

# Minimum Wage Increases Reverse Post-Recession Wage Declines for Workers in Lowest-Paid Jobs

*Real wages for most U.S. workers remain below 2009 levels, but minimum wage increases prove highly effective as stop-gap measure for workers in the lowest-paid jobs.*

A full decade after the official end to the Great Recession, corporate profits and labor productivity are on the rise, but many workers still receive paychecks that don't outpace the rate of inflation. The one bright spot is among workers who have actively called for, and won, minimum wage increases from lawmakers and some large corporate employers. Starting with the majority Black and Brown fast-food workforce in New York City in 2012, workers in low-paid industries across the country have organized to demand a higher wage floor. The result: Raises for millions of U.S. workers and some significant reversals of wage declines for the lowest paid. Nevertheless, despite the low unemployment numbers that typically predict wage increases, most U.S. workers' real wages remain below 2009 levels.

Since the official end of the Great Recession in 2009, NELP has tracked occupational wage changes for groups of workers along the wage distribution. In our previous analyses of 2013 and 2014 data, before the recent upsurge in state and local minimum wages, we found that workers in the lowest-paid occupations had disproportionate declines in real wages during the recovery. Between 2009 and 2014, the bottom quintile saw real wages decline by 5.7 percent compared to 4 percent for U.S. workers overall.<sup>1</sup>

In this brief, we update our previous analysis with the most recent data available and find that these trends have reversed dramatically in the intervening years, particularly in the states that raised minimum wages. Our analysis shows:

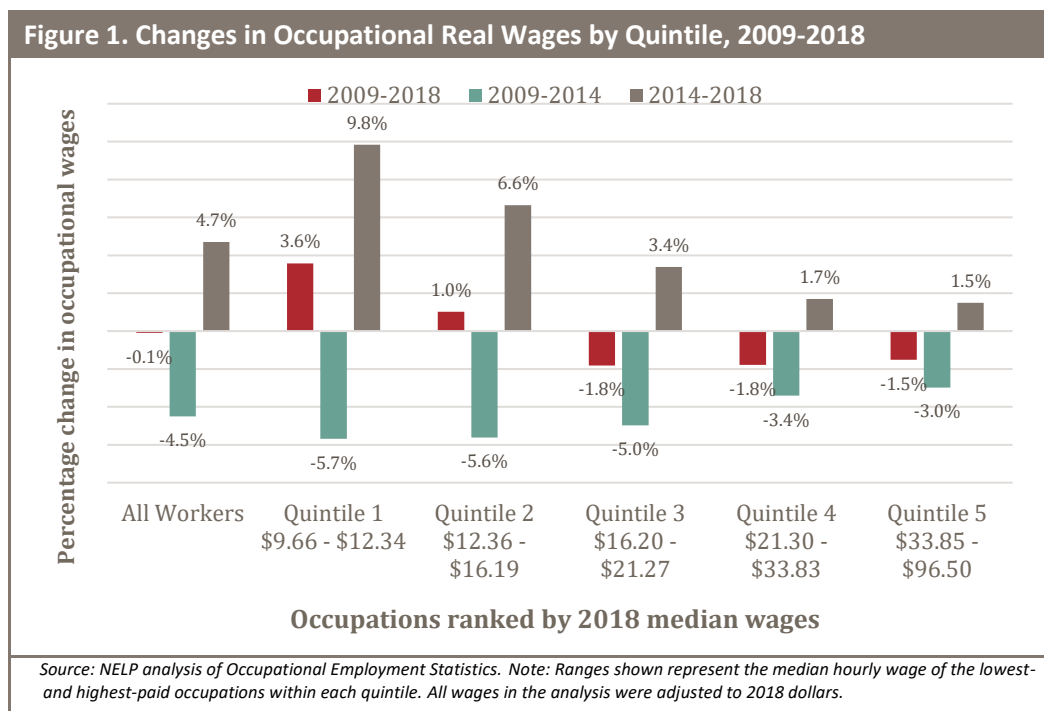
- Occupations in the bottom fifth, which lost the most ground earlier in the recovery, saw median real wage increases of 3.6 percent between 2009 to 2018 (**Figure 1**).
- In those states that implemented minimum wage increases between 2013 and 2018, the bottom fifth gained close to four percent (**Figure 2**). By contrast, in the states without minimum wage increases between 2013 and 2018, the bottom fifth did not experience real wage growth, with real wages remaining stagnant (0.5 percent decline) since the end of the recession (**Figure 2**).

