EPI BRIEFING PAPER
ECONOMIC POLICY INSTITUTE • JULY 14, 2015 • BRIEFING PAPER #405

RAISING THE MINIMUM WAGE TO $12 BY 2020 WOULD LIFT WAGES FOR 35 MILLION AMERICAN WORKERS

BY **DAVID COOPER**

This report is part of **Raising America's Pay,** a multiyear research and public education initiative of the Economic Policy Institute to make wage growth an urgent national policy priority. Raising America's Pay identifies broad-based wage growth as the central economic challenge of our time—essential to alleviating inequality, expanding the middle class, reducing poverty, generating shared prosperity, and sustaining economic growth. *epi.org/pay*

Introduction and key findings

The minimum wage was established in 1938 as part of the Fair Labor Standards Act (FLSA). In addition to prohibiting child labor and mandating the 40-hour workweek, the FLSA established the federal minimum wage to help ensure that all work would be fairly rewarded and that regular employment would provide a decent quality of life. Moreover, regular increases in the minimum wage were meant to ensure that even the lowest-paid workers benefited from broader improvements in wages and living standards.

Yet today, because of decades of infrequent and inadequate adjustment, the federal minimum wage no longer serves as an adequate wage floor. Every year that the minimum wage is left unchanged, rising prices slowly erode its buying power. In 2014, the federal minimum wage of $7.25 was worth nearly 10 percent less than when it was last raised in 2009, after adjusting for inflation. In fact, the real (inflation-adjusted) value of the federal minimum wage in 2014 was 24 percent below its peak value in 1968.

This decline in purchasing power means low-wage workers have to work longer hours just to achieve the standard of living that was considered the bare minimum almost half a century ago. Over that time, the United States has achieved tremendous improvements in labor productivity that could have allowed workers at all pay levels to enjoy a significantly improved quality of life. Instead, because of policymakers' failure to preserve this basic labor standard, a parent earning the minimum wage today does not earn enough through full-time work to be above the federal poverty line.

In April 2015, Sen. Patty Murray (D-Wash.) and Rep. Robert "Bobby" Scott (D-Va.) introduced the Raise the Wage Act of 2015, a bill that would raise the federal minimum wage in five steps to $12 per hour by 2020. Beginning in 2021, the minimum wage would be "indexed" to median wages so that each year, the minimum wage would automatically be adjusted based upon growth in the median wage. The bill would also gradually increase the subminimum wage for tipped workers (or "tipped minimum wage"), which has been fixed at $2.13 per hour since 1991, until it reaches parity with the regular minimum wage.

This report begins by providing historical context for the current value of the federal minimum wage and the proposed increase to $12 by 2020. It then describes the population of workers likely to receive higher pay under an increase to $12 by 2020, with detailed demographic data that refute a number of common misconceptions about low-wage workers. The report concludes with a discussion of the provisions of the Raise the Wage Act that would index the minimum wage to median wages, and gradually eliminate the subminimum wage for tipped workers.

Key findings include:

- A $12 minimum wage in 2020 would undo the erosion in value of the minimum wage that took place largely in the 1980s. It would also reverse the growth in wage inequality between low- and middle-wage workers over the past generation.
- Raising the minimum wage to $12 by 2020 would directly or indirectly lift wages for 35.1 million workers—more than one in four U.S. workers.

- Over the phase-in period of the increases, affected workers would receive nearly $80 billion in increased wages. Once the increase is fully phased-in, the average affected worker would earn roughly $2,300 more each year than she does today (assuming no change in the number of work hours).
- The workers who would receive a pay increase do not fit the stereotypes of low-wage workers.
    - The average age of affected workers is 36 years old. A larger share of affected workers are age 55 and older (15.3 percent) than are teens (10.7 percent). About two-thirds of affected workers are 25 years old or older.
    - The majority of affected workers (55.9 percent) are women.
    - Workers of color would disproportionately be affected, with more than one-third of black and Hispanic workers receiving a raise.
    - Of workers who would receive a raise, the majority (57.4 percent) work full time, nearly half (45.1 percent) have at least some college experience, and more than a quarter (27.7 percent) have children.
    - More than one-third (36.5 percent) of single parents who work would receive higher pay, including nearly 40 percent of working single mothers.
    - The workers who would benefit are, on average, the primary breadwinners for their family, earning more than half (54.3 percent) of their family's total income.
- Indexing the minimum wage to median wages would ensure that low-wage workers share in broad improvements in U.S. living standards, and would prevent future growth in inequality between low- and middle-wage workers.

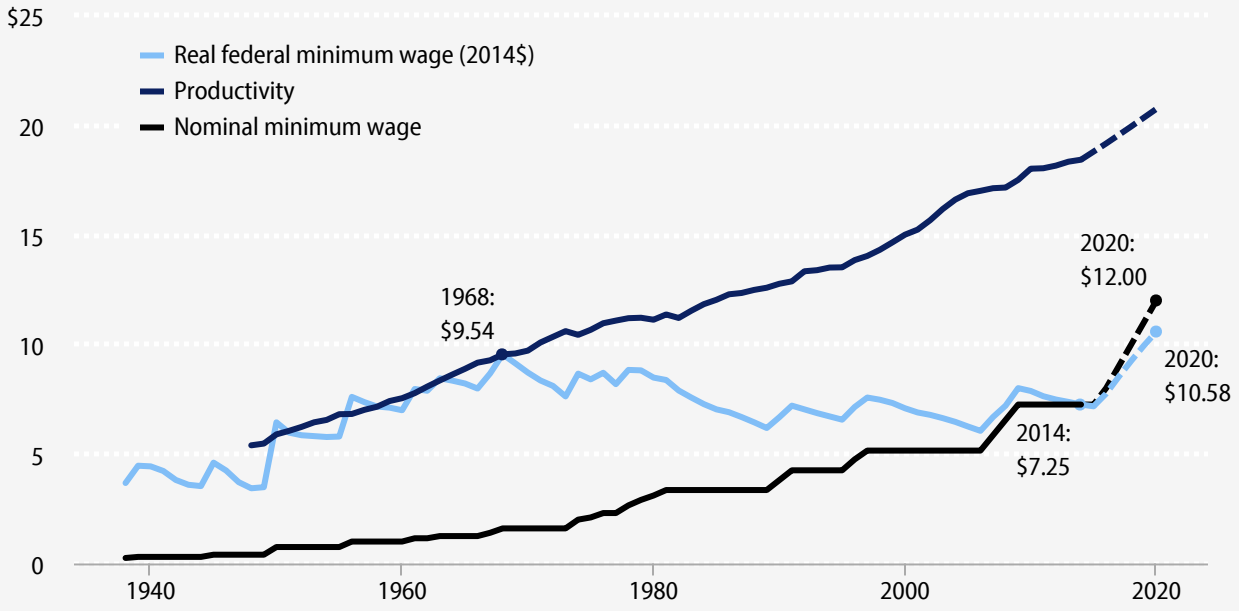
The minimum wage in context

Since its inception in 1938, the federal minimum wage has been adjusted through legislated increases nine times—from a nominal (non-inflation-adjusted) value of 25 cents per hour in 1938 to the current $7.25, where it has remained since 2009. These increases have been fairly irregular, varying in size and with differing lengths of time between increases. Yet aside from a few very brief deflationary periods in the postwar era, prices have consistently risen year after year. Each year that the minimum wage remains unchanged, its purchasing power slowly erodes until policymakers enact an increase. This haphazard maintenance of the wage floor has meant that low-wage workers of different generations or in different decades have been protected by significantly different wage standards.

Figure A shows the nominal and real value of the minimum wage from its inception in 1938 to today, as well as U.S. total economy net productivity indexed to 1968. As the figure shows, in the first increase following the end of World War II, the minimum wage rose rather dramatically in real terms, nearly doubling overnight in 1950, followed by regular increases that kept pace with rising labor productivity until the late 1960s. The minimum wage peaked in inflation-adjusted value in 1968, when it was equal to $9.54 in 2014 dollars. Increases in the 1970s essentially held the value of the minimum wage in place despite higher inflation driven by oil and food price shocks. Yet in the 1980s, as inflation remained elevated, the minimum wage was left to deteriorate to 1950s levels. Subsequent increases in the 1990s and late 2000s were not large enough to undo the erosion that took place in the 1980s. As of 2014, the federal minimum wage was worth 24 percent less than in 1968.[1]

FIGURE A

Real and nominal value of the federal minimum wage, projected value under the Raise the Wage Act, and total economy productivity, 1938–2014 and 2015–2020 (projected)



Note: The productivity series is total economy productivity net depreciation, indexed to the 1968 real value of the minimum wage. Minimum-wage values are in 2014 dollars deflated by the CPI-U-RS. Projections for productivity growth and the real value of the minimum wage under the Raise the Wage Act use CBO (2015).

Source: EPI analysis of Raise the Wage Act, Fair Labor Standards Act and amendments, Current Population Survey Outgoing Rotation Group microdata, unpublished Total Economy Productivity data from Bureau of Labor Statistics Labor Productivity and Costs program, and CBO (2015)

ECONOMIC POLICY INSTITUTE

The dashed lines in the figure show that the Raise the Wage Act would restore the lost purchasing power of the federal minimum wage, bringing it to an estimated $10.58 in 2014 dollars. This would equal an 11 percent increase in purchasing power from the 1968 peak.

Such an increase in purchasing power is decidedly modest when compared with growth in the U.S. economy and in workers' ability to generate income since that time. As explained in Cooper, Schmitt, and Mishel (2015), increases in average labor productivity represent the potential for higher living standards for workers. However, this potential is realized only if productivity gains translate into higher wages. The dark blue line in the figure shows that average labor productivity has more than doubled since the late 1960s, yet pay for workers generally and for low-wage workers in particular has either stagnated or fallen since the 1970s (Bivens et al. 2014). In the case of low-wage workers, hourly pay has declined in real terms since 1979 as a direct result of the erosion of the minimum wage (Bivens et al. 2014).

A higher minimum wage would direct a small portion of overall labor productivity gains into higher living standards for low-wage workers. Productivity in low-wage work may not have grown as substantially since the 1960s as overall productivity; however, low-wage workers today tend to be older (and are therefore likelier to have greater work experience) and significantly more educated than their counterparts in 1968 (Mishel 2014a). To the extent that workers with more experience and greater education typically earn more than their younger and less-educated counterparts, we would expect low-wage workers today to earn more, not less, than what they earned in the previous generation. In this context, a pay increase for America's lowest-paid workers of 11 percent over the 52-year span from 1968 to 2020 is indeed modest when compared with projected overall productivity growth of 117 percent over the same period.[2]

The minimum wage is also a mechanism for combating inequality. As technological progress and increased productivity raise wages for average- or middle-wage workers, a rising minimum wage ensures that the lowest-paid jobs also benefit from these improvements. This is the essence of the "fairness" implied in the name of the Fair Labor Standards Act, the act that established the minimum wage.

Figure B shows how the federal minimum wage has compared with the wages of typical U.S. workers, using two measures of typical wages. The light blue line shows the value of the federal minimum wage as a percentage of the average hourly earnings of nonsupervisory production workers, a group that comprises roughly 80 percent of U.S. workers and excludes highly paid managers and executives. The dark blue line shows the minimum wage as a percentage of the median wage of all full-time workers.

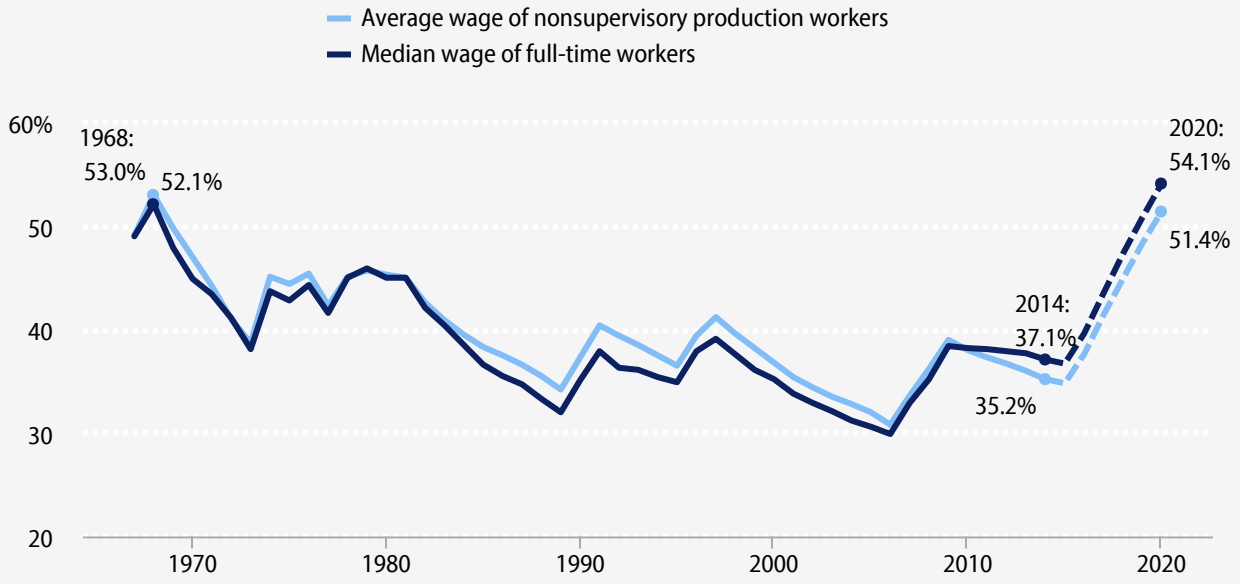
Both series illustrate how as the minimum wage was left to erode, the gap between pay in middle-class jobs and low-wage jobs expanded considerably. Indeed, the declining value of the federal minimum wage is the key driver of the growth in inequality between low-wage workers and middle-wage workers since the late 1970s (see Zipperer 2015a or Mishel 2014b). In 1968, the federal minimum wage was equal to roughly half the wage of the typical U.S. worker: 53.0 percent of the average hourly earnings of production workers, and 52.1 percent of the median wage of all full-time workers. In 2014, the minimum wage was equal to just over one-third of the wage of the typical worker: 35.2 percent of the average production worker wage, and 37.1 percent of the median wage of all full-time workers.

