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Estimating the Impact of a \$15.00 Minimum Wage in Florida

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About the Economists

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DR. WILLIAM EVEN is a Professor of Economics in the Farmer School of Business at Miami University. He received his Ph.D. in economics from the University of Iowa in 1984. He is a research fellow with the Scripps Gerontology Center, the Employee Benefits Research Institute and the Institute for the Study of Labor. His recent research examines the effects of minimum wage laws, the Affordable Care Act, the effect of Greek affiliation on academic performance, and the relationship between skills and earnings among older workers. His research has been funded by several organizations including the U.S. Administration on Aging, the U.S. Department of Education, and the Employment Policies Institute. Even has published journal articles in a variety of outlets including the *Journal of Labor Economics*, the *Review of Economics and Statistics*, the *Journal of Human Resources*, *Economic Inquiry*, *Industrial and Labor Relations Review*, and *Industrial Relations*. His recent teaching experience includes courses in introductory microeconomics, labor economics, and undergraduate and graduate courses in econometrics.

Summary

Florida's hospitality industry is in crisis. The COVID-19 pandemic cost hundreds of thousands of hospitality workers their jobs. In the hotel industry, COVID destroyed an estimated 336,000 direct and hotel-supported jobs, according to an analysis from Oxford Economics; in the restaurant industry, a statewide shutdown led to hundreds of thousands of job losses, and billions in lost sales.¹

Experts see a years-long employment recovery on Florida's horizon; many of the operators forced to close will never reopen.² It is in this environment that voters will consider an amendment to raise the state's minimum wage to \$15 an hour—a 75 percent increase over the state's current minimum wage.

Economists David Macpherson and William Even, building on methodology developed by the nonpartisan Congressional Budget Office, estimate that Florida will lose 158,000 jobs should the ballot measure pass. The Miami and Fort Lauderdale metropolitan area would shoulder nearly one-third of the job loss, according to the economists—after suffering some of the worst consequences from COVID-19. The job loss is heavily concentrated in the restaurant industry, with 43,000 jobs lost by 2026. Over 25,000 lost jobs are currently held by tipped workers, whose incomes are at risk because of changes to the tipped minimum wage.

These estimates are conservative. For instance, the economists find that even small negative changes in the hospitality industry's earnings growth would magnify the consequences of the policy. Importantly, this study only accounts for jobs lost as a direct consequence of a rising minimum wage. Hundreds of thousands of additional jobs are at risk at marginal businesses who may be unable to reopen due to the COVID19 pandemic or other factors. If a \$15 minimum wage has broader negative impacts on the state's economy, the resulting slower economic growth would create long-term impacts from which the state might never recover.

Voters should carefully consider these consequences before approving a ballot measure that would put the state's future at risk.

¹ https://www.ahla.com/sites/default/files/Compiled%20State%20Job%20Loss%20Impact-COVID_0.pdf

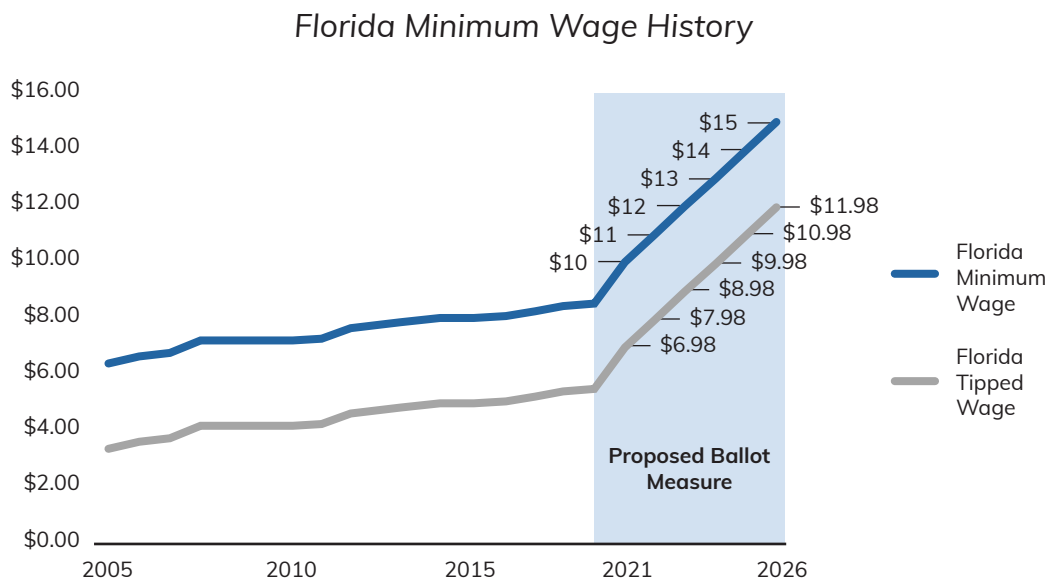
² <https://www.sun-sentinel.com/coronavirus/fl-ne-coronavirus-leisure-hospitality-south-florida-achilles-heel-20200712-odkt3oq2lfgxppidwohaeis2ry-story.html>

