Minimum Wage and the U.S. Gender Wage Gap: A State-Level Analysis

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Abstract

In 2016, minimum wage increases went into effect in fourteen US states. Each subsequent year, more increases to state minimum wages have gone into effect throughout the country. Currently, thirty states have minimum wages that are above the current federal minimum wage rate of $7.25 per hour that was established in 2009. In this paper, we examine the relationship between state-level gender pay gaps and minimum wages. First, we estimate the gender pay gap on a state level by estimating the difference in mean wages for men and women for each state using the Blinder-Oaxaca counterfactual decomposition to compare the size of the gender pay gaps from 2016-2021 to the U.S. average. Even when controlling for education and industry, the pay gap between men and women still persists in most states. Much of the variation in the gender pay gap among the US states can be attributed to differences in the composition of industries and labor supply within each state. We find that nineteen of the twenty-one states that have minimum wages at or below the federal minimum wage have gender pay gaps that are larger than the national average. Our results are consistent with studies examining the relationship between minimum wage and gender pay gaps in other countries and we find that increases in minimum wages reduce the earnings gap among younger workers and those in low-skilled jobs. To our knowledge, we are the first to analyze the relationship between the gender pay gap and minimum wage rates in the United States.

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1 Introduction

Many factors such as education, occupation, age and race are all significant when predicting wages between men and women. Goldin and Katz (2008) discuss the correlation between some women's choices to have careers that fit with family-oriented goals as opposed to career goals and the earnings differential between men and women. Examples of these career choices could be choosing jobs that offer shorter work weeks or less travel and overall shorter time commitments. The tradeoff for these family-friendly benefits is typically a lower-paying salary. They also find fewer men taking career interruptions than women do.

Even when comparing men and women of similar educational background, women still tend to earn less than men. This often because women stop working earlier, take more breaks career breaks and work less hours a week than their male counterparts which all can negatively impact earnings. Bertrand et al. (2010) surveyed MBA's from the University of Chicago and find three main causes of earnings differences of men and women in corporate careers. First, women have slightly lower GPAs and take fewer finance courses than their male counterparts. They also find women work fewer hours compared to men. Women work on average fifty-two hours per week in the first fifteen years of their careers compared to men who work an average of fifty-eight hours per week. Lastly, only ten percent of men in their sample took a career interruption while forty percent of the women went six months or more without working.

Numerous studies (Kulow, 2013; Bertrand et al., 2010) highlight education as a factor impacting the gender wage gap. After controlling for level of education, a gender earnings differential still persists. On average, a woman with a college degree, earns 77 percent of what a man earns, and loses a total of $1.2 million dollars over the course of her working life. A woman with only a high school degree loses $700,000. A woman with a professional degree however, loses $2 million dollars over the course of her working life (Kulow, 2013).

The size of the overall earnings gap has decreased since 1960, when women earned only 60% of men's average pay. The narrowing of the gender earnings gap is due largely in part to women's increased education and workforce participation. Although the size of the earnings gap has decreased since women began entering the workforce in large numbers, the earnings gap is still of concern since in many U.S. households, women's wages constitute a major source of family income. Married women currently contribute over 36% of the total family income and in 34% of U.S. families, mothers are the sole wage earners (Miller and Vagins, 2018).

The gender earnings gap is often attributed to an individual's choices as they pertain to education, career and lifestyle. Determining the causes of the earnings gap for men and women is challenging since many factors and varying individual characteristics, many of which are difficult to measure, attribute to one's educational and career path and ultimately one's salary. This makes identification of a clear-cut cause challenging. Existing studies on the gender earnings gap consider individual worker characteristics that potentially attribute to the overall gender earnings gap. Earnings differences between men and women are impacted by gender differences in average number of hours worked per week, choice of occupation and number of career interruptions (Getz, 2011; Goldin and Katz, 2008; Miller and Vagins, 2018). There are few existing studies of the gender wage gap in the United States that examine variations in the size of the earnings gap based on geographic location, particularly in relation to one's state of residence. This study attempts to fill that gap.

