

Estimating the Job Loss Impact of a \$25 Federal Minimum Wage

OVER 5 MILLION JOBS LOST NATIONWIDE

This year, members of Congress have introduced a bill to raise the federal minimum wage requirement up to \$25 per hour by 2031 for larger businesses. Smaller businesses will reach that rate in 2038. The bill would also eliminate the federal tip credit, raising the cash wage for tipped employees up to \$25 per hour.¹ New estimates show this would slash millions of jobs across the country.

The majority of research over three decades finds minimum wage increases reduce employment.² A new model developed by the Employment Policies Institute (EPI)—based on methods developed by the nonpartisan Congressional Budget Office (CBO) and other American labor economists—compiles the latest economic data to estimate what this means for workers under the latest proposed minimum wage hike.³ Using these established methods and the latest Census Bureau data on workers across the country, EPI estimates the federal \$25 proposal will cost 5.01 million jobs nationally, significantly impacting the hospitality sector, tipped restaurant workers, and teens.

KEY FINDINGS



THE BILL
PROPOSES A
245% INCREASE
IN THE FEDERAL
MINIMUM WAGE



MORE THAN
5 MILLION
JOBS LOST



52% OF JOB
LOSSES ARE
AMONG 16-24
YEAR OLDS



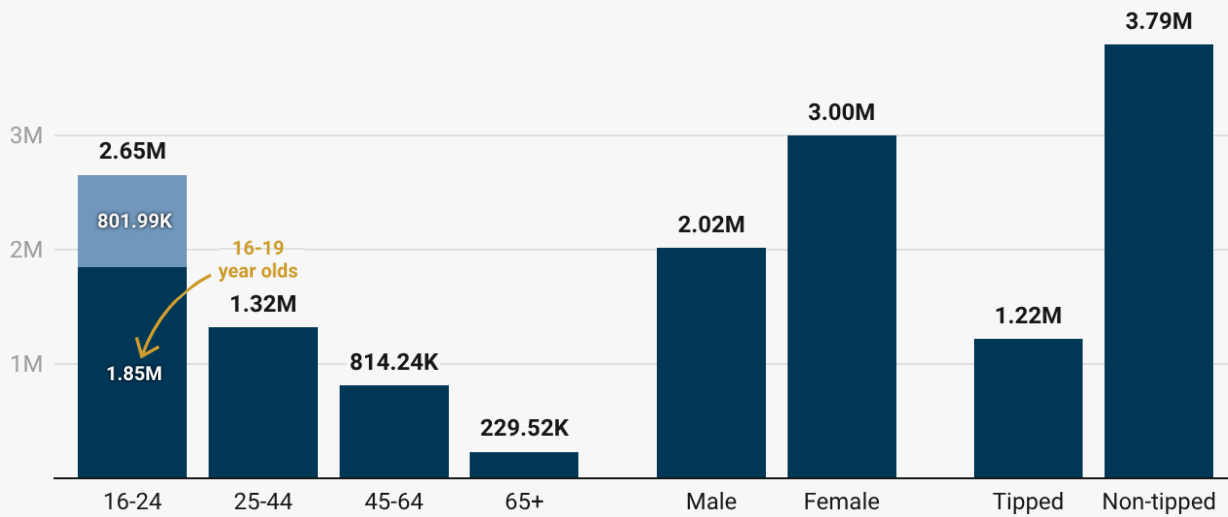
ONE-THIRD OF
JOB LOSSES
ARE IN THE
RESTAURANT
INDUSTRY

1 Sen. Chris Murphy: https://www.murphy.senate.gov/imo/media/doc/living_wage_for_all_act_bill_text.pdf

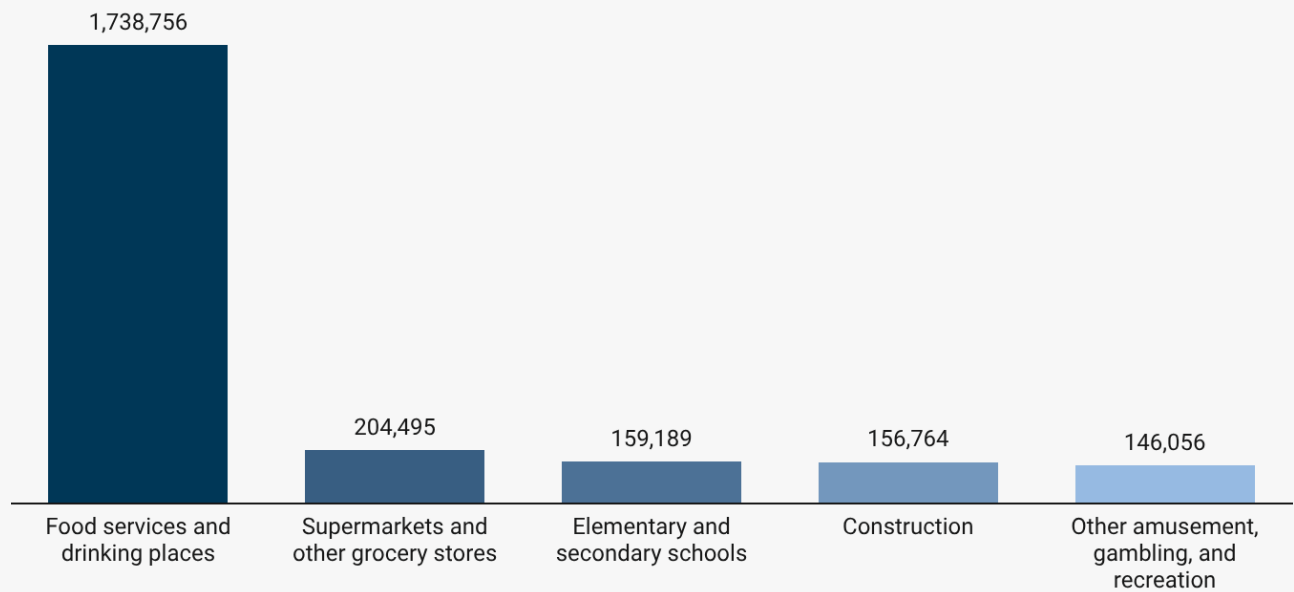
2 <https://www.nber.org/papers/w28388>

3 We would like to thank Dr. Bill Even for his helpful comments and suggestions on the methodology.

JOB LOSSES BY AGE BRACKET, GENDER, AND TIP STATUS



TOP 5 INDUSTRIES WITH HIGHEST JOB LOSSES



STATE	NUMBER OF JOBS LOST
Texas	831,289
Pennsylvania	295,473
