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Good news and bad news about U.S. labor force participation

Many headwinds from the 2010s are gone, but we're not investing enough in the future

Report • By Elise Gould, Sarah Jane Glynn, Hilary Wething, and Josh Bivens • September 25, 2025

Economic Policy Institute • Washington, DC

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Key takeaways:

- The last decade marks a shift in the prime-age labor force participation rate (LFPR). It moved away from a long-term decline toward rebounded participation in the wake of strong labor markets. Current prime-age LFPR is now back to its 2001 level, erasing much of those losses. Key conclusions from this: Full-employment labor markets are needed to keep LFPRs strong, and long-term structural determinants of LFPR growth cannot be accurately diagnosed during times of cyclical labor market weakness.
- Since 1979, key drivers of the decline in men's labor force participation included the following:
  - extended periods of excess unemployment rates
  - the labor market scarring effect of mass incarceration
  - the decline of historical sources of employment for noncollege men like the manufacturing and military sectors
  - increased opioid usage
- During the strong labor market in the late 2010s and following the tremendous recovery from the pandemic recession, noncollege men and Black men have seen substantial increases in labor force participation.
- Women, by contrast, experienced historical gains in labor force participation throughout the 1980s and 1990s but then their participation stalled out in the early 2000s —and began falling behind relative to peers in OECD countries. In the U.S., insufficient support for balancing paid work and family responsibilities has been a limiting factor in further increases in women's labor force participation. However, increases in workplace flexibility, with the rise of hybrid or remote work following the pandemic, may have boosted labor force participation, particularly for women with caregiving responsibilities.

Policy recommendations for maintaining and improving gains in labor force participation:

- In addition to policies that prioritize tight labor markets, policies should target the following for adults:
  - reductions in opioid use
  - reductions in incarceration rates
  - improvements in policies that support parents and caregivers
  - substantial improvements in the pay and working conditions of jobs of the future (like caregiving jobs) to attract and retain workers
- Investments in today's children are crucial for boosting the labor force participation of future generations, such as safety net policies that promote long-term health and educational investments. The future labor market benefits of investing in children are

so strong in the long run that they may even be fiscally self-financing.

Executive summary

Labor force participation is both a key input and a consequence of strong economic growth. While there are many reasons some do not participate in the formal labor market—school, family caregiving responsibilities, retirement, work-limiting disabilities—a strong labor market with high employer demand for workers is a necessity to give as many willing workers as possible a chance for employment.

In an aging population in which college attendance is far more common than it used to be, demographic trends have a strong influence on the overall labor force participation rate. Few people think that it's a problem that many older Americans choose to enjoy retirement or that many younger adults are enrolled in school rather than searching for work. What is, however, a potential problem is many prime-age workers—those between 25 and 54—are dropping out of the job search and work. To assess the extent of this problem, this report focuses primarily on prime-age labor force participation, the share of the population between 25 and 54 that is working or looking for work. This measure rose sharply from the mid-1970s to the mid-1990s. After that, it was flat for a period, then fell during the mid-2010s, most notably following the Great Recession. Over the last 10 years, participation has rebounded strongly and is now back to its 2001 level, erasing much of those post-2000 losses.

The rise in participation before 2000 was primarily driven by women as they increased their education, delayed family formation, and chose to participate in the paid labor market, driven in part by greater opportunities to access higher-paying previously male-dominated professions. The rise in participation over the last decade improved outcomes for both men and women, as strong employer demand led to workers entering or returning to the labor market. By 2024, women's participation hit an all-time high, and men's participation rate is back to its 2010 level.

Changes in labor force participation over the last nearly five decades varied by gender, but also across various demographic groups. While changes *within* demographic groups were the most important drivers of overall trends, there were notable differences between groups. For instance, those without a college degree—particularly men—experienced steeper declines in participation. And education upgrading (increasing the share of the population with a college degree) over the long term did little to offset that weakness. Loss of jobs in areas that traditionally were large-scale employers of noncollege men, such as manufacturing and the military, is undoubtedly related to reduced opportunity and participation in the labor force for those without a four-year college degree.

Black men, in particular, experienced notable declines in participation before the strong labor market over the last 10 years returned their participation to its 2000 level. The quadrupling of incarceration rates through the 1980s and 1990s disproportionately impacted Black men, making it harder for them to secure employment because of both the

labor market scarring effects of incarceration as well as labor market discrimination.

Across peer countries in the OECD, prime-age labor force participation didn't fall off to the same extent for men as it did in the U.S. and continued to rise for women over time. Insufficient support for balancing paid work and family responsibilities in the U.S. has been a limiting factor, particularly for women's labor force participation. A body of international evidence indicates that larger investments in those areas—such as child care and paid leave—have the potential to help boost participation. Recent increases in work flexibility following the pandemic, such as hybrid or remote work, may have aided the entry or reentry of workers with caregiving responsibilities.

Policy choices–both of commission and omission—can affect the future growth of labor force participation, but outside of immigration, the effects will be comparatively modest relative to historical swings in labor force participation. Strengthened public care can increase labor supply, particularly for women. Poor health, pain, and opioid use have been linked to lower participation, so improving population health and the provision of health care could increase labor force participation. Further, investments in today's children, through programs that provide health care, early education, and food security, can also pay dividends in terms of future labor force participation.

A strong economy and high-quality jobs are strongly related to labor force participation. When the labor market is tight, workers come back in search of better opportunities. Even with the pandemic job losses, the tight labor market over the last decade has all but erased the declines in the 2000s when excess unemployment and slow job growth kept would-be workers on the sidelines.

Introduction

The rate at which people participate in the U.S. labor force—which includes people who are working, as well as those who are unemployed but actively looking for work—has enormous implications for the economy and can serve as a barometer for its overall health.

There is no ideal labor force participation rate, and a society in which 100% of the population is in the labor force is not only unrealistic, but also undesirable. For example, high labor force participation could reflect a strong economy, or it could reflect a lack of access to social safety nets that force the very old and people with work-limiting disabilities into the workforce in order to survive. Falling labor force participation rates could be the result of a recession or other negative event like a global pandemic or could be caused by an aging population with many retired people or increased educational opportunities that delay entry into the labor force among younger cohorts.

Because there is no obvious ideal labor force participation rate, policymakers should think less about particular targets to hit for this rate and should instead aim at removing barriers that stand in the way of willing workers and their ability to search for and secure a decent job. While there are good reasons to not participate, such as gaining education or skills, harmful barriers could include macroeconomic slack in labor markets or more structural barriers like discrimination or insufficient societal investment in workers' health and skills or insufficient support for balancing paid work and family responsibilities.

Labor force participation that is high due to few barriers between willing workers and the ability to find decent jobs is a key ingredient to a healthy, stable economy. This relationship moves in both directions: A healthy economy is one that sees few barriers to willing workers finding jobs, and growing labor force participation is also a key component of economic growth. When the number of people in the labor force increases, it boosts production and leads to higher consumption.

The overall labor force participation rate in the United States is lower now than at its peak in 2000, largely because the population is aging and members of the baby-boom generation have retired. Participation among younger people has declined over time, raising concerns among some economists and policymakers. But the direction of these trends has not been consistently negative, and there is evidence from the last decade that earlier patterns were less durable than predicted.

This report provides an overview of prime-age labor force participation over the last 45 years, summarizes prior research on possible drivers behind the changes over time, and highlights when and how patterns have shifted over the last decade, concluding with policy recommendations that the data suggest could be most helpful to support a continued upward trajectory.

Overall trends in labor force participation

The prime-age labor force participation rate is the share of the civilian noninstitutional population between ages 25 and 54 that is working or looking for work. We focus on this measure to remove those who may be more likely to be in school or retired. As educational attainment has increased over time, a larger share of the population may be out of the labor force for longer (primarily affecting the population younger than 25). At the same time, the population has aged, and a growing share of the population has moved into retirement. Removing those under 25 and over 54 from our analysis removes those mostly demographic changes in labor force participation. Unless otherwise stated, all analysis in this report will include only the U.S. population 25 to 54 years old and will, therefore, be referred to as the labor force or the labor force participation rate (LFPR).

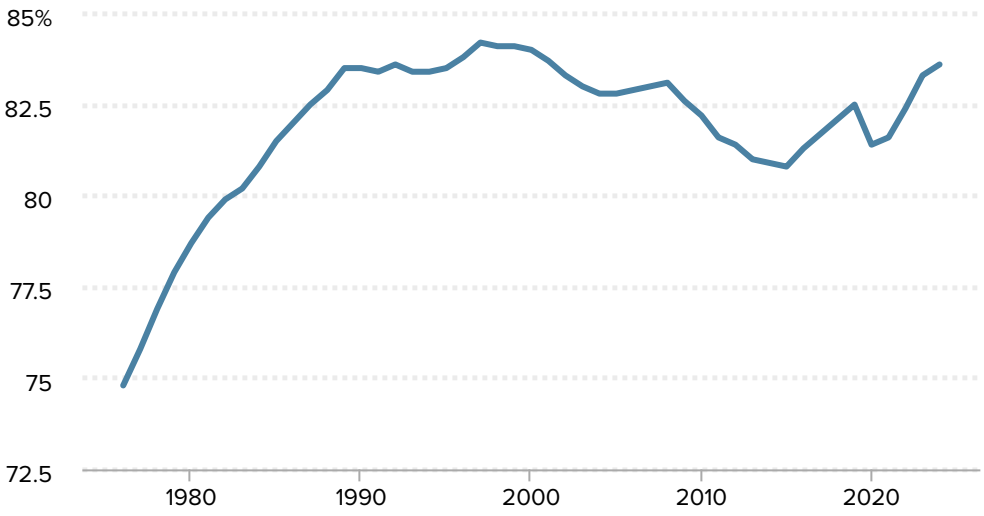
In this report, our primary data set is the basic monthly Current Population Survey. For most analysis, we have a consistent series from 1976 to 2024 and use that entire period, when possible, to display trends. For consistency when decomposing changes over periods of time, we start with 1979 because it is the first business cycle peak in our data, and we don't want to capture any cyclical trends that may have impacted the data from 1976. Using endpoints for analyses that are at different points of the business cycles can cloud conclusions on structural changes in the labor market. This is what happened with much of the research on labor force participation rates from the mid-2010s when the economy was still suffering employment losses in the aftermath of the Great Recession.

Prime-age labor force participation increased year over year throughout most of the post-World War II era for which we have data. Between 1976 and 2024, the prime-age labor force participation rate rose 8.8 percentage points from 74.8% to 83.6%. As **Figure A** demonstrates, there was a sharp rise in labor force participation from 1976 to the mid-1990s when it stabilized somewhat, then fell until the mid-2010s. With the notable exception of the pandemic recession, labor force participation has been on the rise for the last 10 years.

