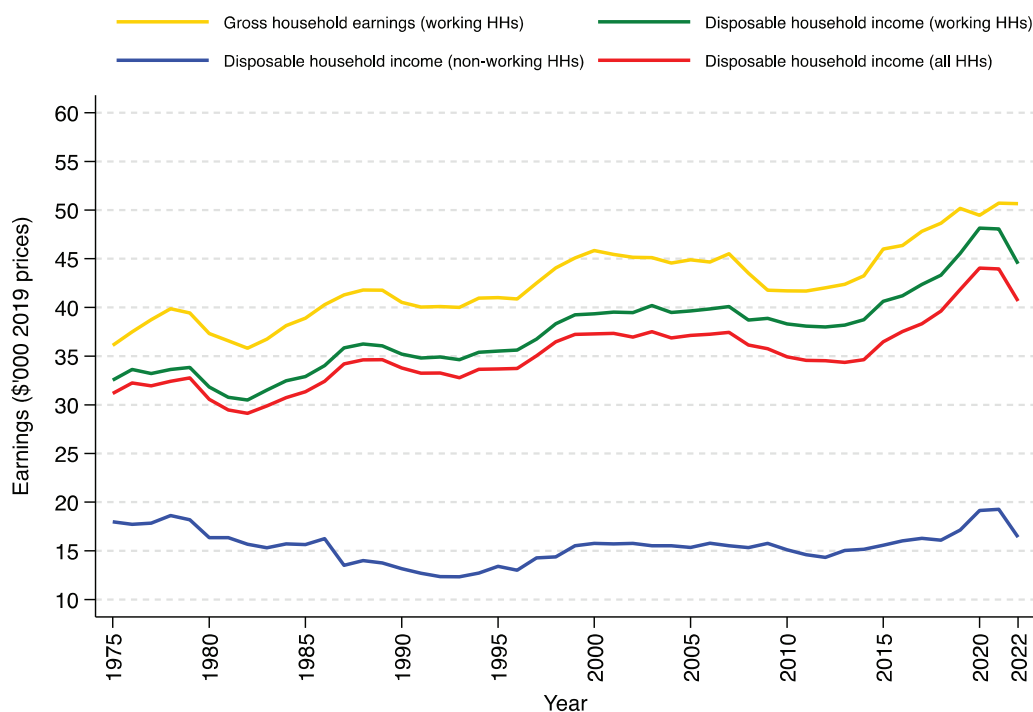


FIGURE 4 Median real gross household earnings and disposable household income, by household working status. *Note:* Sample is individuals aged 25–60 from the CPS ASEC, 1976–2023. A working household is defined as a household in which at least one adult is in work in the calendar year. All earnings and incomes have been equivalised using the modified OECD equivalence scale. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-5890.12368)]

implication is that the widening income inequality in the economy would have been exacerbated but for the skill upgrading among more recent cohorts of workers.

This is underscored in Figure 5, which sheds light on the evolution of median household incomes 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 amongst those with college credentials (ISCED 6–8), where equivalised disposable income increases one-third from \$45,000 to \$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.

Given the yawning gaps in incomes between working and non-working households on the one hand, and between high- and low-educated households on the other, Figure 6 presents trends in the share of individuals in working households broken down by education attainment. In the figure, we see that there is an interactive effect between work and education attainment – individuals with fewer formal educational credentials are increasingly less likely to reside in a household where at least one adult is working. This is most pronounced after 2000, where the share in a working household among the ISCED 0–2 group declines 10 percentage points from 80 per cent to 70 per cent, and the share in a working household among the ISCED 3–5 group falls from 90 per cent to 80 per cent two decades later.