In this paper, we use annual data from the 2001-2018 Current Population Survey (CPS) March supplement to test for variation in the gender earnings gap across states in the United States. We attempt to determine if state of residency can be linked to any size differences in the ratio of men's to women's earnings. A report issued by the U.S. Census Bureau's American Community Survey highlights differences in earnings between men and women at both the national and state levels (Semega, 2009). The report lists median earnings for men and women for all states as well as the national average and determines women's earnings as a percentage of men's earnings. The ACS 2009 survey compares men's and women's overall median earnings. Women earned lower salaries than men in each of the 50 states. This report does not, however, use any empirical tests to determine any significant state effects beyond presenting the median earnings values.

In this paper we test for any statistically significant differences in mean earnings for each gender by geographical location based on state of residency. To determine the size of each state's earnings gap, we measure the differences in earnings by estimating income in separate regressions for both men and women to estimate average wages in each state. Next, we determine the gender wage gap (GWG) in east state by calculating the ratio of women's earnings relative to men's and compare them to the national average wage gap.

We add to the gender wage gap literature by assessing the gender wage gap in each state and compare the size of the gap relative to the national average gender wage gap. We map the relative wage gaps and see that some patterns are arise. States with the smallest wage gap are located primarily in the Northeast and the West regions.

On average, women in the United States earn 80% less than men in our sample. When we control for individual worker characteristics the pay gap shrinks but women are still only earning 91% of what men earn on average. These statistics becomes even more striking when considering that women are becoming more educated relative to men. We find Wyoming has the largest and Washington D.C has the smallest GWG. Women in Wyoming earn only $0.68 for every dollar a man earns. When we adjust for individual worker traits, we find the ratio of women's to men's earnings increases but is still 19% less than male workers in the state. In both our baseline and adjusted models, we find that women's earnings relative to men's are highest in Washington D.C., Maryland, Vermont, Oregon, and California.

Next, we consider how minimum wage laws in each state might impact the difference in men and women's earnings. We find that in our baseline model, nineteen of the thirty states that have gender pay gaps that are larger than the national average have minimum wages at or below the federal minimum wage rate. In our expanded model which controls for worker traits, fifteen out of twenty-three states with larger than US average pay gaps are at or below the federal minimum wage. When we limit our sample to workers earning between

$25,000-$300,000 a year to eliminate the minimum wage earners from the sample, the results remain consistent. This indicates that the differences in men's and women's earnings in each state cannot be attributed to women making up a larger share of minimum wage earners.

2 Trends in the Gender Pay Gap

The narrowing of the gender wage gap from the 1960's through the mid 1990's is due largely in part to women's increased education and workforce participation. Although the size of the earnings gap has decreased since women began entering the workforce in large numbers, the earnings gap is still of concern since in many U.S. households, women's wages constitute a major source of family income. In nearly two-thirds of all households, women work outside of the home and contribute at least a quarter of the family's earnings. In forty-two percent of US families, mothers are the primary or sole wage earners (Miller and Vagins, 2018). Although the gender wage gap in not a phenomenon unique to the United States, the wage gap in the U.S. is approximately 2.5 percentage points larger than the Organization Economic Co-operation and Development (OECD) average and currently larger than many other industrialized nations (House, 2016).

The gender wage gap decreased significantly during the 1980's where the pay ratio increased from sixty-three percent in 1979 to seventy-four percent in 1989. Women's earnings relative to men's earnings increased another 6 percent from 1989 to 1998 (Blau et al., 2006). Mulligan and Rubinstein (2008) suggest the narrowing of the gender wage gap reflects changes in the composition of the female workforce. From the late 1970's through the late 1990's, women's wages have increased relative to men's wages. At the same time, changes in women's labor force selection as well as increases labor force attachment and human capital investment have led to a growing increase in inequality within gender. Mulligan and Rubinstein find the majority of the measured relative growth in women's wages would not have occurred if the changes in the composition of the female labor force had not occurred concurrently.