Georgia	253,708
North Carolina	250,000
Florida	234,730
Ohio	213,802
Indiana	182,152
Tennessee	159,873
California	142,582
South Carolina	135,739
Wisconsin	135,526
Louisiana	129,477
Oklahoma	125,954
Virginia	125,088
Michigan	124,525
Illinois	119,228
Kentucky	118,860
Alabama	117,535
New York	108,072
Utah	88,214
Kansas	83,292
Missouri	82,692
Mississippi	82,051
Iowa	73,625
Minnesota	66,417
Arizona	65,533

STATE	NUMBER OF JOBS LOST
Arkansas	59,788
New Jersey	58,925
Maryland	51,050
Idaho	45,858
Nevada	45,523
Massachusetts	44,031
West Virginia	36,768
Nebraska	36,314
Colorado	33,802
New Mexico	31,818
New Hampshire	26,804
Oregon	25,537
Washington	24,296
Connecticut	19,104
Delaware	17,973
Montana	17,582
Wyoming	14,336
North Dakota	14,317
South Dakota	13,759
Rhode Island	12,375
Hawaii	12,265
Maine	12,107
Alaska	5,890
Vermont	5,317
District of Columbia	1,281

METHODOLOGY FOR ESTIMATING EMPLOYMENT EFFECTS OF MINIMUM WAGE INCREASES

The purpose of this study is to estimate the employment effects of proposed minimum wage increases across the U.S. using methodology consistent with the Congressional Budget Office (CBO) and economists Dr. William Even and Dr. David Macpherson.⁴

DATA AND SAMPLE CONSTRUCTION

This analysis uses data from the U.S. Census Bureau's Current Population Survey (CPS) Outgoing Rotation Groups (ORG) from January 2021 through March 2026, retrieved through IPUMS.⁵ Pooling observations across this period provides a sufficiently large sample to accurately estimate employment and wage effects for both tipped and non-tipped workers. We follow the methodology developed by economists Dr. William Even and Dr. David Macpherson in their analysis of a \$17 federal minimum wage.⁶ Their approach closely mirrors the methodology used by the Congressional Budget Office (CBO) to estimate the employment effects of federal minimum wage increases.⁷

