Economic Policy Institute

The State of American Wages 2016

Lower unemployment finally helps working people make up some lost ground on wages

Report • By Elise Gould • March 9, 2017

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Introduction and key findings

Rising wage inequality has been a defining feature of the American economy for nearly four decades. In 2016, with an improving economy, most workers at all income and educational levels finally began to see an increase in wages. But large gaps in equality by gender, race, and wage level remain, and some of these gaps are increasing.

Rising inequality means that although we are finally seeing broad-based wage growth, ordinary workers are just making up lost ground, rather than getting ahead. The way rising inequality has directly affected most Americans is through sluggish hourly wage growth in recent decades, despite an expanding and increasingly productive economy. For example, had all workers' wages risen in line with productivity, as they did in the three decades following World War II, an American earning around $40,000 today would instead be making close to $61,000 (EPI 2017c). A hugely disproportionate share of economic gains from rising productivity is going to the top 1 percent and to corporate profits, instead of to ordinary workers—who are more productive and more educated than ever. This rising inequality is happening largely because big corporations and the wealthy have been rewriting the rules of the economy, particularly the job market, to stack the deck in their favor. This has prevented the benefits of productivity growth from "trickling down" to reach most households.

The latest data on hourly wages shows that the gap between those at the top and those at the middle and bottom has continued to increase through much of the 2000s. This report details the most up-to-date hourly wage trends through 2016 across the wage distribution and education categories, highlighting important differences by race and gender. By looking at real hourly wages by percentile, we can compare what is happening over time for the lowest-wage workers (those at the 10th and 20th percentiles) with wage trends for the highest-wage workers (those at the 90th and 95th percentiles). What stands out in this last year of data is that the economic recovery appears to finally be reaching a broad swath of American workers. In fact, wage growth in 2016 was more rapid for middle-

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and low-wage workers than for those at the top (defying the longer-term trend of more wage growth at the top). To be clear, there is still substantial work to be done to reach genuine full employment, reduce wage disparities by gender and race, and reverse the damage done to wages by decades-long growth in inequality and wage stagnation. But 2016 was a welcome break from years past—only time and proper policies will tell if this performance is to be repeated in coming years.

Key findings include:

- From 2000 to 2016, wage growth was consistently stronger for high-wage workers, continuing the trend in rising wage inequality.
    - Since 2007, before the Great Recession, the strongest wage growth has continued to be within the top 20 percent of the wage distribution.
    - From 2015 to 2016, wage growth was more evenly distributed among all workers. While strong growth continued at the top, we saw promising growth at the middle and bottom as well. Median wages grew 3.1 percent from 2015 to 2016. The 20th percentile experienced a striking 6.4 percent increase in pay, while the 10th percentile increased 2.9 percent after increasing 3.8 percent the year before.
- While wage inequality has generally been on the rise for both men and women, wage inequality is higher and growing more among men.
    - From 2015 to 2016, men saw the strongest wage growth at the top and bottom of their wage distribution: 6.0 percent growth at the 95th percentile and 4.5 percent and 5.9 percent growth at the 10th and 20th percentiles, respectively. However, the male median wage in 2016 was still lower than it was in 2000 or 2007.
    - Women experienced a far more equal wage distribution and their wage growth from 2015 to 2016 was relatively more broadly shared, with the strongest growth for the second year in a row at the 10th percentile (3.1 percent).
- The gender wage gap at the median has narrowed since 2000, with a typical woman now earning 83 cents on the male dollar, although significant gender wage gaps remain across the wage distribution. The gender wage gap at the top continues to grow and the gap at the bottom also increased slightly over the last year.
    - The regression-adjusted gender wage gap increased slightly from 2015 to 2016 and is currently 22.0 percent.
- From 2015 to 2016, wages of the lowest-wage workers—especially low-wage women—grew most in states that had increased their minimum wage.
    - Overall, wages of workers at the 10th percentile increased 2.9 percent in the last year, but this figure masks drastically different trends by state. In states without minimum wage increases in 2016, the 10th-percentile wage rose 2.5 percent; in states with minimum wage increases in 2016, the 10th-percentile wage rose by 5.2 percent—more than twice as much.
    - Not surprisingly, women, who are more likely to hold low-wage jobs, saw a larger boost in states with minimum wage increases, relative to men (and relative to those in states without minimum wage increases). The 10th-percentile women's

wage grew 6.3 percent in states with a minimum wage increase, compared with 2.5 percent growth in states without a minimum wage increase.

- At every decile and at the 95th percentile, wage growth since 2000 was faster for white and Hispanic workers than for black workers.
    - From 2015 to 2016, Hispanic workers experienced more broadly based wage growth than other groups.
    - From 2015 to 2016, white workers saw stronger wage growth at the bottom of their wage distribution.
    - Despite the fact that black workers saw stronger growth in the bottom 60 percent of their wage distribution from 2015 to 2016, the bottom 60 percent of black workers have seen their real wages decline since 2007, with the exception of those at the median.
- Throughout the wage distribution, the black–white wage gaps are larger today than in 2000; however, in the last year, the gap became slightly smaller at the middle and very top. The Hispanic–white wage gap has likewise shrunk at the middle and top of the wage distribution in the last year, but the wage gap at the top is still below where it was in 2000.
    - The regression-adjusted black–white and Hispanic–white wage penalties have shrunk over the last year, but the black–white gap remains larger today than it was in 2000 while the Hispanic–white gap is narrower than in 2000. In 2000, the Hispanic–white wage gap was larger than the black–white wage gap. In 2016, the reverse is true. The regression-adjusted racial wage gap narrowed much more for men than for women from 2015 to 2016.
- While all educational groups saw wage gains from 2015 to 2016, wages of those with only some college (a category that includes those with associate degrees) remain below their 2000 and 2007 levels.
- Since 2000, wage growth for those with a college or advanced degree was faster for men than for women; while wage growth for those without a college degree was faster for women than for men.
    - The women's wage distribution by educational attainment was more equal, while men's wages continued to pull apart as average wages for men with a high school diploma and some college remained below their 2000 and 2007 levels.
    - While there has been a slow narrowing of gender wage gaps for those with less than a college degree since 2000, gender wage gaps continued to grow among those with a college or advanced degree. At every education level, women are paid consistently less than their male counterparts, and the gap is particularly striking at higher levels of educational attainment.
- Wages for white, black, and Hispanic workers rose for workers at all education levels over the last year, but some groups saw a bigger boost than others.
    - Among white workers, those with a college or advanced degree had the strongest wage growth, and those with only some college or less than a high school diploma still had lower wages than they did in 2007.

- Among black workers, only college and advanced degree holders had higher wages than in 2000, but their wage growth was considerably slower than similarly degreed white or Hispanic workers.
- Black–white wage gaps by education were larger in 2016 than in 2000 for all education groups, while Hispanic–white wage gaps were narrower for workers with less than high school, high school, and college-degree levels of education. At every education level, workers of color were paid consistently less than their white counterparts.

- Over 2000–2016, the boost to wages that comes from earning a college degree increased, but nowhere near fast enough to explain the total rise in wage inequality over that time.
  - Workers with four-year college degrees or advanced degrees have seen stronger wage growth than those with less educational attainment since 2000, 2007, and 2015.
  - While those with college degrees or advanced degrees saw wage growth of 8.5 percent and 6.9 percent, respectively, from 2000 to 2016, educational attainment has not been sufficient to return many workers to where they were before the recessions of the 2000s: the bottom 50 percent of workers with a college degree still have lower wages than they did in 2000 or 2007.
  - The regression-adjusted college wage premium continued to grow in 2016 and has grown since 2000, though at a far slower rate than it did in the 1980s and 1990s. The college premium is the percent by which hourly wages of four-year college graduates exceed those of otherwise equivalent high school graduates. The rise in the college premium has been driven by increases for men, particularly since 2007. From 2015 to 2016, the college premium for women actually fell.
  - The pulling away at the top of the wage distribution cannot be explained by the rising college wage premium; the increase in the college wage premium slowed considerably in the 2000s and is much smaller in magnitude than the rise in the 95/50 wage gap (the gap between the top and the middle).