Figure A

Labor force participation among prime-age adults is higher today than five decades ago

Prime-age labor force participation rate, 1976–2024



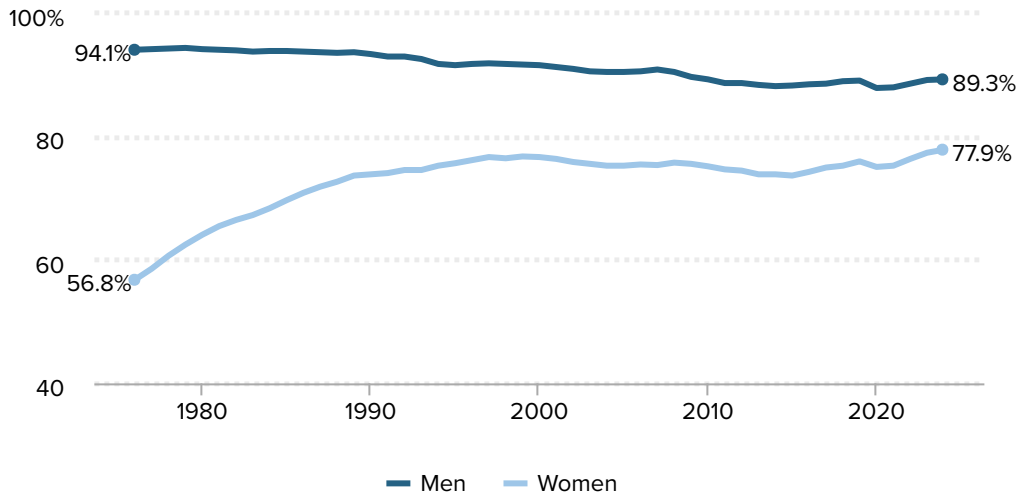
Notes: Data include the civilian noninstitutional population. "Prime age" refers to ages 25 to 54.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Figure B

Women's labor force participation is higher than it was 50 years ago, while men's is lower than it was

Prime-age labor force participation rate by gender, 1976–2024



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Notes: Data include the civilian noninstitutional population. "Prime age" refers to ages 25 to 54.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Labor force participation rates by gender

The overall trends in prime-age labor force participation are valuable in understanding the overall story of the labor market, but they mask some stark differences between participation rates for men and women. **Figure B** shows that men's labor force participation is consistently higher than women's throughout the entire period. What's most striking is the rise in participation overall through the 1990s was entirely driven by women. There are a number of cultural and socioeconomic factors behind that rise in women's participation as women increased their college attendance and graduation rates while narrowing the gender gap in college majors, delayed marriage and childbirth, and acquired more market-relevant skills. Combined, these shifts led to greater opportunities for women to enter previously highly male-dominated occupations and earn higher wages (Goldin 2006). Both men and women experienced declines in participation from around 2000 to the mid-2010s, and then both groups experienced a rise since then, though stronger for women.

Labor force participation rates move with overall labor market strength

Labor force participation rates tend to decline under weak economic conditions, like recessionary periods. But when the 2008 recession began, prime-age participation had still not fully recovered losses from the early 2000s, and LFP continued to fall for both men and women after the recession ended and the economy started expanding again. The majority of the decline in prime-age labor force participation occurred in the years after the 2008 recession, when prime-age LFP fell by 2.2 percentage points over the course of six years.

A significant body of research was released in the mid-2010s that highlighted the long-term fall in labor force participation, particularly among men, but the last 10 years have shown us a notable reversal in trend as participation for both men and women have been on the rise. While prime-age women are now experiencing their highest labor force participation rates on record, men's have stopped their downward movement and risen 1.1 percentage points since their low point in 2014 (except in the pandemic recession).

The strength of the labor market over the last 10 years has meant more and better opportunities for potential labor market entrants. There have been two distinct periods over the last 45 years in which a growing economy has led to more broadly shared prosperity: the late 1990s and the last 10 years. **Table 1** maps changes in labor force participation in those particular time periods against unemployment rates. Then, we summarize those two periods of time into two categories. The stronger labor market is defined by 1995–2000 and 2014–2024, while the weaker labor market is defined by the remaining 30 years since 1979.

In the good times, the unemployment rate averaged 4.7%, and labor force participation increased 0.3 and 0.1 percentage points per year, on average for women and men, respectively. In the bad times, women's labor force participation continued to rise, but was largely driven by the structural increases in opportunities in education and reduced barriers to entry for higher-paying professions that characterized the 1979–1995 period. Men's participation fell 0.2 percentage points in these times of weaker opportunities and lower wage growth when the overall unemployment rate averaged 6.7% (Gould 2020). Since 2000, periods of high unemployment have been associated with declines in both male and female labor force participation.

Periods of higher unemployment for much of the last 45 years appear to be related to lower participation rates, particularly among men. But, as the women's labor force participation rate stabilized in 2000, the trends have been similar for both men and women. The weaker labor market between 2000 and 2014 meant losses in participation, as workers saw fewer opportunities for themselves in the labor market. Though delayed, the labor market expansion in the lead-up to the business cycle peak in 2019, and in the strong bounceback of the last four years, has coincided with greater labor market

Table 1

Men's labor force participation fell when the economy was weaker

Annualized changes in labor force participation rate and average unemployment rate by gender

	Ppt change in labor force participation rate		Average unemployment rate
	Women	Men	
1979–1995	0.8	-0.2	6.9%
1995–2000	0.2	0.0	4.6%
2000–2014	-0.1	-0.2	6.5%
2014–2024	0.4	0.1	4.7%
Good times	0.3	0.1	4.7%
Bad times	0.4	-0.2	6.8%

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Notes: Ppt refers to percentage point. Data include the civilian noninstitutional population. "Prime age" refers to ages 25 to 54. To avoid double counting, the average unemployment rate represents the average of 1979–1995, 1996–2000, 2001–2014, and 2015–2024.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

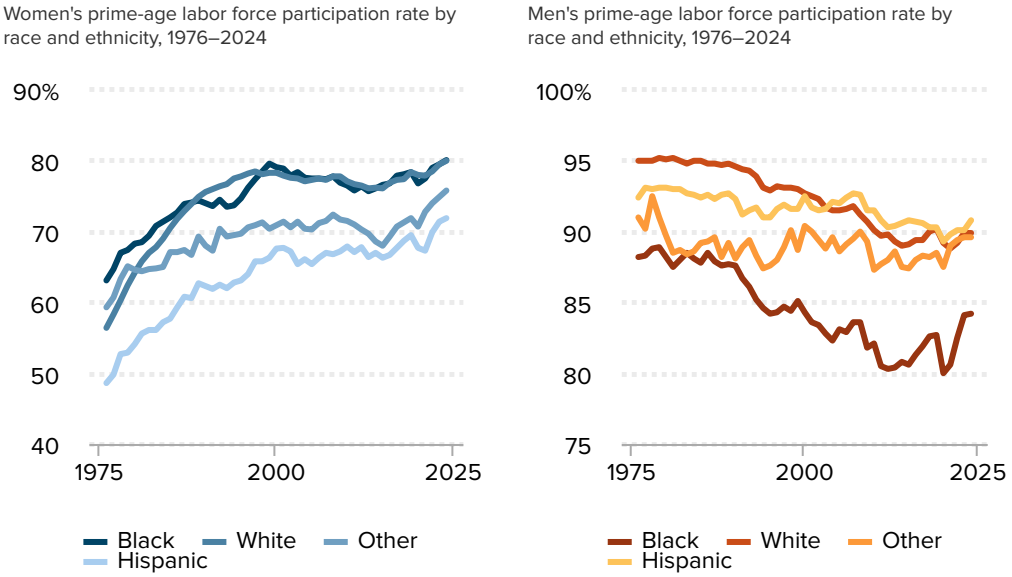
participation for new or returning workers.

Mechanically, when workers see fewer opportunities and leave the labor force, the unemployment rate will fall as people who may have been classified as unemployed are now out of the labor force and, therefore, not counted. To the extent this is happening, even the higher unemployment rates in the bad times may be overstating labor market strength or undercounting weakness.

Since men's and women's labor force participation rates differ greatly in terms of their absolute levels across the entire period in question, we will conduct separate analyses for women and men. We caution readers to note the change in scale between figures for women and men when comparing trends. Women's low participation in the 1970s requires a wider range; when men's are narrowed to the range of interest, it can appear to amplify changes. While there were large losses over the entire period for men, they may appear larger than they are when compared with women's wider labor force experiences.

Figure C

Over the past five decades, women across race and ethnicity saw increases, while Black men saw the steepest declines in labor force participation



Notes: Data include the civilian noninstitutional population. "Prime age" refers to ages 25 to 54. Race and ethnicity groups are mutually exclusive. The y-axes differ across charts to best illustrate the levels and trends for each group.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Labor force participation rose for all racial/ethnic groups among women, while white and Black men experienced the largest declines

Figure C illustrates prime-age labor force participation rates for women (on the left) and men (on the right) for four groups: Hispanic of any race, white non-Hispanic (white), Black non-Hispanic (Black), and other (non-Hispanic). Other (non-Hispanic) is mostly Asian and Pacific Islander women and men; however, a series for this group doesn't date as far back as 1976. Among women, Hispanic women have the lowest participation rates, while white and Black women have the highest. White women experienced the sharpest rise in participation through the 1970s, 1980s, and 1990s, and all groups experienced a lack of progress or a softening in participation in the early 2000s. Except for the dip in the pandemic recession, all groups experienced a resurgence in participation over much of the last decade.

Over the entire period, Black men had the lowest labor force participation rates, and their

declines were the sharpest for much of the last 45 years, never recovering fully in each recovery until the most recent period. With the exception of losses in the pandemic recession, Black men experienced a significant increase in participation over the last decade. Now, their labor force participation rate is the highest it has been in nearly 25 years. White men also experienced declines until the mid-2010s, but their participation rate stabilized and remains just shy of their pre-pandemic levels. Hispanic men experienced milder declines over the entire period and an uptick since the pandemic recession.

Though we do not show a figure for labor force participation rates by nativity (and the data only go back to 1994), it's worth noting that among women, the participation rate of noncitizens is much lower than that of native or naturalized women (See **Appendix Table 1**). Among men, the largest fall in participation occurred among the native-born though 2014 but then rose over much of the last 10 years, except during the deep pandemic recession. Non-native men, either naturalized or noncitizens, did not experience large declines in participation, but their presence in the U.S. is often tied to the availability of work so their denominator—the population of each of these groups—also ebbs and flows with the strength of the labor market.

Over the last nearly five decades, the prime-age population has shifted from over 80% to about 55% white non-Hispanic, a drop of about 28 percentage points (EPI 2025a). While the Black share of the prime-age population rose about 4 percentage points, the largest gains were among the Hispanic share, increasing about 16 percentage points between 1979 and 2024 (EPI 2025a).

Given differences in labor force levels by race and ethnicity and the changing composition of the population by race and ethnicity over time, it is useful to decompose the overall change in the labor force into its component parts: the change in population share (or the between effect) and the change in labor force participation within groups (the within effect). **Figure D** shows these two effects, on the left for women and on the right for men.

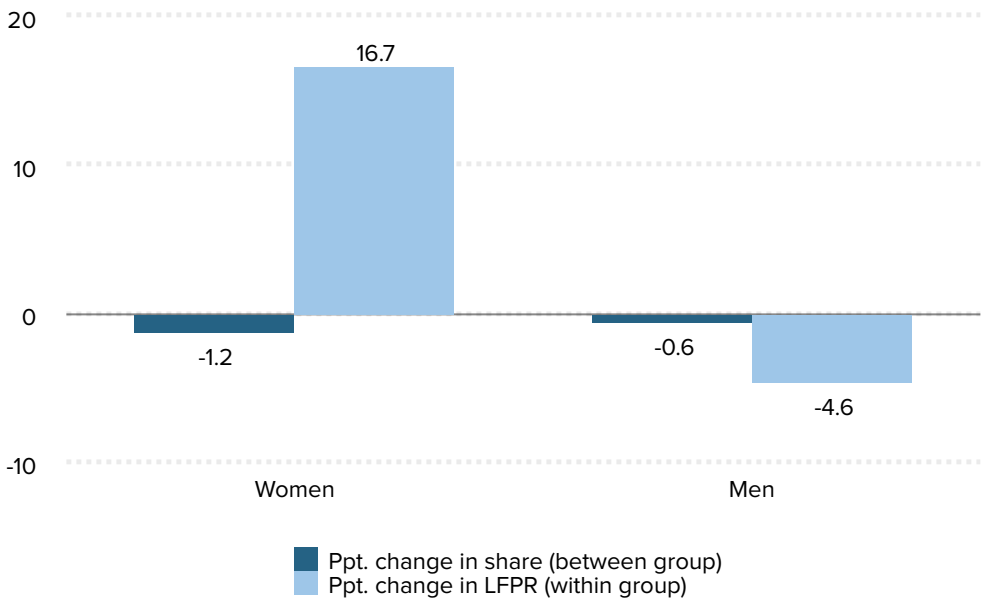
Compared with the changes due to the changing composition of the workforce, the changes within groups loom much larger. For women, the changing composition pulls down participation in part because Hispanic women were a growing share of the population with lower participation rates, compared with the falling share and higher participation rates of white non-Hispanic women. The rise is due to within-group increases in participation over the entire period.