Recent History of Florida's Minimum Wage

In 2004, Florida voters approved Amendment 5, which raised the state's minimum wage from \$5.15 to \$6.15 and then linked it to rise annually with inflation. It also froze the state's tip credit at \$3.02, such that the tipped minimum wage rises along with the state minimum wage.³

Amendment 2, on the ballot in the fall of 2020, would further raise the state's minimum wage to \$10 in September 2021, and then by one dollar each subsequent year until it hits \$15 in 2026. The tip credit remains frozen at \$3.02, and the tipped minimum wage would rise to \$11.98.

Florida attorney John Morgan spent more than \$5 million to place the measure on the ballot.⁴



³ A complete two-decade history of Florida's minimum wage is available from the state's Labor Department. Last accessed 8/26. <https://floridajobs.org/docs/default-source/business-growth-and-partnerships/for-employers/posters-and-required-notice/2019-minimum-wage-poster/florida-minimum-wage-history-2000-2018.pdf?sfvrsn=4>

⁴ <https://www.cnbc.com/2019/09/15/rich-lawyer-john-morgan-tries-to-get-15-minimum-wage-on-2020-florida-ballot.html>

The Impact of \$15 in Other Jurisdictions

The \$15 minimum wage is a relatively recent phenomenon with little historical precedent. Since the creation of the federal minimum wage in 1938, it has averaged \$7.39 on an inflation-adjusted basis.⁵ In 2014, Seattle became the first major city to enact a \$15 minimum wage; several other localities followed suit, including San Francisco, Los Angeles, and the District of Columbia. Today, several dozen localities—mostly in California—have a \$15 minimum wage in effect.⁶ (Seven states have enacted a \$15 minimum wage, but these states are still phasing the policy in.)

A large body of economic research has shown that even modest increases in the minimum wage result in adverse employment consequences. When employers with narrow profit margins cannot offset the cost of the wage mandate through higher prices, they instead scale back on employment. Dr. David Neumark of the University of California-Irvine, writing for the Federal Reserve Board of San Francisco, summarized several decades of literature thusly:

“[The] overall body of recent evidence suggests that the most credible conclusion is a higher minimum wage results in some job loss for the least-skilled workers—with possibly larger adverse effects than earlier research suggested.”⁷

An increase in the minimum wage to \$15 an hour is decidedly immodest; even proponents acknowledge that the figure has little economic basis. The available evidence from cities’ early experiences with a \$15 minimum wage suggests reason for caution. In San Francisco, for instance, a Harvard Business School study found that each one-dollar increase in the city’s minimum wage floor caused a 14-percent increase in the likelihood of closure for a median-rated (3.5 star) restaurant.⁸

⁵ Authors’ analysis of historical minimum wage data, adjusted using the Consumer Price Index. <https://www.bls.gov/cpi/factsheets/cpi-math-calculations.pdf>

⁶ A full list of state and local wage rates is available here: <https://www.littler.com/publication-press/publication/minimum-wage-tipped-and-exempt-employee-pay-2020-rates-only-update>

⁷ Dr. Neumark’s paper is available via the Federal Reserve Board of San Francisco. Last accessed 8/26. <https://www.frbsf.org/economic-research/files/el2015-37.pdf>

⁸ Luca, Dara Lee, and Michael Luca. “Survival of the Fittest: The Impact of the Minimum Wage on Firm Exit.” Harvard Business School Working Paper, No. 17-088, April 2017. (Revised August 2018.)