The 1980's saw not only a falling gender pay gap but also rising inequality in the labor market. The inequality rose both within and between education and experience groups. Changes in wage structure account for much of the wage inequality during this time. Wage differentials rose markedly by education, occupation, age and by experience groups (Autor et al., 2008). Blau and Kahn (1997) use a technique developed by Juhn et al. (1991) to determine the effect the within group wage inequality has on the gender wage gap during this time. Although rising rewards to skill caused greater within group wage inequality, women were better able to counterbalance this than their male counterparts due to increases in women's relative levels of experience and improved occupational distribution. Women also fared better than men from the impact of deunionization.

O'Neill and Polachek (1993) find increases in women's years of experience, a relative increase in women's level of education, return to schooling and structural changes in the economy that favored women account for much of the decline in blue collar wages and account for twenty percent of the narrowing of the wage gap in the 1980's. This effect, however, was offset by the rise in relative wages in both higher skilled and male dominated occupations.

A decline in labor market discrimination towards women could also account for some of the narrowing of the wage gap since the mid 1970's. This could be due in part to antidiscrimination policies as well as general change in social acceptance of women in the labor markets. Leonard (1989), however, does not find government policies aimed at reducing discrimination during the 1980's had any impact on the gender wage gap during this time.

Leveling off of the female labor force participation rate, slowing integration of occupations and normalized attitudes towards gender in the workplace all signaled a slowing or even a stalled convergence in gender inequality the 1990's (Cha and Weeden, 2014; Hegewisch et al., 2010; Blau et al., 2006). Cha and Weeden (2014) focus on the increasing prevalence of long work hours (defined as fifty or more hours per week) and find that the changing culture and increased returns to overwork combined with the essentially stable differences in the proportion of men and women able and willing to work long hours each week has offset wage-equalizing trends. They find the effect of overwork on the gender wage gap accounts for approximately 10 percent of the total wage gap. The overwork effect on wage inequality is comparable in magnitude to the positive impact education and rising returns to education have on women's wages, thereby essentially offsetting the effect.

The pace of the convergence in the gender wage gap appeared to have slowed or even stalled in the 1990's. Women's labor force participation rates, after decades of steadily increasing, plateaued in the mid 1990's. The unexplained gap is typically used to estimate gender discrimination.

Goldin and Katz (2008) discuss factors impacting earnings differences between men and women. Their results show the gender earnings gap and the correlation to some women's choices to have careers that fit with family-oriented goals as opposed to career goals. Examples of these choices could be choosing jobs that offer shorter workweeks or less travel and overall shorter time commitments. The tradeoff for these family-friendly benefits is typically a lower-paying salary. They also find fewer men taking career interruptions than women do.

A study of MBA' s from the University of Chicago found three main causes of earnings differences of men and women in corporate careers (Bertrand et al., 2010). Women have slightly lower GPAs and took fewer finance courses than their male counterparts. They also found that women worked fewer hours compared to men. Women worked on average 52 hours per week in the first fifteen years of their careers compared to men who worked an average of 58 hours per week. Lastly, they found that only 10 percent of men in their study took a career interruption while 40 percent of the women went six months or more without working.

Results obtained from prior studies reinforce the fact that there is in fact a gender earnings gap and seek to find sources of the gap. These studies do not however examine any geographical or state connection and a variance in the earnings gap.

A report presented by the American Community Survey (ACS) in 2009 highlights findings on men and women's earnings at the national and state levels. Earnings are defined as the sum of an individual's wage and salary income plus any self-employment income. The sample was restricted to include only full-time year-round workers aged 16 years or older. A year-round worker is defined as an individual that worked 50 or more weeks in the past 12 months and included the individual's paid time off or sick time as weeks worked. They also consider full-time to mean 35 or more hours worked in a week[1].