Several demographic CPS variables were recoded to match the specifications used in the underlying regression models. This includes the following:

- Education (EDUC) into 5 categories ("Less than high school," "High school," "Some college/ Associate's," "Bachelor's," "Graduate").
- Workforce stats (WKSTAT) into 2 categories ("Full time," "part time").
- Race (RACE) into 3 categories ("Black," "white," and "other race").
- Occupation (OCC) into 23 broad categories as listed by the Census Bureau, ranging from "Management," "Business and financial operations," "Computer and Mathematical sciences," etc. (See full list from Census Bureau).⁸
- Sex (SEX) into 2 categories ("Female," "Male").

4 https://epionline.org/wp-content/uploads/2025/03/230710_EPL_JobLossImpactOf17MinWage.pdf

5 <https://cps.ipums.org/cps/> (Retrieved May 15, 2026)

6 https://epionline.org/wp-content/uploads/2025/03/230710_EPL_JobLossImpactOf17MinWage.pdf

7 <https://www.cbo.gov/system/files/2019-07/CBO-55410-MinimumWage2019.pdf>

8 <https://www2.census.gov/programs-surveys/cps/methodology/Occupation%20Codes.pdf>

ESTIMATION OF HOURLY WAGE RATES

To determine which workers would be affected by the proposed minimum wage increase, we first estimate each worker's current hourly wage and then forecast what their wage would be in the absence of the policy change.

Workers with a reported hourly wage (HOURWAGE2) were assigned that value directly. For workers without a reported hourly wage, a proxy for hourly wage was calculated as weekly earnings (EARNWEEK2) divided by usual weekly hours worked (UHRSWORKORG).

Following guidance from the Bureau of Labor Statistics regarding reporting error in CPS hours data,⁹ observations with reported hours worked were then adjusted to account for systematic over- and under-reporting of usual weekly hours in accordance with the table below.

ESTIMATED WORK HOURS	CPS USUAL HOURS MINUS TIME DIARY
1–14	-7.3
15–24	-4.1
25–34	-1.0
35–39	3.3
40	1.1
41–45	3.3
46–54	5.0
55–64	8.6
65–74	13.9
75+	25.4

PREDICTING MISSING USUAL WEEKLY HOURS WORKED

For individuals without both a reported hourly wage and weekly hours worked, we predict a value for usual weekly hours using the regression, as used by Even and Macpherson.¹⁰ For these individuals, this predicted value was used to calculate the proxy value for hourly wage, as explained above.

The sample was first divided into training and prediction samples. The training sample would inform the model to predict usual weekly hours, and included workers with valid observations for both usual weekly hours and actual hours worked during the previous week (AHRSWORKT).

9 <https://www.bls.gov/opub/mlr/2014/article/is-the-workweek-really-overestimated.htm#ednref17>

10 https://epionline.org/wp-content/uploads/2025/03/230710_EPL_JobLossImpactOf17MinWage.pdf (Footnote 3)

The prediction sample included workers with reported actual hours during the previous week but missing usual weekly hours worked.

A regression model of usual hours worked was estimated using the training sample. The model controls for hours worked last week (AHRSWORKT), full-time status (fulltime), five education categories (EDUC), age (AGE), age squared (age2), age cubed (age3), age quartic (age4), and three race/ethnicity categories (race3). The model also controls for female (female), year (year), and full-time status interacted with occupation (occ1d).

The model explained approximately 70 percent of the variation in usual weekly hours worked (adjusted $R^2=0.698$) and was statistically significant ($F = 2,219$, $p < 0.001$). Predicted values from this model were used to generate usual weekly hours estimates for workers with missing information on usual hours worked. These predicted values were then combined with reported values to create a final hours-worked measure (HRSWRK).

TRIMMING OUTLIERS

For the observations which had reported values for usual hours worked (UHRSWORKORG), we also use Even and Macpherson/CBO methodology to trim outliers in this data.¹¹ Using the previous regression model, we calculated the standard error of the residuals, and trimmed all reported values that exceeded ± 1.96 standard errors.

