

## Research



# The Job Implications of State Minimum Wage Increases in 2018 and Beyond

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## EXECUTIVE SUMMARY

This study examines the employment effects of current state-level minimum wage hikes. Overall, the study finds that the minimum wage increases taking effect in 12 states and the District of Columbia over the next several years will result in millions of lost jobs throughout the country. In particular:

- The incremental minimum wage increases implemented in 2018 alone will cost 261,000 jobs;
- The full effect of the new minimum wage laws currently phasing in is a loss of 1.7 million jobs;
- The entire minimum wage increases occurring in these states (including other hikes since 2012) will cost 2.6 million jobs;
- Over 75 percent of the job losses will occur in California and New York.

## INTRODUCTION

On January 1<sup>st</sup>, 18 states implemented minimum wage increases, and three additional states and the District of Columbia will raise their minimum wages in July. For nine of these states, these increases are inflation adjustments. For the rest of these states and the District of Columbia, the increases are just one of many incremental steps toward much higher minimum wages over the course of several years, with the goal of boosting worker earnings.

The minimum wage, however, is a policy tool that has significant tradeoffs, including potentially negative effects on the labor market. It can boost the earnings of those who keep their job. Yet, it has also been shown to cost other employees their jobs and prevent workers looking for a job from obtaining one. In effect, raising the minimum wage transfers earnings from those who lose their jobs or are no longer able to obtain one to those who are employed.

This study examines the labor market implications of these state-level minimum wage increases. In particular, it performs three analyses. First, it examines the labor market implications of the 2018 incremental minimum wage hikes in isolation. Second, it analyzes the implications of the entire minimum wage hikes mandated by the new laws that are currently being implemented. Third, it estimates the total employment effect of all minimum wage laws enacted in those states in recent years. The study finds that in isolation the incremental minimum wage increases occurring in 2018 will cost 261,000 jobs. The newly mandated full minimum wage increases that are currently being implemented will result in a total loss of 1.7 million jobs. When combined with recent previous minimum wage increases in some of the same states, the total loss comes out to 2.6 million jobs.

# OVERVIEW OF MINIMUM WAGE INCREASES IN 2018

In total, 21 states and the District of Columbia are increasing their minimum wages this year. Eighteen states increased their minimum wages on January 1<sup>st</sup>, and three states and the District of Columbia will increase their minimum wages on July 1<sup>st</sup>. Nine of the states' wage hikes are inflation adjustments. In those states, existing laws require the minimum wage to increase at the same rate as inflation so that its purchasing power remains constant over time. Table 1 contains the 2018 minimum wage increases in those states.

**Table 1: 2018 Minimum Wage Increases Due to Inflation Adjustments**

State	2017	2018
Alaska	\$9.80	\$9.84
Florida	\$8.10	\$8.25
Minnesota*	\$9.50/\$7.75	\$9.65/\$7.87
Missouri	\$7.70	\$7.85
Montana	\$8.15	\$8.30
New Jersey	\$8.44	\$8.60
Nevada	\$8.25/\$7.25**	tbd***
Ohio	\$8.15	\$8.30
South Dakota	\$8.65	\$8.85

\*In Minnesota, the lower minimum wage applies to small employers and the higher minimum wage applies to large employers.

\*\*In Nevada, employers have the option of paying less if they cover the employee's health insurance.

\*\*\*The 2018 minimum wage in Nevada will be announced in April and take effect on July 1<sup>st</sup>.

In the remaining 12 states and the District of Columbia, the minimum wages are rising because of new laws that mandate substantial minimum wage increases. Table 2 contains the new minimum wage for 2018 in those states and the entire increases under the new laws.