- All other groups experienced stagnancy—with very small overall increases or decreases in purchasing power during this period (less than 2 percent). (See **Figure 1.**)

The wages gains made by the bottom fifth in recent years are indeed a bright spot in the post-recession labor market, but it is important to note that these gains did not benefit all racial groups equally. The modest success of minimum wage raises did little to redress deep-rooted racial wage inequality in this country. A recent study revealed that Black workers have received far smaller pay increases during the recovery compared with other racial groups, despite falling unemployment rates.<sup>2</sup> This reality is a bleak reminder that while minimum wage policies are effective at setting a wage floor, they are a blunt tool at best. Future organizing and policymaking efforts to address the problem of wage stagnation must include targeted strategies to address systemic racism in the labor market in order to meaningfully improve outcomes for Black workers.

### Real wages rise at the bottom—a striking reversal from earlier recovery trends

Several other studies, using a variety of data sources, have noted the recent increase in wages at the bottom.<sup>3</sup> Complementing that work, this analysis draws on data from a different source—the Occupational Employment Statistics series, which uniquely affords the ability to examine hourly wages across nearly 800 occupations and most U.S. states, providing a richer and more granular picture of wage changes since 2009.



When averaging hourly rates for all occupations across the wage distribution, real wages for U.S. workers in general have failed to catch up to levels at the end of the recession, even with recent increases. Workers on average have about half a percent less in purchasing power in

2018 than in 2009. Except for the lowest-paid occupations, all groups experienced stagnancy—with very small overall increases or decreases in purchasing power during this period (less than 2 percent). (See **Figure 1**.)

Wages for the bottom fifth, however, buck this general trend of stagnancy. Between 2009 and 2018, occupations in the bottom fifth saw median real wage increases of 3.6 percent, buoyed by a 9.8 percent increase since 2014. (See **Figure 1**.)

These increases are especially notable given the trends earlier in the recovery, during which the bottom fifth of occupations saw the greatest declines in real wages as compared to higher-earning occupations, as NELP's earlier research has shown.<sup>4</sup>

From the end of the recession to 2014, real wages slumped for all occupational wage groups, and those at the bottom lost more than those at the top. However, from 2014 to 2018, we see a dramatic reversal, with the bottom fifth gaining almost 10 percent in purchasing power. The second quintile also made significant gains during that period, gaining more than 6 percent. In contrast, the top three quintiles made small gains but did not catch up to 2009 levels of purchasing power. (One important caveat to note is that the data source we use, the OES, does not allow us to disaggregate for the very highest earners, e.g., the top 5 percent or top 1 percent. These earners have experienced disproportionate gains in wages since 1979, and as other studies have shown, continue to see bigger increases than other groups.<sup>5</sup>)