More broadly shared wage growth from 2015 to 2016 does little to reverse decades of rising inequality

Wage inequality has been rising since the late 1970s—a trend that largely stems from intentional policy choices that have eroded ordinary workers' leverage to secure higher pay (Bivens et al. 2014). These policy choices—made on behalf of those with the most economic power—include allowing the minimum wage to stagnate, eroding workers' rights to bargain collectively, and prioritizing low inflation over low unemployment. Policies such as these have resulted in hourly pay for the vast majority of American workers stagnating

Table 1

Hourly wages by wage percentile, 2000–2016 (2016 dollars)

	Wage by percentile										Wage ratio		
	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th	50th/ 10th	95th/ 50th	95th/ 10th
2000	$8.90	$10.93	$12.64	$14.64	$17.04	$20.20	$23.82	$29.13	$37.92	$48.32	1.9	2.8	5.4
2007	$9.11	$10.95	$12.77	$15.00	$17.43	$20.76	$24.63	$30.30	$40.55	$52.48	1.9	3.0	5.8
2015	$9.08	$10.25	$12.56	$15.08	$17.33	$20.40	$25.21	$31.29	$42.87	$56.88	1.9	3.3	6.3
2016	$9.35	$10.91	$12.91	$15.03	$17.86	$21.00	$25.08	$31.89	$43.86	$57.86	1.9	3.2	6.2
Annualized percent changes											**Wage ratio change**		
2000–2016	0.3%	0.0%	0.1%	0.2%	0.3%	0.2%	0.3%	0.6%	0.9%	1.1%	0.0	0.4	0.8
2000–2007	0.3%	0.0%	0.1%	0.3%	0.3%	0.4%	0.5%	0.6%	1.0%	1.2%	0.0	0.2	0.3
2007–2016	0.3%	0.0%	0.1%	0.0%	0.3%	0.1%	0.2%	0.6%	0.9%	1.1%	0.0	0.2	0.4
2015–2016	2.9%	6.4%	2.8%	-0.3%	3.1%	3.0%	-0.5%	1.9%	2.3%	1.7%	0.0	0.0	-0.1

Note: Sample based on all workers age 18–64. The *x*th-percentile wage is the wage at which *x*% of wage earners earn less and (100 - *x*)% earn more.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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despite growing economy-wide productivity, with economic gains highly concentrated at the top.

Wage growth since the Great Recession has continued to follow this trend: slower growth for most and faster growth for those at the top. **Table 1** includes data from 2000 (the previous business cycle peak), 2007 (the most recent business cycle peak), and the two most recent years of data (2015 and 2016). For a full discussion of EPI's use of the Current Population Survey Outgoing Rotation Group (CPS ORG) data, see EPI's methodology for measuring wages and benefits (EPI 2017a). In the full business cycle from 2000 to 2007, growth was relatively slow overall and relatively unequal; the gains at the 90th and 95th percentiles were higher than at the middle or bottom of the wage distribution. In fact, the middle and the bottom grew at practically the same rate over 2000–2007 as they did from 2007 to 2016. The ratio of wages at the 50th and 10th percentiles of the wage distribution (i.e., the 50/10 wage gap, or the gap between the middle and the bottom) has remained fairly constant from 2000 to 2016, while the gaps between the 95th percentile and the 50th (the top and the middle) and the 95th and the 10th (the top and the bottom) have grown.

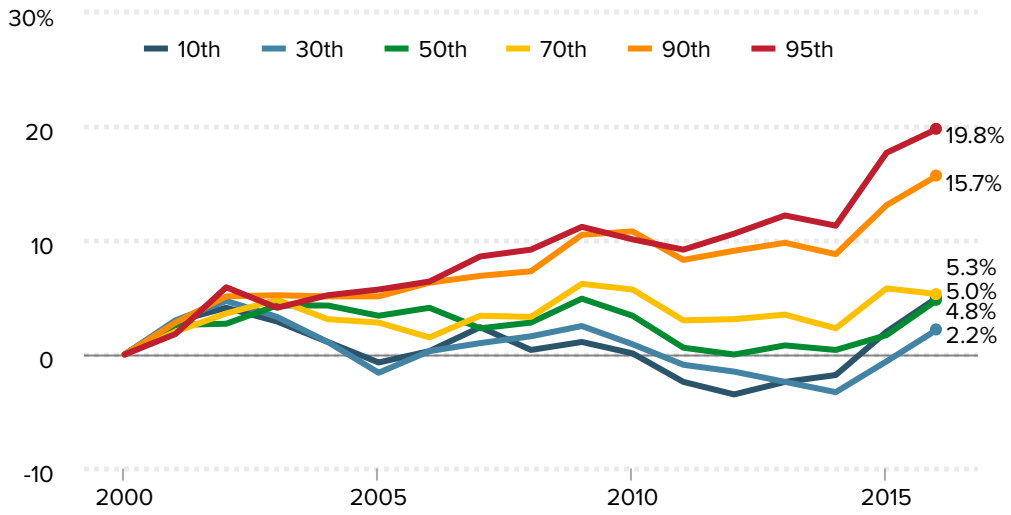
Wage inequality has generally been on the rise, but wage growth was more evenly distributed from 2015 to 2016. While strong growth continued at the top, we saw a pickup in growth at the middle and bottom as well. The median wage grew 3.1 percent from 2015 to 2016, marking the first year that the median wage finally exceeded its 2007 level. This increase kept the 95/50 wage ratio from growing in the last year.

At the same time, the 20th percentile experienced a striking 6.4 percent increase in pay, but remained just barely below the level it reached in 2007 and 2000. The 10th percentile continued to see relatively strong growth, increasing 2.9 percent from 2015 to 2016 after increasing 3.8 percent the year before. This pattern may be attributed to state-level minimum wage increases, as discussed below.

Figure A

High-wage earners have continued to pull away from everyone else in the 2000s

Cumulative percent change in real hourly wages, by wage percentile, 2000–2016



Note: Sample based on all workers age 18–64. The *x*th-percentile wage is the wage at which *x*% of wage earners earn less and (100 - *x*)% earn more.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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Figure A illustrates the trends in wages for select deciles (and the 95th percentile), showing the cumulative percent change in real hourly wages from 2000 to 2016. Although the last year saw more broadly shared wage growth, the overall story of inequality is clear. The lines demonstrate that those with the highest wages have had the fastest wage growth in recent years. From 2000 to 2016, the 95th-percentile wage grew about four times faster than the wages for the bottom 70 percent of wage earners. By 2016, the 95/10 ratio had grown to 6.2 from 5.8 in 2007 and 5.4 in 2000. This means that on an hourly basis, the 95th-percentile wage earner was paid 6.2 times what the 10th-percentile wage earner was paid. Similar trends are found in the 95/50 wage ratio, with those at the top pulling away from those at the middle. In 2016, the 95th-percentile wage earner was paid 3.2 times more than the median worker.

While the data discussed here clearly show increasing wage inequality from 2000 to 2016, the CPS ORG data do not allow analysis of wage trends within the top 5 percent of the wage distribution. Using Social Security wage data through 2015, it can be shown that from 1979 to 2015, the wages of the top 1 percent grew 156.7 percent, while the wages of the bottom 90 percent grew only 20.7 percent (Mishel and Kroeger 2016).