The dotted lines in the figure show that the Raise the Wage Act would essentially restore the relationship that existed in the late 1960s between the minimum wage and wages of typical workers. A $12 minimum wage in 2020 is projected to equal 54.1 percent of the median full-time wage, and 51.4 percent of the average production worker wage. These projections make the conservative assumption that wages of typical workers will not grow any faster than inflation in the coming years. If, instead, the wages of typical workers were to grow just 0.5 percent per year faster than inflation between 2014 and 2020, a $12 minimum wage in 2020 would equal less than half the median wage.[3]

When set at an adequate level, the minimum wage also ensures that work is a means to a minimally decent quality of life. By establishing a wage floor, the minimum wage prevents unscrupulous employers from reducing wages to destitution levels during periods of economic distress, thereby helping to prevent the exploitation of workers who may have limited job options. Unfortunately, the erosion of the minimum wage has effectively negated this protection, as evidenced in the Great Recession and its aftermath. During and after the recession, millions of previously better-paid workers were forced to take lower-paying jobs. Unable to make ends meet on the wages from these jobs, millions of

FIGURE B

Federal minimum wage as a share of the median wage and of the average wage of typical workers, 1967–2014 and 2015–2020 (projected under Raise the Wage Act)



Source: EPI analysis of Current Population Survey Annual Social and Economic Supplement microdata, Bureau of Labor Statistics data on average hourly earnings of production nonsupervisory workers, and the Raise the Wage Act

ECONOMIC POLICY INSTITUTE

workers—roughly half of whom work full time—have had to rely on public assistance programs to supplement their inadequate pay (Cooper 2014).

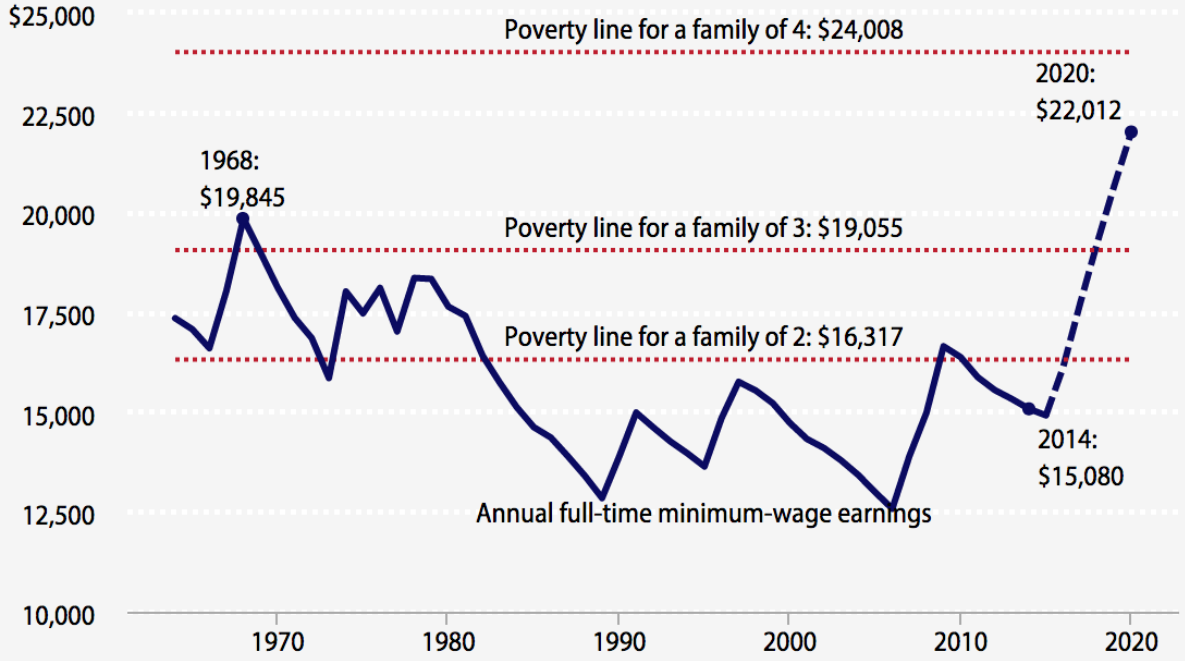
As shown in **Figure C**, a parent working full time while earning the minimum wage today earns too little to be above the federal poverty line. In contrast, at its high point in 1968, the minimum wage was sufficient to keep a family of three out of poverty. As the dark blue dotted line in the figure shows, the Raise the Wage Act would bring full-time minimum-wage earnings back above the poverty line for a family of three. In fact, when coupled with income from refundable tax credits, a full-time worker at the minimum wage would be lifted above the poverty line for a family of four.[4]

Demographic characteristics of affected workers

Raising the federal minimum wage to $12 by 2020 would lift pay for tens of millions of American workers. As the subsequent sections show, the vast majority of these workers do not fit the common portrayal of low-wage workers being primarily teenagers from middle-class families who are working part time after school, or stay-at-home mothers whose "secondary earnings" are inconsequential to their family's financial health.

FIGURE C

Annual wage income for a full-time minimum-wage worker, compared with various poverty thresholds, 1964–2014 and 2015–2020 (projected under Raise the Wage Act)



Note: All dollar values are expressed in 2014 dollars.

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

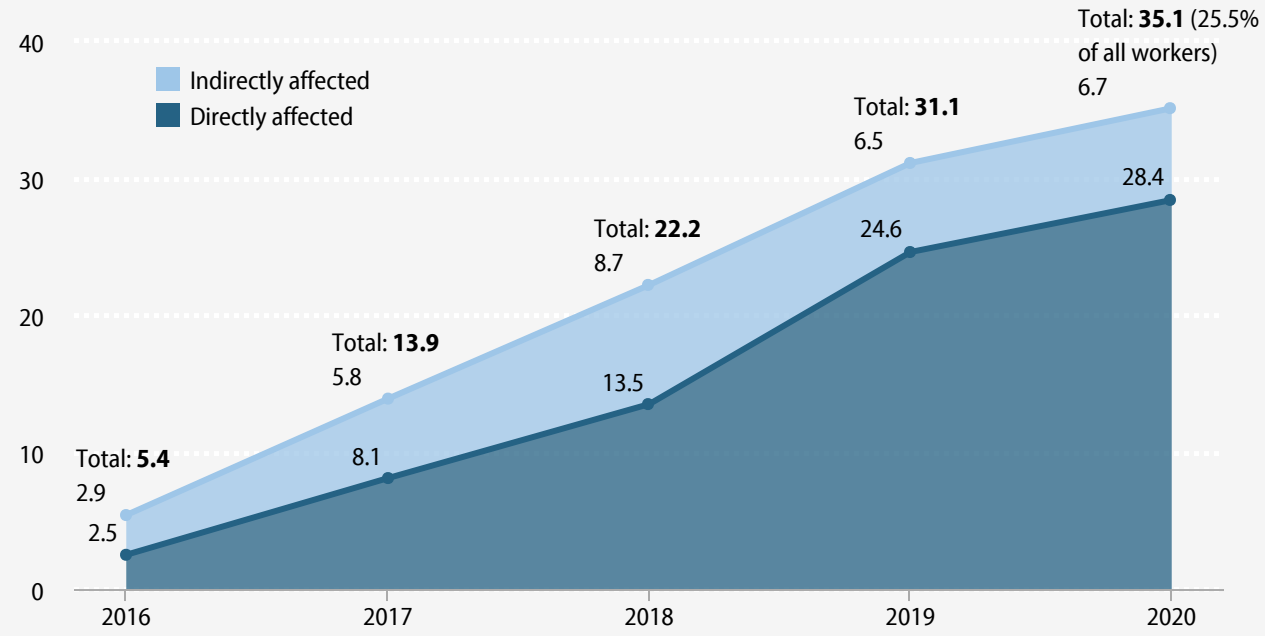
ECONOMIC POLICY INSTITUTE

Figure D shows the number of workers who are likely to receive a raise as the minimum wage is gradually increased. In the first step, when the minimum is increased from $7.25 to $8.00 per hour, 5.4 million workers are likely to benefit. This includes 2.5 million workers who will directly benefit—meaning their current pay rate is between $7.25 and $8.00—as well as 2.9 million who will indirectly benefit, meaning they will likely receive a raise through spillover or "ripple" effects because their current pay rate is just above $8.00.[5] Raising the minimum wage typically results in wage increases for workers further up the wage ladder because employers want to maintain some progression in their internal pay scales (Wicks-Lim 2006).

With each successive increase, the cumulative number of workers who would benefit grows. In the second year, as the minimum is lifted to $9.00 per hour, 8.1 million workers would directly receive a raise, and another 5.8 million would indirectly receive a raise. When the minimum increases to $10 in year three, 13.5 million would be directly affected, along with 8.7 million who would be indirectly affected. In the fourth year, the increase to $11 per hour would raise wages directly for 24.6 million workers, and indirectly for another 6.5 million workers. The final increase to $12 per

FIGURE D

Number of workers (in millions) affected by increasing the federal minimum wage to $12 by 2020



Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

hour would directly lift the pay of 28.4 million workers, and indirectly spur wage increases for another 6.7 million workers. In total, the increase to $12 would lift wages for 35.1 million workers—more than one in four U.S. workers.

The resulting pay increases for affected workers are significant. Over the full phase-in period of the increases, workers would receive nearly $80 billion in additional annual wages. Once the increase is fully phased-in, the average affected worker would earn roughly $2,300 more each year than she does today (assuming no change in the number of work hours).

The following sections highlight the demographic characteristics—in terms of age, sex, race and ethnicity, family composition, hours of work, education, family income, and geography—of the workers who would be affected, either directly or indirectly. Tables containing all the underlying demographic information, including discrete numbers of affected workers by demographic category, are also presented in Appendix A. Detailed state-level data are available at http://go.epi.org/6jY.

Age

The low-wage workers likely to benefit from increasing the minimum wage are frequently characterized as being primarily teenagers, and almost entirely young. Although this would not justify paying them wages significantly lower than those paid to their counterparts a generation ago, this stereotype is also false. While some low-wage workers are indeed

young, the vast majority of workers who would benefit from increasing the federal minimum wage to $12 are prime-working-age adults, and only a small fraction are teenagers. As shown in the top graph in **Figure E**, teens comprise a mere 10.7 percent of the workers who would benefit; nearly 90 percent of affected workers are 20 years old or older.

The second graph in Figure E breaks down the age distribution of affected workers even further, showing that two-thirds of affected workers are at least 25 years old. In fact, a larger share of affected workers are age 55 and older (15.3 percent) than are teens (10.7 percent). Likewise, a larger portion of affected workers are age 40 and older (36.7 percent) than are under age 25 (33.4 percent). Among affected workers, the average age is 36 years old.[6]

Sex

While raising the minimum wage would benefit both women and men, it would disproportionately raise pay for women. As shown in the pie chart in **Figure F**, women make up 55.9 percent of affected workers. In comparison, women make up only 49.2 percent of the total U.S. workforce.

This disproportionate impact is shown in the bar chart in Figure F. Among all wage-earning women in the United States, 29.6 percent would receive a raise under a federal minimum-wage increase to $12 by 2020. In comparison, 21.7 percent of all wage-earning men would benefit—not as large a share as for women, but still more than one-fifth of all male workers.

The bar chart in Figure F also shows the shares, by gender, of other selected groups who would benefit from a minimum-wage increase. Among working parents, 27.3 percent of working mothers would receive a raise, as would 14.2 percent of working fathers. Among single parents, the effects are more dramatic: Nearly 40 percent of all single working mothers would receive a raise if the federal minimum wage were increased to $12 by 2020, as would more than a quarter (28.0 percent) of single working dads. Large shares of minority workers would also benefit: 37.1 percent of women of color who work would receive a raise, along with 30.5 percent of men of color who work.

Race/ethnicity

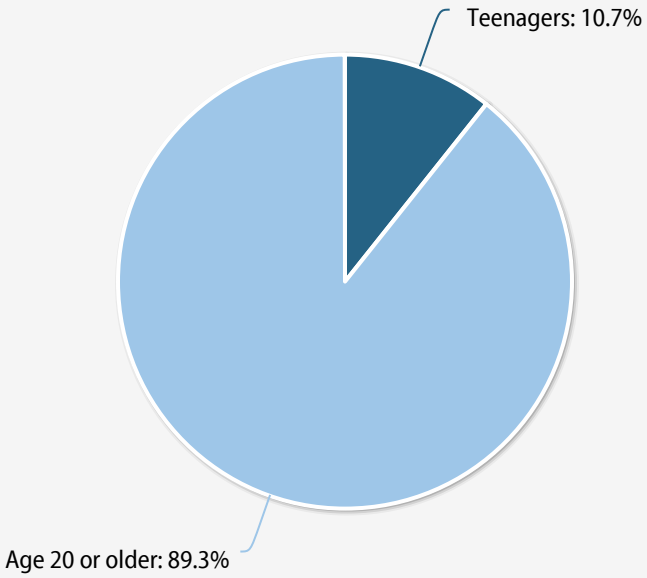
As shown in the pie chart in **Figure G**, the majority of workers who would benefit from increasing the minimum wage are white, non-Hispanic workers, comprising just over half (53.2 percent) of all those who would receive a raise. Hispanic workers of any race make up the next largest share, at just under a quarter (24.3 percent) of the total affected population. Black or African American workers are 15.4 percent of the total, and Asians and workers of other races/ethnicities make up 7.1 percent of the total.