These consequences in high-cost markets have generated concerns about the impact of a \$15 minimum wage in regions with a lower cost-of-living. This concern was echoed by left-of-center think tank Third Way, which proposed a minimum wage that “would account for the differences in living costs between regions...[but not be set] high enough to encourage automation, a reduction in low-wage worker hours, or off-shoring.”⁹

Even researchers who support a higher minimum wage have acknowledged the need for regional differentiation: A 2014 Brookings Institution paper proposed setting the minimum wage at half of the relevant local median wage.¹⁰ In Florida, this would suggest a statewide minimum wage of roughly \$8.60—consistent with the state’s current minimum wage.¹¹

Last year, several Congressional Democrats voted against a proposal to raise the federal minimum wage to \$15 an hour, citing concerns about cost-of-living differences in lower-cost areas. Rep. Joe Cunningham (SC-1) put it this way:

“More than doubling the minimum wage and increasing the tipped wage sevenfold would place a burden on Lowcountry businesses that they could not sustain.”¹²

Cunningham’s statement cited an analysis from the nonpartisan Congressional Budget Office (CBO), which found that up to 3.7 million jobs would be lost should the federal minimum wage rise from \$7.25 to \$15—with 1.3 million workers pulled out of poverty.¹³ As one Wall Street Journal commentary described it, “as many as three people would lose their jobs for each person no longer in poverty.”

⁹ <https://www.thirdway.org/memo/a-regional-minimum-wage>

¹⁰ https://www.hamiltonproject.org/assets/legacy/files/downloads_and_links/state_local_minimum_wage_policy_dube.pdf

¹¹ Occupational Employment Statistics, May 2019. https://www.bls.gov/oes/current/oes_fl.htm

¹² <https://cunningham.house.gov/media/press-releases/cunningham-statement-his-vote-against-raise-wage-act>

¹³ <https://www.cbo.gov/publication/55410>

Analysis of Florida's \$15 Proposal

The CBO methodology is the basis for this analysis on the impact of a \$15 minimum wage in Florida. Economists David Macpherson and William Even adapted the CBO's approach to estimate the specific impact of Amendment 2. (The full methodology is described in the subsequent section.)

Florida has been hard-hit by the COVID crisis, losing hundreds of thousands of jobs in the past several months. The economists, following revised employment projections from the CBO, assume that state employment will not return to 2019 levels until 2026. They also model two different scenarios for wage growth: In one scenario, consistent with the CBO, wages grow by 2.5% annually; in an alternate scenario, wages in the hospitality industry grow by 1% while wages in other industries grow by 2.5%.

By 2026, the economists estimate that 158,000 jobs will be lost because of a \$15 minimum wage. Should the hospitality industry face slower wage growth than other industries, this figure would rise to 181,000 lost jobs.

This estimate is conservative: Hundreds of thousands of additional jobs are at risk at marginal businesses who may be unable to reopen—thanks to a combination of a new wage mandate and other economic factors. If a \$15 minimum wage has broader negative impacts on the state's economy, the resulting slower economic growth would create long-term impacts from which the state might never recover.

This job loss is not evenly distributed—neither geographically nor demographically. The economists had sufficient data to estimate job losses for three of the state's major metropolitan areas: Miami-Fort Lauderdale, Orlando, and Tampa-St. Petersburg. Miami-Fort Lauderdale, which has already faced deep job losses because of COVID, would shoulder nearly one-third of the total job loss from the proposed minimum wage increase.

Job Loss Distribution by Select Metropolitan Areas

	Affected by \$15 Minimum Wage	Job Loss for \$15 Minimum Wage
Miami-Fort Lauderdale - Miami Beach	682,126	49,630
Orlando	271,325	19,025
Tampa-St. Petersburg-Clearwater	341,053	25,090
Entire State	2,133,679	158,449

The economists find that younger workers age 16-19—who currently face double-digit unemployment rates—would shoulder the largest proportion of job loss. Even older workers age 65+, who may be working part-time to earn supplementary income, face a substantial risk of job loss. Also at greater risk are female workers, who face roughly 92,000 lost jobs when a \$15 minimum wage is law in 2026.