The ACS survey reports median earnings for both men and women. Overall, women's earnings as a percentage of men's for the United States were 77.9% for 2009 (Semega, 2009). Perhaps a more interesting result of this survey, however, was women's median earnings as a percentage of men's earnings varied substantially by state. Wyoming had the largest earnings gap among all states based on median earnings. According to the ACS report, women's earnings in Wyoming were only 64% of men's earnings, In Washington DC, women earned 88% of men's median income, the smallest earnings gap when measuring median earnings. These states represent the highest and lowest values for the gender earnings gap, but by no means are they outliers. The 2009 ACS report shows that women in Wyoming earn only 65.5% of a man's income and Utah women earn 66.4% of what men earn. In fact, four states show women's income as a percentage of men's to be under 70% while in nine states, women earn 80% of men's earnings or higher.

Hoffman (2015) cites two possible explanations for variation in the gender earnings ratio among states. One general explanation could be attributed to gender differences in relative skills or demographic characteristics like race and ethnicity. The other being possible gender-based differences in the market value of skills in state labor markets. Hoffman estimates differences between baseline and a full human capital model and shows how much of the state effect remains after adjusting for differences in worker composition for each gender. He

[1] ACS Table (1) results were replicated and are included in the Appendix of this paper.

focuses his analysis on states with the largest state effects and attempts to determine causes of the state impacts by examining occupational and educational factors in those states. He finds in 2008-2009, the largest gender earnings differential was in the state of Louisiana and Washington D.C. had the highest unadjusted earnings ratio but attributes most of that effect to composition. Maine had the highest regression adjusted impact on the gender earnings gap.

3 Data and Methodology

Blau and Beller (1988) show the importance of using weekly earnings to measure the gender wage gap. Comparing only full-time year-round workers in 1971 to those in 1981, they find women's annual earnings were only fifty-nine percent of men's in each year. When using weekly earnings for the same years, however, they find a 4.7 percent increase in women's earnings relative to men's earnings. The difference is that using weekly earnings adjusts for time inputs, specifically, hours and weeks worked.

We use the Current Population Survey (CPS) March Supplement for the years 2016 through 2021. We use the Current Population Survey instead of the American Community Survey because the CPS provides measures of key explanatory variables that we use in our model to adjust for individual worker attributes.

We restrict the sample to US citizens age 18-67. We define full-time year-round workers as earning between $5,000-300,000, working 30 or more hours per week on average for at least 26 weeks in the previous year. These restrictions reduce the sample size to 278,109 observations for the U.S. as well as Washington DC. The number of observations per state varies, but each state has over 1,000 observations per year at a minimum, ensuring an adequate sample size from each state[2].

[2]Delaware was excluded because it did not meet the adequate sample size.

There are two common approaches for estimating fixed effects models. A within-groups method can be used to estimate the regression to net out the unobservable effects. A least squares dummy variable approach can also be used. This approach is done by creating dummy variables, which brings the unobserved effect explicitly into the model. Typically, this method is not preferred over the within groups method since it adds extra variables to the regression equation and causes a loss in degrees of freedom. It is also common to have many fixed effect units with few observations per unit. The fixed effects may be of little interest or may be infeasible to recover. In our analysis however, the sample size is large, providing many observations for each state fixed effect. Our goal is to capture and measure the state fixed effects since they can be interpreted as a measure of the differences in the average state earnings.

We control for age, education, marital status, race[3], Hispanic ethnicity, metropolitan status and number of children under 18 in the household[4].

First, we examine any effect of the state of residence on earnings for each gender. Separate equations are estimated for men and women to capture the fixed effects for both genders for each state.

$$Earnings_i = \beta_0 + \beta_1 State_j + \beta_2 Year_{it} + \epsilon_i \tag{1}$$

Next, we add variables to measure individual worker characteristics to the state and year effects model. Since the goal is to determine if state effects exist and not to determine the actual cause of the difference, we choose a parsimonious model adding variables commonly used in many labor economics studies.