**Table 2: 2018 Minimum Wage Increases Due to New Law**

State	2017	2018	Changes under new Minimum Wage Law	Inflation Index
Arizona	\$10.00	\$10.50	\$8.05 in 2016 to \$12 in 2020	Yes
California	\$10.50	\$11.00	\$10 in 2016 to \$15 in 2022	Yes
Colorado	\$9.30	\$10.20	\$8.31 in 2016 to \$12 in 2020	Yes
District of Columbia*	\$12.50	\$13.25	\$11.50 in 2016 to \$15 in 2020	Yes
Hawaii	\$9.25	\$10.10	\$7.25 in 2014 to \$10.10 in 2018	No
Maine	\$9.00	\$10.00	\$7.50 in 2016 to \$12 in 2020	Yes
Maryland*	\$9.25	\$10.10	\$7.25 in 2014 to \$10.10 in 2018	No
Michigan	\$8.90	\$9.25	\$7.40 in 2013 to \$9.25 in 2018	Yes
New York				
New York City	\$11.00	\$13.00	\$9 in 2016 to \$15 in 2019	Yes
Nassau, Suffolk, & Westchester Counties	\$10.00	\$11.00	\$9 in 2016 to \$15 in 2022	Yes
Rest of State	\$9.70	\$10.40	\$9 in 2016 to \$12.50 in 2021	Yes
Oregon*				
Portland Metro	\$11.25	\$12.00	\$9.25 in 2016 to \$14.75 in 2022	Yes
Nonurban Counties	\$10.00	\$10.50	\$9.25 in 2016 to \$12.50 in 2022	Yes

Standard	\$10.25	\$10.75	\$9.25 in 2016 to \$13.50 in 2022	Yes
Rhode Island	\$9.60	\$10.10	\$9.60 in 2017 to \$10.50 in 2019	No
Vermont	\$10.00	\$10.50	\$8.73 in 2014 to \$10.50 in 2018	Yes
Washington	\$11.00	\$11.50	\$9.47 in 2016 to \$13.50 in 2020	Yes

\*Minimum wage increases occur on July 1<sup>st</sup> of each year.

This year, four states (Hawaii, Maryland, Michigan, and Vermont) are implementing the final incremental wage hike to reach the full minimum wage level mandated by their new laws. For instance, Hawaii’s minimum wage increased from \$9.25 per hour to \$10.10 per hour, completing the scheduled increase from \$7.25 in 2014 to \$10.10 in 2018. Other states are in the middle of their schedule for hiking the minimum wage. For instance, in Arizona, the minimum wage rose from \$10 per hour to \$10.50 per hour in 2018, on its way to \$12 per hour in 2020. In California, the minimum wage rose from \$10.50 to \$11 per hour in 2018, an incremental step toward \$15 per hour in 2022.

## JOB IMPLICATIONS

States usually phase in minimum wage increases in small increments to avoid causing major labor market shocks and substantial job losses. However, even small minimum wage increases can have devastating effects on job growth. For instance, when the [American Action Forum](#) (AAF) examined the job implications of the state minimum wage increases implemented in 2017, it found that, in isolation, the incremental wage hikes last year will cost 383,000 jobs over the next few years. Moreover, the full minimum wage increases will cost 1.8 million jobs in those states. When combined with recent previous minimum wage increases in some of the same states, the total loss comes out to 2.6 million jobs.<sup>[1]</sup>

The figures from the 2017 AAF study were based on 2015 peer-reviewed research by Jonathan Meer and Jeremy West in the *Journal of Human Resources*. Their study found that a 10 percent increase in the real minimum wage is associated with a 0.3 to 0.5 percentage-point decline in the annual net job growth rate.<sup>[2]</sup> Moreover, the study concluded that the reduction in annual job growth leads to a substantial decline in future employment levels relative to the projected growth. In particular, it found that three years after a 10 percent increase in the real minimum wage, employment is typically 0.7 percent lower than it would have been absent the minimum wage increase.

In the following, this study looks at what the conclusions from Meer and West mean for the new minimum wage laws being implemented this year, both for the incremental minimum wage increases in 2018 and for the entire minimum wage increases occurring over time. In particular, using official state employment projections as a baseline, this study applies the Meer and West estimate to the minimum wage increases taking place. For instance, if a 10 percent increase in the real minimum wage is associated with a 0.7 percent decrease in employment three years later from the projected level, then a 20 percent increase is associated with a 1.4 percent

decrease, a 100 percent increase is associated with a 7 percent decrease, and so on.

