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State of Working America Wages 2022

Low-wage workers have seen historically fast real wage growth in the pandemic business cycle

Policy investments translate into better opportunities for the lowest-paid workers

Report • By Elise Gould and Katherine deCourcy • March 23, 2023

What this report finds: Between 2019 and 2022, low-wage workers experienced historically fast real wage growth. The 10th percentile real hourly wage grew 9.0% over the three-year period. This tremendous real wage growth at the lower end of the wage distribution was exceptional, significantly faster than in any other business cycle peak since 1979. Nevertheless, low-wage workers, who are disproportionately women and Black and Hispanic, continue to suffer from grossly inadequate wages: The 10th-percentile wage in 2022 was $12.57, or $26,145 annually for a full-time worker.

Why it matters: Policymakers responded to the pandemic recession with actions that made a real difference in people's lives: Wages grew for those who needed it most. Thoughtful policymaking going forward can help ensure that low-wage workers continue to see improvements in their standard of living.

What we can do about it: The recent gains in low-end wage growth may be short-lived if policymakers curtail the recovery. The Federal Reserve should

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refrain from raising interest rates too fast in the name of controlling inflation. Even a "mild" recession resulting from these actions will do significant harm to low-wage workers and their families. In addition, policymakers should:

- raise the federal minimum wage;
- make long-term investments in our unemployment insurance system;
- strengthen and enforce labor standards; and
- remove obstacles to workers forming unions.

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Over the past 40 years, low- and middle-wage workers in the U.S. labor market have experienced only a few short years of strong growth in real (inflation-adjusted) wages. The current business cycle is a notable exception for the lowest-paid workers in our economy. Even in the face of rising prices, low-wage workers have experienced historically fast real wage growth.

Large policy investments, combined with a tight labor market, made these strong gains possible. Women and Black and Hispanic workers have particularly benefited. But these workers still face steep wage gaps relative to men and white workers. And the nation's lowest-paid workers still receive wages that are inadequate to meet most families' basic needs. Policymakers need to strengthen labor standards so that workers can lock in the gains made and continue to build on them, even in weaker labor markets.

Wage growth was strongest for low-wage workers over the last three years

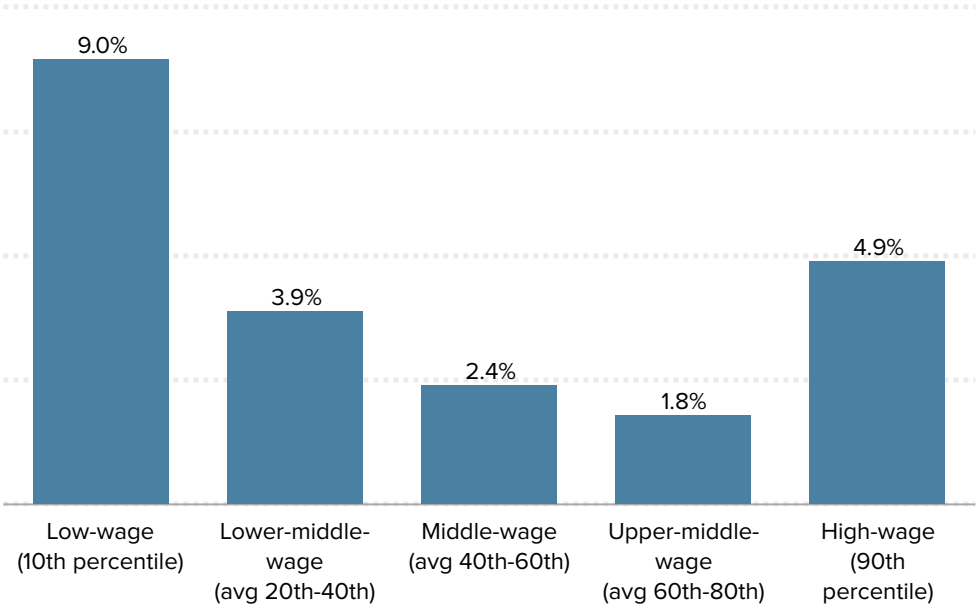
Our analysis focuses on changes in real wages between 2019 and 2022. In this report, we largely ignore what happened in the intervening years—2020 and 2021—given labor market dynamics that caused dramatic swings in job losses and gains.[1]

We divide the wage distribution into roughly five groups to uncover recent wage trends at different wage levels. **Figure A** displays wage growth at the 10th percentile ("low-wage"), the average of the 20th–40th percentiles ("lower-middle-wage"), the average of the 40th–60th percentiles ("middle-wage"), the average of the 60th–80th percentiles ("upper-middle-wage"), and the 90th percentile ("high-wage") using Current Population Survey (CPS) Outgoing Rotation Group microdata (EPI 2023a). See the appendix for more

Figure A

The lowest-wage workers had the strongest wage growth during the pandemic

Real wage growth across the wage distribution, 2019–2022



Notes: Low-wage is represented by the 10th percentile and high-wage is represented by the 90th percentile. The lower-middle, middle, and upper-middle-wages are the averages of the 20th–40th percentiles, the 40th–60th percentiles, and the 60th–80th percentiles, respectively.