We re-estimate the model with these individual worker characteristic variables included. Equation (2) represents the regression equation for earnings based on state controlling

[3]Race categories are white, black and Asian.

[4]Number of children is classified as a dummy variable which categories for one, two, three or more children with no children acting as the omitted variable.

for individual worker characteristics. X_i represents a matrix of variables that control for age, quadratic age, education, race and ethnicity, marital status, number of children, and metropolitan status. The coefficient of interest is the coefficient on $State_j$. This coefficient represents the estimates for the effect of state of residence of respondent on earnings controlling for education, race and ethnicity, marital and family status, citizenship, the two work experience measures as well as a dummy variable for year. Again, estimates are obtained for both men and women in separate OLS estimates.

$$Earnings_i = \beta_0 + \beta_1 X_i + \beta_2 State_j + \beta_3 Year_{it} + \epsilon_i \tag{2}$$

We also estimate equations that do not include any state effects:

$$Earnings_i = \gamma_0 + \gamma_1 Year_{it} + \epsilon_i \tag{3}$$

$$Earnings_i = \delta_0 + \delta_1 X_i + \delta_2 Year_{it} + \epsilon_i \tag{4}$$

Equation (3) represents average U.S. earnings. Equation (4) estimates average earnings controlling for individual worker characteristics. This represents the estimates for the entire U.S. population. Similarly, men and women's earnings based on these individual traits are estimated in separate regressions.

4 Empirical Results

Table (1) provides summary statistics for the other categorical variables representing individual worker traits for the entire sample period and also for women and men respectively. The percentage of black workers is roughly 12% and Hispanic males make up 14% of the labor force. Black women represent roughly sixteen percent of the female labor force and Hispanic women account for thirteen percent. This proportion is similar for both genders in our sample. We note that women with higher education make up a greater proportion of the female labor force than their male counterparts. Men with three or more children make up almost 20% of the male labor force whereas mothers with three or more children under the age of 18 in the household makeup only about 6% of the female labor force. This can indicate a greater burden of childcare being place on women and those with larger families opt to leave the labor force to care for their children. The distribution of the sample for the other key variables tends to be fairly similar for men and women. The overall size of the earnings gap decreases when controlling for individual characteristics.

We use the estimated coefficients for regression equations (1) and (2) to recover average wages in each state for men and women. We extrapolate average wages by taking the exponent of the estimated log wages for each gender. To estimate the pay gap in each state we take the ratio of women's to men's estimated wages for each state. The estimated earnings ratios (GER) for each state are presented in Table (2). Column (1) represents the GER for each state using Equation 1, which represents our baseline model. This is the estimated average pay gap between women and men before controlling for individual worker characteristics.

The national average gender earnings ratio is 0.80 and 0.91 based results from Equations (3) and (4). The state variations from the national average GER are presented in Columns (2) and (4) of Table (2) for the baseline and adjusted models respectively.

We use the results from the estimates from equations (1) and (2) to test the significance of state fixed effects on earnings. An F test concludes that the null hypothesis that the state effects are all equal to zero is rejected at all levels of significance indicating that state of residence impacts earnings.

5 Minimum Wage Laws

Next, we compare the gender wage gaps to minimum wage rates in each state. Figures (4) and (4) show the GERs for each state ranked from largest to smallest. Figure (4) ranks GERs using the baseline model from Equation (1) and Figure (5) ranks GERs using the adjusted model from Equation (2). Recall, the GER is the ratio of women's earnings to men's so the largest GER represents the smallest difference in men's and women's earnings or the smallest pay gap. The U.S. average GER is displayed in red. The blue states represent states whose minimum wage is at or below[5] the Federal Minimum Wage rate which was $7.25 during the entire sample period. No states that were at the Federal rate or below had increases in their minimum wage during the sample period. States above the U.S. average represent states whose pay gap is smaller than the national average. Conversely, states below the U.S. average have pay gaps that are larger than the national average. Of the thirty states with larger average GWG's than the national average, nineteen of them have minimum wages at or below the Federal level. As Figure (5) shows, when we adjust for individual worker characteristics, fifteen out of the twenty-three below the U.S. average have a minimum wage at the Federal level.