For both the incremental and entire minimum wage increases, the study only evaluates states where the minimum wage is rising due to a new law, not states where the minimum wage already rises each year with inflation. Meer and West found negative effects of increasing the real (inflation-adjusted) value of the minimum wage on job growth. The real value of a minimum wage that only rises with inflation is constant over time, in contrast, and as a result, those states do not have the real increases in the minimum wage to measure the reduction in job growth that Meer and West suggested.

## IMPLICATIONS OF MINIMUM WAGE INCREASE IN 2018

While the Meer and West findings may not seem very problematic, when taking into account the magnitude of the minimum wage increases and the number of states implementing new laws, the negative labor market consequences add up. Let's first examine the incremental minimum wage hikes of 2018 in isolation, without considering previous or future minimum wage increases under the new state laws.

As illustrated in table 3, the incremental minimum wage increases in 2018 could impose substantial drags on state job growth.

**Table 3: Labor Market Implications of 2018 Minimum Wage Increases<sup>[3]</sup>**

State	Minimum Wage Increase	Percent Reduction in Employment	Jobs Lost
Total	n/a	0.5%	261,000
Arizona	5.0%	0.4%	11,000
California	4.8%	0.3%	63,000
Colorado	9.7%	0.7%	21,000
District of Columbia	6.0%	0.4%	3,000
Hawaii	9.2%	0.6%	5,000
Maine	11.1%	0.8%	5,000
Maryland	9.2%	0.6%	20,000

Michigan	3.9%	0.3%	13,000
New York	n/a	0.9%	98,000
New York City	18.2%	1.3%	63,000
Nassau, Suffolk, & Westchester Counties	10.0%	0.7%	18,000
Rest of State	7.2%	0.5%	16,000
Oregon	4.9%	0.3%	7,000
Rhode Island	5.2%	0.4%	2,000
Vermont	5.0%	0.4%	1,000
Washington	4.5%	0.3%	13,000

Applying the Meer and West estimate, the state minimum wage increases in 2018 lead employment in 2021 to be 0.3 percent to 1.3 percent lower than if the minimum wages remained at 2017 levels. Using official employment projections as a baseline, this comes out to job losses ranging from 1,000 in Vermont to 98,000 in New York.[4] In 2021, employment in these 12 states and the District of Columbia combined will be 0.5 percent lower than if the minimum wages did not change, translating to a total loss of 261,000 jobs.

## IMPLICATIONS OF ENTIRE MINIMUM WAGE INCREASES CURRENTLY BEING IMPLEMENTED

Beyond the minimum wage hikes occurring just in 2018, the entire minimum wage increases currently being implemented impose much larger problems for the labor markets in these same states. That is because the new minimum wage levels, when fully implemented, are drastic increases. For instance, under current law in California, the minimum wage is rising 50 percent, from \$10 to \$15 per hour, by 2022. In Maine, the minimum wage will have increased by 60 percent once the new law is fully implemented in 2020. And for most of New York's population, the minimum wage will have increased by 66.7 percent once fully implemented.

Table 4 contains the projected change in employment, measured three years after these new minimum wage laws are fully implemented.

### Table 4: Labor Market Implications of Entire Minimum Wage Increases[5]

<b>State</b>	<b>Year Measured</b>	<b>Minimum Wage Increase</b>	<b>Percent Reduction in Employment</b>	<b>Jobs Lost</b>
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Total	n/a	n/a	n/a	1,692,000
Arizona	2023	39.8%	2.8%	90,000
California	2025	50.0%	3.5%	700,000
Colorado	2023	32.9%	2.3%	73,000
District of Columbia	2023	21.9%	1.5%	12,000
Hawaii	2021	39.3%	2.8%	20,000
Maine	2023	60.0%	4.2%	28,000
Maryland	2021	39.3%	2.8%	86,000
Michigan	2021	25.0%	1.8%	82,000
New York	n/a	n/a	n/a	453,000
New York City	2022	66.7%	4.7%	233,000
Nassau, Suffolk, & Westchester Counties	2025	66.7%	4.7%	129,000
Rest of State	2024	38.9%	2.7%	91,000
Oregon	2025	30.5%	2.1%	46,000
Rhode Island	2022	9.4%	0.7%	4,000
Vermont	2021	12.8%	0.9%	3,000
Washington	2023	33.6%	2.3%	95,000

Three years after the new minimum wages are completely implemented, employment in these states will be 0.7 percent to 4.7 percent lower than under the previous laws, based on the estimate from Meer and West. Once



again, using official employment projections from each state’s labor department as a baseline, this comes out to job losses ranging from 3,000 in Vermont to 700,000 in California. New York, meanwhile, could lose 453,000 jobs. Between 2021 and 2025, all 12 states and the District of Columbia combined could lose roughly 1.7 million jobs.