Source: EPI analysis of the Current Population Survey Outgoing Rotation Group microdata, EPI Current Population Survey Extracts, Version 1.0.37 (2023), https://microdata.epi.org.

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information about why and how we selected these data measures and their robustness to our conclusions throughout this report.

Real wage growth at the 10th percentile was exceptionally strong—even in the face of high inflation

Between 2019 and 2022, hourly wage growth was strongest at the bottom of the wage distribution. The 10th-percentile real hourly wage grew 9.0% over the three-year period. When we look across the wage distribution, we see wage growth declining for each successive wage group until we reach the high-wage group. Compared with the 9.0% wage growth at the bottom, growth was less than half as fast for lower-middle-wage workers (3.9%) and less than one-third as fast for middle-wage workers (2.4%) between 2019 and 2022. Upper-middle wages grew even more slowly at 1.8% over the three-year period, while the 90th-percentile wage grew 4.9%—faster than the middle wages, but not as fast as the 10th-percentile wage.

Faster wage growth at the bottom led to wage compression

Because wages grew much faster at the 10th percentile than at the other four points we measure within the 20th to 90th percentiles, wage compression occurred. These findings—disproportionately strong wage growth at the bottom leading to wage compression—are consistent with the findings of other recently released research (Autor, Dube, and McGrew 2023).

However, the wage compression shown here is very much isolated to the bottom 90% of the wage distribution. Very-high-end (top 1% and top 0.1%) wages rose much faster than bottom 90% wages through 2021.

The very top continues to amass larger shares of the overall wage pie

While our analysis finds fast wage growth at the 10th percentile and wage compression within the bottom 90% of the wage distribution, highly unequal wage growth has led the very top to amass a greater share of the overall earnings distribution, contributing to worsening inequality.

Changes at the very top of the wage distribution cannot be measured using the CPS, but Social Security Administration data reveal that between 2019 and 2021, annual earnings of the top 1% and top 0.1% rose 16.1% and 29.2%, respectively, while the bottom 90% experienced an overall loss of 0.2% (Gould and Kandra 2022b). Comparing the share of earnings of the bottom 90% with that of the top 5% in 2021, the bottom of the wage distribution, which is 18 times as large as the top, collected just 58.6% of total earnings, while the top earned almost 30%.

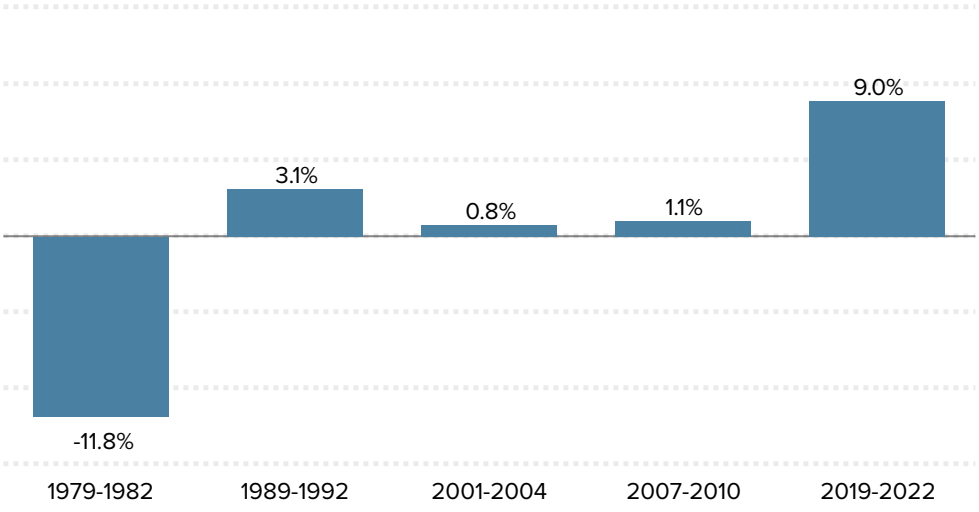
The bounceback low-wage workers experienced was stronger than in any business cycle since 1979—and smart policy was a key factor

Figure B shows just how exceptional this recovery has been in achieving strong wage growth for low-wage workers. The figure presents the real changes in the 10th-percentile wage three years from the prior peak in each business cycle since 1979. Wage growth in the current business cycle is nearly three times as fast as the next closest period over the last 40 years.