A factor that may have led to withdrawal from the labour force among low-skilled workers is the declining real return to work. Figure 7 presents trends in real average hourly wages by sex and education attainment among paid employees (i.e. the self-employed are omitted because of challenges separating hours of work into those reflecting production and those reflecting investment). The series show that the real wages of low-educated men fell \$8 per hour in inflation-adjusted terms from 1975 to

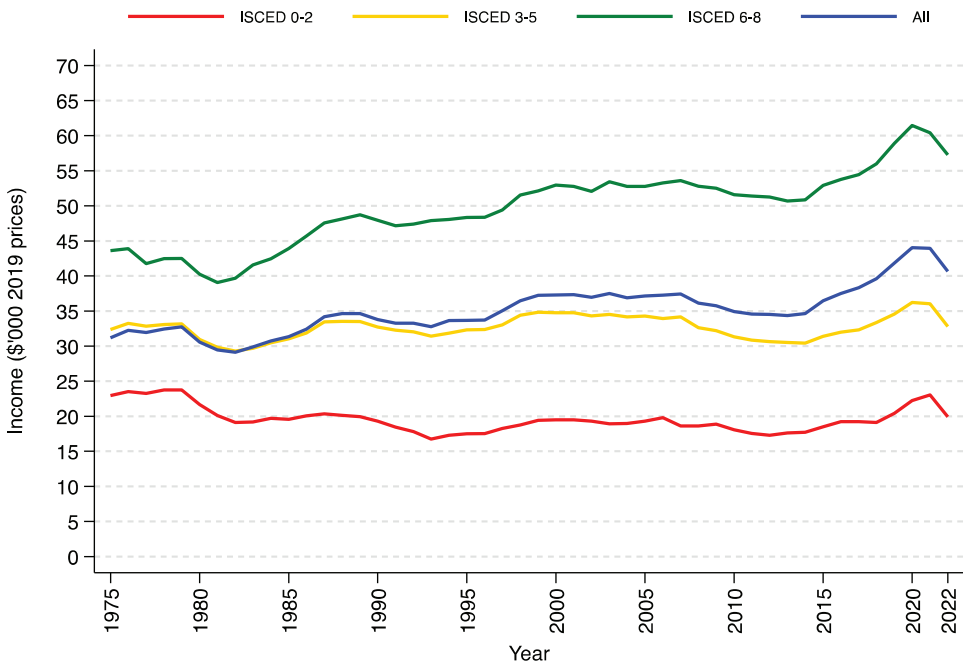


FIGURE 5 Median real disposable household by education attainment. *Note:* Sample is individuals aged 25–60 from CPS ASEC, 1976–2023. Incomes are in 2019 prices and have been equivalised using the modified OECD equivalence scale. [Colour figure can be viewed at wileyonlinelibrary.com]