Among men, the changing composition of the workforce played a small role, though likely driven by a falling population share of white men with higher participation rates in general. The drop in participation rates within each race/ethnic group played a much larger role over the 45-year period.

Figure D

Within-group changes in labor force participation played a larger role in trends by gender

Decomposition of labor force participation rates, by gender and racial and ethnic demographic group, 1979–2024



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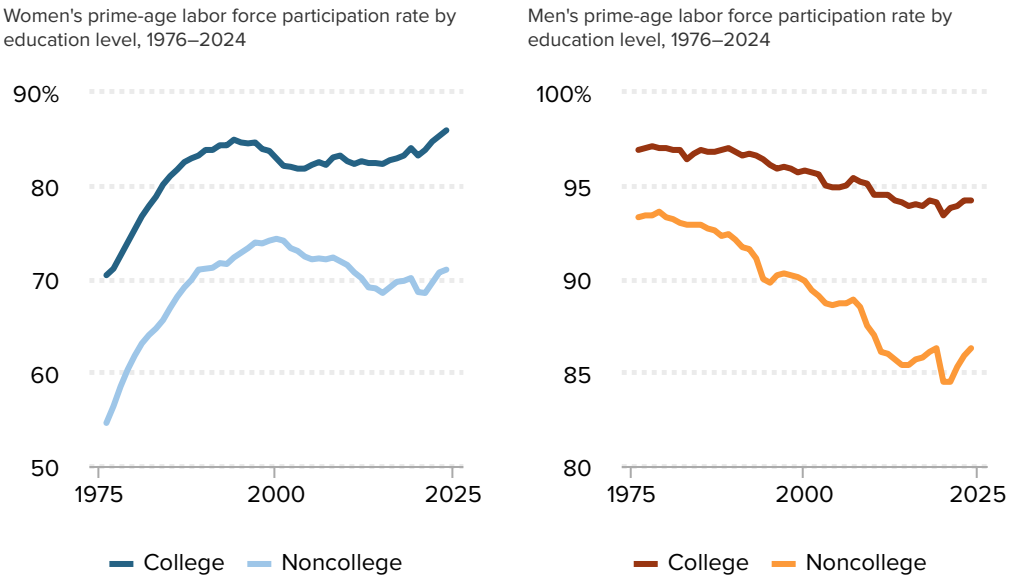
Notes: The between-group estimates explain how much of the change in men's and women's labor force participation rates can be explained by changes in the racial and ethnic group shares. The within-group estimates explain how much of the change in men's and women's labor force participation can be explained by changes in demographic groups.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Figure E

Over the last five decades, the labor force participation rate for women with a college degree grew to an all-time high, but it fell sharply for noncollege men until the mid-2010s



Notes: Data include the civilian noninstitutional population. "Prime age" refers to ages 25 to 54. College refers to completion of a four-year degree. The y-axes differ across charts to best illustrate the levels and trends for each group.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Labor force participation rate fell sharply for men with less than a four-year college degree, while participation for women with a college degree is at its highest ever

Labor force participation rates for different groups by educational attainment vary but follow the same general pattern for men and women, respectively. Both men and women with lower levels of educational attainment, shown in **Figure E** as noncollege—less than a four-year bachelor's degree—exhibit lower levels of labor force participation throughout the last 45 years. For women, the noncollege participation tracked college participation, though their rates notably continued rising into 2000, while college participation peaked in 1997 (before the current period). Then, noncollege women's participation dropped off in the 2000s and rose only mildly over the last 10 years. After softening for several years, labor force participation for women with a college degree is now at an all-time high.

The labor force participation rate for men with and without college degrees has declined over time, but unevenly. Men *without* a four-year college degree experienced large declines between 1979 and 2014, a fall of 8.2 percentage points. They experienced some gains in the expansion of the late 2010s but were harmed more in the pandemic recession. While their participation rate is now back to their 2019 level, the increase hasn't put a huge dent in the losses they suffered in the 35 years following 1979.

The reduction in labor force participation for noncollege men over time has been considerably greater than for men with a four-year degree. Technology has reduced employment for some types of workers, especially in manufacturing and jobs made up of routine tasks, while boosting employment for other kinds of work, and there is evidence that middle-skilled or middle-wage occupations have declined and have been replaced with a combination of low- and high-skilled jobs (CEA 2016).[1]

The decline in jobs that are available to workers with lower levels of formal education—or perhaps more accurately, the decline in the types of jobs these men have traditionally had access to, such as those in manufacturing—may make men more likely to leave the labor force. The decline in routine manual-labor jobs—skilled and semi-skilled jobs in production, maintenance, and material moving occupations, which are concentrated in manufacturing but are common in many other industries as well—has been significant and was accelerated by the 2008 recession.

From 2000 to 2017, routine manual-labor jobs as a share of all nonfarm employment fell by nearly 5 percentage points (Valletta and Barlow 2018). There is a correlation between routine manual-labor jobs and prime-age labor force participation, and in states where the drop was larger, there tended to be corresponding larger declines in participation. Controlling for other state-level economic conditions does not alter the relationship, indicating that the share of routine manual-labor jobs is not a proxy for other broad changes such as changes to the unemployment rate. The reduction in the routine manual employment share from 2000 to 2017 is estimated to have reduced the prime-age participation rate by approximately 1.3 percentage points, slightly more than half of the actual 2.3 percentage point decline in prime-age LFP (Valletta and Barlow 2018).

More specifically, the share of men's employment in the manufacturing sector has fallen to less than half of what it was in 1979. As shown in **Appendix Table 3**, men's share of employment in combined durable and nondurable goods manufacturing was 28.5% in 1979, but by 2024, these shares were reduced to 12.8%. To be clear, women's participation in manufacturing jobs also declined substantially over the period, dropping from 17.9% to 6.3% of women's employment; however, given that these jobs made up a smaller share of women's overall employment composition, the loss was felt less by women than by men.

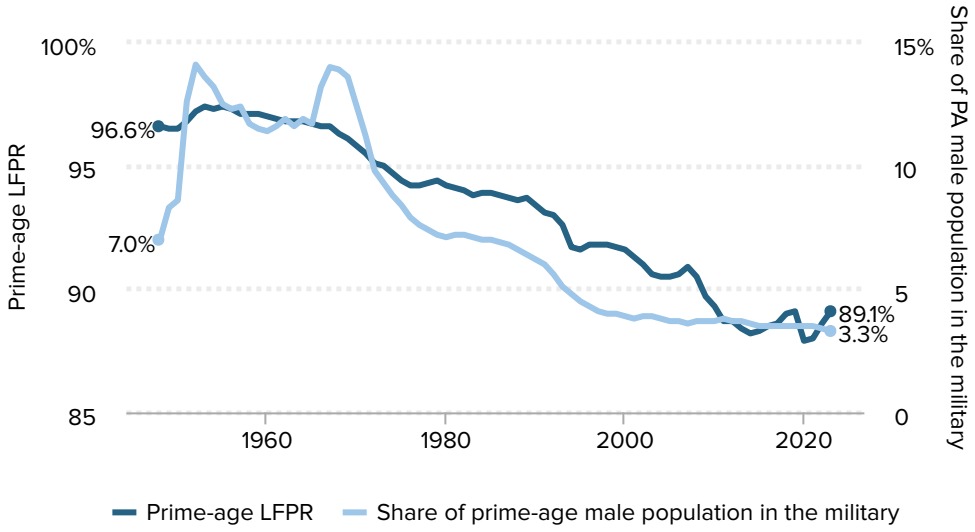
Additionally, the debate over falling male labor force participation often does not mention an important and heavily male economic sector that has shrunk enormously in terms of the opportunities it provided for those who might otherwise have lower-than-average participation rates: the military.

Figure F shows the overall decline in men's labor force participation alongside the decline in total military employment scaled to the male noninstitutional prime-age population. To

Figure F

Men's labor force declined at the same time the share of men in the military fell

Men's prime-age labor force participation and share in the military, 1948–2023



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Notes: Data include the civilian noninstitutional population. "Prime age" refers to ages 25 to 54.

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be clear, these are not true shares because our measure of the prime-age population is limited to the noninstitutional population, which excludes those in military service. However, the decline in military employment has meant that millions of noncollege men who might have lower-than-average opportunities in the civilian economy can no longer find work in the military. Throughout the mid-1960s through the 1990s, the share of prime-age men in the military dramatically decreased, from a high of 14% in 1967 leveling out at just under 4% of the prime-age male population in the 2000s.

Educational upgrading played a small role compared with within-group changes in labor force participation

As with the composition of the population by race and ethnicity, there were large shifts in the educational attainment of men and particularly women between 1979 and 2024. As shown in Appendix Table 2, the share of women with a college degree rose 30.3 percentage points, while the share of men with a college degree rose 14.3 percentage points. Even though women started out with a smaller share of college graduates, today they are more likely to have a four-year degree relative to men. Given that overall labor force participation is far higher for college degree holders, all else equal, we would expect

participation rates to have climbed over the 45-year period. While not the same as the labor force participation rate, prime-age women's increased educational attainment is estimated to have contributed 2.7 percentage points to their employment rate between 2000 and 2023 (Arnon et al. 2023).

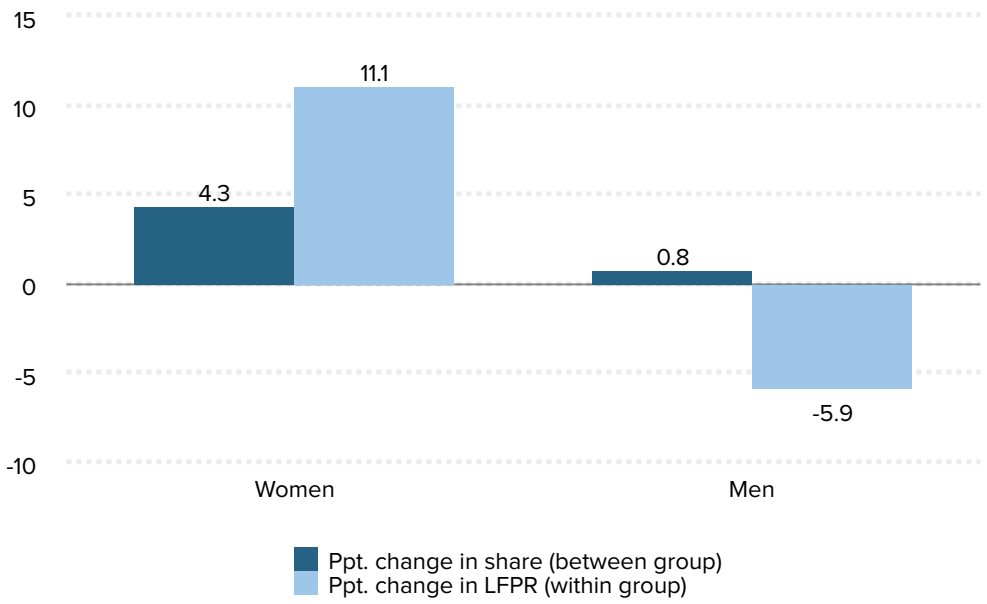
There is evidence that pursuing postsecondary education may be delaying labor force entry, at least for some populations. While most college students are younger than prime age, about one-third of students enrolled at Title IV institutions in the fall of 2023 were age 25 or older, and one-quarter were ages 25 to 39 (NCES 2024). Research comparing prime-age men between millennial and baby-boomer generational cohorts found that school attendance explains a roughly a third of millennial men under 30s' lower labor force participation, but that this effect has virtually no impact by age 40 (Bengali, Duzhak, and Zhao 2023). And when millennial men are separated by education, labor force participation for those with a high school diploma or less is relatively flat from age 25 to 40, while it increases with age for those with a college degree or more, suggesting that additional educational attainment may play a role in delaying eventual entry into the labor market.