Figure B

Low-wage workers have experienced stronger-than-usual wage growth in the pandemic business cycle

Real wage changes at the 10th percentile, three years from prior peak, in current and last four business cycles, 1979–2022



Source: EPI analysis of the Current Population Survey Outgoing Rotation Group microdata, EPI Current Population Survey Extracts, Version 1.0.37 (2023), https://microdata.epi.org.

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Growth for low-wage workers was driven by smart policy decisions

The fast growth for low-wage workers over the last three years didn't happen by luck: It was largely the result of intentional policy decisions that addressed the pandemic and subsequent recession at the scale of the problem. Policymakers learned from the aftermath of the Great Recession, in which the pursuit of austerity led to a slow and prolonged economic recovery.

Several large spending bills were passed in the first year of the pandemic, which provided enhanced and expanded unemployment insurance, economic impact payments, aid to states and localities, child tax credits, and temporary protection from eviction, among other measures (Gould and Shierholz 2022). These actions provided relief to workers and their families to help them weather the recession. These measures also fed the surge in employment, which gave low-wage workers better job opportunities and leverage to see strong wage growth.

A tightening labor market further drove wage gains for low-wage workers

As unemployment continued to drop over 2021–2022, it further bolstered workers' leverage. Low unemployment means that workers are relatively scarce, which requires employers to work harder to attract and retain workers and lessens their discretion to discriminate without facing a profitability penalty. In low-unemployment labor markets, lower-wage and historically marginalized workers experience better labor market outcomes and faster wage growth (Bivens and Zipperer 2018; Wilson and Darity 2022).

'Severed monopsony' also boosted low-wage workers' leverage

In addition, the sudden loss of millions of low-wage jobs at the start of the pandemic significantly reduced the frictions that tie workers to particular jobs—that is, the barriers that in normal times keep workers from searching for better employment opportunities. These barriers include, for example, the lack of time or other resources to engage in a job search or a lack of awareness of better opportunities (Manning 2003; Jäger et al. 2021).

Bivens (2023) coined the term "severed monopsony" to describe this phenomenon of reduced frictions. Once the employer-employee ties have been severed, employers' power to rehire those same workers at the same pay and working conditions is greatly reduced. The workers may have moved out of the area, moved on to better jobs, or become more aware of other opportunities and less willing to settle for what their former employer offers.

In the pandemic recovery, this phenomenon opened up opportunities and led to increases in hires and quits ("churn") in the low-wage labor market. This increased churn—on top of a tightening labor market and the need to incentivize workers to take "front-line" jobs with pandemic exposure—increased low-wage workers' leverage, which led to faster wage growth.[2]

Middle-wage workers didn't see as much wage growth as low-wage workers—but their wage growth was still faster than in previous business cycles

Middle-wage workers—workers between the 40th and 60th percentiles of the wage distribution—didn't experience similar gains in the recent recovery. This is probably at least in part because they did not benefit from widespread severing of monopsony power. In addition, it's possible that a prolonged recovery for public-sector workers has been a drag weighing on middle-wage employment and wage growth. The public-sector jobs

shortfall—particularly in state and local employment—is about the same size as the shortfall in leisure and hospitality, which suffered far greater losses in the pandemic than other industries; as of February 2023, both sectors have about 400,000 fewer jobs than when the pandemic began (Gould 2023).

However, even the slower middle-wage growth over the last three years was much faster than that found in the four prior business cycles (EPI 2023a). Policy investments helped middle-wage workers—as they helped low-wage workers—with improved unemployment insurance, economic impact payments, and child care tax credits, among other provisions.

Higher minimum wages can lock in the gains made by low-wage workers

The minimum wage is a crucial labor standard that serves as a valuable wage floor, bolsters the bargaining power of low-wage workers, and narrows wage gaps between workers by gender, race, and ethnicity. Strong labor standards—such as the minimum wage—work hand-in-hand with tight labor markets to provide faster wage growth for lower-wage workers. Higher minimum wages lock in the gains made in tight labor markets and bolster low wages in downturns as well as in expansionary periods.

While the federal minimum wage has been stuck at $7.25 an hour since 2009, over half of states have increased their minimum wage since then (EPI 2023c). We can see if there is a relationship between these state-level minimum wage increases and low-end wage growth by comparing differences in wage growth between states with and without changes to their minimum wage.