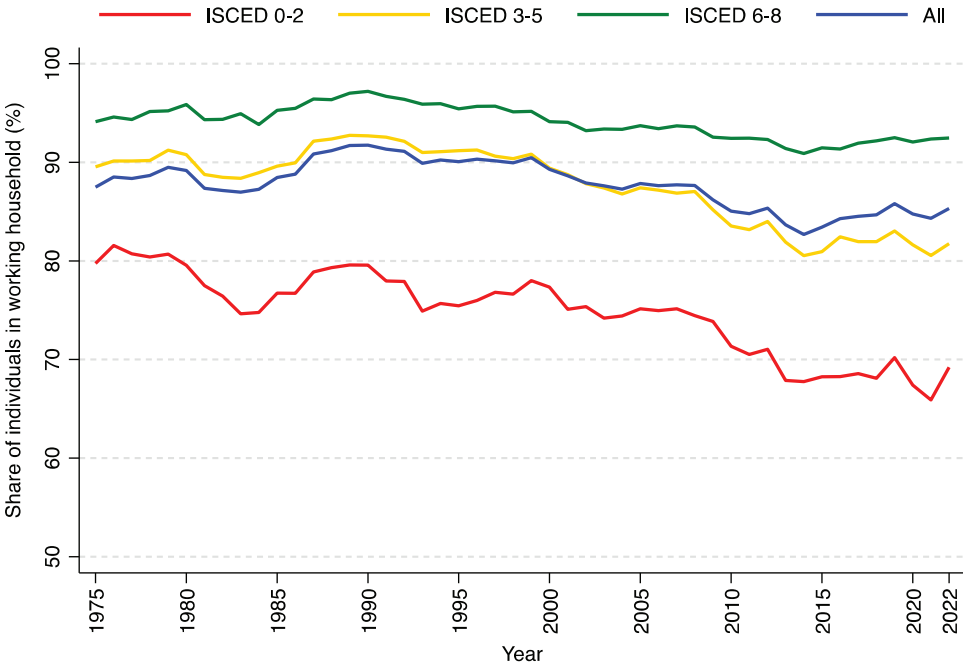


FIGURE 6 Share of individuals in a working household by education attainment. *Note:* Sample is individuals aged 25–60 from the CPS ASEC, 1976–2023. A working household is defined as a household in which at least one adult is in work in the calendar year. [Colour figure can be viewed at wileyonlinelibrary.com]

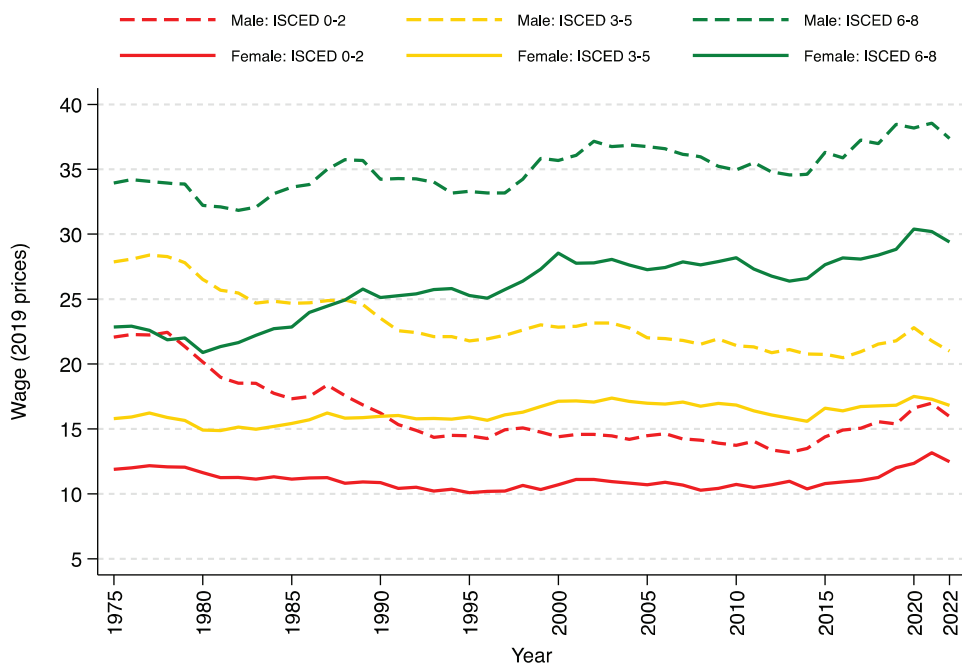


FIGURE 7 Median real hourly wages among employees by sex and education attainment. *Note:* Sample is individuals aged 25–60 from the CPS ASEC, 1976–2023. An employee is defined as an individual who in the calendar year worked for an employer. Self-employed are omitted. Wages are in real 2019 dollars. [Colour figure can be viewed at wileyonlinelibrary.com]

1990, remained stagnant for 25 years, before turning up in the last half decade, though still 28 per cent below the mid-1970s level. Middle-skilled men did not fare much better, with a 24 per cent decline in real wages, while college-educated men experienced a modest 10 per cent real growth in hourly wages over the last 45 years. Low- and middle-skilled women, while not experiencing large real declines in wages, experienced little growth in median wages in the last five decades. The outlier is high-educated women whose real hourly wages increased nearly 30 per cent from \$23 per hour to \$29 per hour, though much of that gain was realised in the two decades from 1980 to 2000.⁶

Another potential factor feeding rising inequality is the growing importance of assortative mating, the notion that individuals of similar credentials and earnings potential partner up into marriage or cohabiting unions. We explore this in Figure 8, which depicts – within each gender’s earnings distribution – where the earnings of the partner falls in their respective distribution. Taking the left panel as an example, on the *x*-axis we report the gross earnings percentiles for the sample of married and cohabiting women with working partners, and on the *y*-axis we report where their partners fall in the distribution of partners’ earnings. The average income percentile for the partners of women who are not working is plotted as a discrete point at the origin of the *x*-axis.