Job Loss Distribution by Age

Age Group	Affected by \$15 Minimum Wage	Job Loss for \$15 Minimum Wage
16-19	181,202	46,676
20-24	408,900	26,632
25-34	449,283	24,184
35-44	318,464	18,075
45-54	331,548	17,703
55-64	287,116	15,757
65+	157,166	9,423
All Ages	2,133,679	158,449

Job Loss Distribution by Sex

	Affected by \$15 Minimum Wage	Job Loss for \$15 Minimum Wage
Male	927,883	66,389
Female	1,205,796	92,060
Both Sexes	2,133,679	158,449

Job Loss Distribution by Race and Ethnicity

Race	Affected by \$15 Minimum Wage	Job Loss for \$15 Minimum Wage
White	1,513,304	112,627
Black	507,220	36,088
Other	113,155	9,734
All Races	2,133,679	158,449
Ethnicity		
Non-Hispanic	1,428,458	107,544
Hispanic	705,221	50,905

Tipped workers are also at risk of employment consequences. Amendment 2 would raise the tipped minimum wage by more than 100 percent—substantially raising the required base pay for employees who already earn far more than minimum wage through their tip income. In Maine, New York, Michigan, New Mexico, Virginia, and the District of Columbia, tipped workers have successfully opposed proposals to raise the tipped wage—citing a risk to their tipped income and their jobs.¹⁴

Florida would lose 25,900 tipped jobs were Amendment 2 to pass. Research shows that a higher tipped minimum causes firms to opt for service models that require fewer employees.¹⁵ Also, tipped workers who are able to keep their jobs may experience declines in income, based on new research from Cornell University showing that employees receive fewer tips as the tipped wage rises.¹⁶

Job Loss Distribution by Occupation Type

	Affected by \$15 Minimum Wage	Job Loss for \$15 Minimum Wage
Non-Tipped Workers	1,932,308	132,525
Tipped Workers	201,371	25,924
All Workers	2,133,679	158,449

The hospitality industry has faced the most severe consequences from COVID; many of these businesses would receive a fatal blow from Amendment 2. The economists find that over 54,000 hospitality jobs—including roughly 43,000 restaurant jobs—would be lost because of the wage increase. Should a slower restaurant recovery take place, hospitality job loss would rise to 77,000, with roughly 60,000 of those lost jobs in restaurants. In this scenario, total job loss would rise to 181,227.

¹⁴ <https://www.nytimes.com/2019/03/22/nyregion/amy-schumer-poehler-waitresses-wages.html>

¹⁵ https://www.researchgate.net/publication/239522386_The_Effect_of_the_Tipped_Minimum_Wage_on_Employees_in_the_US_Restaurant_Industry

¹⁶ <https://www.minimumwage.com/2020/03/new-study-higher-tipped-wage-lower-tip-percent-age/>

Job Loss Distribution by Selected Industries

	Employment in 2026	Affected by \$15 Minimum Wage	Job Loss for \$15 Minimum Wage
Agriculture, Forestry, Fishing, Hunting, and Mining	63,057	23,447	1,872
Construction	566,795	92,745	5,388
Manufacturing	456,938	91,618	4,505
Wholesale Trade	224,582	35,574	1,801
Retail Trade	1,095,280	424,038	32,727
Transportation, Warehousing, and Utilities	501,395	93,906	5,248
Information	174,776	27,441	2,039
Finance, Insurance, Real Estate, Rental, and Leasing	666,751	77,847	3,937
Professional, Scientific, Management, Administrative, and Waste Management Services	1,052,054	204,303	11,495
Educational Services, Health Care, and Social Assistance	1,921,136	370,441	22,260
Arts, Entertainment, Recreation, Accommodation, and Food Services	995,129	502,477	54,567
Restaurants*	609,246	358,232	43,591
Other Services, Except Public Administration	440,161	142,244	10,288
Public Administration	425,961	47,598	2,322
All Industries	8,584,017	2,133,679	158,449
Results with 1% hospitality wage growth between 2019 and 2026			
Arts, Entertainment, Recreation, Accommodation, and Food Services	995,129	572,622	77,345
Restaurants*	609,246	404,935	60,169