In past years, state minimum wage increases have done more to bolster wages at the bottom

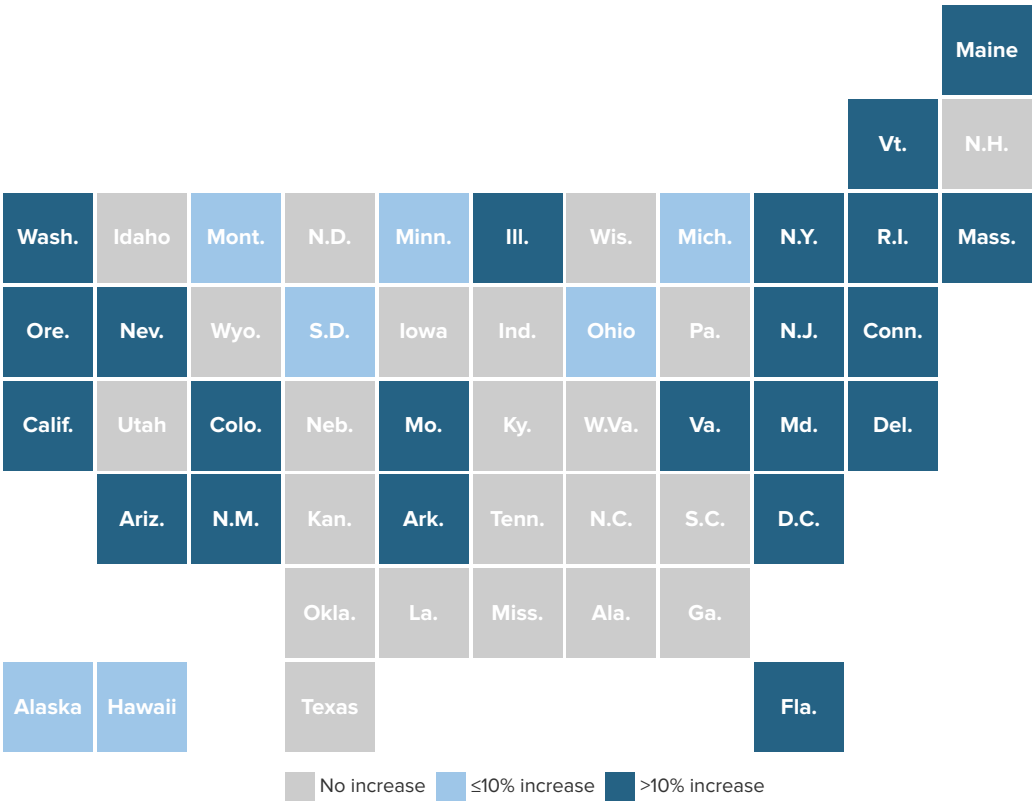
Between 2016 and 2017, 10th-percentile wage growth was twice as fast in states with minimum wage increases as in states without (Gould 2017); wage growth was 2.5 times as fast for a woman at the 10th percentile in states that raised their minimum wage compared with a 10th-percentile woman in states that didn't. This growth at the bottom helped to narrow the gender wage gap.

Over the entire period from 2013 to 2019 leading up to the peak before the pandemic recession, low-end wage growth was 17.6% in states that increased their minimum wage at least once over that period, compared with 9.3% in states that didn't (Gould 2020). The differential in wage growth isn't as large when we look at just the period from 2017 to 2019; that's because the labor market was tightening over those two years. When the unemployment rate is low, the minimum wage is less likely to bind—that is, employers already have to pay higher wages to attract and retain workers, so fewer workers are directly affected by minimum wage increases.

Figure C

The minimum wage increased in 28 states and the District of Columbia between 2019 and 2022

States minimum wage increases, by size of increase, 2019–2022



Note: These minimum wage categories are based on changes in the nominal value of the minimum wage, not adjusted for inflation. In states with no changes, their minimum wage fell in real terms.

Source: EPI analysis of state minimum wage laws. See EPI's minimum wage tracker for the most current state-level minimum wage information.

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In the pandemic recovery, state minimum wage increases were less of a factor in wage growth than in previous years