IDENTIFICATION OF MINIMUM WAGE “COVERED” WORKERS

NON-TIPPED WORKERS

Workers not classified in tipped occupations (list in following section) were categorized as non-tipped workers. For non-tipped workers without a reported hourly wage, hourly earnings were calculated as:

$$\text{Usual Hourly Wage} = \text{Weekly Earnings} \div \text{Usual Hours Worked}$$

Non-tipped workers’ reported hourly wages and those with the calculated usual hourly wage (above) created a new variable (NT_HW). To determine whether workers were covered by federal minimum wage requirements, hourly wages were compared to the applicable state minimum wage for the month and year the observation was recorded. Following Even and Macpherson, workers whose hourly wages were more than \$0.25 below the statutory minimum wage were assumed not to be covered by the federal Fair Labor Standards Act (FLSA) and were therefore excluded from the sample.

11 https://epionline.org/wp-content/uploads/2025/03/230710_EPL_JobLossImpactOf17MinWage.pdf (Footnote 4)

TIPPED WORKERS

Workers classified in the following occupations were categorized as tipped workers, following CBO guidelines¹²

- Massage therapists (2018 Census code 3630¹³), bartenders (4040), waiters/waitresses (4110), dining room/cafeteria attendants/barbacks (4130), host/hostesses, restaurant/lounge/coffee shop (4150), barbers (4500), hairdressers/hairstylists/cosmetologists (4510), miscellaneous personal appearance workers (4523), personal care and service workers, all other (4655), shuttle drivers and chauffeur (9141), taxi drivers (9142); and
- Food preparation and serving related workers, all other (4160) who are in the following industries: Other amusement, gambling, and recreation industries (IPUMS industry code 8590¹⁴), Traveler accommodation (8660), and Food services and drinking places, except alcoholic beverages (8680).

Total hourly pay (includes cash wage and tips) for tipped workers was calculated as:

$$\text{Total Hourly Pay} = \text{Weekly Earnings} \div \text{Usual Hours Worked}$$

For tipped workers with reported hourly wages, the reported wage was treated as the worker's cash wage (i.e., the wage paid by their employer before tips). For workers without reported hourly wages, cash wages were estimated using a tipped-worker wage regression model.

The regression model of cash wages for tipped workers controls for occupation, gender, age, and age squared. All included variables were statistically significant predictors of hourly cash wages of tipped workers, and the model explained approximately 17% of the variation in the wage among tipped workers (adjusted $R^2=0.17$). The relatively modest explanatory power likely reflects substantial variation in cash wages attributable to factors not available in the current data sample, including employer characteristics, geographical labor market conditions, and differences in tip earnings. Predicted values from this model were used to impute missing hourly wage observations and combined with observations that reported hourly wage values to create a new cash wage variable.

Workers' reported cash wage values and predicted cash wages (by the regression model) created a new complete hourly wage variable for tipped workers ("TFull_Cash_Wage").

12 CBO: <https://www.cbo.gov/system/files/2019-07/CBO-55410-MinimumWage2019.pdf>; Full list: https://epionline.org/wp-content/uploads/2025/03/230710_EPI_JobLossImpactOf17MinWage.pdf

13 <https://www2.census.gov/programs-surveys/cps/methodology/Occupation%20Codes.pdf>

14 <https://usa.ipums.org/usa/volii/ind2022.shtml>

Similar to non-tipped workers, to determine if tipped workers were covered by federal minimum wage requirements, we compare their hourly cash wage rate to the state's tipped minimum wage requirement in the observation month. If a tipped worker's reported hourly cash wage is more than \$0.25 below the state's minimum cash wage, we assume the worker is not subject to the FLSA and therefore was excluded from the sample.

WAGE STANDARDIZATION AND FORECASTING

ADJUSTMENT TO 2026 WAGE LEVELS

All yearly nominal wages (both cash wages and total hourly pay) were adjusted to reflect 2026 values using annual Employment Cost Index (ECI) growth factors published by the CBO, averaged over each applicable period (observation year to current year 2026) to develop a standard annual average rate of wage growth over that timeframe.¹⁵ This standardization ensures that observations from different years are expressed in comparable wage terms.