Although workers of color are a slim minority of those who would benefit, they do benefit at significantly higher rates. The bar chart in Figure G shows the share of each race or ethnic group that would receive a raise if the federal minimum wage were increased to $12 by 2020. As the figure shows, more than one-third (34.7 percent) of all black or African American workers would receive higher pay, as would nearly four in 10 (37.8 percent) Hispanic workers. Just less than a quarter of Asian workers and those of other races/ethnicities would receive a raise—a slightly higher share than that of white, non-Hispanic workers, of whom 21.0 percent would receive higher pay.

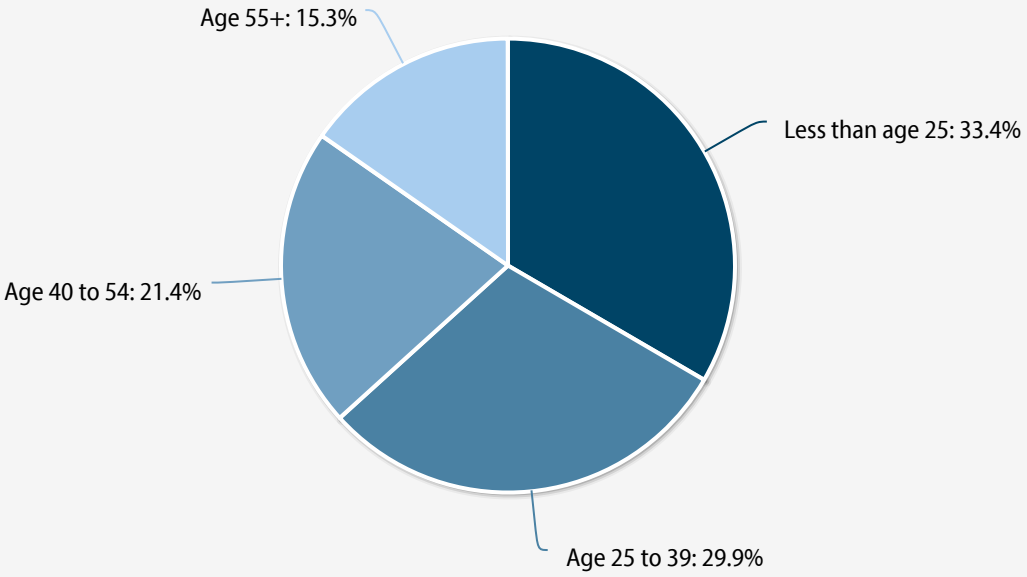
FIGURE E

Age of workers affected by increasing the federal minimum wage to $12 by 2020

Share of affected workers who are teenagers versus age 20 or older



Detailed age breakdown of affected workers

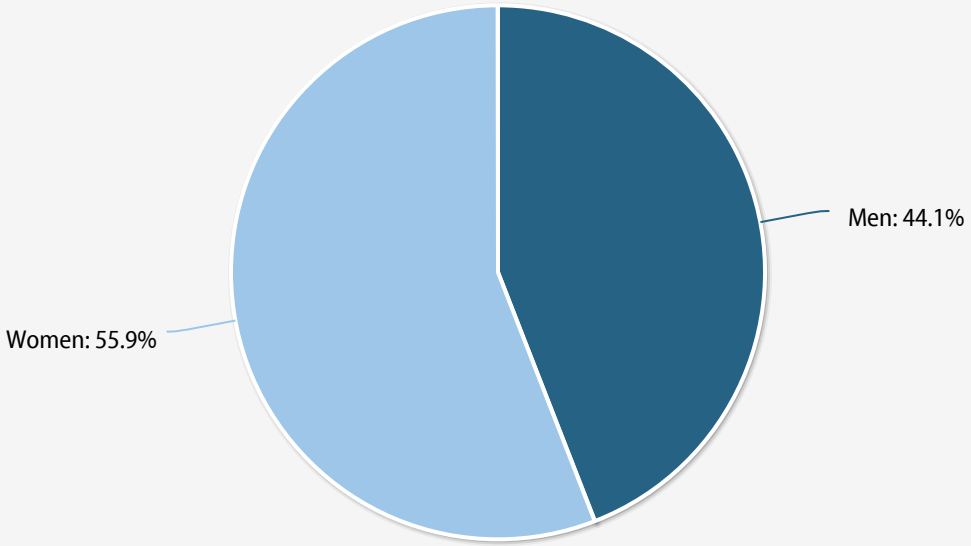


Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

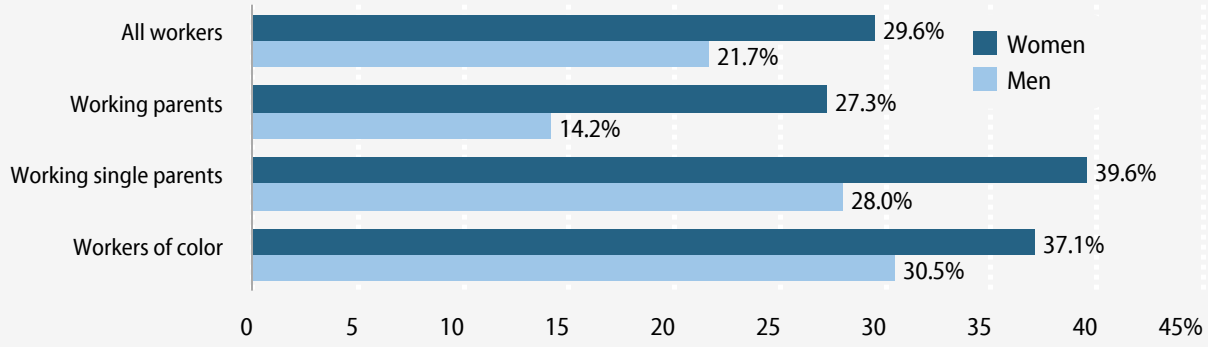
ECONOMIC POLICY INSTITUTE

FIGURE F

Gender of workers affected by increasing the federal minimum wage to $12 by 2020



Shares of demographic groups that would benefit, by gender



Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

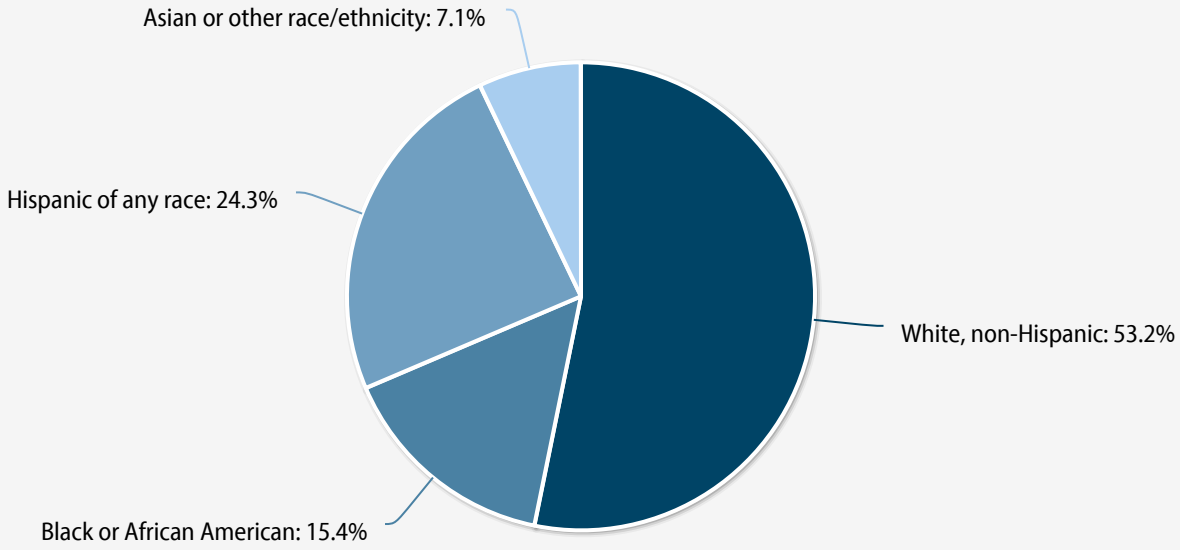
ECONOMIC POLICY INSTITUTE

Education

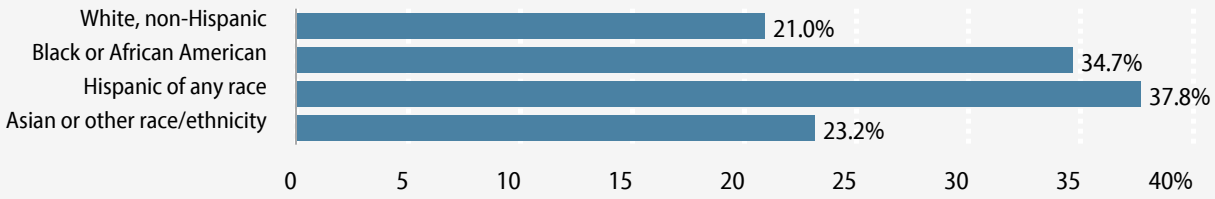
As with misperceptions of the age of low-wage workers, many of the workers who would benefit from increasing the minimum wage have more education than is commonly acknowledged. As shown in **Figure H,** nearly half (45.1 percent) of the affected workers have at least some college experience, and nearly 20 percent have an associate degree or higher.

FIGURE G

Race/ethnicity of workers affected by increasing the federal minimum wage to $12 by 2020



Share of each worker race/ethnic group that would benefit



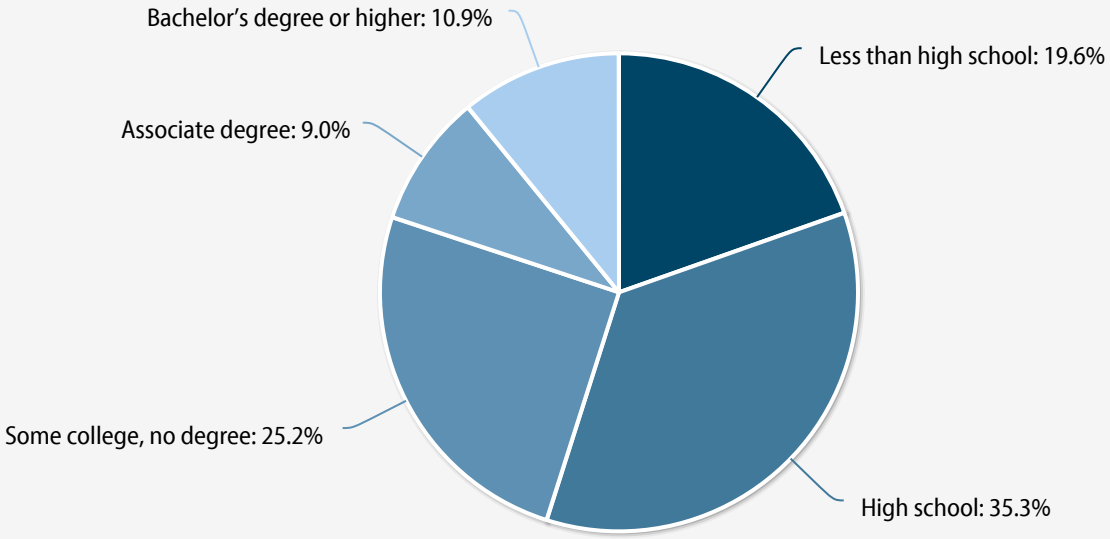
Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

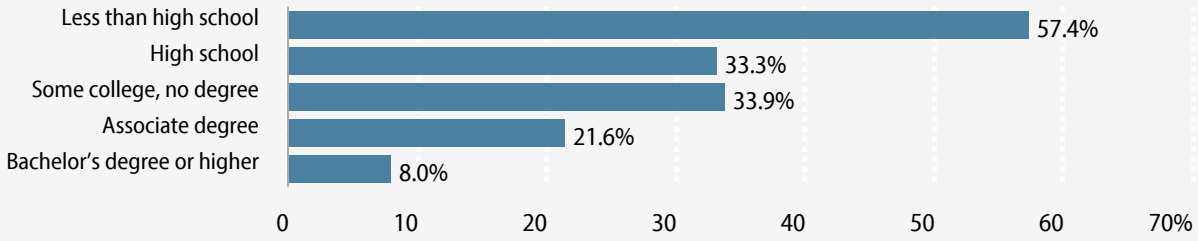
The bar graph in Figure H shows the share of workers at each educational level who would receive a raise from increasing the federal minimum wage to $12 by 2020. Not surprisingly, workers with lower levels of education are far more likely to be affected: More than half (57.4 percent) of workers with less than a high school education would receive a pay increase. Still, large shares of those who have completed high school and sought further education would also benefit. Just over a third (33.9 percent) of workers with some college experience, yet no degree, would receive a raise, as would more than one-fifth (21.6 percent) of workers with an associate degree.