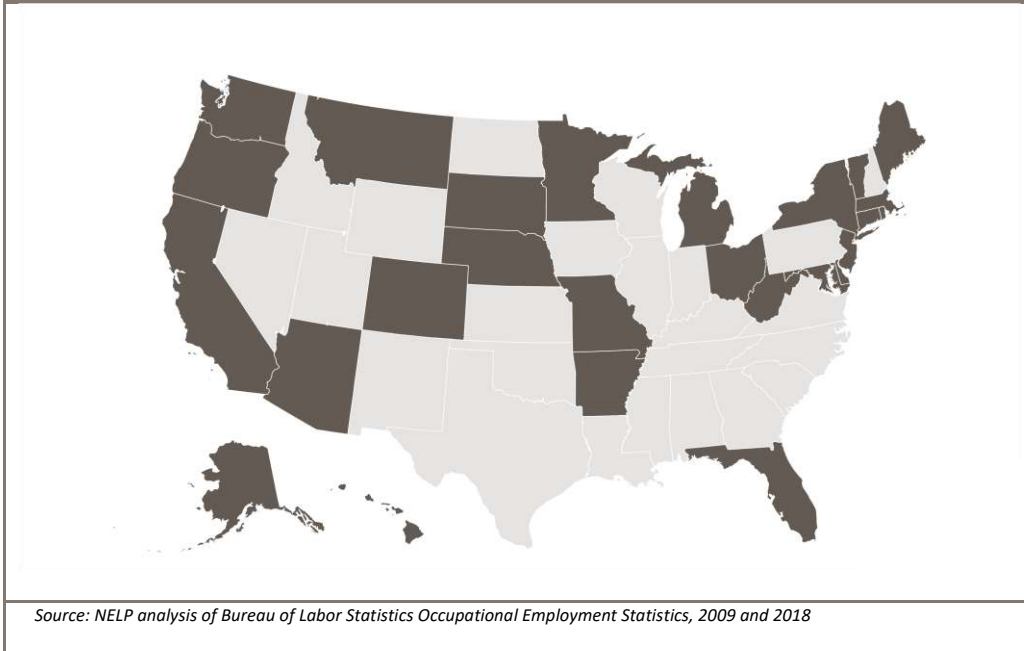
## **In states without minimum wage increases, wage stagnation at the bottom persists**

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Workers in low-paid jobs around the country did not all see the same wage gains during the recovery. While many factors can contribute to wage levels, including a tightening labor market, a comparison of wage trends in states with differing minimum wage policies suggests that state-level wage policies, often implemented in response to organizing by low-paid workers, play a critical role in improving labor market outcomes at the bottom. By contrast, those states that depend on voluntary pay increases by corporations and other employers saw continued pay stagnation and weak purchasing power for workers.

Two clusters of states, differentiated by their minimum wage policies, emerged in recent years as a result of workers organizing for higher wages. In response to decades of rising inequality and stagnant earnings, a pivotal movement to raise wages swept across the country starting in 2012, when Black and Brown fast-food workers in New York City came together to demand a \$15 hourly wage. Around the country, low-wage workers in multiple industries joined the effort and rallied around that demand. Organizing at their workplaces, city halls, and state houses, they succeeded in pushing dozens of states and localities to raise their minimum wages since 2013. In total, 26 states and the District of Columbia increased their minimum wages at least once between 2013 and 2018.<sup>6</sup> These states are Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, the District of Columbia, Florida, Hawaii, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, Ohio, Oregon, Rhode Island, South Dakota, Vermont, Washington, and West Virginia.

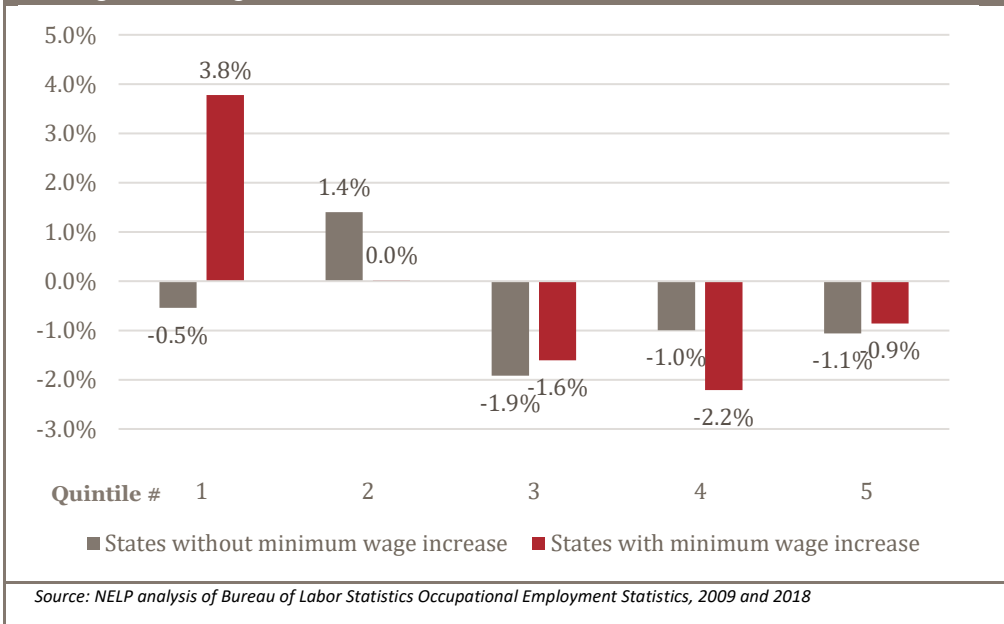
**Figure 2: States and localities that have increased minimum wage at least once between 2013 - 2018**