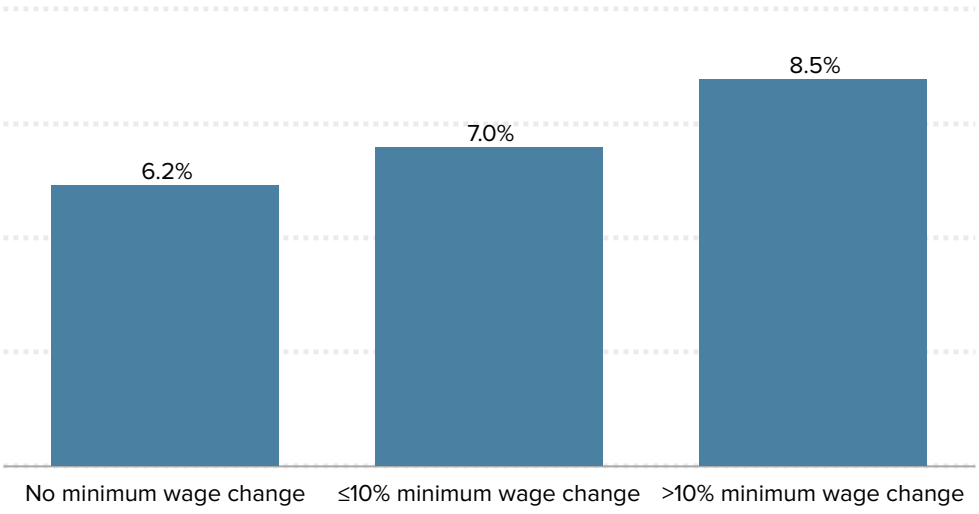
We turn now to the current period. Twenty-eight states and the District of Columbia raised their minimum wages between 2019 and 2022, either through legislation, referendum, or indexing. To analyze the relationship between these state-level increases and wage growth at the bottom, we group all 50 states (plus D.C.) into three categories, as shown in **Figure C**. Light blue states had no minimum wage increase, medium blue states had a small minimum wage increase (10% or less), and dark blue states had a relatively larger minimum wage increase (greater than 10%).[3]

In **Figure D**, we compare real wage increases across these three sets of states. The key

Figure D

Wage growth was strong at the bottom regardless of minimum wage changes

Real wage growth at the 10th percentile among states grouped by presence or size of minimum wage increase, 2019–2022



Notes: Figure C details the list of states in each category. See EPI's minimum wage tracker for the most current state-level minimum wage information.

Source: EPI analysis of the Current Population Survey Outgoing Rotation Group microdata, EPI Current Population Survey Extracts, Version 1.0.37 (2023), https://microdata.epi.org, and EPI analysis of state minimum wage laws.

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result is clear: Low-wage workers experienced fast wage growth in all states, regardless of changes to their minimum wage. Low-end wages grew between 6.2% and 8.5% across the three groups of states.

It is not surprising that differences between states are smaller than what has been seen in earlier years. A tightening labor market on its own leads to stronger wage growth among lower-wage workers (Bivens and Zipperer 2018). Further, as discussed above, enhanced relief measures and reduced frictions boosted low-wage workers' leverage, thereby increasing the 10th-percentile wage across all states regardless of changes in state minimum wages.

In the pandemic recovery, wage compression occurred across the states

We find wage compression in all three sets of states similar to what we find at the national level. That is, wage growth at the bottom of the wage distribution was faster than at the middle of the wage distribution (not shown in chart; EPI 2023a).

Minimum wage increases are crucial to lock in low-wage workers' gains and build on them

We need to lock in the real wage gains that occurred for low-wage workers over the last three years. Increasing the federal minimum wage is the best way to do that. Unfortunately, Congress has failed to increase the federal minimum wage in the last 13 years, and it is now at its lowest value in real terms in 66 years (Cooper, Hickey, and Zipperer 2022).

In response to sustained inaction at the federal level, many states and localities have continued to increase their minimum wages, as 23 states and D.C. did on January 1, 2023 (Hickey and Cooper 2022). More than 8 million workers benefited from those increases in their state's minimum wage. Among those affected, 23.2% are in families with incomes below the poverty line, while another 26.5% have incomes between 100% and 200% of the poverty line (Hickey and Cooper 2022). Some states are even accelerating the pace of minimum wage growth to ensure low-wage workers continue to see increases in their living standards in upcoming years (Cox 2023).

The tight labor market and pandemic measures such as unemployment insurance expansion, economic impact payments, and child tax credits have provided vital gains to low-wage workers. However, these workers need the support of strong labor standards, including a higher minimum wage, to keep from falling behind when the labor market weakens.

Despite historic wage growth, low-wage workers continue to suffer from grossly inadequate wages

Despite the meaningful impact of minimum wage hikes at the state and local levels, wage rates remain insufficient for individuals and families working to make ends meet across the U.S. Federal policy action is needed.