FIGURE H

Educational attainment of workers affected by increasing the federal minimum wage to $12 by 2020



Share of each worker educational attainment group that would benefit



Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

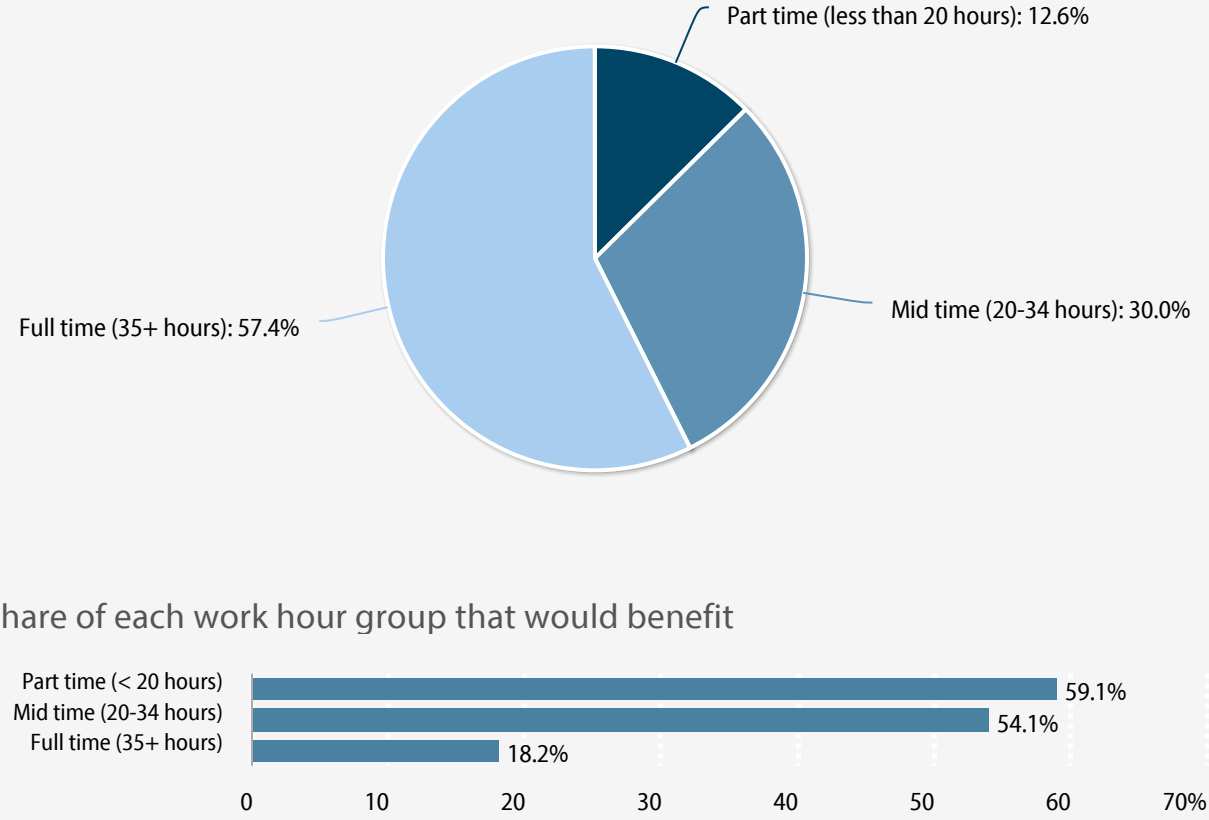
Hours of work

Many workers who would benefit from a minimum-wage increase also work longer hours than commonly thought; they are not simply working part time or in after-school jobs. As shown in the pie chart in **Figure I**, more than half (57.4 percent) of affected workers work full time (at least 35 hours per week). Another 30.0 percent work between 20 and 34 hours per week, and only 12.6 percent work fewer than 20 hours per week.

Still, those workers who are not full time do benefit at disproportionate rates. The bar chart in Figure I shows the share of each group of workers by work hour category who would receive a raise from a minimum-wage increase to $12.

FIGURE I

Work hours of workers affected by increasing the federal minimum wage to $12 by 2020



Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

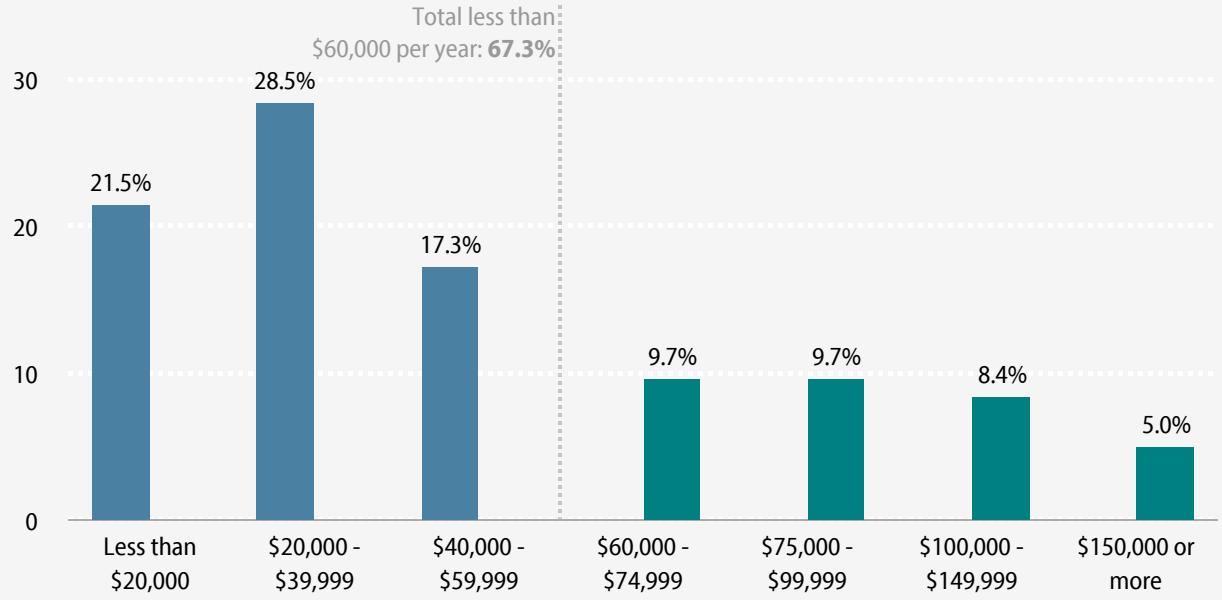
ECONOMIC POLICY INSTITUTE

Nearly 60 percent of workers who work fewer than 20 hours per week would receive a raise, as would 54.1 percent of those working between 20 and 34 hours per week. Among full-time workers, 18.2 percent would receive a raise.

Many individuals who work less than full time are not opting for fewer hours by choice—many are limited by a lack of available work, or because circumstances prevent them from seeking full-time employment, such as the need to care for a family member, or a lack of adequate work supports (access to child care, paid leave, or flexible work schedules) that might facilitate a full-time schedule. For these workers, an increase in their hourly rate of pay is arguably even more important, as it could provide resources that would enable them to seek more hours of work.

FIGURE J

Family income of workers affected by increasing the federal minimum wage to $12 by 2020



Note: Percentages do not sum to 100% due to rounding.

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

Family income

Again contrary to some portrayals, the majority of workers who would benefit from increasing the minimum wage come from families of modest means. As shown in **Figure J**, 67.3 percent of the workers who would receive a raise if the minimum wage were increased to $12 by 2020 have total family incomes of less than $60,000 per year. Exactly half of affected workers have total family incomes below $40,000 per year.

Some opponents of raising the minimum wage contend that as a policy for reducing economic hardship, the minimum wage is ineffective because many poor people do not work. This is false. As explained in Gould, Davis, and Kimball (2015), the majority of poor people age 18 to 64 who can work (i.e., they are not in school, retired, or disabled) do work, and over 40 percent work full time. Moreover, increasing the minimum wage is an effective tool for reducing poverty. In a comprehensive review of the literature on the minimum wage's poverty-reducing effects, Dube (2013) finds that nearly all studies of this relationship show that raising the minimum wage significantly reduces poverty rates. In his own analysis of minimum-wage increases in the 1990s and 2000s, he finds that for every 10 percent increase in the minimum wage, the poverty rate is expected to decline by 2.4 percentage points.

A variation of this criticism is that the minimum wage is "poorly targeted" because some of the workers who would benefit from a minimum-wage increase come from middle-class families. The fact that the minimum wage provides

protection to workers at all levels of family income is a feature, not a bug, of the law. As a labor standard, the minimum wage prevents exploitation of workers, regardless of their family income level. No worker, no matter how wealthy his or her family, should have to work for unacceptably low wages. Moreover, the fact that some low-wage workers do come from middle-class families underscores that the erosion in the minimum wage's value over the past 45 years has hurt both low- and middle-income families.

Family status and children

Many of the workers who would benefit from increasing the minimum wage are supporting families and children. As shown in the pie chart in **Figure K**, more than one-third (35.4 percent) of the affected workers are married, and more than one-quarter (27.7 percent) of affected workers have children. In total, over 9.7 million parents would receive higher pay under a minimum-wage increase to $12 by 2020. Of these, 3.9 million are single parents, accounting for 11.0 percent of those who would be affected by raising the minimum wage (discrete numbers of affected workers by family status are shown in Appendix Table 2a). While this is a relatively small portion of the total beneficiaries, it is larger than their 7.7 percent share of the overall labor force. In other words, single parents would disproportionately benefit from raising the minimum wage.

The bar chart in Figure K shows the shares of workers by family type who would be affected. Among married parents who work, 16.1 percent would receive a raise from increasing the minimum wage to $12 by 2020. Single parents who work would benefit at more than double that rate—more than one in three working single parents (36.5 percent) would receive higher pay if the minimum wage were raised.

The parents receiving higher pay provide for 17.5 million children across the United States. As shown in **Figure L**, this is nearly one-quarter (22.6 percent) of all U.S. children. The figure also shows that the share of children with at least one parent who would benefit from increasing the minimum wage varies considerably across the states. In Vermont, only 12.6 percent of children have a parent who would receive a raise, while in North Carolina, nearly one-third of children (31.6 percent) would see their family's resources increase if the minimum wage were lifted to $12 by 2020.

Geography

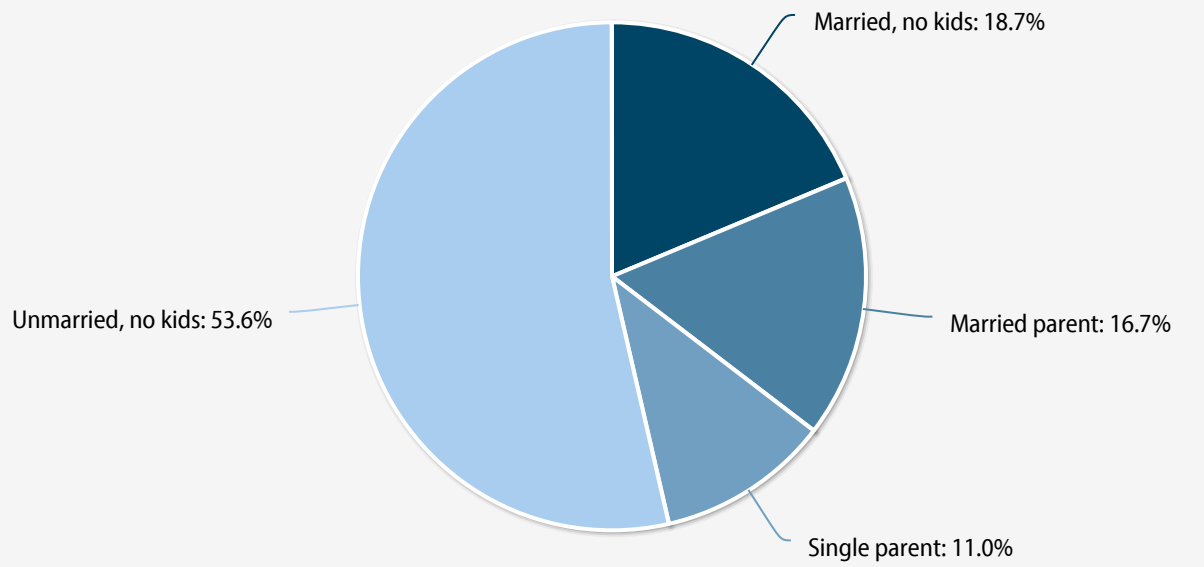
Not surprisingly, the share of workers in each state who would be affected by a federal minimum-wage increase varies considerably. **Figure M** shows the share of each state's workforce that would be affected if the federal minimum wage were raised to $12 by 2020. The smallest impact would be in Alaska, where only 15.7 percent of the workforce is likely to be affected. The largest impact is in Arkansas, where nearly a third of all workers (33.1 percent) are likely to receive a raise.

Many of the states with relatively small affected populations have recently enacted increases in their state minimums, or have automatic annual adjustments based on inflation, such as Vermont, Massachusetts, Washington, and Alaska. These states will already have wage floors near the proposed $12 by 2020.[7] As the increases in those states' minimum wages "ripple" up through the wage distribution in the preceding years, the number of workers who would be affected by the enactment of a higher federal minimum by 2020 is reduced.