During this same period, minimum wages did not increase at the federal level or in the 24 states remaining states. Comparing the two groups of states—those that enacted raises and those that did not—reveals a measurable difference in wage trends for workers in low-paid jobs. In the states without minimum wage increases, the bottom fifth did not experience the same growth in real wages that similar workers in other parts of the country saw after 2009.<sup>7</sup> Their real wages stayed largely stagnant, with a half percent decline since the end of the recession. In contrast, in those states that implemented minimum wage increases, the bottom fifth gained close to four percent from 2009-2018 (**Figure 2**).

**Figure 3: Occupational Real Wage Changes by Quintile and State Minimum Wage Policy, 2009-2018**

% change in real wage 2009-2018



The contrast between these two groups of states suggests that where lawmakers responded to workers' calls for a higher minimum wage, these policies played a crucial role in lifting wages at the bottom during the period of recovery from the Great Recession. The success of higher minimum wage standards in some states demonstrates the pressing need for an increase in the federal minimum wage to \$15 an hour by 2025 in order to raise standards in the 24 states where workers have been left behind.

### **Despite modest wage gains for workers who lost the most, other policy interventions are urgently needed to address wage stagnation and racial and economic inequality**

Our findings demonstrate that the relatively large minimum wage increases in recent years were a critical strategy in helping the lowest-wage workers catch up after substantial losses during the post-recession period. With the help of these minimum wage policies, workers at the bottom have regained their footing.

As **Table 3** shows, however, even for the workers who gained the most, the benefits are modest, representing just a small increase in purchasing power. For example, cashiers, who saw some of the biggest percentage increases, make about 75 cents more per hour after inflation than they did at the end of the recession. Retail salespersons, the largest group of low-wage workers, only gained 13 cents an hour, while home health aides saw no increase at all.

Table 1: Occupational Real Wage Change for Ten Largest Low-Wage Occupations				
Occupation	Employment	2009 median wage 2009	Median Hourly Wage, 2018	Change in real median hourly wage, 2009-2018
Retail Salespersons	4,448,120	\$11.48	\$11.61	1.1%
Combined Food Preparation and Serving Workers, Including Fast Food	3,676,180	\$9.76	\$10.20	4.5%
Cashiers	3,635,550	\$10.10	\$10.76	6.5%
Waiters and Waitresses	2,582,410	\$10.02	\$10.45	4.3%
Personal Care Aides	2,211,950	\$11.15	\$11.53	3.4%
Stock Clerks and Order Fillers	2,056,030	\$11.88	\$12.34	3.9%
Maids and Housekeeping Cleaners	924,290	\$10.92	\$11.41	4.5%
Food Preparation Workers	814,600	\$10.79	\$11.39	5.6%
Home Health Aides	797,670	\$11.61	\$11.61	0.0%
Packers and Packagers, Hand	663,970	\$11.03	\$11.80	7.0%

*Source: NELP analysis of Occupational Employment Statistics 2009 and 2018. All values are 2018 dollars.*