The average annual ECI growth was as follows:

- For 2021 observations: 4.25%
- For 2022 observations: 3.97%
- For 2023 observations: 3.67%
- For 2024 observations: 3.51%
- For 2025 observations: 3.44%

FORECASTING NATURAL WAGE GROWTH (WITHOUT NEW MINIMUM WAGE LAWS)

Then, we forecasted future hourly wage rates (for non-tipped and tipped workers) and hourly total earnings rates (tipped workers) assuming there will be some natural growth in those earnings. This is because hourly-paid workers may be reporting hourly rates higher than the statutory minimum wage, and may still see some natural growth over time without new mandates. We forecasted this natural growth by applying average annual Employment Cost Index (ECI) growth rates, published by the CBO, to the newly adjusted hourly wage estimates now at a 2026 baseline, between 2026 and the target policy year, currently slated for 2031 in the proposal. This calculation represents what hourly wages and earnings might do assuming there are no minimum wage law changes through 2031. For the current

15 Economic Projections, February 2023. <https://www.cbo.gov/system/files/2023-02/51135-2023-02-Economic-Projections.xlsx>

federal \$25 minimum wage proposal that rises from 2026 to 2031¹⁶, we use the average annual ECI growth rate of 3.09% to forecast natural wage growth over the target period¹⁷

Future statutory state minimum wages were also forecasted using existing minimum wage indexing rules based on current state laws (if states do not provide for indexing future minimum wage requirements, we assume the current rate will hold for future years through 2031). This is to understand how current state minimum wage laws would affect wages without a new federal mandate.

If the natural growth in a worker wage fell below the projected state minimum wage (or if the cash wage fell below the state's minimum cash wage), the worker's wage was increased to the state minimum wage in accordance with Even and Macpherson's methodology, as all FLSA-covered workers are assumed to be earning at least the state hourly minimum wage, or tipped cash wage for tipped workers.

IDENTIFICATION OF AFFECTED WORKERS

A non-tipped worker was classified as affected if their forecasted future hourly wage in the target year fell between the forecasted statutory minimum wage and the proposed minimum wage.

A tipped worker was classified as affected if either:

1. Their projected cash wage fell between the forecasted statutory tipped minimum wage and the proposed cash wage; or
2. Their projected total hourly pay fell between the forecasted statutory minimum wage and the proposed minimum wage.

CALCULATING COST OF WAGE HIKES TO EMPLOYERS

To calculate the percentage cost increase in wage payments to employers by a proposed minimum wage, we did the following:

- For non-tipped workers, it is the difference between the proposed minimum wage and the higher of the worker's forecasted hourly wage and the forecasted statutory minimum wage in the target implementation year.

16 <https://ramirez.house.gov/media/press-releases/ramirez-garcia-simon-mejia-workers-labor-leaders-introduce-living-wage-all-act>

17 Economic Projections, February 2026. <https://www.cbo.gov/system/files/2026-02/51135-2026-02-Economic-Projections.xlsx>

- For tipped workers, it is the greater of 1) the difference between the proposed cash wage and either the forecasted statutory cash wage or the worker's forecasted cash wage in the target implementation year (whichever is higher), or 2) the difference between the full hourly pay forecasted for target year and the proposed minimum wage.

CALCULATING EMPLOYMENT EFFECTS

Employment effects were estimated using the latest elasticities provided by the CBO for their analysis of a \$15 wage:¹⁸

- Teen workers (ages 16–19): -0.829
- Adult workers (ages 20 and older): -0.269

We believe this is a conservative estimate of the negative impact of the wage hike on employment, considering the larger scope of the current federal proposal.

For each affected worker, projected job loss was calculated as the product of:

1. ϵ = The applicable elasticity;
2. $\% \Delta C$ = The percentage increase in hourly cost to employers as a result of the proposed wage increase; and
3. W_i = The worker's CPS earnings weight adjusted to reflect projected employment in the target year, averaged from CBO annual employment growth estimates from 2026-2031, which we estimate to be 0.335%.¹⁹ These earnings weights were also pooled to standardize population estimates across the sample period, according to CPS procedure.²⁰

$$Total\ Job\ Losses = \sum (\epsilon \times \% \Delta C \times W_i)$$

18 <https://www.cbo.gov/publication/57049>

19 CBO Economic Projections, Calendar Year, Employment, total nonfarm (establishment survey), percentage change annual rate, February 2026 <https://www.cbo.gov/data/budget-economic-data#4>

20 CPS IPUMS Forum <https://forum.ipums.org/t/using-earnwt-for-multiple-years-of-cps-outgoing-rotations-data/2433>