A natural assumption could be that more women are earning the minimum wage relative to men and the gender wage gap can, in part, be due merely to the low minimum wage in the state. To test this, we restrict the sample to omit minimum wage earners in each state. We restrict our sample to annual wages and salary of $25,000-$300,000 which effectively eliminates any worker earning below $12 an hour if they work full-time year-round. We present the updated results for the restricted sample in Table (3). Similarly, Columns (1) represents the GER using estimates of the coefficients for the state fixed effects model (Equation (1)). The GER from the adjusted model, shown in Column (3) of Table (3) represent the coefficient for the state dummy variables for equation (2) that include adjustments for individual worker traits. Columns (2) and (4) are the differences from the national average GER.

We then rank the estimated wage gaps for each model. The results for the restricted baseline model are presented in Figure (5). With the sample restricted to those earning at

[5] For states that have a minimum wage below the Federal level, the Federal minimum wage rate prevails.

least \$25,000 annually, the average GER for the U.S. increases to 0.84. Although we find that the overall pay gap between men and women shrinks at higher incomes, the Federal minimum wage states still continue to have pay gaps that are larger than the national average. The results for our adjusted model at the higher income are consistent with the full sample and presented in Figure (7).

6 Conclusion

This study tests for any significant differences in the size of the earnings gap based on state of residence. We find that the earnings gap as measured by the gender earnings ratio varies among states. We use regressions analysis using unadjusted and adjusted models and find variation in the gender wage gap among the states. The sizes of the earnings gaps vary by state when control variables are included. States with minimum wages set at or below the federal minimum wage rate tend to have pay gaps that are larger than the national average in both models. These results are robust when we omit minimum wage earners from our sample by estimating our models for workers earning above \$25,000 annually.

Due to the identification challenges of a generalized gender earnings gap, we hold individual worker characteristics constant for each state as well as assume that any possible omitted variables are held constant across all states since our goal is to determine the existence of a state varying gender earnings gap, not causes for the variations. The individual factors that vary across states could be a topic for future work.

A possible pattern of mostly positive deviations from the national mean gender earnings ratio for the states in the northeast and west mostly negative deviations for states in the south would suggest a possible connection between GER size and region of the country. Testing for a regional effect did not fall into the scope of this paper but could be subject of future research as well.

References

Autor, D. H., Katz, L. F., and Kearney, M. S. (2008). Trends in us wage inequality: Revising the revisionists. *The Review of economics and statistics*, 90(2):300–323.

Bertrand, M., Goldin, C., and Katz, L. F. (2010). Dynamics of the gender gap for young professionals in the financial and corporate sectors. *American economic journal: applied economics*, 2(3):228–55.

Blau, F. D. and Beller, A. H. (1988). Trends in earnings differentials by gender, 1971–1981. *ILR Review*, 41(4):513–529.

Blau, F. D., Brinton, M. C., and Grusky, D. B. (2006). *The declining significance of gender?* Russell Sage Foundation.

Blau, F. D. and Kahn, L. M. (1997). Swimming upstream: Trends in the gender wage differential in the 1980s. *Journal of labor Economics*, 15(1, Part 1):1–42.

Cha, Y. and Weeden, K. A. (2014). Overwork and the slow convergence in the gender gap in wages. *American Sociological Review*, 79(3):457–484.

Getz, D. (2011). Men's and women's earnings for states and metropolitan statistical areas: 2009. *The American Community Survey and Select Survey Briefs*, pages 51–62.

Goldin, C. and Katz, L. F. (2008). Transitions: Career and family life cycles of the educational elite. *American Economic Review*, 98(2):363–69.

Hegewisch, A., Liepmann, H., Hayes, J., and Hartmann, H. (2010). Separate and not equal? gender segregation in the labor market and the gender wage gap. *IWPR Briefing Paper*, 377:1–16.