Furthermore, despite the modest success of recent minimum wage increases in raising wages at the bottom, racial wage inequality in the United States saw little change during the Great Recession and its aftermath. Raising the federal minimum wage is a start, but taken alone, it is not enough. A recent study showed that Black workers have received far smaller pay increases during the recovery compared with other racial groups, despite decreasing unemployment rates.<sup>8</sup> There has also been scant progress in reducing occupational segregation by race in the last two recoveries. Recent research has shown that, on average, 56 percent of either Black women or White men would need to change occupations in order to achieve occupational equity between these two groups in the workforce.<sup>9</sup>

Removing barriers to quality jobs and high-wage employment for Black workers and addressing wage stagnation for U.S. workers of all races will require more than minimum wage increases.<sup>10</sup> It will require concerted effort on the part of federal, state, and local policymakers, regulators, and private-sector leaders to reorient our economy toward shared prosperity, greater racial justice, and a renewed commitment to workers’ right to act collectively to improve their workplaces, and by extension, the economy.

Some immediate steps that policymakers could take to improve wages include restoring both public- and private-sector workers’ freedom to form unions and bargain collectively; aggressively enforcing existing wage protections (including protections against misclassification of employees as independent contractors, and protections from wage theft and unjust termination); curbing wasteful spending on stock buybacks to free up funds for worker compensation; ending job discrimination based on conviction history; strengthening anti-trust enforcement; restoring overtime protections for salaried employees; extending federal wage protections to excluded workers; raising wages for workers in the public sector and at businesses receiving public contracts or subsidies; and creating more quality public-

sector jobs by expanding public works and service programs. Reversing wage stagnation and addressing racial and economic inequality for U.S. workers is urgent and critical; it should be a central focus of policymaking efforts at the federal, state, and local levels in coming years.

## Appendix: Data and Methods

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This brief draws on data from the Occupational and Employment Statistics (OES) for 2009, 2014, and 2018. Every year, OES produces detailed employment and wage estimates for approximately 800 occupations based on six semi-annual surveys covering 1.2 million establishments. Other sources of data, such as the Current Population Survey and Current Employment Statistics, do not have sufficient sample sizes to allow for an analysis of wage declines at the level of detailed occupations.

Our analysis is based on 785 occupations classified according to the Standard Occupational Classification (SOC) system. Because a revised SOC was introduced in 2010, we used the SOC 2000 to 2010 crosswalk to recode 2009, 2014, and 2018 data to form a consistent series of occupation codes across years. During this process, we consolidated 42 occupation codes, representing 4.8 percent of total employment, into 23 existing occupation codes. We also made adjustments to reflect changes to occupational categories made by the OES in 2017 in which 22 codes were collapsed into 10 broader codes.<sup>11</sup>

In addition, the OES does not report hourly wage data for occupations with irregular work schedules (e.g., teacher, athletes, and pilots). We imputed median hourly wages for education-related occupations by dividing median annual earnings by 1,560 hours (nine months of full-time work) and divided by 2,080 hours (12 months of full-time work) for the remaining occupations. In addition, the OES did not report median earnings data (hourly or annual) for nine high-wage occupations. We excluded these occupations from our analysis.

For Figures 1 and 2, we ranked occupations from highest to lowest using their 2018 median hourly wage, weighted by 2018 employment, and then grouped the occupations into five approximately equal quintiles. For each quintile, we calculated the average of the percentage change in the median hourly wage for the occupations in that quintile (or, as in Figure 2, the average of the percentage change in the hourly wage at the 10th and 90th percentiles, respectively). Similarly, the total percentage change is the weighted average percentage change for all occupations. To compare wages across years, we used the annual CPI-U to adjust for inflation. Median earnings for 2018 are adjusted to reflect changes in the CPI-U between May, when survey data were collected, and the annual average CPI-U for 2018.

Finally, it is important to note that although the OES methodology is designed to produce cross-sectional employment and wage estimates, we believe that absent other sources of reliable data at the level of detailed occupations, these data provide valuable insight into occupational wage trends over time. BLS produces OES estimates for any given reference period using six semi-annual panels for three consecutive years. Given that our analysis spans a nine-year period (2009 to 2018), the samples in question do not overlap.