## IMPLICATIONS OF ALL RECENT MINIMUM WAGE INCREASES

Moreover, all recent minimum wage increases in these states since 2012 have had even greater labor market consequences. California, the District of Columbia, New York, and Rhode Island each began phasing in their current minimum wage laws soon after they finished phasing in separate minimum wage increases, effectively extending previous minimum wage raises even further. Table 5 details the full minimum wage increases in states that expanded on previous minimum wage laws.

**Table 5: States that Expanded Previous Minimum Wage Increases**

State	Minimum Wage in 2012	New Minimum Wage Law	Percent Change	Year Effective
California	\$8.00	\$15.00	87.5%	2022
District of Columbia	\$8.25	\$15.00	81.8%	2020
New York				
New York City	\$7.25	\$15.00	106.9%	2019
Nassau, Suffolk, & Westchester Counties	\$7.25	\$15.00	106.9%	2022
Rest of State	\$7.25	\$12.50	72.4%	2021
Rhode Island	\$7.40	\$10.50	41.9%	2019

Relative to the minimum wage levels in 2012, the planned increases in these states are extreme in several cases. The new minimum wage laws in California and the District of Columbia result in an 87.5 percent and an 81.8 percent total increase, respectively, over the minimum wage levels before any new laws were implemented. Meanwhile, New York’s recent minimum wage laws translate to a total minimum wage hike of 106.9 percent in New York City and Nassau, Suffolk, and Westchester Counties and a 72.4 percent increase in the rest of the state.

Taking into account the entire minimum wage increases occurring in these states since 2012 leads to even larger estimated job losses, contained in table 6.

**Table 6: Labor Market Implications Three Years after Full Implementation in States that**

## Extended Previous Minimum Wage Increases

State	Year Measured	Percent Reduction in Employment	Jobs Lost
Total	n/a	n/a	2,037,000
California	2025	6.1%	1,225,000
District of Columbia	2023	5.7%	46,000
New York (total)	n/a	n/a	750,000
New York City	2022	7.5%	374,000
Nassau, Suffolk, & Westchester Counties	2025	7.5%	206,000
Rest of State	2024	5.1%	170,000
Rhode Island	2022	2.9%	16,000

Again, applying the findings from Meer and West, the total minimum wage increases since 2012 in these states alone could cost 2 million jobs, the vast majority of which would be in California and New York. In California, employment in 2025 will be 6.1 percent lower than without its two consecutive minimum wage increases, resulting in a loss of 1.2 million jobs. The consecutive minimum wage increases across New York could cause future employment to decline 5.1 percent to 7.5 percent between 2022 and 2025. This translates to a total loss of 750,000 jobs in the state. When adding in the rest of the minimum wage increases currently being implemented over the next several years, it comes out to a total loss of 2.6 million jobs. Since California and New York are the largest states implementing minimum wage increases, and since they are mandating the largest minimum wage hikes, over 75 percent of all job losses will occur in them.

## CONCLUSION

In recent years minimum wage laws have grown in popularity as several states and cities have enacted increasingly expansive wage hikes. While the intention to raise earnings is honorable, often overlooked are the labor market consequences. Substantial evidence suggests that mandated wage hikes reduce hiring, cost the lowest skilled workers their jobs,<sup>[6]</sup> and may even force businesses to shut down.<sup>[7]</sup>

The potential job losses from current minimum wage increases are startling. The incremental minimum wage increases implemented this year alone will cost 261,000 jobs. The entirety of the minimum wage increases mandated by current laws could cost 1.7 million jobs. And finally, when considering that a number of minimum

wage laws effectively extend previous minimum wage increases, the effect of all minimum wage increases in those states could cost 2.6 million jobs total. Policymakers should keep these labor market consequences in mind when considering minimum wage increases.