Hoffman, S. D. (2015). Geography and gender: Variation in the gender earnings ratio across us states. *Social Science Quarterly*, 96(1):235–250.

House, W. (2016). The gender pay gap on the anniversary of the lilly ledbetter fair pay act. *Issue brief, White House, Council of Economic Advisors, Washington, DC*.

Juhn, C., Murphy, K. M., and Pierce, B. (1991). Accounting for the slowdown in black-white wage convergence. *Workers and their wages*, pages 107–43.

Kulow, M. D. (2013). Beyond the paycheck fairness act: Mandatory wage disclosure laws-a necessary tool for closing the residual gender wage gap. *Harv. J. on Legis.*, 50:385.

Leonard, J. S. (1989). Women and affirmative action. *Journal of Economic perspectives*, 3(1):61–75.

Miller, K. and Vagins, D. J. (2018). The simple truth about the gender pay gap. *American Association of University Women*.

Mulligan, C. B. and Rubinstein, Y. (2008). Selection, investment, and women's relative wages over time. *The Quarterly Journal of Economics*, 123(3):1061–1110.

O'Neill, J. and Polachek, S. (1993). Why the gender gap in wages narrowed in the 1980s. *Journal of Labor economics*, 11(1, Part 1):205–228.

Semega, J. (2009). *Men's and women's earnings by state: 2008 American Community Survey*. US Department of Commerce, Economics and Statistics Administration.

Tables

Table 1: Summary Statistics

	(1) Full Sample	(2) Women	(3) Men
Asian	0.059	0.061	0.063
Black	0.136	0.159	0.116
White	0.777	0.750	0.799
Hispanic	0.141	0.137	0.144
Age	42.4	42.3	42.5
Married	0.545	0.535	0.545
No Children	0.551	0.534	0.564
One Child	0.189	0.211	0.170
Two Children	0.174	0.176	0.068
Three or More Children	0.086	0.079	0.198
Less than High School	0.040	0.030	0.048
High School	0.250	0.209	0.283
Some College or Associate's	0.280	0.287	0.274
Bachelor's Degree	0.277	0.294	0.263
Graduate Degree	0.154	0.180	0.132
Central City or Outside Central City	0.859	0.861	0.857
Usual hours worked per week	43.04	41.83	44.06
Usual number of weeks worked	50.68	50.56	50.77
Men	0.547		
Women	0.453		
Number of Observations	278,109	127,026	151,053

Source: CPS March supplement data obtained from IPUMS 2016-2021.
Weighted means are calculated using restricted sample with observations from all states and Washington, D.C. except Delaware due to low number of observations. Numbers are reported as percentages of total sample size for race, ethnicity, marital status, number of children, education and metropolitan status.