In **Figure G**, we examine the role that changing education composition played in the changes in labor force participation. As the shift in educational attainment was twice as large among women, it's not surprising that it played a large role in lifting women's participation rates overall. But the increases in participation within education groups were even more important since 1979. For men, the declines in participation within each group played an outsized role in explaining declines in labor force participation. As we saw in Figure E, these losses were more acute among noncollege men.

Figure G

Educational upgrading among men did little to offset declines in labor force participation

Decomposition of labor force participation rates, by gender and educational attainment (college vs. noncollege), 1979–2024



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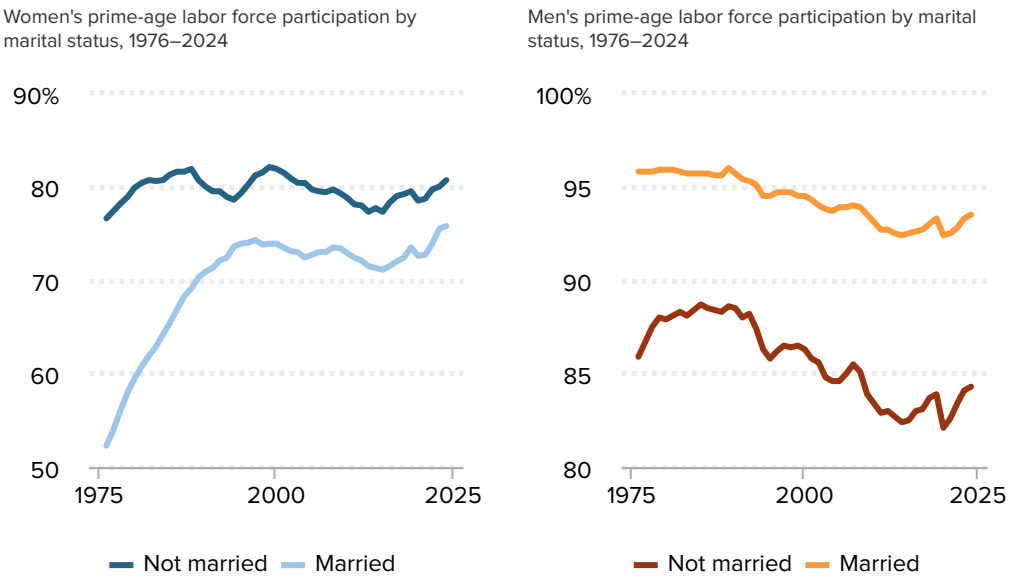
Notes: The between-group estimates explain how much of the change in men's and women's labor force participation rates can be explained by changes in the education group shares. The within-group estimates explain how much of the change in men's and women's labor force participation can be explained by changes in demographic groups.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Figure H

Married women entered the labor force in greater numbers, while married and unmarried men's labor force fell



Notes: Data include the civilian noninstitutional population. "Prime age" refers to ages 25 to 54. The y-axes differ across charts to best illustrate the levels and trends for each group.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Labor force participation among married women rose quickly, as unmarried women saw little change

Participation rates for men and women by marital status display a strikingly different pattern, as shown in **Figure H**. Married men are more likely to work than unmarried men, while unmarried women are more likely to work than married women. Unmarried women always exhibit relatively high levels of labor force participation, and that has changed little over much of the last few decades, except for mild rising and falling in business cycles. Married women, however, experienced a sharp rise in participation from just over a half (52.3%) to three-quarters (75.8%), currently at their highest level of participation on record.

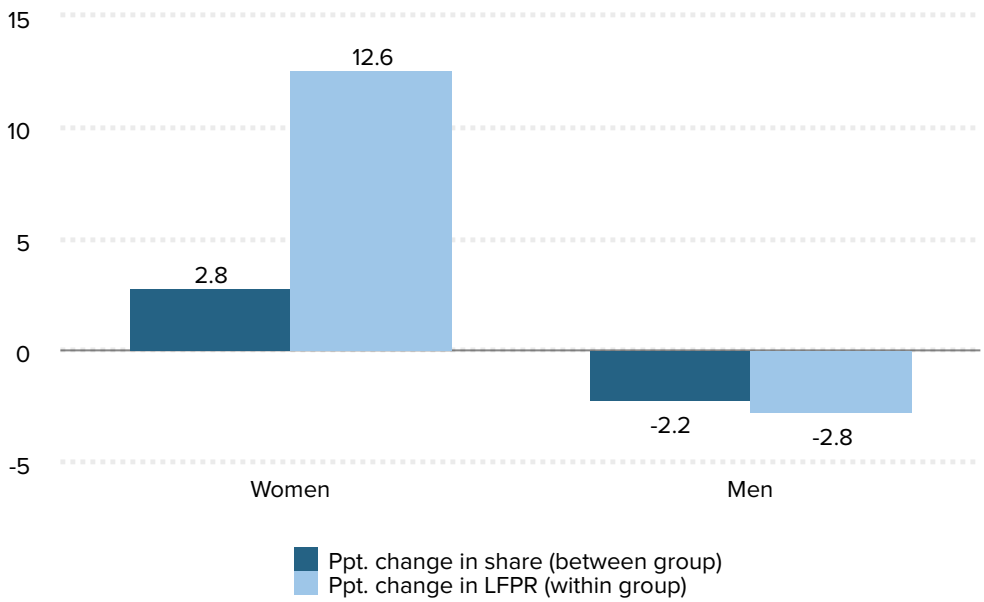
On average, married men are about 9 percentage points more likely to participate in the labor force than unmarried men. That gap has been relatively consistent over the last 45 years, though unmarried men are more subject to swings in the labor market.

Over the last nearly five decades, marriage rates have declined for both men and women, falling by about a quarter overall (see **Appendix Table 2**). All else equal, the decrease in marriage rates for women would pull up overall labor force participation for women. **Figure**

Figure I

The decline in marriage led to increases in participation among women in contrast to men

Decomposition of labor force participation rate, by gender and marital status (married vs. unmarried), 1979–2024



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Notes: The between-group estimates explain how much of the change in me'sn and women's labor force participation rates can be explained by changes in the marital status groups shares. The within-group estimates explain how much of the change in men's and women's labor force participation can be explain by changes in demographic groups.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

I illustrates this decomposition. The shift toward unmarried status pulled up women's participation but depressed men's, as unmarried women are more likely to work than unmarried men, but unmarried men are less likely to work than married men. Rising participation, especially among married women, was a major factor in the rise of participation among women. Men's falling labor force participation over the 1979–2024 period is explained by both falling participation among married and unmarried men and falling married rates.

Labor force participation among women with young children rose, while men's labor force remained tied to aggregate labor market conditions

While a small percentage of prime-age workers overall report they are not in the labor force due to family and care responsibilities, family structure and caregiving have strikingly disparate impacts on men's and women's participation. Care for children is a significant driver of this difference, as mothers are more likely than fathers to be primary caregivers. Mothers have lower participation rates than similarly aged women without children, even after controlling for demographics and education (Kahn, García-Manglano, and Bianchi 2014).

Participation rates for women with young children tend to lag participation rates for women overall and have not grown at the same rate (see Appendix Table 1). Women with children under age 3 have lower participation rates than women with children under 5, although the gap between these two groups has closed slightly since the early 2000s. Women experience a significant and sharp decline in labor force participation after having their first child. Compared with one year prior to having their first child, mothers are 18 percentage points less likely to be in the labor force in the quarter they give birth, and it takes an estimated two years after the birth of their last child for LFP to recover to roughly the same rate as pre-motherhood (Sandler and Szembrot 2019).

Some of this is likely due to personal preferences and cultural norms around caregiving, but there is also evidence that suggests high prices for child care contribute significantly to lower maternal labor force participation. Previous studies have found a positive relationship between access to child care and the mother's LFP, although the size of the effect varies across studies (Morrissey 2017). More recent data suggest a close to a 1-to-1 relationship between the price of care and employment; as child care prices increase by 1 percentage point, a mother's probability of employment declines by 0.9 percentage points, and the relationship is even stronger in states with traditional gender norms (Collins et al. 2021).

Factors thought to have influenced prime-age labor force participation between 2000 and the mid-2010s

The majority of the decline in prime-age labor force participation occurred in the years immediately after the 2008 recession, when the participation rate fell by 2.2 percentage points over the course of six years. This prompted a wave of research and subsequent news coverage aimed at understanding the drivers behind this shift. Labor force

participation rates tend to decline under weak economic conditions like recessionary periods. But when the recession began, the prime-age LFP had still not fully recovered losses from the early 2000s, and it continued to fall for several years for both men and women after the recession ended and the economy started expanding again.

The longer-term trends indicated that there were factors exerting downward pressure on prime-age participation beyond the business cycle. Estimates on how much of the change in LFP was caused by cyclical factors vary, ranging from one-sixth to about two-thirds (Shierholz 2012; CEA 2016). But while point estimates varied, there was widespread agreement that structural factors contributed significantly to falling labor force participation after 2007.

Many of the factors identified, such as declining opportunities for men without four-year college degrees and stalled parental and child care policies, have already been discussed. A wide range of other potential causes has also been hypothesized to be behind the reduction in prime-age participation, with an overall focus on the experience of men, given their steeper declines.

Poor health, pain, and the opioid epidemic

The number of prime-age adults who report they are not in the labor force due to poor health or disability has increased over time and is the primary reason for nonparticipation reported by men (Tüzeman and Tran 2019). Prime-age women overall report their health as better and their well-being as higher compared with men, and women's self-reported health does not vary significantly by labor force status. In contrast, prime-age men who are not in the labor force report worse health indicators compared with working men (Graham and Pinto 2021).

Racial and ethnic disparities in health are well documented (NASEM 2017), but in contrast to decades of findings that people of color experience disproportionate health challenges, white men, among prime-age men not in the labor force from 2010 to 2016, reported worse health, lower well-being, and more pain than men of other racial groups. Among these white men, overall low scores were driven by those with lower educational attainment and those at the older end of the prime-age range, especially those ages 45 to 54. Because their health was so much worse than similar men who are working, this suggests that poor health may be the cause of their nonparticipation rather than its effect (Graham and Pinto 2021).

The opioid epidemic has also been linked to declining labor force participation, although it is difficult to assign causation or separate cause from effect due to a lack of reliable data. Opioid prescriptions increased significantly beginning in the late 1990s and peaked in 2012 (Chai et al. 2018) with 17.8 billion opioid analgesic pills dispensed that year alone (Woods et al. 2021). While the overall decline in prime-age labor force participation predates the opioid epidemic, there is evidence opioid use may have contributed to the trend.

A number of studies show that increases in the use of opioids are associated with

negative labor market outcomes, including lower labor force participation, although effect sizes vary (Maclean et al. 2020). One widely cited report found that labor force participation fell more in counties with higher opioid prescription rates. After controlling for race, marital status, age, education, manufacturing jobs, and census region, increased opioid prescriptions are estimated to account for as much as 0.6 percentage points of the decline in prime-age male LFP and 0.8 percentage points of the decline for women—or roughly 20% of the total decline from 1999 to 2015 (Krueger 2017). Subsequent research found an opposite pattern by gender, estimating that a 10% increase in the local opioid prescription rate is associated with a 0.53 percentage point decline in prime-age participation for men and a 0.10 percentage point decline for prime-age women (Aliprantis, Fee, and Schweitzer 2023).