[1] Ben Gitis & Curtis Arndt, “The Job and Wage Implications of State Minimum Wage Increases in 2017 and Beyond,” American Action Forum, February 2, 2017, <https://www.americanactionforum.org/research/job-wage-implications-state-minimum-wage-increases-2017-beyond/>.

[2] Jonathan Meer & Jeremy West, “Effects of the Minimum Wage on Employment Dynamics,” Journal of Human Resources, August 2015, [http://people.tamu.edu/~jmeer/Meer\\_West\\_MinimumWage\\_JHR-final.pdf](http://people.tamu.edu/~jmeer/Meer_West_MinimumWage_JHR-final.pdf).

[3] Figures may not sum to total due to rounding.

[4] Arizona’s [Labor Statistics](#), California’s [Employment Development Department](#), the District of Columbia’s [Department of Employment Services](#), Hawaii’s [Department of Labor and Industrial Relations](#), Maine’s [Center for Workforce Research and Information](#), Maryland’s [Department of Labor, Licensing & Regulation](#), Michigan’s [Department of Technology, Management & Budget](#), New York’s [Department of Labor](#), Oregon’s [Employment Department](#), Rhode Island’s [Department of Labor and Training](#), and Vermont’s [Department of Labor](#) all project state employment growth between 2014 and 2024. Washington State’s [Employment Security Department](#) projects growth from 2015 to 2025 and Colorado’s [Department of Labor and Employment](#) projects growth between 2016 and 2026. While each report employment levels in the first and last year of the projection, no state reports employment for every year in the projection. To estimate each state’s projected employment level three years after a minimum wage is implemented, we calculated the compounded annual total employment growth rate implied by each projection. We then apply that growth rate to project employment levels specifically to three years after a state’s minimum wage changes. For the minimum wage increases in 2018, this means we projected employment levels to 2021. For the entire minimum wage hikes, this means three years after a state’s new minimum wage is fully implemented. In some instances, three years after a minimum wage hike is a few years beyond the projections reported by these state agencies. In those cases, we project employment to the relevant year by assuming employment continues to grow at the same annual rate implied by the state agency projections.

[5] Note that to calculate the job losses in table 4, the author took into account that the baseline minimum wages under the previous laws in Arizona, Colorado, the District of Columbia, Oregon, Vermont, and Washington would unlikely match the minimum wages those states required just prior to implementing the new laws. Each of the state’s previous laws mandated that the minimum wage increase each year with a measure inflation. For inflation adjustments, [Arizona](#) used the federal CPI-U, [Colorado](#) used the CPI-U for the Denver-Boulder-Greeley metropolitan area, [the District of Columbia](#) used the CPI-U for the Washington Metropolitan Statistical Area, [Oregon](#) used the federal CPI-U, [Vermont](#) used the not seasonally adjusted federal CPI-U, and [Washington](#) used the CPI-W, all of which are reported by the Bureau of Labor Statistics. This means that in the years the new minimum wages are fully implemented, the minimum wages under the previous laws would have likely been higher than their previous levels. To project what minimum wages under the previous laws would have been when the new minimum wages are completely phased-in, the author calculated the compounded annual growth rate in each inflation measure from 2007 to 2017 and assumed the same growth rate will continue going forward. The author then applied that growth rate to the minimum wages, yielding projected minimum wages in future years under previous law. In the remaining seven states, the previous laws did not mandate that the minimum wages rise with inflation. As a result, the minimum wages in those states would have remained constant without the new laws.

[6] David Neumark, J.M. Ian Salas, & William Wascher, “Revisiting the Minimum Wage-Employment Debate: Throwing Out the Baby with the Bathwater?” NBER Working Paper, January 2013, <http://www.nber.org/papers/w18681>.

[7] Daniel Aaronson, Eric French, and Isaac Sorkin, “Firm Dynamics and the Minimum Wage: A Putty-Clay Approach,” Federal Reserve Bank of Chicago, November 2013, <https://www.chicagofed.org/publications/working-papers/2013/wp-26>.