Men are paid more than women, and wage inequality is higher and growing

Table 2

Hourly wages of men and women, by wage percentile, 2000–2016 (2016 dollars)

	Wage by percentile										Wage ratio		
	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th	50th/ 10th	95th/ 50th	95th/ 10th
Men													
2000	$9.67	$11.80	$13.99	$16.66	$19.44	$22.60	$26.81	$32.17	$42.86	$53.72	2.0	2.8	5.6
2007	$9.39	$11.62	$13.96	$16.70	$19.45	$23.01	$27.26	$33.34	$44.61	$57.79	2.1	3.0	6.2
2015	$9.48	$11.21	$13.61	$16.10	$19.18	$22.54	$27.28	$34.39	$48.49	$65.88	2.0	3.4	7.0
2016	$9.91	$11.88	$14.01	$16.32	$19.33	$23.04	$27.88	$34.98	$48.07	$69.86	2.0	3.6	7.1
Annualized percent changes											**Wage ratio change**		
2000–2016	0.2%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.2%	0.5%	0.7%	1.7%	-0.1	0.9	1.5
2000–2007	-0.4%	-0.2%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.6%	1.0%	0.1	0.2	0.6
2007–2016	0.6%	0.2%	0.0%	-0.3%	-0.1%	0.0%	0.3%	0.5%	0.8%	2.1%	-0.1	0.6	0.9
2015–2016	4.5%	5.9%	2.9%	1.3%	0.8%	2.2%	2.2%	1.7%	-0.9%	6.0%	-0.1	0.2	0.1
Women													
2000	$8.40	$9.91	$11.47	$13.28	$15.22	$17.51	$20.81	$25.16	$33.14	$40.41	1.8	2.7	4.8
2007	$8.59	$10.24	$11.64	$13.80	$15.90	$18.48	$22.18	$27.13	$35.84	$44.64	1.9	2.8	5.2
2015	$8.72	$10.08	$11.68	$13.68	$15.87	$18.81	$22.46	$28.19	$38.09	$48.64	1.8	3.1	5.6
2016	$8.98	$10.10	$12.00	$14.03	$16.08	$19.16	$22.98	$28.72	$38.60	$49.91	1.8	3.1	5.6
Annualized percent changes											**Wage ratio change**		
2000–2016	0.4%	0.1%	0.3%	0.4%	0.4%	0.6%	0.7%	0.9%	1.0%	1.4%	0.0	0.4	0.7
2000–2007	0.3%	0.5%	0.2%	0.6%	0.6%	0.8%	0.9%	1.1%	1.1%	1.4%	0.0	0.2	0.4
2007–2016	0.6%	-0.2%	0.0%	-0.1%	0.0%	0.2%	0.2%	0.5%	0.8%	1.1%	-0.1	0.3	0.4
2015–2016	3.1%	0.2%	2.7%	2.6%	1.3%	1.8%	2.3%	1.9%	1.3%	2.6%	0.0	0.0	0.0
Gender wage gap (women's wages as a share of men's)													
2000	87.0%	83.9%	82.0%	79.7%	78.3%	77.5%	77.6%	78.2%	77.3%	75.2%			
2007	91.4%	88.1%	83.4%	82.6%	81.7%	80.3%	81.4%	81.4%	80.3%	77.2%			
2015	92.0%	90.0%	85.9%	84.9%	82.7%	83.5%	82.3%	82.0%	78.6%	73.8%			
2016	90.7%	85.0%	85.7%	86.0%	83.2%	83.1%	82.4%	82.1%	80.3%	71.4%			

Note: Sample based on all workers age 18–64. The *x*th-percentile wage is the wage at which *x*% of wage earners earn less and (100 - *x*)% earn more.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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more among men than among women

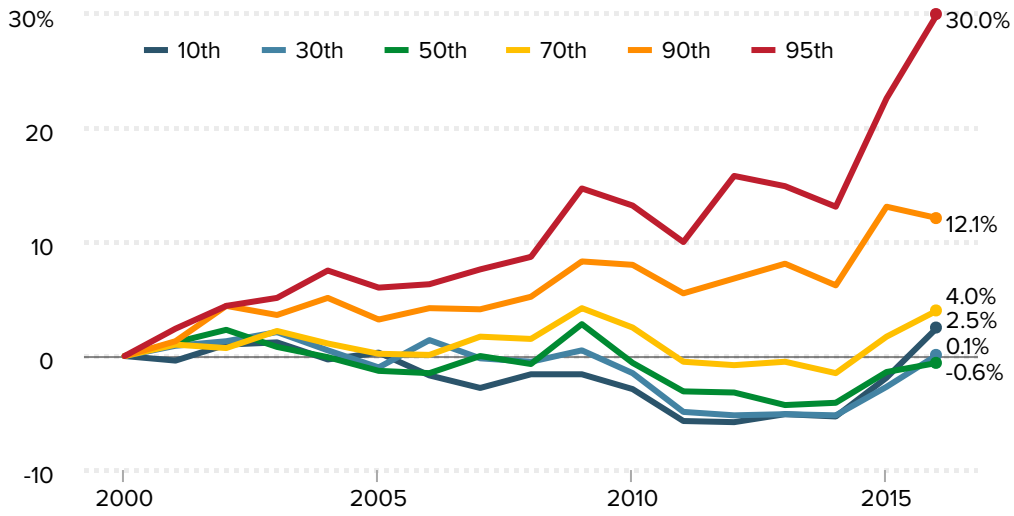
Analyzing wages at different points in the wage distribution over time can mask different outcomes for men compared with women. **Table 2** replicates the analysis of wage deciles for men and women separately, with a comparison of gender wage disparities over 2000–2016. **Figures B** and **C** accompany this table, illustrating the cumulative percent change over 2000–2016 in real hourly wages of men and women at select wage percentiles.

Long-term trends suggest that low- and middle-wage men have fared comparatively

Figure B

The male wage at the top shot up in 2016 while wages at the middle and bottom remained near or below their 2000 level

Cumulative percent change in real hourly wages of men, by wage percentile, 2000–2016



Note: Sample based on all workers age 18–64. The *x*th-percentile wage is the wage at which *x*% of wage earners earn less and (100 - *x*)% earn more.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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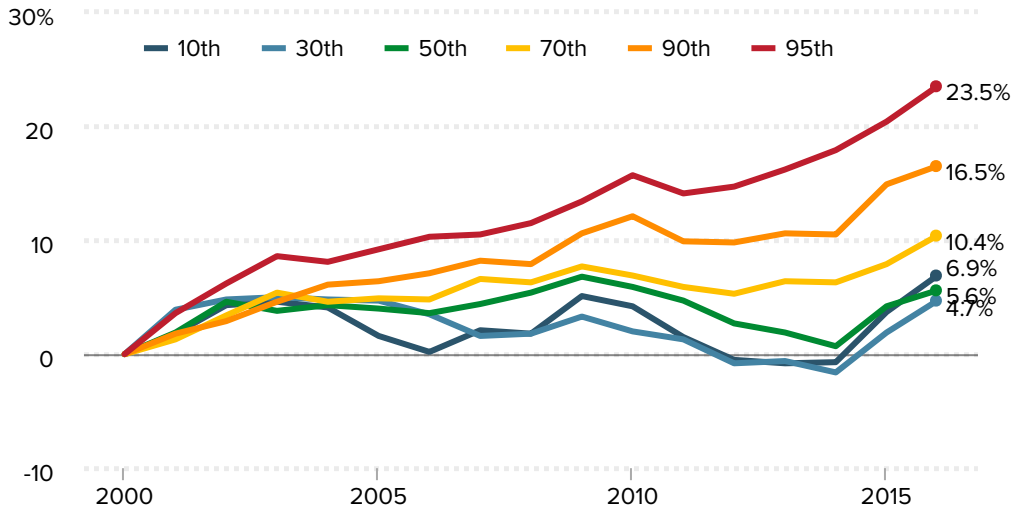
poorly and that wage gaps between the top and the middle (the 95/50 ratio) and the top and the bottom (the 95/10 ratio) have increased more for men than for women. Male wages at the 95th percentile grew 30.0 percent from 2000 to 2016, more than twice as fast as at the 90th percentile and about 10 times faster than for the rest of the wage distribution. From 2015 to 2016, men saw the strongest wage growth at the top and bottom of their wage distribution: 6.0 percent growth at the 95th percentile and 4.5 percent and 5.9 percent growth at the 10th and 20th percentiles, respectively. In the last year, the median male wage grew a paltry 0.8 percent, holding the median wage to just below its 2007 and 2000 levels.