*Note: Restaurants are a subset of the Arts, Entertainment, Recreation, Accommodation, and Food Services category

Technical Analysis

Dr. William E. Even
Dr. David Macpherson

This study uses a methodology similar to that employed by the Congressional Budget Office (CBO) in their analysis of the consequences of an increase in the federal minimum wage to examine the impact of proposed legislation that would increase the hourly minimum wage in Florida to \$15.00 and the hourly tipped minimum wage to \$11.98.¹⁷

Below, we describe the data and methodology used to estimate the number of people affected and the job loss. While it was not possible to obtain all of the specific assumptions and methods used by the CBO, the methods used in our earlier analysis and here are consistent with the CBO methodology, and assumptions about the impact of a minimum wage hike on job loss. We update the original CBO methodology by using the most recent CBO forecasts of future economic conditions that were released in July 2020.¹⁸

The data are from the Outgoing Rotation Groups of the 2017-2019 Current Population Surveys (CPS). Unlike the CBO, we use three years of CPS data to improve the sample size for providing estimates of the employment effects in Florida. To combine the data, we adjust the earnings weights in 2017 and 2018 so that the sum of the earnings weights in those years matches that for 2019.

For workers reporting they are paid by the hour, we use the reported hourly wage. For workers who do not report an hourly wage, we estimate their hourly wage by dividing their reported usual weekly earnings by their usual weekly hours.¹⁹ We

¹⁷ Congressional Budget Office. “The Effects on Employment and Family Income of Increasing the Federal Minimum Wage.” July 2019. In earlier work, we describe details behind the methods we used to replicate the CBO analysis.

¹⁸ See Congressional Budget Office, “An Update to the Economic Outlook: 2020 to 2030.” July 2020. Available at www.cbo.gov/publication/56442/

¹⁹ If a worker reports variable hours, we use a regression to estimate hours worked and divide weekly earnings by the prediction of their weekly hours. The regression includes controls for female and year interacted with hours worked last week, full-time status, education (5 categories), age, age squared, age cubed, age quartic, and race/ethnic status (3 categories). In addition, the model controls for female, year, and full-time status interacted with one-digit broad occupation. For tipped workers without a reported hourly wage, we use a regression to impute their hourly wage. The regression controls for occupation, gender, age, and age squared.

merge the data on hourly earnings to measures of the minimum wage and the tipped minimum wage for 2017-2019 in Florida. Florida's minimum wage in 2019 is \$8.46, and the tipped minimum wage is \$5.44. Since current law in Florida indexes the minimum wage to the CPI, we use CBO forecasts of inflation between 2019 and 2026 to obtain a forecast of \$9.51 in 2026 under current law. The tipped minimum wage is set to remain \$3.02 below the minimum wage in Florida, so we forecast a tipped minimum wage of \$6.49 for 2026.²⁰

Minimum Wage 2019	Tipped Minimum Wage 2019	Projected Minimum Wage 2026	Projected Tipped Minimum Wage 2026	Proposed Minimum Wage	Proposed Cash Minimum Wage
\$8.46	\$5.44	\$9.51	\$6.49	\$15.00	\$11.98

For each worker in the data, we compare their current hourly wage to Florida's minimum in the relevant year. Following the CBO methodology, if an untipped worker hourly wage is more than \$.25 below the state's minimum wage (e.g., below \$8.21 in 2019), we assume the person is not covered by the Fair Labor Standards Act (FLSA).²¹ For tipped workers, we compare their hourly wage rate to the state's tipped minimum wage and consider them not covered by FLSA if their hourly wage is more than \$.25 below the state's tipped minimum wage (e.g., below \$5.19 in 2019).²² We drop all workers who are judged to be not covered by the FLSA in our estimation of the effects of a change in Florida minimum wage law.

To forecast the impact of a minimum wage law that becomes fully effective in 2026, we assume that employment in 2026 is unchanged compared to that in 2019 based

²⁰ Like the CBO, our analysis does not adjust for city-specific minimum wage laws. Unlike some other states, Florida doesn't have city-specific minimum wages.