## Appendix: Table

2018 Quintile	Occupation	Employment	Median Hourly Wage, 2018	Change in real median hourly wage, 2009-2018	Change in real median hourly wage, 2009-2018
1	Retail Salespersons	4,448,120	\$11.61	6.9%	1.1%
1	Combined Food Preparation and Serving Workers, Including Fast Food	3,676,180	\$10.20	9.2%	4.5%
1	Cashiers	3,635,550	\$10.76	11.3%	6.5%
1	Waiters and Waitresses	2,582,410	\$10.45	9.9%	4.3%
1	Personal Care Aides	2,211,950	\$11.53	11.1%	3.4%
1	Stock Clerks and Order Fillers	2,056,030	\$12.34	6.4%	3.9%
1	Maids and Housekeeping Cleaners	924,290	\$11.41	11.8%	4.5%
1	Food Preparation Workers	814,600	\$11.39	14.8%	5.6%
1	Home Health Aides	797,670	\$11.61	7.0%	0.0%
1	Packers and Packagers, Hand	663,970	\$11.80	14.5%	7.0%
2	Office Clerks, General	2,972,930	\$15.71	0	6.0%
2	Laborers and Freight, Stock, and Material Movers, Hand	2,893,180	\$13.56	0	3.5%
2	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,156,270	\$12.53	0	0.6%
2	Orderlies/Nursing Assistants	1,501,060	\$13.69	0	0.4%
2	Assemblers and fabricators, all other, including team assemblers	1,354,150	\$15.13	0	-1.2%
2	Cooks, Restaurant	1,340,810	\$12.74	0	1.4%
2	Security guards/Protective service workers, all other/Security Guards/Transportation Security Screeners	1,301,420	\$14.01	0	2.0%
2	Receptionists and Information Clerks	1,043,630	\$13.98	0	-1.5%
2	First-Line Supervisors of Food Preparation and Serving Workers	964,400	\$15.57	0	-6.8%
2	Light Truck or Delivery Services Drivers	915,310	\$15.75	0	-1.9%
3	Customer Service Representatives	2,871,400	\$16.20	2.3%	-5.6%
3	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	2,165,310	\$17.58	4.2%	3.5%
3	Heavy and Tractor-Trailer Truck Drivers	1,800,330	\$20.96	4.5%	-2.0%
3	Bookkeeping, Accounting, and Auditing Clerks	1,530,430	\$19.31	4.5%	1.9%
3	Maintenance and repair workers, general	1,384,240	\$18.38	0.1%	-6.4%
3	Teacher Assistants	1,331,560	\$17.26	4.4%	0.1%



3	First-Line Supervisors of Retail Sales Workers	1,181,530	\$19.01	-1.0%	-3.9%
3	Construction Laborers	1,001,470	\$17.18	8.9%	4.1%
3	Teachers and Instructors, All Other/Substitute Teachers/Special Education Teachers, All Other	939,550	\$19.41	2.9%	-18.6%
3	Automotive Service Technicians and Mechanics	648,050	\$19.53	3.7%	-2.7%
4	First-Line Supervisors of Office and Administrative Support Workers	1,477,560	\$26.78	3.9%	0.8%
4	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1,350,180	\$28.08	0.6%	-2.7%
4	Accountants and Auditors	1,259,930	\$33.83	1.1%	-1.1%
4	Sales Representatives, Services, All Other	1,033,820	\$26.18	-0.2%	-6.5%
4	Carpenters	718,730	\$22.36	7.9%	0.0%
4	Licensed Practical and Licensed Vocational Nurses	701,690	\$22.19	2.9%	-1.6%
4	Employment, recruitment, and placement specialists/Human resources, training, and labor relations specialists, all other/Labor Relations Specialists/Human Resources Specialists	670,930	\$29.60	1.7%	1.3%
4	Police and Sheriff's Patrol Officers	661,330	\$29.45	2.2%	-2.3%
4	Electricians	655,840	\$26.48	2.1%	-0.9%
4	Market research analysts	638,200	\$30.29	-2.6%	-13.2%
5	Nurse Midwives/Nurse Anesthetists/Registered Nurses/Nurse Practitioners	3,181,380	\$36.03	2.8%	-0.3%
5	General and Operations Managers	2,289,770	\$48.43	-1.9%	-7.8%
5	Elementary School Teachers, Except Special Education	1,410,970	\$37.26	1.7%	-2.4%
5	Business Operations Specialists, All Other	1,060,580	\$33.85	-0.9%	-1.5%
5	Secondary School Teachers, Except Special and Career/Technical Education	1,051,570	\$38.59	1.3%	-2.2%
5	Computer software engineers, applications	903,160	\$49.72	2.6%	0.3%
5	Management Analysts	684,470	\$40.12	-2.3%	-5.9%
5	Lawyers	642,750	\$58.02	-0.5%	-9.6%
5	Middle School Teachers, Except Special and Career/Technical Education	609,970	\$37.49	0.9%	-2.3%
5	Financial Managers	608,120	\$61.41	4.9%	7.1%