In 2022, the 10th-percentile wage was $12.57. While this was a 9.0% increase from 2019, it is still far from sufficient to make ends meet: Even if that 10th-percentile worker worked full time, their annual pay would be only $26,145. In states that saw increases in the minimum wage between 2019 and 2022, the average 10th-percentile wage was $13.60 in 2022, almost 15% more than in states that saw no minimum wage increase ($11.85).[4]

Even with 9.0% wage growth since 2019, it is still difficult—if not impossible—for a 10th-percentile worker to make ends meet. According to EPI's Family Budget Calculator, whether a worker is making $11.85 an hour or $13.60 an hour, they are still not earning enough to attain a modest yet adequate standard of living—a basic family budget for a single individual with no children—in any county or metro area in the United States (EPI 2023b). In fact, any wage rate below $15 an hour is insufficient to meet a one-person basic

family budget in any county or metro area in the United States (Zipperer and Kamper 2023).

Low-wage workers are disproportionately women and Black and Hispanic

Women and Black and Hispanic workers remain disproportionately represented in the low-wage workforce relative to their shares within the overall workforce due to long-standing patterns of discrimination and occupational segregation (Bahn and Cumming 2020; Wilson and Darity 2022).

As **Figure E** illustrates, women make up 48% of the overall workforce but nearly 58% of the low-wage workforce, which is defined as workers in the bottom 20% of the wage distribution. Similarly, Black and Hispanic workers make up larger shares (by 4 and 6 percentage points, respectively) of the bottom 20% than the overall workforce. The data also show that workers with less than a high school diploma, a high school diploma, or some college are overrepresented in the bottom 20% relative to their shares of the overall workforce (not shown in chart; EPI 2023a).

When we examine the low-wage workforce in terms of who and how many workers in the U.S. were paid less than $15 an hour, the results are astounding: In 2022 more than 20 million workers, or 15% of the workforce, were paid less than $15 an hour (Zipperer 2023). Looking across gender lines, 18% of working women (12.1 million) but just 12% of working men (8.5 million) were paid less than $15 an hour. Black and Hispanic workers were also disproportionately more likely to be paid less than $15 an hour: 20% of Black workers (3.6 million) and 19% of Hispanic workers (5.0 million) were, while only 13% of white workers (10.7 million) were.

The Black–white wage gap narrowed, while the gender gap and the Hispanic–white wage gap did not

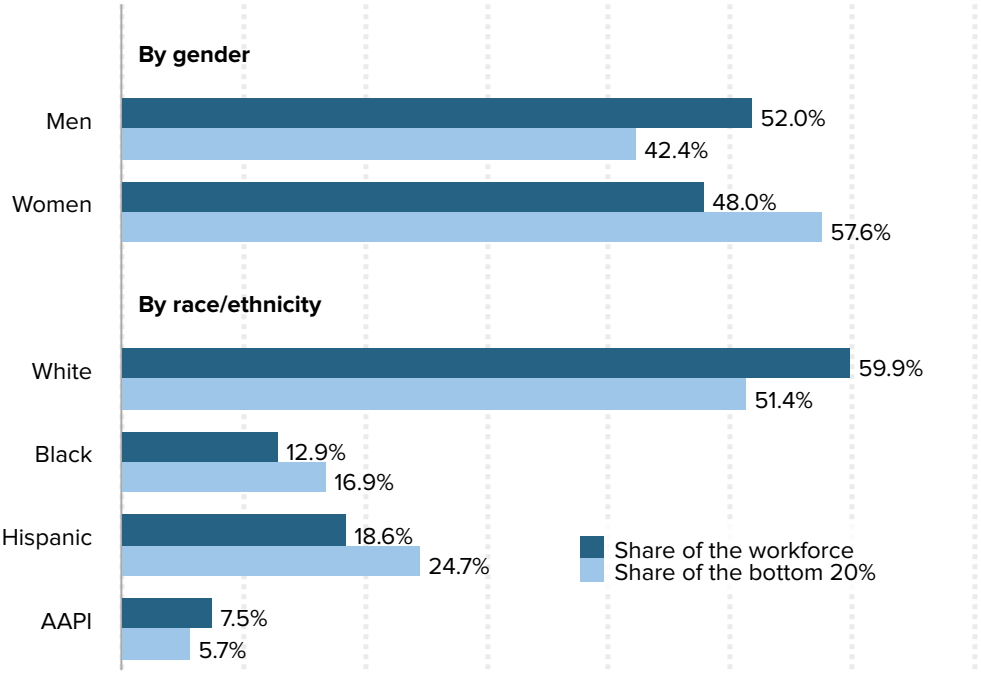
Given the faster wage growth that occurred at the bottom of the distribution, disproportionately impacting women and Black and Hispanic workers, we would expect to see gender and racial wage gaps narrow. However, when we look at the 2019–2022 period, we see that the gender wage gap widened across three measures: the median, the average, and a regression-adjusted average (EPI 2023d).

Over the same time period, the Hispanic–white wage gap also saw no improvements, holding steady between 2019 and 2022.