Women also experienced a growth in wage inequality from 2000 to 2016, with the 95th percentile continuing to pull away from the middle and bottom of the wage distribution. However, wage inequality among women was not as high as it was among men, with the 95th-percentile women paid 5.6 times more than the 10th-percentile women, as compared with a 95/10 ratio of 7.1 among men. While inequality has grown modestly among women, the growth in women's wages is more broadly shared across the wage distribution than men's. In addition, not all women's wage deciles have returned to their prerecession (2007) wage levels, but all groups had higher wages in 2016 than in 2000. From 2015 to 2016, the strongest wage growth for women was 3.1 percent at the 10th percentile, likely related to state-level increases in the minimum wage (discussed below).

Figure C

Women's wages are more compressed than men's wages, but inequality among women has increased since 2000

Cumulative percent change in real hourly wages of women, by wage percentile, 2000–2016



Note: Sample based on all workers age 18–64. The *x*th-percentile wage is the wage at which *x*% of wage earners earn less and (100 - *x*)% earn more.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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While significant gender wage gaps remain across the wage distribution, the gender wage gap at the median saw some continued improvement, with typical women now earning 83 cents on the male dollar. And while men's median wage continued to stagnate, women have seen modest gains at the middle, narrowing the typical worker gap. If we can stem the tide of rising inequality and claw back the disproportionate gains going to those at the top of the overall wage distribution, it would be economically feasible to see both men's and women's wages rise while simultaneously closing the gender wage gap (EPI 2016b). The gender wage gap at the top of the wage distribution continued to grow from 2015 to 2016, and it remained wider than it was in 2000. Over the last year, the gender wage gap at the bottom of the distribution grew, but it still remains the narrowest across the distribution, likely due to the wage floor.

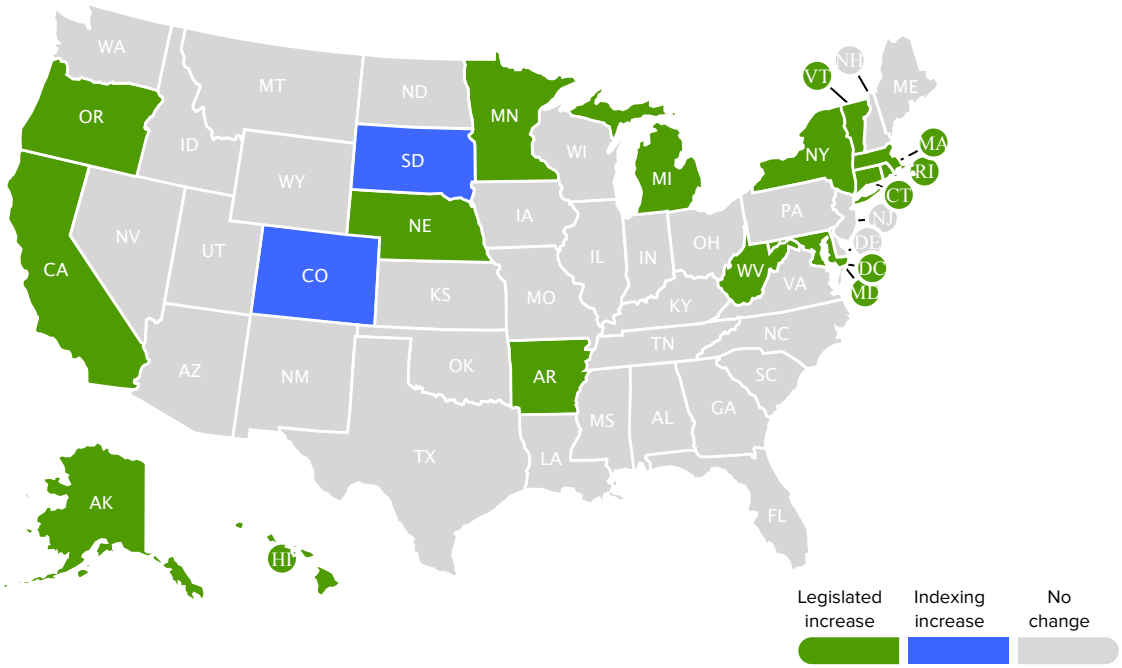
The regression-adjusted gender wage gap (controlling for education, experience, race, and region) showed a small increase, but it was still relatively low by historical standards: in 1979, it was 38.3 percent (EPI 2017b). From 2015 to 2016, the gender wage penalty grew from 21.7 percent to 22.0 percent, but it remained smaller than the penalty in 2007 (22.8 percent) or 2000 (24.0 percent).

Wage growth at the bottom was faster

Figure D

The minimum wage increased in 17 states and D.C. in 2016

States with minimum-wage increases in 2016, by type of increase



Source: EPI analysis of EPI Minimum Wage Tracker (2017)

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in states that increased their minimum wage in 2016

Further investigation reveals that the higher increase in the 10th-percentile women's wage from 2015 to 2016, as compared with the rest of the women's wage distribution, was likely related to state-level increases in the minimum wage. Women's hourly wages are lower than men's at the bottom decile ($8.98 versus $9.91 in 2016) and therefore may be more likely to be impacted by changes in the wage floor. In 2016, the minimum wage was increased in 15 states and in the District of Columbia through legislation and in two states because the minimum wage is indexed to inflation in those states. Most of these increases occurred at the start of the year, though some occurred later in the year. **Figure D** displays in green the states with legislated minimum wage increases in 2016; states in blue had automatic increases resulting from indexing the minimum wage to inflation. Workers in states that increased their minimum wage in 2016 account for 35 percent of the overall U.S. workforce.

Comparing the average minimum wage in 2015 with the average in 2016, the range of the nominal minimum wage increases, legislated or indexed, went from $0.05 (or 0.6 percent) in South Dakota to $1.08 (or 12.5 percent) in Alaska. In real terms (i.e., adjusted for

inflation), the average increase in the minimum wage, weighted by state-level employment, was 6.0 percent among states that saw an increase in 2016. The minimum wage fell 1.2 percent, in real terms, among states that did not have an increase (due to the rise in overall inflation over this period). The differential expected effect in wages among workers at the minimum wage would thus be 6.0 minus (-1.2), or an increase of 7.2 percent.

Here, the state-level 10th-percentile wage is used to represent the typical wage of the low-wage workforce. A comparison of 10th-percentile wage growth between states grouped by whether they had a minimum wage increase yields highly suggestive results. As shown in **Figure E**, when looking at 10th-percentile wages, growth in states without minimum wage increases was slower (2.5 percent) than in states with any kind of minimum wage increase (5.2 percent). As expected, this differential is smaller than the differential in the real minimum wage as groups that are indirectly affected by the minimum wage increase (i.e., have wages just above it) may have a smaller increase than those directly affected by it. While this result holds true for both men and women at the 10th percentile, the result is stronger among women; this is not surprising given that their 10th-percentile wage is lower and more likely to be directly affected by a minimum wage increase. The 10th-percentile women's wage grew 6.3 percent in states with legislated minimum wage increases, compared with 2.5 percent growth in states without any minimum wage increase. This is a clear indication that strong labor standards can improve outcomes for workers even when those workers generally have severely reduced bargaining power.