Source: NELP analysis of May 2009, 2014 and 2018 Occupational Employment Statistics.

## Endnotes

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1. Irene Tung and Claire McKenna, Occupational Wage Declines Since the Great Recession, NELP, 2015. <https://www.nelp.org/publication/occupational-wage-declines-since-the-great-recession/>
2. Eric Morath and Soo Oh, As Wages Rise, Black Workers See the Smallest Gains, Wall Street Journal, April 16, 2019. <https://www.wsj.com/articles/as-wages-rise-black-workers-see-the-smallest-gains-11555437942>
3. Elise Gould, State of American Wages, 2018. Economic Policy Institute. February 2019. <https://www.epi.org/publication/state-of-american-wages-2018/>; and Ernie Tedeschi, Pay Is Rising Fastest for Low Earners. One Reason? Minimum Wages. New York Times, January 3, 2020. <https://www.nytimes.com/2020/01/03/upshot/minimum-wage-boost-bottom-earners.html?searchResultPosition=6>
4. Tung and McKenna.
5. The data source we use, the OES, is most suited to analyzing hourly earnings trends of wage-based occupations employing large groups of U.S. workers. As such, it does not allow for full examination earnings for the most-wealthy or analysis of overall income inequality trends. The OES also doesn't account for non-wage compensation such as benefits or stock options. The highest-wage occupation in our analysis is Family and General Practitioners with a real median wage of \$96.50 an hour in 2018. For further discussion of income trends for the highest earners, see <https://www.epi.org/publication/state-of-american-wages-2018/>
6. See Notes for Figure F in Elise Gould, State of American Wages, 2018. Economic Policy Institute. February 2019. <https://www.epi.org/publication/state-of-american-wages-2018/>
7. The State of Georgia is excluded because data are unavailable for 2009.
8. Elise Gould. Stark black–white divide in wages is widening further. Economic Policy Institute. February 2019. <https://www.epi.org/blog/stark-black-white-divide-in-wages-is-widening-further/>; and, As Wages Rise Black Workers See the Smallest Gains, Wall Street Journal, April 16, 2019. <https://www.wsj.com/articles/as-wages-rise-black-workers-see-the-smallest-gains-11555437942>
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10. Connie Razza, Social Exclusion: The Decisions and Dynamics that Drive Racism. Demos, 2018. <https://www.demos.org/research/social-exclusion-decisions-and-dynamics-drive-racism>; and, Darrick Hamilton and Madeline Neighly, Racial Rules of Corporate Power. Roosevelt Institute. November 2019. [https://rooseveltinstitute.org/wp-content/uploads/2019/11/RI\\_Racial-Rules-of-Corporate-Power\\_Issue-brief\\_201911-1.pdf](https://rooseveltinstitute.org/wp-content/uploads/2019/11/RI_Racial-Rules-of-Corporate-Power_Issue-brief_201911-1.pdf)
11. Bureau of Labor Statistics, Upcoming occupational and industry aggregations in the May 2017 Occupational Employment Statistics estimates. (n.d.). [https://www.bls.gov/oes/changes\\_2017.htm](https://www.bls.gov/oes/changes_2017.htm)

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