Figure E

Women and Black and Hispanic workers are disproportionately represented in the low-wage workforce

Shares of the entire workforce and of the bottom 20% of wage earners, by gender and race/ethnicity, 2022



Note: AAPI refers to Asian American and Pacific Islander. Race/ethnicity categories are mutually exclusive (i.e., white non-Hispanic, Black non-Hispanic, AAPI non-Hispanic, and Hispanic any race).

Source: EPI analysis of the Current Population Survey Outgoing Rotation Group microdata, EPI Current Population Survey Extracts, Version 1.0.37 (2023), https://microdata.epi.org.

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However, the Black–white wage gap did narrow across all metrics: For instance, the Black–white wage gap at the median narrowed from 24.4% to 21.5% and the regression-adjusted Black–white wage gap fell 1.7 percentage points from 14.9% to 13.2%. It is possible that the rise in awareness about and overall impact of social movements like Black Lives Matter has had a role in the difference in outcomes between the Black and Hispanic wage gaps between 2019 and 2022.[5] However, this would be extremely difficult to measure.

Policy matters

The recent gains in low-end wage growth may be short-lived if policymakers curtail the recovery. The most immediate threat to the continued recovery is the Federal Reserve raising interest rates too fast in the name of controlling inflation. If the Fed does overshoot

on interest rates, this could cause a recession. Even a mild recession would be highly regressive, hitting the most vulnerable and historically disadvantaged groups the hardest. If the Federal Reserve pushes too hard or moves too fast, only congressional policymakers have the tools to shelter those harmed.

While great strides were made during the pandemic recession and in its immediate aftermath with vital relief and recovery measures, divided partisan control of the House and Senate means that there is not any easy path to countercyclical measures being legislated if a recession hits again soon. It seems the lessons from the pandemic recession have been all but forgotten. Necessary long-term investments in our unemployment insurance system have not been made and many of the relief measures that increased economic security during the pandemic, such as the child tax credits, have long since lapsed.

Policymakers can and should ensure that low-wage workers lock in the gains made over the past three years and continue to increase their ability to make ends meet. We also need policy measures to boost wages for middle-wage workers, such as making it easier for workers to collectively bargain and bolstering public-sector employment.

In short, we need robust wage growth and worker power at the center of economic policymaking. To stem inequality and see healthy wage growth for the vast majority of workers, we need to use all the tools in our toolbox to reverse these policy trends—including prioritizing full employment, strengthening and enforcing labor standards, and removing obstacles to workers forming unions. These policy investments will provide more broadly shared prosperity so that low- and middle-wage workers alike have opportunities to improve their standard of living.

Acknowledgments

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Appendix: Wage measurement

The objective of this report is to measure real hourly wage changes over the current business cycle across the wage distribution. Historically, EPI has measured wages at nine deciles of the wage distribution (10th through 90th) and at the 95th percentile (EPI 2023d). Here we take a slightly different approach, though our findings are robust to alternative methods.

As noted above, EPI typically measures wages across the wage distribution by reporting deciles. Using this method, the 10th-percentile wage is the wage at which 10% of workers are paid less and 90% are paid more. Because wages are often clumped at certain

values—for instance, $15 an hour, or the hourly equivalent of $40,000 a year—we created a function—binipolate—that linearly interpolates to create consistent cutoff wage values (Zipperer and Mokhiber 2020).

One drawback to this method is that, because it measures wages at specific percentiles, it doesn't always give a clear picture of how workers are doing generally at different wide swaths of the distribution. For instance, sometimes trends at the 40th, 50th, and 60th percentiles conflict and therefore make the results harder to interpret. Additionally, we are unable to accurately measure wages and wage changes at the 95th percentile because of top-coding (Gould, deCourcy, and Mokhiber 2022). The Bureau of Labor Statistics will be addressing the top-coding issue in future analyses (beginning in April 2023); however, they will not be adjusting prior years (U.S. Census Bureau 2023).

Our new approach analyzes trends for middle-wage workers using the average wages of the three quintile ranges at the middle of the wage distribution (20th–40th, 40th–60th, and 60th–80th percentiles) rather than focusing on specific percentiles in the middle (e.g., 40th, 50th, 60th). Average wages can provide a better summary measure, particularly if we are interested in how workers in the broad middle are doing. It is also less volatile over time compared with the decile cutoff value method. Clumping at quintile cutoffs is no longer a concern because we are using all the data in the group to form the average and can simply allocate the appropriate share to make the groups of equal size. Making equally sized groups is appealing for consistency over time as well as for reasons outside this particular study.

There is a drawback to this method, however: Average wages at the top and the bottom of the distribution are heavily influenced by some observations that have either extremely high or extremely low wages. At the top of the distribution, the average wage also relies heavily on our estimates of wages above the top code.