From 2000 to 2016, within-group wage inequality grew for white, black, and Hispanic workers

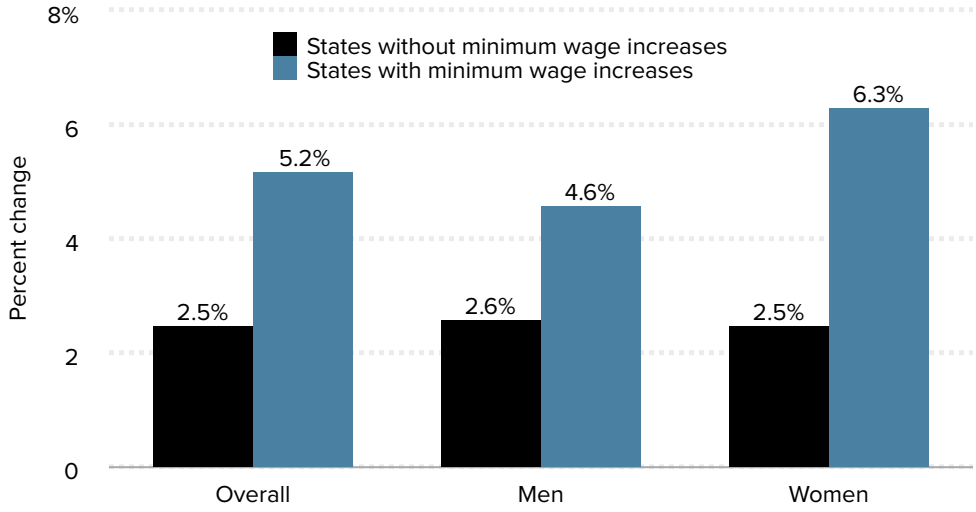
Table 3 examines wage deciles (and the 95th-percentile wage) for white non-Hispanic, black non-Hispanic, and Hispanic workers from 2000 to 2016. From 2000 to 2016, the strongest growth among white, black, and Hispanic workers occurred at the top of the wage distribution, a sign of growing within-group wage inequality. White and black wage growth was relatively more unequal, while Hispanic workers experienced a less extreme growth in within-group inequality. At every decile and at the 95th percentile, wage growth since 2000 has been faster for white and Hispanic workers than for black workers. After suffering declines in the aftermath of the Great Recession, the median wage for black workers in 2016 is finally above its 2000 level.

From 2015 to 2016, Hispanic workers experienced more broadly based wage growth, while black and white workers saw stronger wage growth at the bottom of the wage distribution. The strongest wage growth in the last year for black workers occurred in the bottom 60 percent of wage earners. Despite this, with only one exception, the bottom 60 percent of black workers still had lower wages than they did in 2007. Faster wage growth at the 10th and 20th percentiles from 2000 to 2016 for Hispanic workers greatly exceeded that of low-earning black workers. The differential was so great that the lowest-earning Hispanic workers now have higher wages than the lowest-earning black workers.

Figure E

Wage growth at the bottom was strongest in states with minimum wage increases in 2016

10th percentile wage growth, by presence of 2016 state minimum wage increase and gender, 2015–2016



Note: Alaska, Arkansas, California, Connecticut, District of Columbia, Hawaii, Massachusetts, Maryland, Michigan, Minnesota, Nebraska, New York, Oregon, Rhode Island, Vermont, and West Virginia legislated minimum wage increases in 2016. Colorado and South Dakota increased their minimum wage in 2016 due to indexing to inflation. Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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The bottom half of Table 3 displays wage disparities, comparing black and Hispanic wages as a share of white wages at each decile of their respective wage distributions. While there was a mild narrowing of the black–white wage gap in certain instances from 2015 to 2016, compared with white workers, black workers have been losing ground since 2000, with increasing racial wage gaps across the entire distribution. In 2000, black wages at the median were 79.2 percent of white wages. By 2016, they were only 75.4 percent of white wages. Conversely, Hispanic workers have been slowly closing the gap with white workers at the bottom 70 percent of the wage distribution, while the top gap still remains wider than its 2000 level.

The regression-adjusted black–white and Hispanic–white wage penalties (controlling for education, experience, race, and region) have become smaller over the last year (not shown here, but available in the *State of Working America Data Library* [EPI 2017b]). However, the black–white gap remains larger today (14.5 percent) than it was in 2000 (10.5 percent). Conversely, the Hispanic–white gap (10.5 percent) is narrower than in 2000 (12.7 percent). In 2000, the Hispanic–white wage gap was larger than the black–white wage gap. In 2016, the reverse was true. Further, the regression-adjusted racial wage gap narrowed much more for men than for women from 2015 to 2016.

Table 3

Hourly wages by race/ethnicity and wage percentile, 2000–2016 (2016 dollars)

	Wage by percentile									
	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
					White					
2000	$9.41	$11.37	$13.83	$15.96	$18.49	$21.62	$25.65	$30.83	$40.14	$50.76
2007	$9.31	$11.59	$13.91	$16.47	$19.26	$22.40	$26.63	$32.60	$43.41	$55.50
2015	$9.41	$11.42	$14.03	$16.31	$19.40	$22.77	$27.28	$34.17	$46.38	$61.86
2016	$9.89	$11.92	$14.16	$16.75	$19.79	$23.12	$27.92	$34.59	$47.31	$62.62
Annualized percent changes										
2000–2016	0.3%	0.3%	0.1%	0.3%	0.4%	0.4%	0.5%	0.7%	1.0%	1.3%
2000–2007	-0.1%	0.3%	0.1%	0.4%	0.6%	0.5%	0.5%	0.8%	1.1%	1.3%
2007–2016	0.7%	0.3%	0.2%	0.2%	0.3%	0.4%	0.5%	0.7%	1.0%	1.4%
2015–2016	5.1%	4.4%	0.9%	2.7%	2.0%	1.6%	2.4%	1.2%	2.0%	1.2%
					Black					
2000	$8.47	$9.91	$11.31	$13.10	$14.65	$16.79	$19.69	$23.68	$30.22	$36.38
2007	$8.62	$10.26	$11.55	$13.11	$14.62	$17.09	$19.86	$23.82	$32.07	$39.96
2015	$8.31	$9.64	$10.70	$12.39	$14.39	$16.44	$20.04	$24.36	$33.13	$42.62
2016	$8.61	$9.95	$11.05	$12.89	$14.92	$17.01	$19.98	$24.75	$33.64	$43.35
Annualized percent changes										
2000–2016	0.1%	0.0%	-0.1%	-0.1%	0.1%	0.1%	0.1%	0.3%	0.7%	1.1%
2000–2007	0.3%	0.5%	0.3%	0.0%	0.0%	0.3%	0.1%	0.1%	0.9%	1.3%
2007–2016	0.0%	-0.3%	-0.5%	-0.2%	0.2%	-0.1%	0.1%	0.4%	0.5%	0.9%
2015–2016	3.5%	3.3%	3.2%	4.1%	3.7%	3.5%	-0.3%	1.6%	1.6%	1.7%
					Hispanic					
2000	$8.13	$9.11	$10.24	$11.25	$12.66	$14.19	$16.83	$20.76	$27.29	$34.76
2007	$8.38	$9.32	$10.51	$11.66	$13.75	$15.42	$17.88	$22.20	$29.08	$38.31
2015	$8.65	$9.66	$10.30	$12.11	$13.67	$15.31	$18.29	$22.56	$30.48	$39.82
2016	$8.97	$10.00	$10.99	$12.40	$14.12	$16.04	$18.99	$23.12	$31.92	$42.08
Annualized percent changes										
2000–2016	0.6%	0.6%	0.4%	0.6%	0.7%	0.8%	0.8%	0.7%	1.0%	1.2%
2000–2007	0.4%	0.3%	0.4%	0.5%	1.2%	1.2%	0.9%	1.0%	0.9%	1.4%
2007–2016	0.8%	0.8%	0.5%	0.7%	0.3%	0.4%	0.7%	0.5%	1.0%	1.0%
2015–2016	3.6%	3.5%	6.7%	2.4%	3.3%	4.7%	3.8%	2.5%	4.7%	5.7%
					Wage disparities					
Black as a share of white										
2000	90.0%	87.2%	81.8%	82.1%	79.2%	77.7%	76.7%	76.8%	75.3%	71.7%
2007	92.6%	88.5%	83.0%	79.6%	75.9%	76.3%	74.6%	73.1%	73.9%	72.0%
2015	88.4%	84.4%	76.3%	76.0%	74.2%	72.2%	73.5%	71.3%	71.4%	68.9%
2016	87.1%	83.5%	78.0%	77.0%	75.4%	73.6%	71.6%	71.5%	71.1%	69.2%
Hispanic as a share of white										
2000	86.4%	80.2%	74.1%	70.5%	68.5%	65.6%	65.6%	67.3%	68.0%	68.5%
2007	90.0%	80.5%	75.6%	70.8%	71.4%	68.9%	67.2%	68.1%	67.0%	69.0%
2015	92.0%	84.6%	73.4%	74.2%	70.5%	67.2%	67.1%	66.0%	65.7%	64.4%
2016	90.7%	83.9%	77.6%	74.0%	71.4%	69.4%	68.0%	66.8%	67.5%	67.2%

Note: Sample based on all workers age 18–64. The *x*th-percentile wage is the wage at which *x*% of wage earners earn less and (100 - *x*)% earn more. Race/ethnicity categories are mutually exclusive (i.e., white non-Hispanic, black non-Hispanic, and Hispanic any race).