Figure 8 shows that over time the partner’s earnings profile becomes steeper, which is consistent with more assortative mating – high-wage men and women are more likely to partner with each other. 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 a mildly inverse U-shape, increasing until about the 30th percentile and then stabilising

⁶ Abraham and Kearney (2020) ascribe the post-2000 decline in employment to growth in trade with China and automation. They assume that the effect operates directly through employment opportunities, but research is needed to better understand if some of the effects operate indirectly through wages. Notably, most of the real decline in male wages occurred prior to the China Shock and automation.

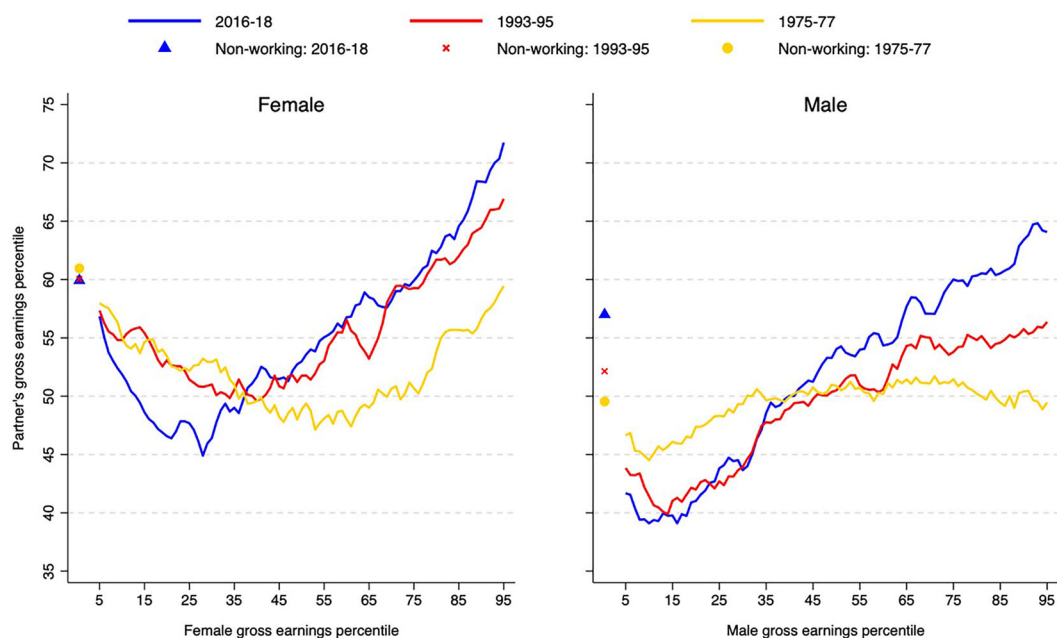


FIGURE 8 Mean gross earnings percentile of spouse by individual's gross earnings percentile. *Note:* Sample is individuals aged 25–60 from the CPS ASEC, 1976–2023. We exclude the bottom and top 1 per cent of the gender-specific earnings distribution. Mean earnings of partners are plotted as 5-point moving averages across the earnings distribution. Partners include both those married and those in cohabiting unions starting with the 1993–95 series. [Colour figure can be viewed at wileyonlinelibrary.com]

before slightly turning down at higher wages, 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. An important gender difference in Figure 8 is among the non-working – women out of work who are married to working men have seen no change in economic position of their partners over time compared to the increase in the economic position of working partners of non-working men, potentially signalling some changes in household production.