Social Security Disability Insurance

Along with increased self-reported poor health, pain, and opioid use, growing incidence of disability benefits has also been proposed as a cause of falling prime-age labor force participation in the 2000s and 2010s. Social Security Disability Insurance (SSDI) has been an important component of the social safety net since benefits began in 1957. Reforms were made to the disability screening process in the 1980s, and researchers have posited that, coupled with an increase in the real value of benefits, this led to the subsequent large increase in enrollment, with the number of workers receiving SSDI benefits tripling from 1980 to 2013. Some went so far as to suggest that many of the applicants may be making fraudulent claims (Autor and Duggan 2006). Although SSDI benefits replace only a fraction of a disabled worker's prior earnings and disabled beneficiaries are more than twice as likely to live below the poverty line (CBPP 2025), some researchers hypothesized that SSDI benefits would reduce the incentive for people with some remaining work capacity to stay in the labor force.

Estimates on how much increased SSDI receipt has contributed to declining labor force participation for prime-age men vary but generally account for very little of the total change (CEA 2016). SSDI is suggested to have a particularly chilling effect on LFP for men with lower levels of education since benefit receipt has grown more for prime-age adults without a college degree, a group that has also seen larger declines in participation (Burk and Montes 2018). But research comparing data on SSDI and participation rates between 1975–1984 and 2008–2017 found that increases in disability benefits explain almost none of the decline in LFP for men with less than a high school education and only very small shares of the drop in LFP for prime-age men with only a high school diploma—0.01 percentage points of the decline for men ages 25–34 and 35–44, and 0.3 percentage points for those ages 45–54 (Binder and Bound 2019).

Incarceration rates

The number of people incarcerated in the U.S. quadrupled from 1978 to 1998 (BJS n.d.), and young Black men are disproportionately likely to be impacted. The rise in incarceration has cross-cutting effects on measured labor force participation. Because the

surveys that estimate participation do not include the incarcerated population, if those currently incarcerated would be likely to have lower-than-average labor force participation rates in the noninstitutional labor market, a rise in incarceration can actually boost measured participation by removing this population from the denominator.

However, if a spell of incarceration causally reduces the probability of labor force participation because it makes an individual's connections to the labor force more tenuous (being in an institution categorically means one is not in the labor force) or because skills and work experience can depreciate over time, then a growing stock of people in the market with a spell of incarceration in their history could lower overall participation through these scarring effects. Further, people with a history of incarceration are more likely to experience labor market discrimination (Burk and Montes 2018).

Spells of incarceration are estimated to have accounted for at least a quarter of the decline in LFP among all Black men between 1979 and 2000, and over one-half of the decline in participation rates among Black men ages 25–34 without a high school diploma (Holzer, Offner, and Sorenson 2005). More recently published research found that having received a criminal charge in their youth significantly increased the number of weeks prime-age men spent out of the labor force up to 26 years later. However, the data used in this research may be overestimating effects since it cannot account for reasons why someone is not in the labor force, including school attendance or because of later incarceration (Ellsworth 2017).

While not specifically measuring effects on prime-age labor force participation, additional research quantifies the way prior convictions—which may or may not result in incarceration—impact future employment. Having been convicted of a felony is estimated to have reduced the employment rate for all men in 2008 by 1.5 to 1.7 percentage points, and by 6.1 to 6.9 percentage points for men without a high school diploma (Schmitt and Warner 2011). Later research using state-level modeling estimated that every 1 percentage point increase in the share of the adult population with a felony conviction is associated with a 0.3 percentage point increase in the rate of nonemployment—including unemployment and being out of the labor force—for adults aged 18 to 54 (Larson et al. 2022).

Leisure activities

As previously discussed, prime age women are much more likely to leave the labor force to undertake family responsibilities, and men rarely report this as the reason for their nonparticipation. But regardless of the reason for their nonparticipation, there is also no evidence that men ultimately use the time they may have otherwise used for labor market activities on household work. Time-use data show that prime-age men not in the labor force spend twice as much time on leisure activities compared with other men, but only slightly more time on housework and caring for children (Krause and Sawhill 2017).

From 2000 to 2015, total market hours worked fell more for younger men ages 21 to 30 than for men ages 31 to 55, and younger men's detachment from the labor market

increased. Computer and video game technology advanced over this same period, which increased the appeal of this leisure time, and younger men significantly increased their time spent gaming. While recognizing other factors such as declining demand for younger men's labor, researchers have hypothesized that video and computer games are a potential factor that contributed to the reduction in the labor supply of younger men, estimating that increased gaming technology was responsible for up 38% to 79% of the differential in work hours reduction between younger and middle-aged men (Aguiar et al. 2017).

Subsequent research confirms that time spent playing video games increased among men in the 2000s (Krueger 2017; Gray 2019). The increase in time spent gaming was concentrated among men under 30, and nonworking young adult men spent more time playing computer and video games than their working peers did. However, total electronics leisure time was flat over this period because time spent on gaming was generally offset by decreased time watching television or movies, not by reduced job search or labor market activity. And while young men who had recently exited the labor force spent more time gaming than employed men did, they spent less time compared with men who had been out of the labor force longer, undercutting the hypothesis that gaming was the reason for their exit (rather than a consequence of it). Overall, the data suggest that shifting cultural norms have made it more socially acceptable for slightly older and non-employed men to spend time playing video games, not that young men were leaving the labor force in order to devote more time to gaming (Gray 2019).

Real and relative wages

Real hourly wages (adjusted for inflation) for prime-age men without a college degree were meaningfully lower in 2015 compared with the early 1970s, while real wages for men with degrees increased over the same time—although the decline is not consistent throughout the entire period, and real wages for all educational groups did increase in the late 1990s (Binder and Bound 2019).

While an individual's personal level of pay is important to labor market decisions, there is also evidence that men's relationship to other men's wages may have a meaningful impact on their beliefs about the financial returns on the time and effort invested in work and subsequent labor supply. Data from 1980 to 2019 show that noncollege prime-age men are more likely to leave the labor force when their earnings decline relative to other prime-age men. Increases in real earnings may not be enough to offset the effect of inequality; it's the comparison to what other similar-ages men are paid that seems to matter most. The relationship with women's wages is weaker, and white non-Hispanic men are driving the relationship, indicating that the LFP of historically privileged groups may be more sensitive to changes in relative economic standing. This decline in relative earnings for noncollege prime-age men is estimated to have contributed to 44% of the decline in labor force participation over this period (Wu 2022).

Additional recent research comparing wages in men's birth states found a positive relationship between the wages paid to other men starting in an individual's boyhood and

their eventual labor force participation when they reach prime age, even after controlling for labor market conditions and demographic variation. The study found that a $0.33 increase in the average experienced aggregate lifetime hourly wage of men raised the probability of prime-age labor force participation by 10 percentage points. The effects persisted even when men moved states, and were stronger within racial categories with an effect twice as strong for Black men compared with white men. Racial decompositions found that white men were most influenced by the wages of other white men, while Black men were influenced by both Black and white wage trajectories (Levin and Vidart 2025). The data suggest that lifetime wage experiences, and what men see other similar men being paid throughout the life course, may shape beliefs about the returns on work, which in turn, influence labor force participation. This may help explain why men's LFP continued to decline in the 1990s when real wages rose.

More recent changes to the economy

The research outlined above was largely conducted using data from the years immediately after the 2008 recession, often with endpoints before prime-age labor force participation started recovering in the late 2010s. Labor force participation declined dramatically in 2020 but rebounded faster than predicted, continuing the upward trend in place before the pandemic. Between 2020 and 2024, the prime-age labor force grew about two-and-a-half times faster than the prime-age population (EPI 2025b). And as of 2024, prime-age men's participation had regained its 2010 level, while women's hit a historic high.

Research on the drivers of the rapid recovery and longer-term prime-age LFP increases is ongoing, but there are indicators that the single most important factor might simply be the state of macroeconomic slack. The 2010s saw prolonged and large output gaps that persisted for almost a decade after the business cycle peak in 2007. The more recent post-pandemic recovery was far faster, with output gaps essentially erased 18 months after the previous peak.

Since 2015, when prime-age participation started to recover, researchers have found a consistent procyclical relationship between changes in state unemployment rates and prime-age LFP, a relationship that is not present for business cycles between 1990 and 2014. The wage gains experienced by low-wage workers have been larger during the recent economic expansions compared with earlier periods, and since this groups tends to be more responsive to changes in labor market conditions, it is possible that higher wages for workers at the lower end of the wage spectrum drove labor force participation rates up (Prabhakar and Valletta 2024). However, as wage growth has slowed, this procyclical rise has likely cooled for now.

Prime-age women's labor force participation fell more than men's in the early months of the pandemic, declining by 3.4 percentage points compared with men's decline of 2.8 percentage points, although women's LFP recovered earlier and more consistently than men's in 2023 (EPI n.d.). Maternal employment and labor force participation were also deeply impacted by the closure of in-person schooling and child care, more so than for

fathers and women without children (Landivar et al. 2023). As a result, in contrast to studies done in the 2010s, much of the post-pandemic research has focused on the labor market experiences of women and mothers.

Labor force participation for mothers whose youngest child was under age 5 hit a record high of 71% in September 2023 (Aron-Dine, Bauer, and Powell 2025). There are a number of factors that could have influenced this outcome, including increased access to telework, as mothers with preschool-aged children are the most likely group of prime-age workers to telework, or this could be the result of the procyclical factors previously discussed.

Earlier analysis found that prime-age women contributed the most to the rebound of the overall labor force participation rate post-pandemic, and among all prime-age women, it was mothers with children under 5 who increased their participation the most from 2019 to 2023. However, this seems to be largely because their participation rate, which was already lower than the rate for all prime-age women and mothers of older children, declined the least among mothers in the labor market collapse period (April–May 2019 to April–May 2020). During the recovery period (April–May 2020 to April–May 2023) prime-age women without minor children had a larger impact on the net change in the labor force participation rate, holding population constant. (Bauer and Wang 2023).

Analysis by the Council of Economic Advisers on the impact of the Biden-Harris administration's $24 billion in child care stabilization funds, which were issued as subsidies to child care providers, estimates a 2–3 percentage point increase in the labor force participation rate for mothers of children under 6 as a result of the funds (CEA 2023). Labor force participation rates stabilized around the time the funds expired, and after that point, growth in LFP for mothers of young children followed the same patterns as those of other women, lending support to the hypothesis that increased child care funding was driving earlier increases. However, these estimates only control for the expanded child tax credit and state unemployment rates, with no control for increases in telework. Telework increases have also been hypothesized to affect all groups of women similarly, but that finding differs by data source. Analysis using Current Population Survey data shows prime-age parents are more likely to telework than workers without children (Aron-Dine, Bauer, and Powell 2025), while others using Census Pulse Survey data found non-mothers were more likely to telework in the first half of 2023 (Bauer and Wang 2023).

Prospects for labor force participation going forward and how policy can affect them

There are many reasons for comparative optimism about prime-age labor force participation going forward, driven by a partial reversal of a number of pressing social challenges. For one, the low points of the 2010s seem to have been significantly driven simply by excess macroeconomic slack. To the degree such prolonged periods of slack can be avoided going forward, labor force participation rates should avoid similar large

slumps. For another, the incarcerated population in the United States has fallen significantly in the past 2 decades. To the degree that the future will see fewer workers scarred by a spell of incarceration, this should boost labor force participation. Further, the high point of the opioid epidemic seems to have passed, and rates of addiction are falling, removing another key headwind to labor force participation.

All of these potential tailwinds to labor force participation are obviously contingent on policy decisions—both economic and social. Further, a number of other margins that will affect labor force participation also will be largely driven by policy. Below, we highlight a number of determinants of labor force participation in coming years and assess how policy can increase or reduce their effect.