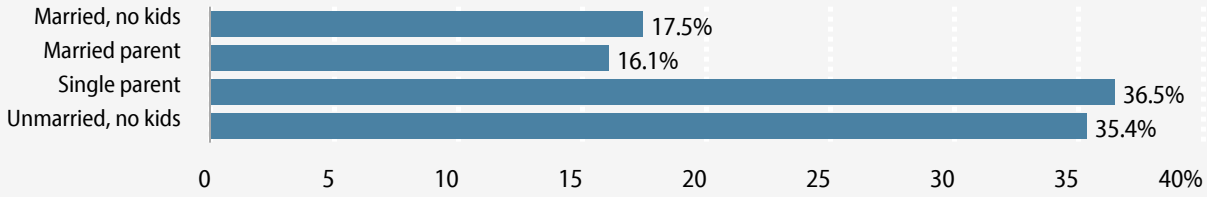
In contrast, the share of the workforce that would be impacted by a federal increase is significantly larger in states with low minimum wages—or in some cases, no minimum wage—such as in Arkansas, North Carolina, Mississippi, Ten-

FIGURE K

Family status of workers affected by increasing the federal minimum wage to $12 by 2020



Share of each worker family type that would benefit



Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

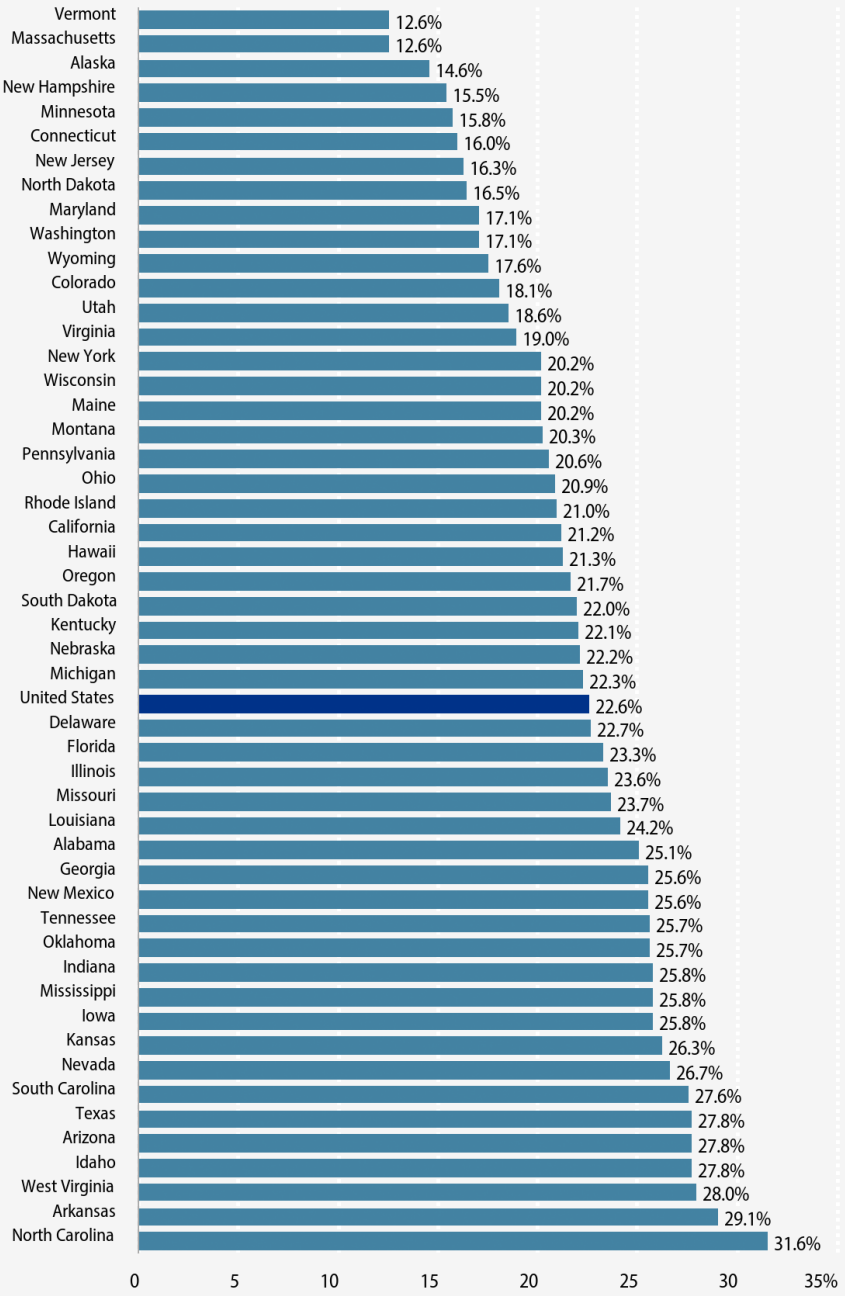
nessee, and Idaho.[8] Workers in the Southeast, in particular, are most likely to see a pay increase if the federal minimum wage were raised.

The importance of affected workers' pay to their family's total incomes

Low-wage workers are sometimes characterized as "secondary earners," suggesting that their work earnings are discretionary or inconsequential to their family's financial health. The data show that this is not at all the case; the average worker who would benefit from increasing the minimum wage to $12 by 2020 is, in fact, the primary breadwinner for her family. As shown in **Figure N**, the workers who would benefit from increasing the minimum wage earn, on average,

FIGURE L

Share of children with at least one parent who would be affected by increasing the federal minimum wage to $12 by 2020, U.S. and by state

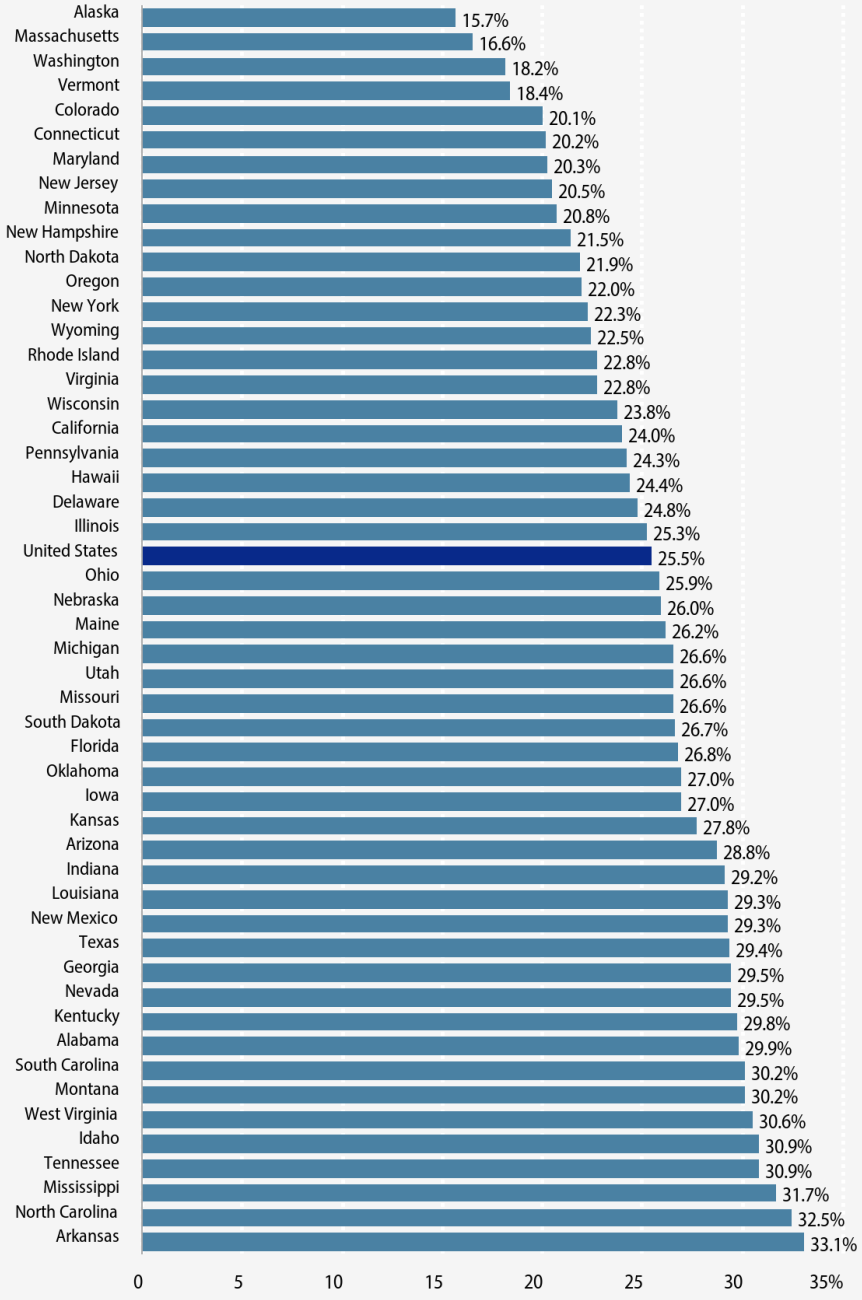


Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

FIGURE M

Share of workforce affected by increasing the federal minimum wage to $12 by 2020, U.S. and by state



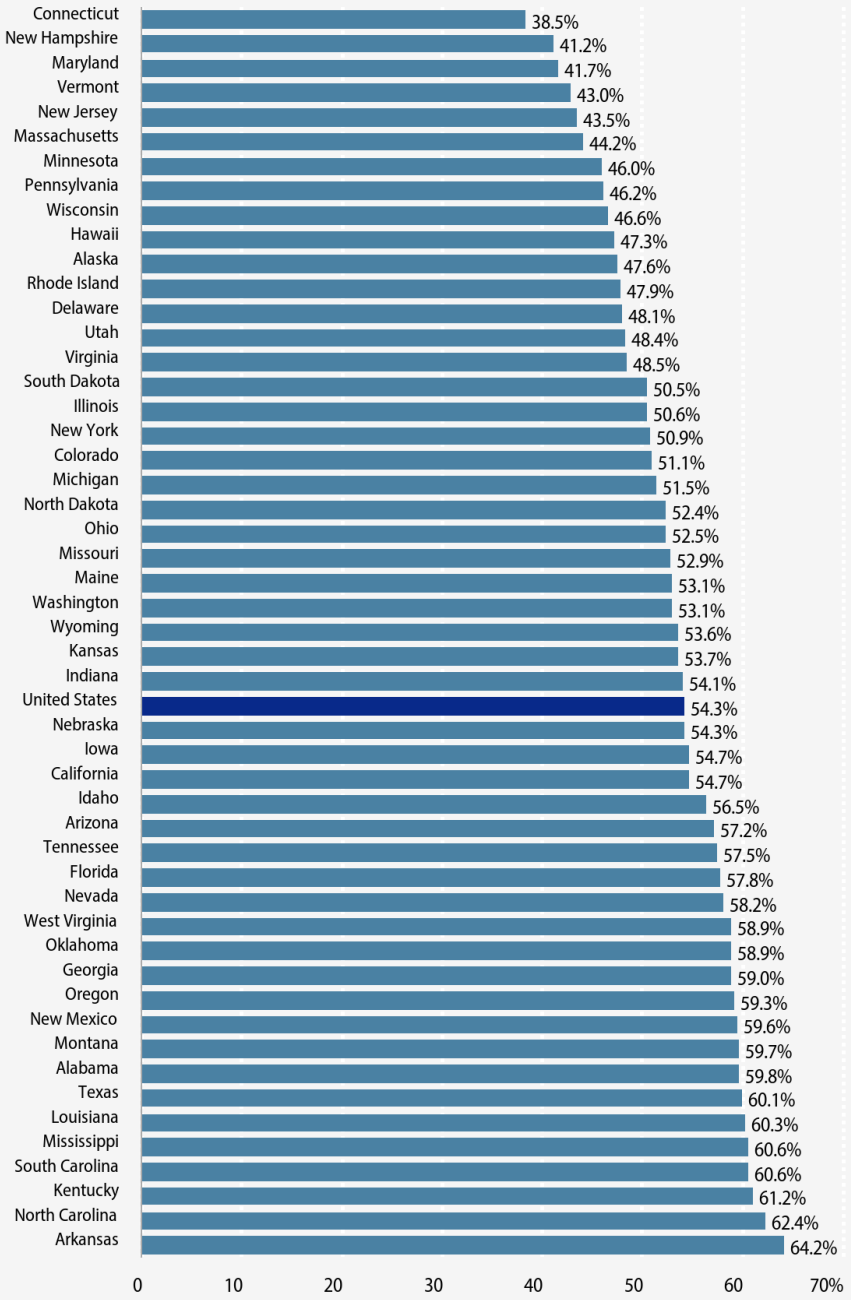
Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

54.3 percent of their family's total income. In several Southern states, affected workers earn more than 60 percent of their family's total income.

FIGURE N

Average share of family income provided by worker affected by increasing the federal minimum wage to $12 by 2020, U.S. and by state



Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata

ECONOMIC POLICY INSTITUTE

Other aspects of the proposal

The Raise the Wage Act would also "index" the minimum wage to median wages, and would gradually phase out the subminimum wage for tipped workers. This section explains why both aspects would benefit workers.

Indexing to median wages

After reaching $12 in 2020, the Raise the Wage Act would index the minimum wage to median wages so that in subsequent years, as wages throughout the workforce rise, the minimum wage would automatically be lifted to maintain its value relative to the median wage. This is different from how most minimum-wage indexing has been done in the past. There are currently a dozen states that index their state minimum wages to changes in prices, typically as measured by changes in the Consumer Price Index (CPI). Indexing to prices prevents any erosion in the minimum's real (inflation-adjusted) value, thereby ensuring that low-wage workers can still afford the same amount of goods and services year after year. This is certainly advantageous to having no indexing; however, indexing to prices effectively legislates that America's lowest-paid workers never see any material improvement in their quality of life. The real value of the minimum wage remains frozen, regardless of increases in overall labor productivity that provide the opportunity to broadly improve living standards.

In contrast, linking the minimum wage to median wages ensures that low-wage workers do not lose ground relative to typical workers. As Zipperer (2015b) explains, indexing to the median wage "links the minimum wage to overall conditions in the labor market." To the extent that productivity improvements and technological progress result in higher wages for the typical U.S. worker, so too will minimum-wage workers see their hourly pay rise. It is of course true that both low- and middle-wage workers have seen their hourly pay lag relative to productivity growth in recent decades. A stronger minimum wage ensures that the vast majority of U.S. workers share a common trajectory of wage growth. It will need to be complemented with other policies to ensure wage growth for this entire vast majority rises in step with overall productivity growth.

In addition, wages are less volatile than prices. Price indices, such as the CPI, are subject to unpredictable changes in the price of food and energy that may be driven by temporary events, such as political instability or natural disasters. Wages, on the other hand, tend to be more stable, rising as fast—or faster—than prices over the long term, yet with greater predictability for employers and employees alike. (See Zipperer 2015b or Shierholz 2009.)

Eliminating the subminimum wage for tipped workers

Under current federal law, employers of workers who customarily receive tips are only required to pay their tipped staff a base wage of $2.13 per hour, provided employees' weekly income from tips plus their base wage equates to an hourly rate of at least the minimum wage. As explained in Allegretto and Cooper (2014), this separate wage standard results in a host of problems for tipped workers, including dramatically higher poverty rates and greater reliance on public assistance. Contrary to common perceptions of waitstaff and bartenders making lavish incomes from tips, the vast majority of tipped work is low-paying. The median wage for tipped workers in 2013, including earnings from tips, was $10.22 per hour—38 percent less than the overall U.S. median wage for that year. Because the majority of tipped workers' pay is from tips—as opposed to a regular paycheck—weekly income can be highly erratic and subject to a greater incidence of wage theft[9] (Allegretto and Cooper 2014). Moreover, the fact that most tipped workers are women means that the

inequities produced by this separate wage system exacerbate existing gender-based wage inequality. (See Gallagher Robbins, Vogtman, and Entmacher 2015.)