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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Wage growth is faster among the more educated, particularly among men

Table 4 presents the most recent data on average hourly wages by education for all workers and by gender, and **Figure F** displays the cumulative percent change in real hourly wages by education. (The discussion throughout identifies each group as mutually exclusive such that those identified as having a college degree have no more than a bachelor's degree. Those identified as having "some college" may have an associate degree or have completed part of a four-year college degree.) From 2000 to 2016, the strongest wage growth occurred among those with advanced degrees (8.5 percent) and those with college degrees (6.9 percent). While all educational groups experienced wage gains from 2015 to 2016, wages of those with only some college remained below their 2000 and 2007 levels.

Figures G and **H** display the cumulative percent change in real hourly wages by education for men and women, respectively. Since 2000, wage growth for those with a college or advanced degree was faster for men than for women, while wage growth for those with less than a college degree was faster for women than for men. In general, the women's wage distribution by educational attainment is more compressed, that is, the wage differences between workers of different levels of education are not as large for women as they are for men. Among women, all groups have now exceeded their 2000 wage levels. On the other hand, men's wages continued to pull apart as male wages of those with a high school diploma and those with some college remained below their 2000 and 2007 wage levels.

While there has been a slow narrowing of gender wage gaps for those with less than a college degree since 2000, gender wage gaps continued to grow among those with a college or advanced degree. As **Figure I** illustrates, women are paid consistently less than their male counterparts at every education level. Furthermore, that gap is particularly striking and growing at higher levels of educational attainment.

As with the overall trends, wages for white, black, and Hispanic workers by educational attainment rose for all groups over the last year (**Table 5**). Among white workers, those with a college or advanced degree had the strongest wage growth, while those with only some college or with less than a high school diploma still had lower wages than they did in 2007. Among black workers, only college and advanced degree holders had higher wages than in 2000, but even their wage growth was considerably slower than similarly degreed white or Hispanic workers. As found in the Hispanic wage distribution in general, Hispanic wage growth was more even among education groups since 2000, though Hispanic workers with some college still had lower wages in 2016 than in 2000.

Black–white wage gaps by education were larger in 2016 than in 2000 for all education groups, while Hispanic–white wage gaps were narrower for workers with less than high school, high school, and college-degree levels of education. At every education level, workers of color were consistently paid less than their white counterparts while Hispanic workers were consistently paid more than black workers (**Figure J**).

Table 4

Average hourly wages by gender and education, 2000–2016 (2016 dollars)

	Less than high school	High school	Some college	College degree	Advanced degree
			All		
2000	$12.72	$17.11	$19.44	$29.87	$37.79
2007	$13.16	$17.33	$19.54	$30.57	$38.74
2015	$12.97	$17.09	$18.94	$31.20	$39.87
2016	$13.23	$17.25	$19.11	$31.93	$41.01
Annualized percent changes					
2000–2016	0.2%	0.1%	-0.1%	0.4%	0.5%
2000–2007	0.5%	0.2%	0.1%	0.3%	0.4%
2007–2016	0.1%	0.0%	-0.2%	0.5%	0.6%
2015–2016	2.0%	1.0%	0.9%	2.3%	2.9%
			Men		
2000	$13.95	$19.30	$22.00	$33.89	$42.36
2007	$14.26	$19.24	$21.82	$34.97	$43.92
2015	$14.11	$18.84	$21.22	$35.68	$46.42
2016	$14.43	$18.88	$21.27	$37.13	$47.77
Annualized percent changes					
2000–2016	0.2%	-0.1%	-0.2%	0.6%	0.8%
2000–2007	0.3%	0.0%	-0.1%	0.4%	0.5%
2007–2016	0.1%	-0.2%	-0.3%	0.7%	0.9%
2015–2016	2.3%	0.2%	0.3%	4.1%	2.9%
			Women		
2000	$10.73	$14.69	$17.03	$25.65	$32.40
2007	$11.22	$15.02	$17.43	$26.24	$33.44
2015	$11.03	$14.76	$16.80	$26.85	$34.07
2016	$11.16	$15.04	$17.08	$26.93	$34.95
Annualized percent changes					
2000–2016	0.2%	0.1%	0.0%	0.3%	0.5%
2000–2007	0.6%	0.3%	0.3%	0.3%	0.5%
2007–2016	-0.1%	0.0%	-0.2%	0.3%	0.5%
2015–2016	1.2%	1.9%	1.7%	0.3%	2.6%
			Wage disparities (women as a share of men)		
2000	76.9%	76.1%	77.4%	75.7%	76.5%
2007	78.7%	78.1%	79.9%	75.0%	76.1%
2015	78.2%	78.3%	79.2%	75.2%	73.4%
2016	77.4%	79.7%	80.3%	72.5%	73.2%

Note: Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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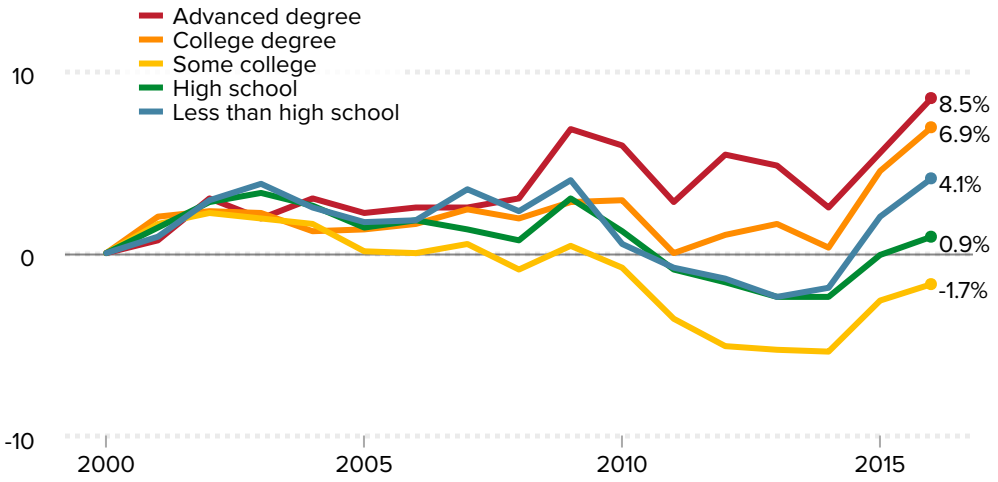
The college wage premium increased, but not fast enough to explain growing wage inequality

Wage growth among those with an advanced degree or college degree rose 8.5 percent