As the economic importance of marriage has increased, however, it has increasingly become the domain of highly educated adults. As shown in the online report, there is a roughly 15 percentage point difference in marriage rates between college-educated adults (ISCED 6–8) and those with less than a college degree by 2021. And, since 1975, marriage rates have declined across all education groups. However, it is notable that the decline in marriage stabilises for college-educated adults by about 1990, whereas the decline persists for adults with fewer formal educational credentials (these education differences in partnering are attenuated somewhat when including cohabitators).

The online report further investigates household composition patterns, demonstrating that among lower-educated women there is a higher share of persons residing in unmarried households with children over time. Among the low- and middle-education groups of men, there is a notable decline in couples residing with children, and while there has been an increase in lone parenthood in these groups, much of the shift has been towards unmarried adult households, or adult children or ‘other’ members residing in the wider household. These are typically men, who tend to have weaker labour force attachment and, when working, lower earnings, each of which likely contributes to widening household inequality.

A final factor we explore that interacts with work and education is the role of the social safety net and tax system. Figure 9 presents the share of gross household income received in the form of non-tax

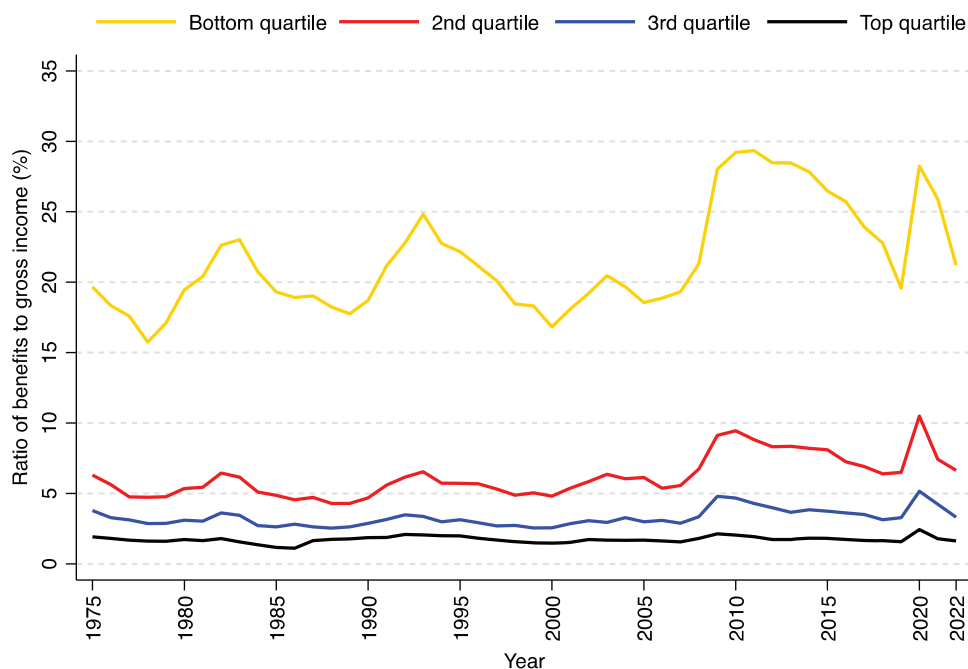


FIGURE 9 Benefits as a proportion of gross income by disposable household income quartile. *Note:* Sample is all individuals aged 25–60 from the CPS ASEC, 1976–2023. All incomes have been equalised using the modified OECD equivalence scale, and in each year and disposable income quartile we present the ratio of average benefit income to average gross income. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

benefits by quartile of the disposable income distribution, measured as the ratio of average benefits to average gross income by year and quartile. In this case, benefits include social insurance such as disability and unemployment insurance, and means-tested transfers such as TANF and SNAP, but not refundable tax credits (see Figure 10). 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 per cent to 30 per cent 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, which support households during economic downturns, as well as direct Congressional action during severe downturns such as the Great Recession and the 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 and third quartiles of the net income distribution are primarily from social insurance (notably UI), and while similarly countercyclical to the first quartile, they make up a much smaller share of household net income.