The Raise the Wage Act would raise the subminimum wage for tipped workers over 10 years until it reaches parity with the full minimum wage, as is currently the case in seven states.[10] These seven states have significantly lower poverty rates among tipped workers than the states where tipped workers are paid a lower base wage. At the same time, growth in the restaurant industry has been as strong, if not stronger, in the states where tipped and nontipped employees are treated equally. This suggests that requiring employers to pay regular wages to tipped workers has had no significant negative effect on growth of the restaurant industry (Allegretto 2013).

Conclusion

Since its inception in the Great Depression, a strong minimum wage has been recognized as a key labor market institution that, if effectively maintained, can provide the foundation for equitable and adequate pay for American workers. However, the failure to regularly and adequately raise the federal minimum wage over the past five decades is one of several policy failures that have denied a generation of American workers more significant improvement in their quality of life. In fact, the erosion of the minimum wage has left low-wage workers today earning significantly less than their counterparts 50 years ago.

Raising the federal minimum wage to $12 by 2020 would restore its value to a level that ensures full-time work is a means to escape poverty, and would provide tens of millions of America's lowest-paid workers with a small yet long-overdue improvement in their standard of living. Automating future increases by indexing to growth in the median wage would ensure workers at the bottom of the wage scale are never again left behind as productivity improvements lead to broader improvements in wages. In addition, gradually raising and eliminating the separate lower wage for tipped workers would eliminate the disparities in labor protections and living standards that currently exist between tipped and non-tipped workers. These actions would significantly improve the well-being of millions of American workers and their families, and help to reduce long-standing race- and gender-based wage inequities.

— *The Economic Policy Institute gratefully acknowledges the* ***Surdna Foundation's*** *support of this research.*

About the author

David Cooper is an economic analyst with the Economic Policy Institute. He conducts national and state-level research on a variety of issues, including the minimum wage, employment and unemployment, poverty, and wage and income trends. He also provides support to the Economic Analysis and Research Network (EARN) on data-related inquiries and quantitative analyses. David has been interviewed and cited by numerous local and national media for his research on the minimum wage, poverty, and U.S. economic trends. He holds a Master of Public Policy degree from Georgetown University.

Appendix A: Data tables

APPENDIX TABLE 1

Estimated effects of a federal minimum-wage increase to $12 in 2020, by step

	Size of increase	Total estimated workers[1]	Directly affected[2]	Indirectly affected[3]	Total affected	Total affected as % of workers	Increased wages for directly and indirectly affected[4]
6/1/2016: $8.00	$0.75	133,198,000	2,546,000	2,870,000	5,416,000	4.1%	$2,088,646,000
6/1/2017: $9.00	$1.00	134,228,000	8,141,000	5,764,000	13,905,000	10.4%	$8,477,746,000
6/1/2018: $10.00	$1.00	135,266,000	13,515,000	8,691,000	22,206,000	16.4%	$14,813,563,000
6/1/2019: $11.00	$1.00	136,313,000	24,640,000	6,472,000	31,112,000	22.8%	$23,154,338,000
6/1/2020: $12.00	$1.00	137,367,000	28,365,000	6,676,000	35,041,000	25.5%	$31,159,044,000
5-year totals:	**$4.75**	**137,367,000**	**28,365,000**	**6,676,000**	**35,041,000**	**25.5%**	**$79,693,337,000**

[1] Total estimated workers is estimated from the CPS respondents who were 16 years old or older, employed, but not self-employed, and for whom either a valid hourly wage is reported or one can be imputed from weekly earnings and average weekly hours. Consequently, this estimate represents the identifiable wage-earning workforce and tends to understate the size of the full workforce.

[2] Directly affected workers will see their wages rise, as the new minimum-wage rate will exceed their current hourly pay.

[3] Indirectly affected workers have a wage rate just above the new minimum wage (between the new minimum wage and the new minimum wage plus the dollar amount of the increase in the previous year's minimum wage). They will receive a raise as employer pay scales are adjusted upward to reflect the new minimum wage.

[4] Total annual amount of increased wages for directly and indirectly affected workers.

Note: Assumed annual population growth is 0.77% (U.S. projected average annual growth rate from 2015 to 2020, according to U.S. Census Bureau (2014)). Assumed annual wage growth is 1.24% leading up to the first increase (U.S. annual average of the bottom 20% of wage earners from 2010 to 2014). In subsequent steps, we assume the CBO's projections for inflation plus 0.2% real wage growth. For example, in year 3, CBO projects growth in the CPI-U of 2.2%, so we assume wage growth of 2.4%.

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

APPENDIX TABLE 2A

Characteristics of U.S. workers who would be affected by increasing the federal minimum wage to $12 per hour by July 2020, total

Category	Estimated workforce	Directly affected	Indirectly affected	Total affected	Percentage of the total affected	Share of this category that is affected
Total	**137,367,000**	**28,365,000**	**6,676,000**	**35,041,000**	**100.0%**	**25.5%**
Sex						
Female	66,234,000	15,855,000	3,719,000	19,574,000	55.9%	29.6%
Male	71,133,000	12,511,000	2,957,000	15,468,000	44.1%	21.7%
Age						
Under 20	4,650,000	3,481,000	272,000	3,753,000	10.7%	80.7%
20 or older	132,718,000	24,885,000	6,404,000	31,289,000	89.3%	23.6%
Less than 25	18,827,000	10,201,000	1,498,000	11,699,000	33.4%	62.1%
25 to 39	46,012,000	8,213,000	2,272,000	10,485,000	29.9%	22.8%
40 to 54	44,583,000	5,854,000	1,654,000	7,508,000	21.4%	16.8%
55+	27,945,000	4,096,000	1,252,000	5,348,000	15.3%	19.1%
Race or ethnicity						
White, non-Hispanic	88,590,000	14,938,000	3,689,000	18,627,000	53.2%	21.0%
Black or African American	15,543,000	4,522,000	879,000	5,401,000	15.4%	34.7%
Hispanic of any race	22,534,000	6,959,000	1,568,000	8,527,000	24.3%	37.8%
Asian or other race/ ethnicity	10,700,000	1,946,000	540,000	2,486,000	7.1%	23.2%
Family status						
Married parent	36,334,000	4,546,000	1,311,000	5,857,000	16.7%	16.1%
Single parent	10,548,000	3,113,000	737,000	3,850,000	11.0%	36.5%
Married, no kids	37,457,000	5,016,000	1,542,000	6,558,000	18.7%	17.5%
Unmarried, no kids	53,028,000	15,690,000	3,086,000	18,776,000	53.6%	35.4%
Working moms	23,222,000	5,098,000	1,250,000	6,348,000	18.1%	27.3%
Single moms	7,705,000	2,481,000	573,000	3,054,000	8.7%	39.6%
Working dads	23,660,000	2,561,000	798,000	3,359,000	9.6%	14.2%
Single dads	2,843,000	632,000	164,000	796,000	2.3%	28.0%

APPENDIX TABLE 2A (CONTINUED)

Category	Estimated workforce	Directly affected	Indirectly affected	Total affected	Percentage of the total affected	Share of this category that is affected
Family annual income level						
Less than $20,000	13,708,000	6,420,000	1,097,000	7,517,000	21.5%	54.8%
$20,000–$39,999	26,523,000	7,953,000	2,034,000	9,987,000	28.5%	37.7%
$40,000–$59,999	24,076,000	4,814,000	1,244,000	6,058,000	17.3%	25.2%
$60,000–$74,999	16,411,000	2,702,000	680,000	3,382,000	9.7%	20.6%
$75,000–$99,999	19,852,000	2,711,000	688,000	3,399,000	9.7%	17.1%
$100,000–$149,999	21,162,000	2,353,000	582,000	2,935,000	8.4%	13.9%
$150,000 or more	15,636,000	1,412,000	352,000	1,764,000	5.0%	11.3%
Work hours						
Part time (< 19 hours per week)	7,463,000	3,921,000	490,000	4,411,000	12.6%	59.1%
Mid time (20–34 hours per week)	19,436,000	9,120,000	1,390,000	10,510,000	30.0%	54.1%
Full time (35+ hours per week)	110,469,000	15,325,000	4,796,000	20,121,000	57.4%	18.2%
Education level						
Less than high school	11,954,000	5,956,000	906,000	6,862,000	19.6%	57.4%
High school	37,167,000	9,993,000	2,366,000	12,359,000	35.3%	33.3%
Some college, no degree	26,069,000	7,172,000	1,673,000	8,845,000	25.2%	33.9%
Associate degree	14,622,000	2,451,000	701,000	3,152,000	9.0%	21.6%
Bachelor's degree or higher	47,555,000	2,792,000	1,029,000	3,821,000	10.9%	8.0%

	Total est. # of children	Child has directly affected parent	Child has indirectly affected parent	Total children with affected parents	% of all children
Children with at least one affected parent	77,411,000	14,054,000	3,463,000	17,517,000	22.6%

	Average share of family income earned by affected worker	Share of affected workers who are sole providers of their family's income
All affected	54.3%	23.7%
Parents affected	63.1%	31.4%

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

APPENDIX TABLE 2B

Characteristics of U.S. workers who would be affected by increasing the federal minimum wage to $12 per hour by July 2020, white non-Hispanic only

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
Total	**88,590,000**	**18,627,000**	**100.0%**	**21.0%**
Sex				
Female	42,954,000	10,940,000	58.7%	25.5%
Male	45,636,000	7,687,000	41.3%	16.8%
Age				
Under 20	3,047,000	2,443,000	13.1%	80.2%
20 or older	85,543,000	16,184,000	86.9%	18.9%
Less than 25	11,407,000	6,743,000	36.2%	59.1%
25 to 39	27,260,000	4,713,000	25.3%	17.3%
40 to 54	29,055,000	3,726,000	20.0%	12.8%
55+	20,869,000	3,445,000	18.5%	16.5%
Family status				
Married parent	23,198,000	2,761,000	14.8%	11.9%
Single parent	4,995,000	1,456,000	7.8%	29.1%
Married, no kids	27,370,000	3,954,000	21.2%	14.4%
Unmarried, no kids	33,026,000	10,456,000	56.1%	31.7%
Working moms	13,794,000	2,939,000	15.8%	21.3%
Single moms	3,504,000	1,166,000	6.3%	33.3%
Working dads	14,399,000	1,278,000	6.9%	8.9%
Single dads	1,492,000	289,000	1.6%	19.4%
Family annual income level				
Less than $20,000	6,196,000	3,018,000	16.2%	48.7%
$20,000–$39,999	13,702,000	4,556,000	24.5%	33.3%
$40,000–$59,999	15,261,000	3,387,000	18.2%	22.2%
$60,000–$74,999	11,106,000	2,011,000	10.8%	18.1%

APPENDIX TABLE 2B (CONTINUED)

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
$75,000–$99,999	14,418,000	2,309,000	12.4%	16.0%
$100,000–$149,999	15,959,000	2,040,000	11.0%	12.8%
$150,000 or more	11,948,000	1,306,000	7.0%	10.9%
Work hours				
Part time (< 19 hours per week)	5,261,000	2,937,000	15.8%	55.8%
Mid time (20–34 hours per week)	12,211,000	5,963,000	32.0%	48.8%
Full time (35+ hours per week)	71,118,000	9,727,000	52.2%	13.7%
Education level				
Less than high school	4,301,000	2,491,000	13.4%	57.9%
High school	23,012,000	6,616,000	35.5%	28.8%
Some college, no degree	16,530,000	5,071,000	27.2%	30.7%
Associate degree	10,280,000	1,938,000	10.4%	18.9%
Bachelor's degree or higher	34,466,000	2,510,000	13.5%	7.3%

	Average share of family income earned by affected worker	Share of affected workers who are sole providers of their family's income
All affected	47.1%	17.5%
Parents affected	53.7%	21.7%

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

APPENDIX TABLE 2C

Characteristics of U.S. workers who would be affected by increasing the federal minimum wage to $12 per hour by July 2020, black only

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
Total	**15,543,000**	**5,401,000**	**100.0%**	**34.7%**
Sex				
Female	8,471,000	3,114,000	57.7%	36.8%
Male	7,072,000	2,287,000	42.3%	32.3%
Age				
Under 20	442,000	366,000	6.8%	82.8%
20 or older	15,101,000	5,035,000	93.2%	33.3%
Less than 25	2,192,000	1,565,000	29.0%	71.4%
25 to 39	5,413,000	1,926,000	35.7%	35.6%
40 to 54	5,214,000	1,226,000	22.7%	23.5%
55+	2,724,000	684,000	12.7%	25.1%
Family status				
Married parent	2,863,000	635,000	11.8%	22.2%
Single parent	2,301,000	1,000,000	18.5%	43.5%
Married, no kids	2,900,000	689,000	12.8%	23.8%
Unmarried, no kids	7,479,000	3,076,000	57.0%	41.1%
Working moms	3,148,000	1,170,000	21.7%	37.2%
Single moms	1,911,000	852,000	15.8%	44.6%
Working dads	2,016,000	466,000	8.6%	23.1%
Single dads	390,000	149,000	2.8%	38.2%
Family annual income level				
Less than $20,000	2,710,000	1,669,000	30.9%	61.6%
$20,000–$39,999	4,162,000	1,702,000	31.5%	40.9%
$40,000–$59,999	2,861,000	822,000	15.2%	28.7%
$60,000–$74,999	1,742,000	452,000	8.4%	25.9%

APPENDIX TABLE 2C (CONTINUED)