Figure F

For workers with some college education, wages were lower in 2016 than in 2000

Cumulative percent change in real average hourly wages, by education, 2000–2016



Note: Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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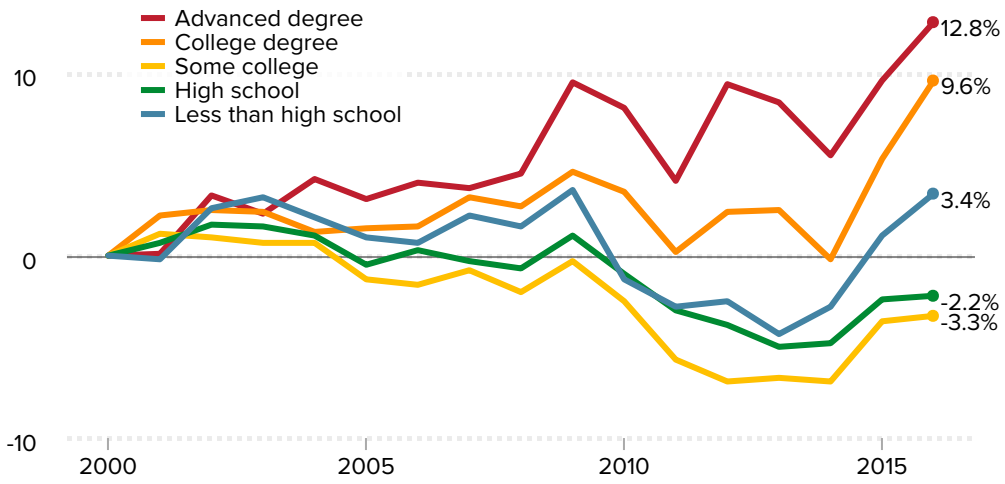
and 6.9 percent, respectively, from 2000 to 2016, while the wages of those with a high school diploma were only 0.9 percent higher than in 2000. Because of this somewhat diverging trend, it's not surprising that the college wage premium—the regression-adjusted log-wage difference between the wages of college-educated and high school–educated workers—grew from 51.6 percent to 56.6 percent from 2000 to 2016 (EPI 2017b). This rise in the college premium has almost entirely been driven by increases for men, particularly since 2007. The college premium for women actually fell from 2015 to 2016.

A prevalent story explains wage inequality as a simple consequence of growing employer demand for skills and education—often thought to be driven by advances in technology. According to this explanation, because there is a shortage of skilled or college-educated workers, the wage gap between workers with and without college degrees is widening. This is sometimes referred to as a "skill-biased technological change" explanation of wage inequality (since it is based on technology leading to the need for more skills). However, despite its great popularity and intuitive appeal, this story about recent wage trends being driven more and more by a race between education and technology does not fit the facts well, especially since the mid-1990s (Mishel, Shierholz, and Schmitt 2013). Furthermore, changes in relative demand for college-educated versus high school–educated workers can have a direct effect on the college wage premium from either side of the equation. Often, these changes—e.g., globalization, deunionization, lowering of the real minimum wage—serve to lower the high school wage and thus raise the relative wage of college graduates.

Figure G

Wages for men with more education continued to pull ahead in 2016 as high school and some college wages were lower than in 2000

Cumulative percent change in real average hourly wages of men, by education, 2000–2016



Note: Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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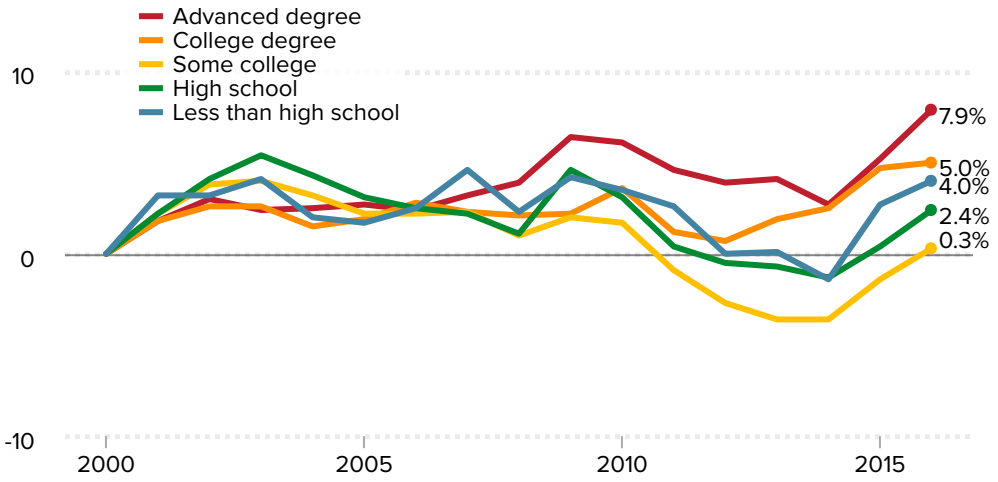
Even among college graduates, there has been a significant pulling away of the very top. The bottom 50 percent of those with a college degree still have lower wages than they did in 2000 or 2007. The 50th-percentile wage among those with a bachelor's degree was 1.5 percent lower in 2016 than it was in 2000, while the 95th-percentile wage of those with a bachelor's degree was 41.2 percent higher (not shown). The more salient story is not one of a growing differential of wages between college and high school graduates, but increasingly one of growing wage inequality overall and within various education groups.

Figure K shows that from 1979 to 2000, the log 95/50 wage ratio grew at roughly the same pace as the wage gap between college-educated workers and high school–educated workers. While this correspondence shouldn't be over-interpreted as driving the 95/50 wage gap, it is true that they both grew at about the same rate. The regression-adjusted college wage premium continued to grow in the 2000s, though at a slower rate than in the 1980s and 1990s. In fact, it slowed considerably by the mid-1990s (Bivens et al. 2014). When we compare the relative size of the changes in each gap from 2000 to 2016, it is clear that gains in the college wage premium have not been large enough to drive the continued steady growth of the 95/50 wage gap.

Figure H

For women at all levels of education, wages were higher in 2016 than in 2000

Cumulative percent change in real average hourly wages of women, by education, 2000–2016



Note: Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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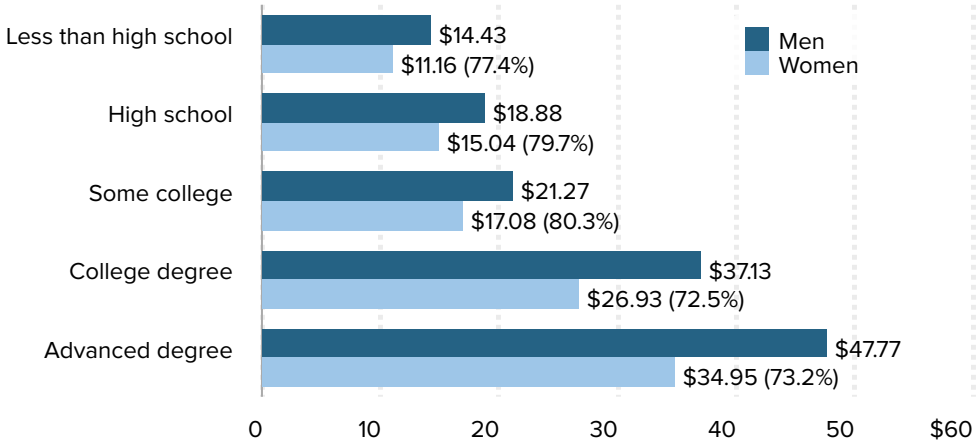
Figure I

On average, men are paid more than women at every education level

Average hourly wages, by gender and education, 2016



Note: Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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Table 5

Average hourly wages by race/ethnicity and education, 2000–2016 (2016 dollars)