Efforts to reduce opioid use further may increase labor force participation

Although the exact effects are challenging to measure due to a lack of comprehensive data, there is some evidence suggesting that the increased use of opioids contributed to declining labor force participation in the late 2000s through mid-2010s (Aliprantis, Fee, and Scheitzer 2023). Since that time, a number of laws at the state and national levels have been enacted in response to the opioid crisis. Federally, the Comprehensive Addiction and Recovery Act of 2016, the 21st Century Cures Act, and the Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act are intended to lessen the demand and supply of opioids while reducing the harms of opioid use disorder (CBO 2022). These efforts are multifaceted but include strategies such as providing funding to states to invest in prescription drug monitoring programs, increasing budgets for public health services to prevent and treat substance use disorders, and developing treatment alternatives to incarceration.

Tracing the impact of these laws is difficult, in part due to the effects of the pandemic, which contributed to increased opioid use, misuse, and deaths in 2020 (CBO 2022). However, post-2020 some measures have markedly improved. The overall rate of opioid dispensing has declined by roughly 20% since 2019, and opioid deaths involving prescription drugs have declined since their peak in 2017 (CDC 2024; NIDA 2024b). Emergency room visits for suspected nonfatal overdoses related to all opioids also declined over this time period (CDC 2024). At the same time, overdose deaths from any drug and those involving any opioid (not just prescription drugs) continued to increase through 2022 before declining in 2023, although they remain elevated by historical standards (NIDA 2024a).

It is too early to know if these measures will continue to trend downward, but there does not seem to be a simple, straightforward, ongoing connection between opioid misuse and labor force participation. Overdose rates are not a perfect proxy for misuse, but deaths from synthetic opioids increased dramatically after 2014 and remain very high, largely caused by illicitly manufactured fentanyl (NIDA 2024c). This occurred at the same time that prime-age labor force participation has also been increasing. It is possible that there are more complex relationships developing between opioid misuse and LFP, particularly as

the opioid crisis changes over time.

Reducing the labor market scarring of incarceration

For Black men in particular, incarceration presents a uniquely challenging obstacle to gaining employment and rejoining the labor force (Pager 2003; Williams, Wilson, and Bergeson 2019; Holzer, Offner, and Sorenson 2005; Ellsworth 2017). At least 1 in 5 Black men will experience incarceration at some point in their lives (Robey, Massoglia, and Light 2023). These results suggest that any successful policy effort to reduce incarceration and recidivism rates would be highly supportive of labor force participation. While recent ban-the-box policies (such as those that do not require job applicants to disclose their criminal history for most jobs) have had mixed results in their ability to promote overall employment (Rose 2021), Bailey et al. (2024) found that children in households that received food stamps had a reduced likelihood of being incarcerated as adults later in life by 0.5 percentage points, suggesting that meeting families' basic needs can do more than just improve health.

More promising than the ban-the-box policies is California's 2011 policy to redistribute the costs of sending an adult to prison to the governing locality that makes the decision to incarcerate. This policy is associated with a reduction in the prison population of 50,000 between 2009 and 2019, suggesting that public financing policy can play a surprisingly effective role in supporting labor force participation (Pfaff 2024). The law, AB 109 or colloquially referred to as realignment," mandated that nonviolent, nonsexual, and nonserious offenders were required to serve sentences under county supervision. Prior to the law, prosecutors, who are paid by the county, were incentivized to prosecute offenses to their highest conviction to get offenders sent to prison, which was paid for exclusively by the state. This redistribution of costs significantly curtailed prosecutors' incentives to seek higher sentences for less serious offenses and as a result, reduced incarceration rates in California substantially.

Job quality matters to attract workers into the labor market, particularly into some of the fastest-growing occupations

A key headwind for men's labor force participation in the past few decades has been a slowdown in job growth in sectors like manufacturing and mining that traditionally provided relatively high wages for workers without a college degree. Much of the change in the composition of employment is largely outside the purview of policymakers—but policy can have some effect on the margins of this employment composition. More importantly, how changing *employment composition* translates into changes in wages or perceived opportunities for different population groups is highly contingent on policy.

Occupational segregation is the tendency for one gender to more likely work in certain

occupations than another. For instance, men are more likely to work in manufacturing and construction, while women are more likely to work in education and health care (industrial sectors are provided in Appendix Table 3, but the same phenomenon exists in occupations). Gender stereotypes, such as the idea that women are better suited to caregiving or that men are naturally better at physically demanding tasks, can constrain people's options and make them more or less likely to pursue traditionally gendered jobs (Palffy, Lehnert, and Backes-Gellner 2023).

Occupational segregation is driven by social and cultural forces that compel women into caring professions (Schieder and Gould 2016). While many people do have choices about which jobs to apply for, accept, or reject, these decisions are made within the context of larger social and cultural influences. Occupational choices are shaped by a lifetime of experiences, including the expectations children are raised with, educational experiences, hiring practices, and norms and beliefs about family roles and the division of household labor held by employers, co-workers, and society. These norms and expectations impact women's as well as men's occupational "choice." As we've shown above, the loss of both manufacturing and military jobs in the U.S. came at a cost to men in particular. On the flip side, the growth in jobs in health care will disproportionately benefit those more likely to work in health care, in this case, women.

Figure J illustrates the occupations expected to gain the most jobs, in percent terms, between 2024 and 2034 (BLS 2025a), as well as the share of women in those four occupations in 2024. The industries shown are expected to grow at least twice as fast as the average rate of 4%.

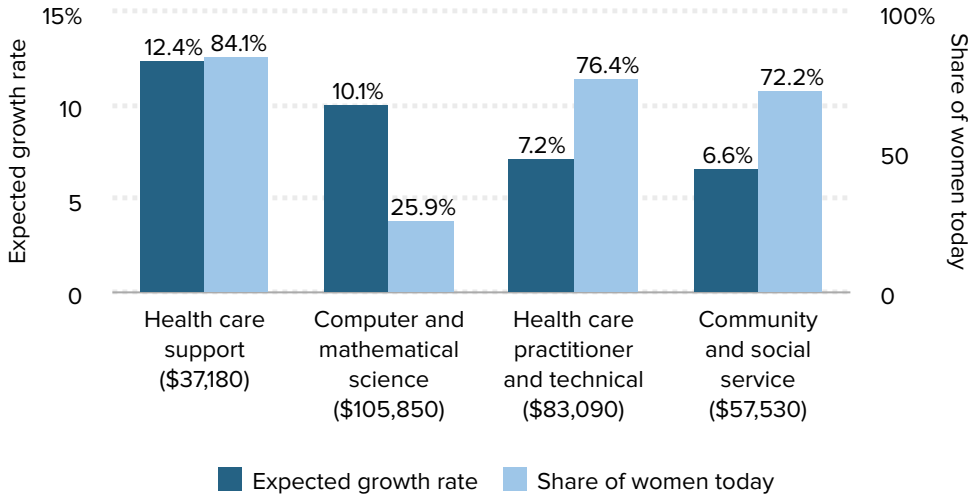
Three of the four fastest-growing occupation groups are dominated by women. The fastest-growing occupation group over the next 10 years—health care support occupations—is expected to grow by 12.4% and is comprised of jobs that pay lower-than-average wages. The median wage in health care support occupations is about three-fourths the median wage overall ($37,000 versus $49,000). Currently women make up about 84% of workers in health care support occupations. Low pay is both a cause and effect of occupational segregation. Jobs in which women are overrepresented tend to provide lower pay and fewer benefits than male-dominated occupations do, and wages tend to fall in occupations as the share of women increases (Levanon, England, and Allison 2009).

For workers of any gender to enter those faster-growing occupations, those jobs need to be better. That means better pay, better working conditions, and better benefits. Stronger labor standards, such as a higher minimum wage and overtime protections, can improve those jobs and make them more appealing to a broader range of workers. Increased unionization can also improve pay in those jobs. On average, workers in unionized jobs are paid about 12.8% more than workers in nonunion jobs (EPI 2025c) A key reason jobs in manufacturing could support a middle-class lifestyle was the high unionization rates. There's no reason currently low-paid health care support occupations couldn't enjoy such conditions. The number and share of unionized workers in health care support jobs has recently increased, and their wages are higher than those of their nonunion counterparts (BLS 2025b; BLS 2025c).

Figure J

Women are more likely to work in the fastest-growing occupations, though wages are relatively low

Expected growth rate and average wage, four fastest-growing occupations, 2024–2034, and share of women in each occupation, 2024



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Notes: Occupation shares are for the civilian noninstitutional population, ages 25 to 54. Expected growth rate of cccupations is expectations of the overall labor market.

Sources: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org. Bureau of Labor Statistics (BLS), Employment Projection, Table 1.1, Last modified August 28, 2025.

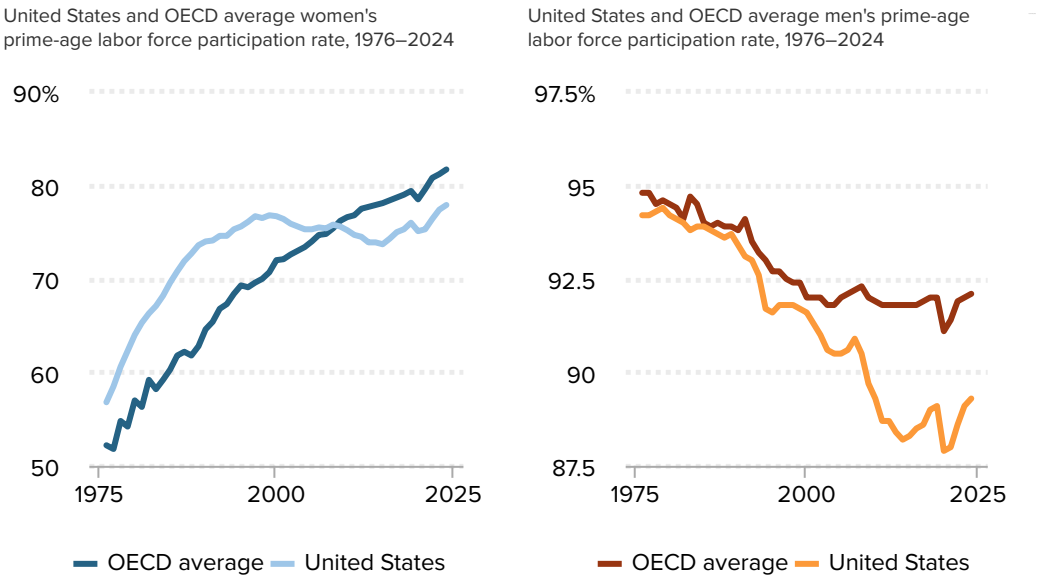
Labor force participation is more resilient in peer countries

Figure K compares the United States with the OECD average prime-age labor force participation, 1976–2024, women on the left and men on the right. While they display similar overall trends at the endpoints—upward for women and downward for men—there are some notable differences. In the OECD countries, men's participation also fell between 1976 to the early 2000s, but the losses tapered off quickly, and today, participation remains around its 2000 level. In the United States, men's participation continued to drop, most notably during the Great Recession and prolonged recovery before starting its upward climb as the economy expanded.

While it is the case that many of our peer countries in the OECD also experienced downturns, particularly in the Great Recession, their labor force participation rates did not fall as far, largely due to different policy responses. Policies such as work sharing and time banking that provide support for workers to stay on the payroll helped blunt the impact of the Great Recession in places like Germany, which saw its unemployment rate tick down at the same time the rate in the U.S. more than doubled (Baker 2018).

Figure K

Over the past five decades, women's labor force participation grew more consistently in OECD countries than in the U.S., while U.S. men's participation saw sharper declines relative to OECD peers



Notes: Data include the civilian non-institutional population. "Prime age" refers to ages 25 to 54. The y-axes differ across charts to best illustrates the levels and trends for each group. OECD countries include Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkiye, the United Kingdom, and the United States.

Source: EPI analysis of OECD data.

Women's labor force participation never stopped its upward rise in the OECD average, even while it softened in the United States following 2000. The steep gains in participation in the U.S. tapered off significantly, while it continued to rise in the OECD until today. The policy environment around work for women is quite different, particularly in Western European countries, which have stronger family leave and child care supports.