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
$75,000–$99,999	1,575,000	306,000	5.7%	19.4%
$100,000–$149,999	1,561,000	313,000	5.8%	20.1%
$150,000 or more	932,000	136,000	2.5%	14.6%
Work hours				
Part time (< 19 hours per week)	670,000	476,000	8.8%	71.0%
Mid time (20–34 hours per week)	2,322,000	1,566,000	29.0%	67.4%
Full time (35+ hours per week)	12,551,000	3,359,000	62.2%	26.8%
Education level				
Less than high school	1,146,000	735,000	13.6%	64.1%
High school	4,938,000	2,144,000	39.7%	43.4%
Some college, no degree	3,784,000	1,562,000	28.9%	41.3%
Associate degree	1,683,000	515,000	9.5%	30.6%
Bachelor's degree or higher	3,992,000	445,000	8.2%	11.1%

	Average share of family income earned by affected worker	Share of affected workers who are sole providers of their family's income
All affected	64.4%	33.7%
Parents affected	71.9%	42.5%

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

APPENDIX TABLE 2D

Characteristics of U.S. workers who would be affected by increasing the federal minimum wage to $12 per hour by July 2020, Hispanic of any race only

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
Total	**22,534,000**	**8,527,000**	**100.0%**	**37.8%**
Sex				
Female	9,647,000	4,179,000	49.0%	43.3%
Male	12,887,000	4,348,000	51.0%	33.7%
Age				
Under 20	832,000	675,000	7.9%	81.1%
20 or older	21,703,000	7,853,000	92.1%	36.2%
Less than 25	3,862,000	2,556,000	30.0%	66.2%
25 to 39	9,193,000	3,122,000	36.6%	34.0%
40 to 54	6,880,000	2,026,000	23.8%	29.4%
55+	2,599,000	823,000	9.7%	31.7%
Family status				
Married parent	6,806,000	2,005,000	23.5%	29.5%
Single parent	2,660,000	1,207,000	14.2%	45.4%
Married, no kids	4,428,000	1,383,000	16.2%	31.2%
Unmarried, no kids	8,641,000	3,933,000	46.1%	45.5%
Working moms	4,332,000	1,822,000	21.4%	42.1%
Single moms	1,860,000	891,000	10.4%	47.9%
Working dads	5,134,000	1,389,000	16.3%	27.1%
Single dads	800,000	316,000	3.7%	39.5%
Family annual income level				
Less than $20,000	3,867,000	2,368,000	27.8%	61.2%
$20,000–$39,999	6,684,000	3,011,000	35.3%	45.0%
$40,000–$59,999	4,320,000	1,420,000	16.7%	32.9%
$60,000–$74,999	2,325,000	643,000	7.5%	27.7%

APPENDIX TABLE 2D (CONTINUED)

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
$75,000–$99,999	2,364,000	512,000	6.0%	21.7%
$100,000–$149,999	1,930,000	394,000	4.6%	20.4%
$150,000 or more	1,043,000	180,000	2.1%	17.3%
Work hours				
Part time (< 19 hours per week)	989,000	660,000	7.7%	66.7%
Mid time (20–34 hours per week)	3,471,000	2,227,000	26.1%	64.2%
Full time (35+ hours per week)	18,074,000	5,640,000	66.1%	31.2%
Education level				
Less than high school	5,792,000	3,230,000	37.9%	55.8%
High school	7,066,000	2,800,000	32.8%	39.6%
Some college, no degree	4,096,000	1,569,000	18.4%	38.3%
Associate degree	1,805,000	512,000	6.0%	28.4%
Bachelor's degree or higher	3,775,000	416,000	4.9%	11.0%

	Average share of family income earned by affected worker	Share of affected workers who are sole providers of their family's income
All affected	64.2%	32.0%
Parents affected	71.5%	39.9%

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

APPENDIX TABLE 2E

Characteristics of U.S. workers who would be affected by increasing the federal minimum wage to $12 per hour by July 2020, Asian or other race only

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
Total	**10,700,000**	**2,486,000**	**100.0%**	**23.2%**
Sex				
Female	5,162,000	1,341,000	53.9%	26.0%
Male	5,538,000	1,145,000	46.1%	20.7%
Age				
Under 20	329,000	269,000	10.8%	81.8%
20 or older	10,371,000	2,217,000	89.2%	21.4%
Less than 25	1,366,000	836,000	33.6%	61.2%
25 to 39	4,146,000	724,000	29.1%	17.5%
40 to 54	3,434,000	530,000	21.3%	15.4%
55+	1,753,000	396,000	15.9%	22.6%
Family status				
Married parent	3,467,000	456,000	18.3%	13.2%
Single parent	592,000	187,000	7.5%	31.6%
Married, no kids	2,759,000	532,000	21.4%	19.3%
Unmarried, no kids	3,882,000	1,311,000	52.7%	33.8%
Working moms	1,949,000	416,000	16.7%	21.3%
Single moms	430,000	146,000	5.9%	34.0%
Working dads	2,110,000	227,000	9.1%	10.8%
Single dads	162,000	42,000	1.7%	25.9%
Family annual income level				
Less than $20,000	935,000	462,000	18.6%	49.4%
$20,000–$39,999	1,976,000	718,000	28.9%	36.3%
$40,000–$59,999	1,634,000	429,000	17.3%	26.3%
$60,000–$74,999	1,237,000	275,000	11.1%	22.2%

APPENDIX TABLE 2E (CONTINUED)

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
$75,000–$99,999	1,495,000	273,000	11.0%	18.3%
$100,000–$149,999	1,711,000	187,000	7.5%	10.9%
$150,000 or more	1,713,000	142,000	5.7%	8.3%
Work hours				
Part time (< 19 hours per week)	543,000	337,000	13.6%	62.1%
Mid time (20–34 hours per week)	1,432,000	754,000	30.3%	52.7%
Full time (35+ hours per week)	8,725,000	1,395,000	56.1%	16.0%
Education level				
Less than high school	715,000	405,000	16.3%	56.6%
High school	2,151,000	799,000	32.1%	37.1%
Some college, no degree	1,660,000	644,000	25.9%	38.8%
Associate degree	854,000	187,000	7.5%	21.9%
Bachelor's degree or higher	5,321,000	450,000	18.1%	8.5%

	Average share of family income earned by affected worker	Share of affected workers who are sole providers of their family's income
All affected	52.3%	19.7%
Parents affected	60.1%	25.4%

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

APPENDIX TABLE 2F

Characteristics of U.S. workers who would be affected by increasing the federal minimum wage to $12 per hour by July 2020, women of color only

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
Total	**23,280,000**	**8,634,000**	**100.0%**	**37.1%**
Age				
Under 20	818,000	677,000	7.8%	82.8%
20 or older	22,462,000	7,957,000	92.2%	35.4%
Less than 25	3,598,000	2,478,000	28.7%	68.9%
25 to 39	8,546,000	2,859,000	33.1%	33.5%
40 to 54	7,574,000	2,183,000	25.3%	28.8%
55+	3,563,000	1,114,000	12.9%	31.3%
Family status				
Married parent	5,227,000	1,520,000	17.6%	29.1%
Single parent	4,201,000	1,888,000	21.9%	44.9%
Married, no kids	4,652,000	1,362,000	15.8%	29.3%
Unmarried, no kids	9,200,000	3,863,000	44.7%	42.0%
Working moms	9,428,000	3,408,000	39.5%	36.1%
Single moms	4,201,000	1,888,000	21.9%	44.9%
Family annual income level				
Less than $20,000	3,915,000	2,493,000	28.9%	63.7%
$20,000–$39,999	6,058,000	2,749,000	31.8%	45.4%
$40,000–$59,999	4,067,000	1,377,000	15.9%	33.9%
$60,000–$74,999	2,464,000	730,000	8.5%	29.6%
$75,000–$99,999	2,523,000	601,000	7.0%	23.8%
$100,000–$149,999	2,479,000	443,000	5.1%	17.9%
$150,000 or more	1,775,000	241,000	2.8%	13.6%
Work hours				
Part time (< 19 hours per week)	1,411,000	937,000	10.9%	66.4%

APPENDIX TABLE 2F (CONTINUED)

Category	Estimated workforce	Total affected	Percentage of the total affected	Share of this category that is affected
Mid time (20–34 hours per week)	4,394,000	2,754,000	31.9%	62.7%
Full time (35+ hours per week)	17,476,000	4,944,000	57.3%	28.3%
Education level				
Less than high school	2,809,000	1,955,000	22.6%	69.6%
High school	6,306,000	3,007,000	34.8%	47.7%
Some college, no degree	4,878,000	2,131,000	24.7%	43.7%
Associate degree	2,428,000	781,000	9.0%	32.2%
Bachelor's degree or higher	6,859,000	760,000	8.8%	11.1%

	Average share of family income earned by affected worker	Share of affected workers who are sole providers of their family's income
All affected	61.2%	30.1%
Parents affected	68.5%	38.3%

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

APPENDIX TABLE 3

Estimated effects of a federal minimum-wage increase to $12 by July 2020, fully phased-in, by state

State	Estimated wage-earning population	Directly affected	Indirectly affected	Total affected	Share of state workforce	Total wage increase for directly and indirectly affected workers	Average total increase in annual income for affected workers
United States	**137,367,000**	**28,365,000**	**6,676,000**	**35,041,000**	**25.5%**	**$79,693,337,000**	**$2,300**
Alabama	1,972,000	492,000	97,000	589,000	29.9%	$1,626,600,000	$2,800
Alaska	321,000	26,000	24,000	50,000	15.6%	$42,661,000	$800
Arizona	2,710,000	636,000	143,000	779,000	28.7%	$1,760,314,000	$2,300
Arkansas	1,157,000	325,000	58,000	383,000	33.1%	$999,562,000	$2,600
California	15,808,000	2,716,000	1,075,000	3,791,000	24.0%	$4,123,717,000	$1,100
Colorado	2,429,000	394,000	94,000	488,000	20.1%	$1,010,738,000	$2,100
Connecticut	1,632,000	271,000	59,000	330,000	20.2%	$363,609,000	$1,100
Delaware	403,000	80,000	20,000	100,000	24.8%	$211,521,000	$2,100
District of Columbia	340,000	–	–	–	n/a	n/a	n/a
Florida	8,406,000	1,902,000	353,000	2,255,000	26.8%	$5,734,670,000	$2,500
Georgia	4,104,000	1,043,000	168,000	1,210,000	29.5%	$3,659,438,000	$3,000
Hawaii	596,000	124,000	21,000	145,000	24.3%	$177,188,000	$1,200
Idaho	671,000	177,000	30,000	207,000	30.8%	$577,820,000	$2,800
Illinois	5,740,000	1,231,000	223,000	1,454,000	25.3%	$3,504,000,000	$2,400
Indiana	2,927,000	733,000	123,000	855,000	29.2%	$2,400,665,000	$2,800
Iowa	1,525,000	336,000	77,000	412,000	27.0%	$1,050,892,000	$2,500
Kansas	1,344,000	305,000	68,000	373,000	27.8%	$999,302,000	$2,700
Kentucky	1,794,000	436,000	99,000	535,000	29.8%	$1,528,313,000	$2,900
Louisiana	1,916,000	468,000	93,000	561,000	29.3%	$1,650,552,000	$2,900
Maine	591,000	130,000	25,000	155,000	26.2%	$367,929,000	$2,400
Maryland	2,733,000	462,000	92,000	554,000	20.3%	$659,495,000	$1,200
Massachusetts	3,172,000	68,000	459,000	527,000	16.6%	$122,439,000	$200
Michigan	4,210,000	931,000	189,000	1,120,000	26.6%	$2,212,337,000	$2,000
Minnesota	2,659,000	440,000	113,000	553,000	20.8%	$737,488,000	$1,300
Mississippi	1,075,000	287,000	53,000	340,000	31.6%	$1,108,815,000	$3,300
Missouri	2,676,000	605,000	108,000	713,000	26.6%	$1,917,625,000	$2,700
Montana	433,000	107,000	24,000	131,000	30.3%	$280,153,000	$2,100
Nebraska	917,000	186,000	52,000	238,000	26.0%	$357,534,000	$1,500
Nevada	1,228,000	298,000	64,000	362,000	29.5%	$983,415,000	$2,700

APPENDIX TABLE 3 (CONTINUED)

State	Estimated wage-earning population	Directly affected	Indirectly affected	Total affected	Share of state workforce	Total wage increase for directly and indirectly affected workers	Average total increase in annual income for affected workers
New Hampshire	655,000	115,000	26,000	141,000	21.5%	$327,545,000	$2,300
New Jersey	4,033,000	690,000	137,000	827,000	20.5%	$1,744,157,000	$2,100
New Mexico	797,000	198,000	36,000	234,000	29.4%	$666,459,000	$2,900
New York	8,422,000	1,547,000	328,000	1,875,000	22.3%	$3,563,101,000	$1,900
North Carolina	4,114,000	1,141,000	194,000	1,335,000	32.5%	$3,993,754,000	$3,000
North Dakota	368,000	63,000	18,000	81,000	22.0%	$196,271,000	$2,400
Ohio	5,188,000	1,095,000	249,000	1,343,000	25.9%	$2,980,908,000	$2,200
Oklahoma	1,533,000	339,000	75,000	414,000	27.0%	$1,202,714,000	$2,900
Oregon	1,624,000	273,000	83,000	357,000	22.0%	$516,006,000	$1,400
Pennsylvania	5,769,000	1,162,000	240,000	1,402,000	24.3%	$3,496,215,000	$2,500
Rhode Island	474,000	92,000	16,000	108,000	22.8%	$208,215,000	$1,900
South Carolina	1,971,000	506,000	89,000	595,000	30.2%	$1,737,731,000	$2,900
South Dakota	380,000	81,000	20,000	102,000	26.8%	$163,666,000	$1,600
Tennessee	2,624,000	689,000	122,000	812,000	30.9%	$2,389,551,000	$2,900
Texas	11,724,000	2,919,000	526,000	3,445,000	29.4%	$10,239,937,000	$3,000
Utah	1,292,000	275,000	69,000	344,000	26.6%	$834,767,000	$2,400
Vermont	299,000	43,000	12,000	55,000	18.4%	$51,511,000	$900
Virginia	3,833,000	725,000	150,000	875,000	22.8%	$2,351,019,000	$2,700
Washington	3,045,000	417,000	136,000	554,000	18.2%	$654,366,000	$1,200
West Virginia	719,000	190,000	30,000	220,000	30.6%	$436,777,000	$2,000
Wisconsin	2,748,000	548,000	106,000	654,000	23.8%	$1,622,497,000	$2,500
Wyoming	267,000	49,000	11,000	60,000	22.5%	$147,377,000	$2,400

Note: Total estimated workers is estimated from the CPS respondents who were 16 years old or older, employed, but not self-employed, and for whom either a valid hourly wage is reported or one can be imputed from weekly earnings and average weekly hours. Consequently, this estimate represents the identifiable wage-earning workforce and tends to understate the size of the full workforce. Directly affected workers will see their wages rise because the new minimum wage rate will exceed their current hourly pay. Indirectly affected workers have a wage rate just above the new minimum wage (modeled as workers with wages between the new minimum wage and the new minimum wage plus the dollar amount of the increase in the previous year's minimum wage). They will receive a raise as employer pay scales are adjusted upward to reflect the new minimum wage.