	Less than high school	High school	Some college	College	Advanced degree
			White		
2000	$13.55	$17.85	$20.08	$30.70	$38.32
2007	$14.10	$18.23	$20.25	$31.48	$39.38
2015	$13.74	$18.22	$20.05	$32.23	$40.33
2016	$13.78	$18.44	$20.15	$32.96	$41.28
Annualized percent changes					
2000–2016	0.1%	0.2%	0.0%	0.4%	0.5%
2000–2007	0.6%	0.3%	0.1%	0.4%	0.4%
2007–2016	-0.3%	0.1%	-0.1%	0.5%	0.5%
2015–2016	0.3%	1.2%	0.5%	2.3%	2.4%
			Black		
2000	$12.10	$15.06	$17.23	$25.44	$33.30
2007	$12.38	$15.01	$17.37	$25.42	$32.76
2015	$11.40	$14.42	$16.05	$26.09	$33.93
2016	$11.50	$14.76	$16.69	$26.17	$33.98
Annualized percent changes					
2000–2016	-0.3%	-0.1%	-0.2%	0.2%	0.1%
2000–2007	0.3%	-0.1%	0.1%	0.0%	-0.2%
2007–2016	-0.8%	-0.2%	-0.4%	0.3%	0.4%
2015–2016	1.0%	2.3%	3.9%	0.3%	0.1%
			Hispanic		
2000	$12.09	$15.16	$17.72	$25.42	$33.73
2007	$12.73	$15.75	$17.91	$27.05	$36.81
2015	$12.79	$15.86	$17.18	$27.32	$34.71
2016	$13.36	$15.99	$17.47	$28.25	$36.06
Annualized percent changes					
2000–2016	0.6%	0.3%	-0.1%	0.7%	0.4%
2000–2007	0.7%	0.5%	0.2%	0.9%	1.3%
2007–2016	0.5%	0.2%	-0.3%	0.5%	-0.2%
2015–2016	4.4%	0.8%	1.6%	3.4%	3.9%
			Wage disparities		
Black as a share of white					
2000	89.3%	84.4%	85.8%	82.9%	86.9%
2007	87.8%	82.3%	85.8%	80.7%	83.2%
2015	82.9%	79.1%	80.1%	81.0%	84.1%
2016	83.5%	80.0%	82.8%	79.4%	82.3%
Hispanic as a share of white					
2000	89.3%	84.9%	88.2%	82.8%	88.0%
2007	90.3%	86.4%	88.5%	85.9%	93.5%
2015	93.1%	87.0%	85.7%	84.8%	86.1%
2016	96.9%	86.7%	86.7%	85.7%	87.4%

Note: Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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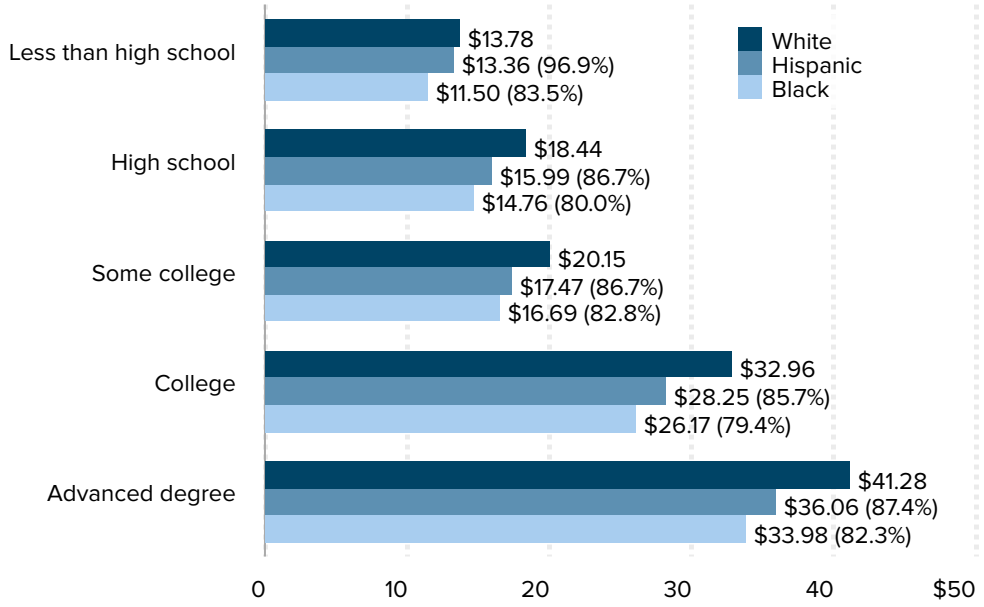
Figure J

On average, white workers are paid more than black and Hispanic workers at every education level

Average hourly wages, by race/ethnicity and education, 2016



Note: Sample based on all workers age 18–64.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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Conclusion

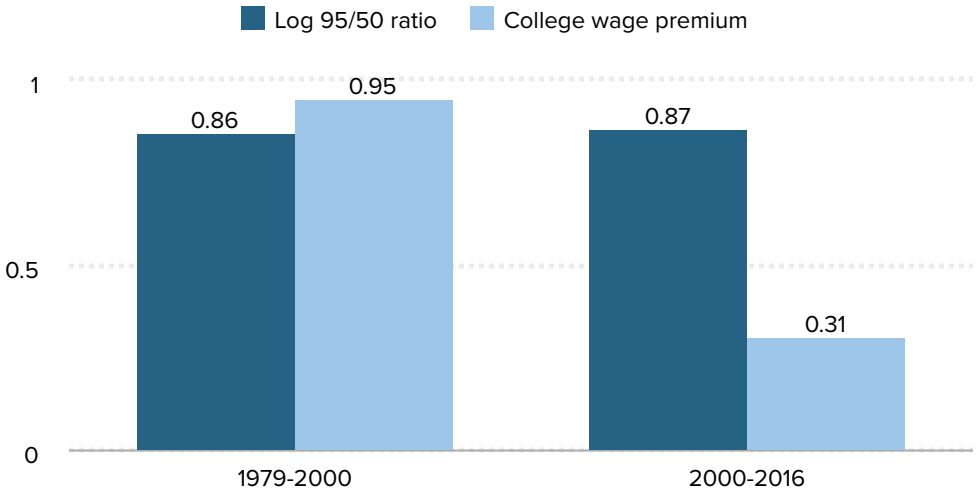
From 2015 to 2016, real hourly wages increased for most workers across the wage distribution and by educational attainment, for men and women alike and for white, black, and Hispanic workers. A particularly bright spot in the data continues to be solid wage growth at the 10th percentile associated with state-level minimum wage increases. In general, though, the 2000s have been associated with a continued pulling apart of the wage distribution with disproportionate gains at the top. Wages for those with additional schooling remain higher than wages for workers with less education, though mild increases in the college wage premium cannot explain the more extreme pulling away of the top earners.

Rising wages over the last year coincided with a period of low unemployment. This is a sign that the economic recovery from the Great Recession has finally begun to reach typical workers. However, there is still a lot of lost ground to make up, and the Federal Reserve ought to keep its foot off the brakes until we reach full employment. For the vast majority of workers to experience even stronger and more durable wage growth, the Federal Reserve needs to hold off on raising interest rates and let the economy continue to recover.

Figure K

The college wage premium cannot explain growing wage inequality since 2000

Average annual percentage-point changes in wage gaps, 1979–2016



Note: Sample based on all workers age 18–64. The college wage premium is the percent by which hourly wages of four-year college graduates exceed those of otherwise equivalent high school graduates. The regression-based gap is based on average wages and controls for gender, race and ethnicity, education, experience, and geographic division. The log of the hourly wage is the dependent variable. The 95/50 wage ratio is a representation of the level of inequality within the hourly wage distribution. It is logged for comparability with the college wage premium.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

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Full employment is one way that workers gain enough bargaining power to increase their wages; employers have to pay more to attract and retain the workers they need. The "lever" for higher wages that comes from full employment is most important for workers at the bottom of the wage distribution (Gould, Davis, and Kimball 2015).

Beyond seeking the tightest of labor markets, policymakers could take other steps to foster strong broad-based wage growth, such as raising the minimum wage, expanding eligibility for overtime pay, addressing gender and racial pay disparities, and protecting and strengthening workers' rights to bargain collectively for higher wages and benefits. For more policies that will raise wages, see EPI's Agenda to Raise America's Pay (EPI 2016a).

About the author

Elise Gould, senior economist, joined EPI in 2003. Her research areas include wages, poverty, economic mobility, and health care. She is a co-author of *The State of Working America, 12th Edition*. In the past, she has authored a chapter on health in *The State of Working America 2008/09*; co-authored a book on health insurance coverage in retirement; published in venues such as *The Chronicle of Higher Education*, *Challenge*

Magazine, and *Tax Notes*; and written for academic journals including *Health Economics*, *Health Affairs*, *Journal of Aging and Social Policy*, *Risk Management & Insurance Review*, *Environmental Health Perspectives*, and *International Journal of Health Services*. She holds a master's in public affairs from the University of Texas at Austin and a Ph.D. in economics from the University of Wisconsin at Madison.

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