Increasingly, though, the United States has pivoted toward a safety net that rewards work (Hardy et al., 2018). This is seen in Figure 10, which depicts the ratio of average disposable income to average gross (before tax) income by quartile of the disposable income distribution. Since 1990, disposable income as a share of gross income has increased sharply in the first quartile of the disposable income distribution. This coincides with the increased generosity of the EITC, which requires both the presence of qualifying children and earnings in the tax unit in order to qualify. There is strong evidence that these expansions increased employment among lone mothers (Meyer and Rosenbaum, 2001; Grogger, 2003; Hoynes and Patel, 2018; Schanzenbach and Strain, 2020), resulting in reduced tax liability because of the refundability of the EITC, and after 1997 the CTC as well. The last two

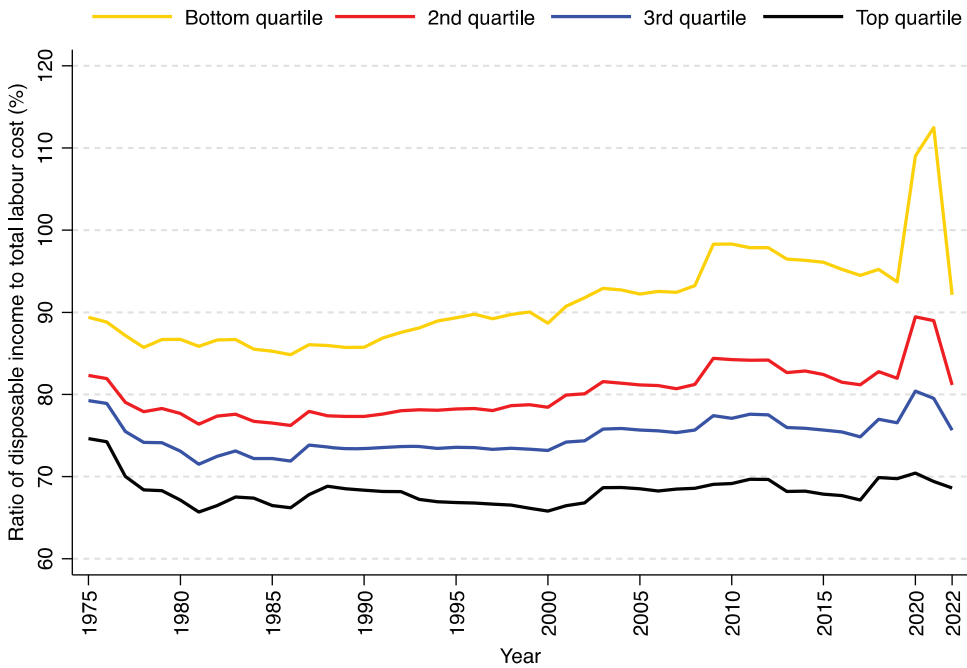


FIGURE 10 Disposable income as a proportion of gross income by disposable household income quartile. *Note:* Sample is all individuals aged 25–60 from the CPS ASEC, 1976–2023. All incomes have been equivalised using the modified OECD equivalence scale, and in each year and disposable income quartile we present the ratio of average disposable income to average gross income. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

years of our sample period overlap with the COVID-19 pandemic, when average after-tax incomes leapt to 120 per cent of average before-tax incomes. This emerged because of the combination of economic impact payments in 2020 that were transmitted through the tax system and thus show up in after-tax incomes and not before-tax incomes, and in 2021 when the American Rescue Plan transferred substantial new resources to households with qualifying children under age 17 via the CTC. In both cases, being detached from work (and thus tax filing) meant that transmission of Economic Impact Payments and the CTC was delayed (or non-existent) because the US Treasury used prior tax return information to deliver benefits to households. This non-receipt of benefits fell particularly hard on low- and middle-skilled lone men, who are increasingly disconnected from work and marriage, and thus did not benefit from much of the COVID-19 redistribution. Both the economic impact payments and expanded CTC were temporary, and thus by 2022 the share of disposable income relative to gross income returned to pre-pandemic levels. It is notable that since 1980 that share has trended up in both the second and third quartiles, mainly from changes to both tax rates and base, while the share in the top quartile has been stable at about 70 per cent.