Source: EPI analysis of Raise the Wage Act using Current Population Survey Outgoing Rotation Group microdata, 2014

ECONOMIC POLICY INSTITUTE

Appendix B: Technical appendix and methodology

EPI's minimum-wage simulation model relies on four quarters of data from the Outgoing Rotation Group of the Current Population Survey (CPS-ORG). The ORG data are first cleaned and imputations made, where necessary, as described in Mishel et al. (2012, Appendix B). EPI's simulation model also pulls data from a compiled dataset of all applicable minimum-wage rates for all states, by month and year, from January 1984 onward. Minimum-wage rates for states with scheduled state minimum-wage increases and/or annual indexing for inflation are projected using CBO projections for inflation, published in the CBO annual Budget and Economic Outlook. See CBO (2015).

We restrict the ORG data to individuals age 16 and older, who are currently employed and for whom valid wage information is either reported or can be calculated from the data, as explained in Mishel et al. (2012, Appendix B).

Sorting the data by state, we first adjust wage values for individuals in states where a state minimum-wage increase occurs between the data period and the first proposed increase in the minimum-wage proposal being analyzed. (For example, if using 2013 data, the minimum wage in New Jersey rose to $8.25 on January 1, 2014; thus, some individuals in New Jersey with wages below $8.25 will already have higher wages before any proposed federal increase could take place.) In these states, wage values below the state minimum wage expected in the month prior to the proposed new minimum wage are increased in direct proportion to the expected minimum. For example, if someone in New Jersey in August 2013 was earning 105 percent of the August 2013 state minimum, his wage is adjusted to 105 percent of the expected state minimum for June 2014, if the proposed federal increase is modeled to occur in July 2014.

For workers in all states, we assume annual nominal wage growth equal to inflation, as projected in CBO (2015), plus 0.2 percent—a prediction based upon U.S. average annual wage growth since 2010.

We also assume population growth between the data period and the proposed first increase. We adjust the ORG weights by the Census Bureau's projected annual growth rate from 2014 to 2020 of 0.77 percent. This annual growth rate is adjusted by the number of months that occur between the midpoint of the data and the month that the first proposed minimum-wage increase would occur.

Having made these adjustments, we identify "directly affected" workers as those workers in states where the prevailing minimum wage is less than the proposed federal minimum, whose wages are greater than or equal to 95 percent of the prevailing minimum wage and less than the proposed federal minimum wage. We identify "indirectly affected" workers as those workers in states where the prevailing minimum wage is less than the proposed federal minimum, whose wages are greater than or equal to the proposed federal minimum wage, but less than the proposed minimum plus the dollar value of the proposed increase—hereafter referred to as the "indirectly affected cutoff." For example, for an increase from $7.25 to $8.20, directly affected workers have a wage between $7.25 and $8.20. The size of the increase is $0.95; thus, the indirectly affected workers would be those workers with wages between $8.20, inclusive, and $9.15, exclusive. The indirectly affected cutoff in this case would be $9.15.

Having counted these directly and indirectly affected workers, the program iterates to the next proposed increase.

After each step, if an individual is predicted to be either directly or indirectly affected, her wage is adjusted to reflect her implied raise. For directly affected workers, their raise is equal to the difference between the new minimum wage and

their existing wage. For indirectly affected workers, their raise is modeled as one-fourth of the difference between their existing wage and the indirectly affected cutoff. For example, an indirectly affected worker previously earning $8.50 would receive a raise of 0.25 x ($9.15-$8.50), or $0.16.

Again, weights are adjusted to reflect the predicted population growth between the first and second increments in the proposed minimum-wage increase. Wage values are again adjusted in states with scheduled minimum-wage increases and are adjusted to reflect natural nominal wage growth.

The same method for identifying directly and indirectly affected workers is applied, and the counts are recorded. The model iterates in this fashion for all remaining steps.

The data used for this report are the CPS ORG data for calendar year 2014.

Endnotes

1. We use the Research Series of the Consumer Price Index for All Urban Consumers (CPI-U) to deflate the value of the minimum wage because the CPI-U tracks changes in the prices of goods bought by typical U.S. consumers. It is the standard deflator used by researchers and government agencies when adjusting wages and incomes for changes in prices. For example, the Census Bureau uses the CPI-U when it measures trends in family and household incomes, and the Internal Revenue Service adjusts tax brackets annually using the CPI-U. The Census Bureau has made various methodological improvements to the CPI-U over the years. The Research Series applies current CPI-U methodology retrospectively to calculate the most accurate measure of historical inflation for typical U.S. consumers. We use the implicit price deflator for gross domestic product—or "GDP deflator"—when calculating changes in total economy net productivity. This is also standard practice, as it captures changes in the value of the overall output of the economy—i.e., the value of what workers are able to produce.

Sherk (2015) criticizes these choices, saying that it is inappropriate to use different deflators to adjust the two series. He contends that using the same deflator for both series, or a different mix of deflators, would show less inflation and thus less erosion in the purchasing power of the minimum wage. Bivens (2015, forthcoming) explains the rationale for using these two separate series in great detail, noting how the series differ and why we believe our choices are appropriate. Yet without going into this detail, Sherk's criticism is irrelevant. It is true that some alternative measures of inflation, such as the price index for personal consumption expenditures (PCE), do show lower levels of inflation than the CPI-U-RS, and thus deflating the minimum wage using the PCE will show less erosion in the minimum wage's buying power. But this does not change the conclusion that minimum-wage workers today make significantly less than their counterparts a generation ago.

In fact, even if one were to indulge Sherk's incorrect suggestion that there has been no decline in the real value of the minimum wage if inflation is measured using the GDP deflator—something no serious analysis of wage values would do—it would still mean that the country's minimum-wage workers are paid no more than they were paid nearly 50 years ago. Given the tremendous growth in per-capita income, wealth, and average labor productivity in the United States over the past five decades, there is no reason why this need be the case; policymakers could have raised the minimum wage more regularly such that a minimum-wage worker in 2015 would be significantly better off than a minimum-wage worker in 1968. Lawmakers simply chose a different outcome.

2. Overall productivity is measured as total economy productivity net depreciation. From 1968 to 2014, net productivity grew by 93 percent. Based upon projections for productivity growth in CBO (2015), growth from 1968 to 2020 is expected to be 117 percent.

3. If median wages grow at CBO's projected rate of inflation plus 0.5 percent between 2014 and 2020, a $12 minimum wage in 2020 would equal 49.9 percent of the median wage.

4. A single earner with an annual income of $22,012 in 2014 (the equivalent of earning $12 per hour full time, year round in 2020) and three qualifying dependent children would receive an EITC benefit of roughly $5,000. This would bring her total annual income to just over $27,000. The poverty line for a family of four in 2014 was $24,008.

5. The range of indirectly affected workers is modeled as those workers reporting hourly wages between the new minimum wage, and the sum of the new minimum wage and the size of the increase to the minimum in each step. For example, when the minimum wage is raised from $7.25 to $8.00, the band of indirectly affected workers is modeled as those workers earning between $8.00 and $8.75. See the methodological appendix for further detail.

6. The median age of affected workers is 31.

7. Vermont's minimum wage will be raised to $10.50 in 2018 and linked to inflation thereafter. It is projected to be $11 in 2020. Massachusetts's minimum will be raised to $11 by 2017. Washington's minimum wage has been indexed to inflation since 1998. It is expected to be around $10.55 by 2020. Alaska's minimum will be raised to $9.75 in 2016, with inflation adjustment thereafter. It is expected to be roughly $10.65 by 2020. The minimum wage in the District of Columbia will be raised to $11.50 in 2016, with automatic inflation adjustment every year thereafter. Based on projections for inflation, it will likely reach $12.60 by 2020.

8. Idaho and North Carolina have minimum wages equal to the federal $7.25. Arkansas recently passed a minimum-wage increase to $8.50 by 2017, but without any further adjustment thereafter. Tennessee and Mississippi have no minimum-wage laws. In these states and others without a minimum wage or with minimum wages below the federal minimum wage, workers must be paid at least the federal minimum wage.

9. "Wage theft" is the practice of employees not being paid the full wages to which they are entitled for the hours they work. See Meixell and Eisenbrey (2014) for greater detail.

10. Tipped workers receive the full minimum wage before tips in Alaska, California, Oregon, Washington, Minnesota, Montana, and Nevada. In Hawaii, tipped workers can be paid $0.50 less than the regular minimum wage if workers' combined base wage plus hourly tips equals at least $7.00 more than the regular minimum wage.

References

Allegretto, Sylvia A., and David Cooper. 2014. *Twenty-Three Years and Still Waiting for Change*. Economic Policy Institute, Briefing Paper #379.

Allegretto, Sylvia A. 2013. *Waiting for Change: Is It Time to Increase the $2.13 Subminimum Wage?* Institute for Research on Labor and Employment, Working Paper No. 155-13.

Bivens, Josh. 2015 (forthcoming). *Pay/Productivity Gap: Why It's Real and Why It Matters* (working title). Economic Policy Institute.

Bivens, Josh, Elise Gould, Lawrence Mishel, and Heidi Shierholz. 2014. *Raising America's Pay: Why It's Our Central Economic Policy Challenge*. Economic Policy Institute, Briefing Paper #378.

Bureau of Labor Statistics (U.S. Department of Labor) Labor Productivity and Costs program. Various years. Unpublished data provided by program staff at EPI's request.

Congressional Budget Office. 2015. *The Budget and Economic Outlook, 2015 to 2025*. http://www.cbo.gov/sites/default/files/cbofiles/attachments/49892-Outlook2015.pdf

Cooper, David. 2014. "20 States Raise Their Minimum Wages While the Federal Minimum Continues to Erode." *Working Economics* (Economic Policy Institute blog), December 14.

Cooper, David, John Schmitt, and Lawrence Mishel. 2015. *We Can Afford a $12.00 Federal Minimum Wage in 2020*. Economic Policy Institute, Briefing Paper #398.

Current Population Survey Annual Social and Economic Supplement microdata. Various years. Survey conducted by the Bureau of the Census for the Bureau of Labor Statistics [machine-readable microdata file]. Washington, D.C.: U.S. Census Bureau.

Current Population Survey Outgoing Rotation Group microdata. Various years. Survey conducted by the Bureau of the Census for the Bureau of Labor Statistics [machine-readable microdata file]. Washington, D.C.: U.S. Census Bureau.

Dube, Arindrajit. 2013. *Minimum Wages and the Distribution of Family Incomes*. Working Paper. University of Massachusetts Amherst.

Gallager Robbins, Katherine, Julie Voghtman, and Joan Entmacher. 2015. *States with Equal Minimum Wages for Tipped Workers Have Smaller Wage Gaps for Women Overall and Lower Poverty Rates for Tipped Workers*. National Women's Law Center.

Gould, Elise, Alyssa Davis, and Will Kimball. 2015. *Broad-Based Wage Growth Is a Key Tool in the Fight Against Poverty*. Economic Policy Institute, Briefing Paper #399.

Meixell, Brady, and Ross Eisenbrey. 2014. *An Epidemic of Wage Theft Is Costing Workers Hundreds of Millions of Dollar a Year*. Economic Policy Institute, Issue Brief #385.

Mishel, Lawrence. 2014a. *Low-Wage Workers Have Far More Education than They Did in 1968, Yet They Make Far Less*. Economic Policy Institute, Economic Snapshot.

Mishel, Lawrence. 2014b. "The Tight Link Between the Minimum Wage and Wage Inequality." *Working Economics* (Economic Policy Institute blog), January 27.

Mishel, Lawrence, Josh Bivens, Elise Gould, and Heidi Shierholz. 2012. *The State of Working America, 12th Edition*. An Economic Policy Institute book. Ithaca, NY: Cornell University Press.

Murray, Patty. 2015. "Raise the Wage Act," S. 1150. 114th Congress.

Sherk, James. 2015. "How The Left Uses Deceptive Minimum-Wage Data." *The Federalist*, June 17.

Shierholz, Heidi. 2009. *Fix It and Forget It*. Economic Policy Institute, Briefing Paper #251.

U.S. Department of Labor, Wage and Hour Division. 2009. "Federal Minimum Wage Rates Under the Fair Labor Standards Act." http://www.dol.gov/whd/minwage/chart.pdf

Wicks-Lim, Jeannette. 2006. *Mandated Wage Floors and the Wage Structure: New Estimates of the Ripple Effects of Minimum Wage Laws*. Political Economy Research Institute at the University of Massachusetts Amherst, Working Paper Number 116.

Zipperer, Ben. 2015a. "How the Minimum Wage Ripples Through the Workforce." *Value Added* (Washington Center for Equitable Growth blog), April 28.

Zipperer, Ben. 2015b. *Bolstering the Bottom by Indexing the Minimum Wage to the Median Wage*. Washington Center for Equitable Growth.