There is meaningful evidence that the lack of work-family policies and relatively sparse care infrastructure in the U.S. depresses women's labor force participation. In 1990, out of 22 OECD countries, the U.S. ranked 6th for women's prime-age labor force participation, but by 2010 had fallen to 17th place. The lack of family-supportive policies in the U.S., such as paid parental leave and publicly provided child care, can explain 29% of the decline in the U.S.'s ranking of female LFP relative to other OECD countries (Blau and Kahn 2013).

In the subsequent 15 years, the gaps between policies in other OECD countries and the U.S. have typically widened. Compared with other high-income OECD countries, the U.S. is now even more of an outlier on nearly every workplace policy that could help boost labor force participation among workers with family responsibilities.

Since 2010 the total amount of paid parental leave available to two parents in OECD countries has increased from an average of 58.1 weeks to 64.6 weeks (OECD 2024). Yet the United States remains an extreme outlier and is one of the only countries in the world that does not guarantee workers the right to any form of paid parental leave. Across the other 37 OECD countries, mothers are eligible for an average of more than one year (53.5 weeks), and fathers are eligible for more than three months (13 weeks) of paid leave.

Families in the United States also pay more on average for child care than families in other OECD countries. In the U.S., a single parent paid the average wage would need to spend 40% of their wages to pay for center-based care for two toddlers—about 5 times the cost burden (8%) for the OECD, on average (OECD n.d.). And while net costs increased for U.S. families, they declined in most other OECD countries, with the overall OECD average dropping from 15% to 8% between 2004 and 2023.

The cost burden is much greater in the U.S. compared with other countries where child care fees are similarly high or higher because the U.S. does not provide meaningful benefits like child care allowances or fee rebates to help families reduce their financial costs. While there are tax credits that allow some working parents to write off child care expenses, not all families qualify, and the overall impact on net costs is minimal.

The share of GDP the United States spends on early childhood education and care has declined since 2010, while the OECD average has increased (OECD Social Expenditure Database n.d.). In 2021, the last year with complete data on all 38 OECD countries, U.S. spending (0.3% of GDP) was less than half the OECD average (0.7%).

Policies related to remote work and workplace flexibility—such as the ability of workers to alter their start and stop times—were not part of the original analysis conducted by Blau and Kahn (2013). However, flexibility and remote or telework options have been identified as important policies to support labor force participation, particularly among mothers post-2020. As of April 2024, 25 of the 38 OECD countries had laws in place allowing workers to request flexible schedules, remote work, or both (World Bank 2024).

The 2019 Work-Life Balance Directive[2] created a right for workers in the European Union to request flexible work arrangements, including remote work, to better coordinate work with family caregiving responsibilities. The law does not guarantee that employers will grant approval to every request, but they are required to seriously consider requests for flexibility and must provide reasons for refusing requests. In the United Kingdom, workers' rights to request flexible work arrangements were expanded through the Employment Relations (Flexible Working) Act 2023[3]. Workers in the U.K. now have a legal right to request flexibility starting from their first day of employment rather than having to wait 26 weeks before making the request as they did previously.

In the United States, workers do not have an explicit legal right to request remote work or workplace flexibility, and employers are not required to consider such requests when they are made. Although the data are not conclusive, there are indications that increased access to telework during and after the pandemic enabled greater labor force participation, including among mothers of young children. Broadening access to flexibility and remote work would likely further increase entry or reentry into the labor force among

workers with caregiving responsibilities, as well as supporting continued participation for current workers.

Investing in children is a long-run strategy to increase labor force participation in the future

Previous sections noted the sharp increase in college attainment among the U.S. population in recent decades and also noted that college graduates saw much slower rates of declines in labor force participation than noncollege workers did. The public sector has supplied the majority of financing for higher education in the United States for the entire post-World War II period. In short, the boost to labor force participation (and economic growth generally) supplied by higher education was a policy choice.

Policy choices about how prepared future generations will be to participate in the labor force are not just confined to education spending (though that is obviously important as well). Investing in children by supporting their basic needs such as food, medical care and child care has been shown to have demonstrable long-term effects on health and economic sufficiency. These, in turn, support attachment to the labor market. Early childhood is a sensitive period, and investments in children tend to have large benefits as they age (Cunha and Heckman 2007; Heckman 2008). Additionally, a stronger welfare state raises the income and resources of a child's family (Ruhm and Waldfogel 2012). Importantly, these benefits tend to outweigh the costs of the program or any potential impacts on the parents (Aizer, Hoynes, and Lleras-Muney 2022).

Long-term studies have tracked children in households with access to food stamps (SNAP), early childhood education, and Medicaid to assess the impact of these programs on these children as adults. With respect to food stamps, Hoynes, Schanzenbach, and Almond (2016) found that access to food stamps for households with children led to statistically significant improvements in measures of metabolic health when they were adults. Moreover, researchers found positive impacts of receiving food stamps on economic sufficiency (high school completion, use of food stamps, and earnings), with statistically significant increases among adult women who receive food stamps. Bailey et al. (2024) linked the 2000 Census and 2001–2013 American Community Survey to information from Social Security to examine how SNAP program rollouts from 1961–1975 impacted children as adults. They found that children with access to food stamps before age 5 have better outcomes as adults in the form of increased economic self-sufficiency (3% standard deviation increase), human capital (6% SD increase), quality of neighborhood residence (8% SD increase), and a 1.2-year increase in life expectancy.

Several studies have also documented the long-run impact of Medicaid with implications for labor market participation. Miller and Wherry (2019) studied infants who gained access to Medicaid *in utero* via their mother's prenatal coverage. They find that infants with prenatal coverage had lower rates of chronic health conditions as adults, fewer

hospitalizations, and increased high school graduation rates. Thompson (2017) examined the long-term impact of Medicaid access and found that each additional year of Medicaid eligibility during childhood improved overall adult health (self-score evaluations) and reduced chronic conditions and asthma prevalence as adults. Given that disability and chronic health conditions are some of the main reasons that individuals stay out of the labor force, these studies show that access to Medicaid as a child can promote the conditions that would lead to labor force attachment.

Finally, Brown, Kowalski, and Lurie (2020) use tax data to estimate the long-term impact of Medicaid eligibility in childhood on a variety of outcomes measured at ages in early adult life. They find that eligibility for Medicaid during childhood increased college enrollment rates, delayed fertility, reduced mortality, and reduced dependence on EITC benefits, and led to higher tax payments among adults, suggesting that access to Medicaid has the long-term benefit of improved economic self-sufficiency and employment.

While the U.S. doesn't have a national pre-K early-childhood program, studies of individual programs show promising results. Chicago's Child-Parent Center Education Program preschool was linked to higher educational attainment and socioeconomic status, a higher likelihood of health insurance coverage, and lower rates of justice-system involvement and substance abuse (Reynolds et al. 2011). Michigan's HighScope Perry Preschool program was linked to fewer arrests, higher earnings, and higher educational achievement and attainment (Schweinhart 2005), and careful cost- benefit analysis estimated that every dollar invested at age 4 yields a return of $60–$300 by age 65 (Heckman et al. 2010). Additionally, studies of state-introduced universal kindergarten programs in the 1960s and 1970s found that this additional early childhood education increased both educational attainment for some groups of students (Cascio 2009, 2010; Dhuey 2011); and labor market outcomes in the form of weeks worked and wages (Dhuey, 2011), suggesting that early childhood education interventions can support labor market attachment.

Studies in Europe have documented the impact of pre-K and early childhood care on long-term outcomes. In Denmark, researchers found that early increased preschool density was positively associated with completed schooling, particularly for daughters of less educated mothers, and later adult earnings (Bingley and Westergaard-Nielsen, forthcoming). In France, researchers found that the large-scale universal preschool program increased test scores, high school graduation rates, and adult wages, with larger effects for children from disadvantaged backgrounds (Dumas and LeFranc 2010). In Norway, an expansion of subsidized child care led to increased educational attainment (more years of schooling, higher rates of college attendance) and labor market participation **(**Havnes and Mogstad 2011).

The role labor force participation rates play in the economic future of the U.S.

Labor force growth is a key element of economic growth more generally. At the most basic level, growth in overall gross domestic product (GDP) over brief periods of time can be proxied as the sum of the growth rates of the labor force and of labor productivity—with productivity defined as the amount of output generated in an average hour of work in the economy. Given this, every percentage point rise or fall in the growth rate of the labor force translates one for one into a corresponding change in overall GDP growth.

In coming decades, the question that matters more than any other for projecting labor force growth for the U.S. economy is the pace of net immigration. For example, the Congressional Budget Office projects that the U.S. labor force will grow by just under 7% from 2025 to 2035 (CBO 2025a). But if the influence of immigration flows is removed, this growth will fall to just 0.5% over the entire next 10 years.[4]

There is no realistic scope at all for changes within U.S.-born labor force participation rates to fundamentally change this and lead to significant increases in the labor force over the next decade. Most importantly, the U.S.-born population is aging fast. Over the next 10 years the share of the U.S. adult population over the age of 65 will rise by another 4 percentage points (to over 27%). Given the gap in labor force participation rates for workers aged 65–74 and those under the age of 65, this translates into a reduction in the overall labor force participation by roughly a full percentage point over the decade—a powerful headwind to growth.[5]

In theory, the CBO has taken some account of the fact that major headwinds to growth in prime-age participation rates over the past decade or so should likely reverse (or at least, dial down) in the next 10 years. These headwinds include excess labor market slack, the stock of prime-age adults with some spell of incarceration in their past, the prevalence of opioid addiction, and the steady shrinkage of military employment scaled against the civilian workforce. If none of these past headwinds to labor force participation were taken into account in CBO projections, their reversal could conceivably add 1–2 percentage points to prime-age labor force participation rates over the next 10 years. But, again, this doesn't come close to rivalling the potential effects of changes in net immigration, and CBO has likely accounted for a number of these influences in their projections, at least in part.[6]

If one of the more ambitious long-run strategies for boosting future labor force participation highlighted in the previous section was undertaken (large investments in child health, nutrition, and education for example), these effects could conceivably add another percentage point to labor force participation rates, but only at a quite long time horizon (well over 10 years).[7]

One upshot of the dominance of immigration flows in conditioning future labor force

growth and the continued downward pressure on labor force growth imposed by the aging of the U.S.-born population is that anybody promising large increases in GDP growth in coming years without calling for higher rates of immigration will have a very hard time fulfilling this. Again, every percentage point decline in the growth rate of the labor force subtracts a percentage point from GDP growth, and changes in labor force growth in the coming decade will be driven near entirely by immigration inflows.

Of course, GDP growth is (roughly) the sum of growth in the labor force *plus* the growth of productivity. In theory, a slower growth rate of the labor force could be overcome by a surge in productivity growth, and overall GDP growth could still rise. However, productivity growth over the past century in the U.S. economy has fluctuated with a relatively narrow band—essentially between 1% and 2% annually. Since the 1960s, spells of productivity growth over 2% have been rare—just the late 1990s and early 2000s. It is theoretically possible that we are in a stage currently where technological change will accelerate and productivity growth will surge to the higher bands of its historical experience, but this is very hard to bank on. Promises of future growth surges from other technological changes (like robotization in the 2010s) yielded real, but quite modest, productivity growth.

But while productivity growth is unlikely to generate historically fast GDP growth in coming decades, it is the most relevant part of the growth equation to focus on. A higher GDP driven by a larger labor force does not necessarily raise living standards. It is productivity growth alone that makes a country richer over time in the most relevant sense—providing the potential for higher living standards *per person*.

By far the most substantive way that differing rates of labor force growth can affect Americans' economic future is through the tax and transfer system. The federal government in the U.S. has historically taken on the role of ensuring adequate income in retirement for all citizens by running social insurance programs—Social Security and Medicare—through the nation's fiscal system. Very roughly speaking, current workers are taxed to provide benefits to current retirees. As the share of the population that is retired rises relative to the stock of current workers, this means a higher share of workers' output needs to be devoted to providing income for retirees.