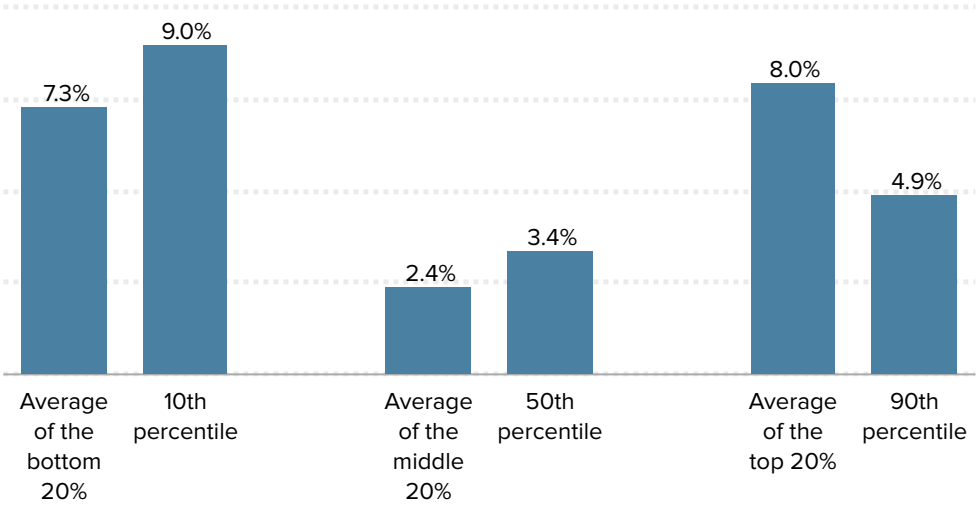
Appendix Figure A compares the real wage growth, from 2019 to 2022, of the 10th, 50th, and 90th percentiles against the average wage growth of the bottom, middle, and top quintiles. Regardless of the method employed, the data show strong wage growth at the bottom and weaker growth at the middle of the distribution. Some very low wages appear to pull down the average of the bottom 20% relative to the 10th percentile. Because of vast inequality in the U.S., the skewed distribution at the very top and faster high-end wage growth pull the top-20% average higher than the 90th percentile. Arguably, the top-20% average is a better measure of high-end wage growth than the 90th percentile, but its reliance on estimates of the top-coded wages makes it less appealing as a form of measurement.

With these considerations in mind, we measure low wages at the 10th percentile and high wages at the 90th percentile. We measure wages of the middle three quintiles using the average wages of the 20th–40th percentiles, 40th–60th percentiles, and 60th–80th percentiles. This approach allows us to avoid the issue of very low and high wages affecting our estimates at the bottom and top of the distribution, and it allows us to obtain a less volatile and better summary measure of how workers in the middle of the distribution are actually doing.

Appendix Figure A

Measurement comparisons between percentiles and average wages of quintiles

Real wage growth at different points in the wage distribution, 2019–2022



Source: EPI analysis of the Current Population Survey Outgoing Rotation Group microdata, EPI Current Population Survey Extracts, Version 1.0.37 (2023), microdata.epi.org.

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Notes

1. In 2020, the bottom dropped out of the labor market as low-wage and low-hours workers lost their jobs in disproportionate numbers (Gould and Kandra 2021; Gould and Kassa 2021). As the recovery took hold in 2021, swings in the composition of the workforce by gender, race/ethnicity, education, work hours, industry, and occupation made it necessary to account for these differences in measuring wage changes in the pandemic labor market (Gould and Kandra 2022a). By 2022, the dramatic compositional shifts in the pandemic labor market had mostly resolved. While leisure and hospitality—a notably low-wage sector—still has the largest employment shortfall relative to pre-pandemic employment and, on average, workers were more educated in 2022 than in 2019, most measurable spikes in the workforce by demographic and job characteristics normalized in the last year. As of mid-2022, payroll employment had returned to its pre-recession level and unemployment rates across race and ethnic groups were close to or even below their pre-pandemic levels.

2. Autor, Dube, and McGrew (2023) make similar arguments about the increased competition for low-wage workers driving wage gains in 2021–2022.

3. These minimum wage categories are based on changes in the nominal value of the minimum wage, not adjusted for inflation. In states with no changes, their minimum wage fell in real terms.

4. EPI analysis of Current Population Survey Outgoing Rotation Group microdata (EPI 2023a). The 10th-percentile wage in each state group is a weighted average of the states' 10th-percentile wages.

5. Despite the lack of legislation, social mores can have lasting impacts on the thoughts, feelings,

and actions of individuals in society (Miller 2017).

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