²¹ For example, if a state's minimum wage is \$7.25, non-tipped workers less than \$7.00 per hour are considered not covered by FLSA, and if a state's tipped minimum wage is \$2.13, tipped workers earnings less than \$2.00 per hour (excluding tips) are considered not covered. These adjustments are designed to address the possibility that respondents round answers when reporting hourly earnings.

²² Following the CBO, we define tipped workers as anyone who reports one of the following occupations: massage therapists; bartenders; waiters and waitresses; hosts and hostesses, restaurant, lounge, and coffee shop; barbers; hairdressers, hairstylists, and cosmetologists; miscellaneous personal appearance workers; personal care and service workers, all other; taxi drivers and chauffeurs; and Food preparation and serving related workers, all other including dining room and cafeteria attendants and bartender helpers in the other amusement, gambling, and recreation industries or traveler accommodation industry or restaurants and other food services industries.

on July 2020 CBO forecasts.²³ Also, we assume that nominal wages would grow by 2.5% per year based on CBO projections of earnings growth between 2019 and 2026.²⁴ If a worker's wage (or tipped wage for tipped workers) in 2026 is below the state-specific minimum wage forecast for 2026, we boost the estimate to match the level required by state law.

To estimate the number of workers affected by a minimum wage in 2026, we perform separate calculations for tipped and non-tipped workers. For non-tipped workers, we estimate the number of people with a predicted wage in 2026 lying between the forecast of Florida's minimum wage for 2026 (\$9.51) and the proposed 2026 minimum of \$15.00 minimum. For tipped workers, we estimate the number of people whose cash wage (i.e., the hourly wage paid by the employer, excluding tips) is between Florida's forecasted tipped minimum (\$6.49) and the proposed tipped minimum wage in 2026 (\$11.98).

After estimating which workers are affected by the proposed minimum or tipped minimum wage, we estimate the increase in the hourly cost to the employer. For non-tipped workers, the increase in the cost is the difference between the proposed \$15.00 minimum wage and the wage we predict for the worker in 2026. For tipped workers, the increase in cost is estimated as the difference between the proposed tipped minimum wage of \$11.98 and the worker's projected cash wage.

The estimated job loss uses elasticities identical to those used by the CBO. For the \$15.00 minimum wage, the elasticity for affected teenagers (workers aged 16-19) is -0.822, and for affected adults, the elasticity is -0.266.²⁵ The estimated job loss is calculated by summing across all affected workers the product of the relevant elasticity, the percentage increase in the hourly cost to employers resulting from the proposed change, and the worker's earnings weights adjusted to reflect employment.

²³ The CBO report allowed for employment and earnings growth rates that varied by age, sex, education and race. We were unable to obtain the assumed growth rates used by CBO and chose to use the same growth rates across sub-groups of the population.

²⁴ The assumed earnings and employment growth are based on CBO forecasts available in Congressional Budget Office, *An Update to the Budget and Economic Outlook*, August 2019. https://www.cbo.gov/system/files/2019-08/55551-CBO-outlook-update_0.pdf

²⁵ The CBO derives the long-run minimum wage elasticities by multiplying the CBO estimate of the short-run elasticities (-0.1475 for adults and -0.4550 for teens) times 1.5 (-0.2213 for adults and -0.6825 for teens). These long-run elasticities are then scaled upward to account for larger increases in the minimum wage and whether the minimum wage is indexed. The elasticities are scaled slightly downward to account for three -year adjustment period. For details, see <https://www.cbo.gov/system/files/2019-11/55681-cbo-code-for-employment-elasticities.zip>.

We generated estimates of the number of workers affected and the job loss associated with the proposed minimum wage increase. The forecast is that in 2026, there will be 8,584,017 workers covered by the FLSA in Florida. Of these workers, 2,133,679 (24.9% of covered workers) will be affected by the minimum wage hike. We also estimate that there will be 158,449 jobs lost as a result of the minimum wage hike. We also consider a scenario where wage growth in the Arts, Entertainment, and Recreation, and Accommodation and Food Services industry is 1 percent instead of 2.5 percent between 2019 and 2026. This increases the projected job loss in that industry from 54,567 to 77,345. In the sub-sector of restaurants and bars, the lower wage growth assumption increases job loss from 43,591 to 60,169.