Finally, we attempt to summarise the influence of marriage, education and work on before- and after-tax income inequality, and how those influences changed over the entire sample period. We do so by implementing a decomposition of the Gini index into a component attributable to inequality within groups, inequality between groups, and the overlap of the income distributions between groups (Mookherjee and Shorrocks, 1982).⁷ In each of the years, we create 12 groups across marriage (married/unmarried), education (ISCED 0–2/ISCED 3–5/ISCED 6–8) and work (reside in a

⁷ The Gini index is not exactly decomposable into within- and between-group inequality unless there is no overlap in the income distributions across groups, which does not happen in general. Thus, the residual term captures the overlap. We use the `ineqdeccini` procedure written by Jenkins (2019) for implementation in Stata.

TABLE 1 Decomposition of equalised gross and disposable household income.

Income measure	Year	Gini	Share within-group inequality	Share between-group inequality	Share residual effect
Gross income	1975	0.336	19.65	42.37	37.97
	2007	0.418	16.75	51.60	31.65
	2019	0.443	16.80	52.73	30.45
	2022	0.447	16.69	53.06	30.25
Disposable income	1975	0.301	19.54	41.43	39.02
	2007	0.367	16.51	51.45	32.03
	2019	0.394	16.48	52.43	31.08
	2022	0.397	16.34	53.01	30.65

Note: Sample is all individuals aged 25–60 from the CPS ASEC, 1976–2023. All incomes have been equalised using the modified OECD equivalence scale.

working/non-working household), and we report the results of the decomposition based on both real equalised gross household income and disposable household income. We present the starting and ending years of our sample, as well as the year prior to the Great Recession of 2008–09 and prior to the COVID-19 pandemic. The estimates in Table 1 suggest that in 2022 the between-group effect accounts for 11 percentage points more in the Gini index compared with 1975. Most of this change is due to a reduction in the share assigned to the residual interaction effect, and was realised by the onset of the Great Recession in 2008. Moreover, the Gini increases over time by the same percentage whether we measure income gross or after-tax payments and credits, and the decomposition is the same as well.⁸ This suggests that over our study period differences in incomes accruing between groups based on marriage, education and work have become increasingly important.

6 | CONCLUSION

We have used data from nearly five decades of the CPS ASEC to examine trends in household disposable income inequality and potential mechanisms through changes to work, wages, earnings, marriage and the tax and transfer system in the United States.

We find that there has been rising inequality in after-tax and transfer household incomes – whether measured by summary measures such as the Gini or percentiles such as the 90/10 ratio – despite expansions in the social safety net supporting households (especially those with children) in the lower quartile of the income distribution. While there has been a strong secular increase in education attainment among both men and women, there has been an increasing detachment from work among low- and middle-educated households, coupled with a decline in marriage among the same population. The gradient of married partners earnings has increased sharply since the 1970s, resulting in greater divergence in household incomes among the highly educated compared with those who have fewer formal credentials. A decomposition of the Gini index suggests that over the 48-year period of our sample these differences between groups have become increasingly important in accounting for inequality. We note that the omission of the current (and possibly formerly) incarcerated population,

⁸ In results not tabulated, we also conducted the decomposition based solely on marriage, and then marriage and education. The between-group share in each year increases dramatically with the inclusion of education, and is about 5 percentage points lower than the share reported in Table 1. Because we do not measure cohabitation in 1975, the analysis in Table 1 is restricted to marriage alone. When we include cohabitation in 2022, the between-group share that year remains constant, but the within-group share increases by 2 percentage points.

especially men, likely makes these inequality results an understatement. The incarcerated population, which increased dramatically from about a half million in prison or jail in 1980 (0.2 per cent of the population) to over 2 million by 2000 (0.8 per cent of the population), upon release are either unable to work at all or are locked out of many opportunities (National Research Council, 2014). These developments, along with a tax and transfer system that increasingly rewards work over welfare, has resulted in a pulling apart of the US economy.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available from the IFS at <https://ifs.org.uk/inequality/country-studies-us/>.

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