This need not imply any pronounced economic pressure. Productivity growth means that even if a rising *share* of workers' incomes is devoted to social insurance for current retirees that workers' net-of-tax income *levels* can still rise steadily over time. But this demographic angle of the large social insurance programs run by the federal government does pose potential political challenges. These political challenges could well be lessened by policy decisions that keep the ratio of current workers to current retirees higher than it otherwise would have been—and here is where issues of labor force participation could matter.

Conclusion

Labor force participation is both an input and a consequence of a healthy economy. While there is no ideal labor force participation rate that policymakers should target, they should

target any barriers that are keeping willing workers from being able to actively search for work. These barriers include too-slack labor markets stemming from macroeconomic policy failures; labor market discrimination; insufficient investment in workers' health, skills, and credentials; and a failure to make investments needed to enable parents with young children to also participate meaningfully in the labor market.

Outside of immigration, however, the changes to labor force participation that can be leveraged by even quite ambitious policy changes will be relatively small and will not meaningfully change the trajectory of the U.S. macroeconomy over a decade or so. This does not mean they are not worth doing, instead it means that policymakers should be realistic when claiming that future economic growth can be boosted by increasing growth in the U.S. labor force.

Appendix

Appendix Table 1

Labor force participation rates by gender and demographic group, 1979, 2024, and percentage point change

	Men			Women		
Demographic group	**1979**	**2024**	**Ppt. change**	**1979**	**2024**	**Ppt. change**
Race						
White	95.2%	89.9%	-5.3	62.4%	80.0%	17.6
Black	88.9%	84.2%	-4.7	67.4%	80.1%	12.7
Hispanic	93.1%	90.8%	-2.3	52.9%	71.9%	19
Other	91.0%	89.6%	-1.4	65.1%	75.8%	10.7
Nativity *						
Native	91.9%	88.5%	-3.4	76.8%	80.1%	3.3
Naturalized	93.5%	93.2%	-0.3	74.8%	77.7%	2.9
Not a citizen	89.6%	91.5%	1.9	58.4%	63.6%	5.2
Education						
Less than high school	88.4%	81.0%	-7.4	49.2%	52.3%	3.1
High school	95.9%	85.5%	-10.4	63.1%	68.8%	5.7
Some college	95.4%	89.1%	-6.3	66.8%	78.2%	11.4
College	97.5%	93.7%	-3.8	70.8%	83.8%	13
Advanced degree	96.2%	95.1%	-1.1	83.1%	89.1%	6
College/Noncollege						
College	97.0%	94.2%	-2.8	73.9%	85.9%	12
Noncollege	93.6%	86.3%	-7.3	60.3%	71.0%	10.7
Married						
Married	95.9%	93.5%	-2.4	58.0%	75.8%	17.8
Not married	88.0%	84.3%	-3.7	78.9%	80.7%	1.8
Children *						
Under 3	96.6%	95.4%	-1.2	61.9%	67.0%	5.1
Under 5	96.3%	95.3%	-1.0	65.7%	69.5%	3.8
Age						
25–29	94.8%	87.9%	-6.9	65.9%	78.1%	12.2
30–34	96.2%	90.6%	-5.6	62.2%	78.2%	16
35–39	96.2%	91.1%	-5.1	63.6%	78.7%	15.1
40–44	95.2%	90.3%	-4.9	64.1%	78.7%	14.6
45–49	93.3%	89.1%	-4.2	60.5%	78.0%	17.5
50–54	89.6%	86.6%	-3.0	56.5%	75.6%	19.1

Appendix Table 1 (cont.)

Demographic group	Men			Women		
	1979	2024	Ppt. change	1979	2024	Ppt. change
Region						
Midwest	95.5%	90.5%	-5.0	62.3%	81.2%	18.9
Northeast	94.3%	89.4%	-4.9	61.0%	79.9%	18.9
South	93.6%	88.8%	-4.8	62.7%	75.9%	13.2
West	94.4%	89.0%	-5.4	64.1%	77.0%	12.9

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Notes: Nativity data begin in 1994. Data on children begin in 1999.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Appendix Table 2

Population shares by gender and demographic group, 1979, 2024, and percentage point change

	Men			Women		
Demographic group	**1979**	**2024**	**Ppt. change**	**1979**	**2024**	**Ppt. change**
Race						
White	83.2%	55.8%	-27.4	81.1%	54.9%	-26.2
Black	9.7%	13.1%	3.4	11.2%	14.6%	3.4
Hispanic	5.4%	21.6%	16.2	5.6%	20.6%	15.0
Other	1.8%	9.5%	7.7	2.1%	10.0%	7.9
Nativity *						
Native	88.5%	78.0%	-10.5	89.2%	78.6%	-10.6
Naturalized	3.4%	8.9%	5.5	3.4%	9.7%	6.3
Not a citizen	8.1%	13.2%	5.1	7.4%	11.7%	4.3
Education						
Less than high school	22.2%	8.3%	-13.9	22.0%	6.6%	-15.4
High school	32.4%	29.3%	-3.1	42.6%	22.7%	-19.9
Some college	20.8%	23.5%	2.7	19.3%	24.3%	5.0
College	15.3%	25.3%	10.0	12.2%	28.5%	16.3
Advanced degree	9.3%	13.6%	4.3	4.0%	17.9%	13.9
College/Noncollege						
College	24.6%	38.9%	14.3	16.1%	46.4%	30.3
Noncollege	75.4%	61.1%	-14.3	83.9%	53.6%	-30.3
Married						
Married	80.7%	54.7%	-26.0	78.6%	56.6%	-22.0
Not married	19.3%	45.3%	26.0	21.4%	43.4%	22.0
Age						
25–29	22.1%	16.7%	-5.4	21.9%	16.6%	-5.3
30–34	20.0%	17.9%	-2.1	19.8%	17.9%	-1.9
35–39	16.2%	17.4%	1.2	16.4%	17.4%	1.0
40–44	13.9%	17.0%	3.1	14.0%	16.9%	2.9
45–49	13.7%	15.4%	1.7	13.6%	15.5%	1.9
50–54	14.2%	15.6%	1.4	14.4%	15.8%	1.4
Region						
Midwest	26.6%	20.3%	-6.3	26.0%	19.9%	-6.1
Northeast	22.1%	16.7%	-5.4	22.9%	16.8%	-6.1

Appendix Table 2 (cont.)

Demographic group	Men			Women		
	1979	2024	Ppt. change	1979	2024	Ppt. change
South	32.1%	38.1%	6.0	32.3%	39.1%	6.8
West	19.3%	24.9%	5.6	18.8%	24.2%	5.4

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Notes: Nativity data begin in 1994.

Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Appendix Table 3

Employment shares by gender and industry, 1979, 2024, and percentage point change

	Men			Women		
	1979	2024	Ppt. change	1979	2024	Ppt. change
Agriculture, mining, forestry and fisheries	5.4%	2.3%	-3.1	2.0%	1.4%	-0.6
Communications and utilities	3.8%	3.5%	-0.3	2.4%	1.7%	-0.7
Construction	10.3%	13.2%	2.9	1.3%	1.9%	0.6
Educational	5.3%	5.1%	-0.2	14.5%	13.8%	-0.8
Entertainment and recreation	3.2%	6.6%	3.4	6.9%	7.2%	0.3
Finance, insurance and real estate. Business, auto, repair, and other professional services	12.2%	25.0%	12.9	14.7%	21.8%	7.1
Manufacturing, durable goods	18.8%	8.7%	-10.1	8.9%	3.4%	-5.5
Manufacturing, nondurable goods	9.7%	4.1%	-5.6	9.0%	2.9%	-6.1
Personal services, including private household	0.9%	0.9%	-0.1	4.3%	3.4%	-0.9
Public administration	7.0%	5.5%	-1.5	4.6%	5.3%	0.7
Retail trade	8.7%	9.0%	0.3	11.6%	8.8%	-2.8
Social Services	0.5%	0.7%	0.2	1.8%	3.9%	2.1
Transportation	5.8%	7.4%	1.6	2.0%	2.9%	0.9
Wholesale trade	5.3%	2.6%	-2.6	2.5%	1.3%	-1.2
Hospital and medical	3.1%	5.4%	2.3	13.6%	20.3%	6.7

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Source: EPI analysis of the Current Population Survey (CPS) basic monthly microdata, EPI Current Population Survey Extracts, Version 2025.6.11, https://microdata.epi.org.

Acknowledgments

The authors thank Katie deCourcy and Stevie Marvin for research assistance and Grace Park for editing. This project was made possible by financial support from the Peter G. Peterson Foundation.

Notes

1. We should note that this change in employment shares by skill- or credential-grouping does not predict at all accurately any related change in wages. In short, one can believe that changing employment shares by occupation—even those driven by technological changes—fail to move relative wages or inequality in any significant way, and that non-relationship between employment and wage changes by occupation is validated in the data (see Mishel, Schmitt, and Shierholz 2013).

2. Council Directive 2019/1158, 2019 O.J. (L 188), 79–93.

3. The Employment Relations (Flexible Working) Act 2023, c. 24 (UK), https://www.legislation.gov.uk/uksi/2024/438/made.

4. Authors' analysis is based on information in CBO 2025a, b. The size of the over-19 labor force over the next decade is provided directly in CBO 2025b. This data also provide the share of growth in the over-19 population that is accounted for by immigration. To obtain the counterfactual growth, we just removed the portion of growth associated with immigration each year and recalculated the level of the labor force for each year in the next decade.

5. Numbers in this paragraph are based on authors' analysis of data in CBO 2025a, b. CBO 2025b reports that the share of the over-64 population will rise as a share of the total adult population by almost exactly 3 percentage points between 2025 and 2035. Currently, the LFPR for workers between the ages of 65 to 69 is almost exactly 30 percentage points lower than for workers between the ages of 55 to 64. Multiplying these together (which gives 0.9%) should give a very rough sense of the downward pressure on labor supply stemming from aging.

6. Schmitt and Warner (2011) estimated that the scarring effect of incarceration could reduce the employment-to-population ratio of men by between 0.6 to 2.6 percentage points by 2008. Given that the stock of incarcerated men has fallen by roughly 20% since its highest point (and a bit more than this as a share of the population), this penalty going forward could have been reduced by 0.15 to 0.6 percentage points. In regard to opioids, given estimates that rising opioid use throughout the 2000s could have reduced labor force participation rates by as much as 1 percentage point, any leveling off of this could remove a powerful headwind to labor force growth, and any affirmative reduction in the incidence of opioid addiction should, in theory, potentially boost labor force growth.

7. Most estimates of the effect of early childhood investments—whether it be early education, health, or nutritional investments—report the effect on earnings of exposed children when they become adults. Assuming a package of investments in today's children were able to boost their earnings by 5% when they became adults (which seems plausible given that early childhood educational investments alone have been estimated to increase annual earnings of exposed children by over

20%, and the share of today's children not currently receiving high-quality early childhood education is estimated to be over half of all children (see Lynch and Vaughul 2015)). If increased labor force participation accounted for a fifth of this total earnings effect (as opposed to lower unemployment rates, higher hours worked during a year, and higher hourly wages), then a range of estimates would indicate that these investments could boost the adult labor force participation rates of today's children by roughly a percentage point. It seems plausible that increased labor force participation could, by itself, explain a fifth of projected future earnings. For example, annual earnings of workers with a college degree are roughly 60% higher than with only a high school degree. This 60% difference can be very roughly expressed as the sum of differences in labor force participation, unemployment rates, hours worked per year, and average hourly earnings. Labor force participation rates for workers with a bachelor's degree or greater are roughly 12% higher than for workers with only a high school diploma , which is roughly a fifth of the total difference in annual earnings.

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