Table 2: State Gender Wage Gap 2016-2021

State	(1)	(2)	(3)	(4)	State	(1)	(2)	(3)	(4)
Alabama	0.796	0.00	0.904	-0.01	Montana	0.752	0.00	0.908	0.00
Alaska	0.829	0.03	0.940	0.03	Nebraska	0.819	0.04	0.949	0.04
Arizona	0.790	-0.01	0.920	0.01	Nevada	0.828	0.02	0.932	0.02
Arkansas	0.781	-0.02	0.891	-0.02	New Hampshire	0.777	-0.01	0.901	-0.01
California	0.843	0.04	0.951	0.04	New Jersey	0.815	0.01	0.924	0.01
Colorado	0.802	0.00	0.918	0.01	New Mexico	0.835	0.02	0.937	0.02
Connecticut	0.825	0.03	0.950	0.04	New York	0.838	0.02	0.932	0.02
DC	0.898	0.10	0.994	0.08	North Carolina	0.778	-0.02	0.890	-0.02
Florida	0.812	0.01	0.922	0.01	North Dakota	0.745	-0.05	0.857	-0.05
Georgia	0.810	0.01	0.907	0.00	Ohio	0.774	-0.01	0.900	-0.01
Hawaii	0.834	0.03	0.912	0.00	Oklahoma	0.768	-0.03	0.879	-0.03
Idaho	0.764	-0.04	0.920	0.01	Oregon	0.852	0.06	0.968	0.06
Illinois	0.787	-0.01	0.901	-0.01	Pennsylvania	0.852	0.00	0.968	0.00
Indiana	0.763	-0.04	0.884	-0.03	Rhode Island	0.795	0.01	0.915	0.01
Iowa	0.752	-0.05	0.897	-0.01	South Carolina	0.820	-0.02	0.926	-0.02
Kansas	0.791	-0.01	0.918	0.01	South Dakota	0.780	0.00	0.892	0.00
Kentucky	0.741	-0.06	0.858	-0.05	Tennessee	0.794	0.01	0.916	0.01
Louisiana	0.735	-0.07	0.839	-0.07	Texas	0.787	-0.03	0.918	-0.03
Maine	0.824	0.02	0.950	0.04	Utah	0.778	-0.01	0.887	0.00
Maryland	0.865	0.07	0.970	0.06	Vermont	0.857	0.07	0.984	-0.01
Massachusetts	0.800	0.00	0.910	0.00	Virginia	0.720	0.01	0.904	0.07
Michigan	0.772	-0.03	0.888	-0.02	Washington	0.857	-0.01	0.984	0.01
Minnesota	0.795	0.00	0.929	0.02	West Virginia	0.786	-0.04	0.921	-0.01
Mississippi	0.744	-0.06	0.864	-0.05	Wisconsin	0.788	0.02	0.903	-0.04
Missouri	0.790	-0.01	0.914	0.00	Wyoming	0.729	-0.10	0.872	0.02

Columns (1) and (3) represent gender wage gap calculated using coefficients for the State variable from Equations (1) and (2) respectively. Columns (2) and (4) represent the difference in each state's earnings ratio relative to the national mean.

Table 3: State Gender Wage Gap for Incomes above $25,000

State	(1)	(2)	(3)	(4)	State	(1)	(2)	(3)	(4)
Alabama	0.838	0.00	0.919	-0.02	Montana	0.828	-0.01	0.908	-0.03
Alaska	0.856	0.02	0.940	0.01	Nebraska	0.838	0.00	0.935	0.00
Arizona	0.822	-0.02	0.925	-0.01	Nevada	0.830	-0.01	0.945	0.01
Arkansas	0.843	0.00	0.922	-0.01	New Hampshire	0.835	0.00	0.947	0.01
California	0.865	0.03	0.955	0.02	New Jersey	0.843	0.00	0.920	-0.01
Colorado	0.842	0.00	0.933	0.00	New Mexico	0.804	-0.03	0.905	-0.03
Connecticut	0.854	0.02	0.964	0.03	New York	0.840	0.00	0.937	0.00
DC	0.907	0.07	1.011	0.08	North Carolina	0.865	0.03	0.928	-0.01
Florida	0.843	0.00	0.935	0.00	North Dakota	0.860	0.02	0.941	0.01
Georgia	0.860	0.02	0.934	0.00	Ohio	0.823	-0.02	0.917	-0.02
Hawaii	0.868	0.03	0.924	-0.01	Oklahoma	0.786	-0.05	0.871	-0.06
Idaho	0.824	-0.01	0.947	0.01	Oregon	0.823	-0.02	0.918	-0.02
Illinois	0.831	-0.01	0.929	-0.01	Pennsylvania	0.817	-0.02	0.907	-0.03
Indiana	0.823	-0.02	0.913	-0.02	Rhode Island	0.858	0.02	0.959	0.02
Iowa	0.818	-0.02	0.925	-0.01	South Carolina	0.823	-0.02	0.924	-0.01
Kansas	0.834	0.00	0.923	-0.01	South Dakota	0.846	0.01	0.938	0.00
Kentucky	0.822	-0.02	0.901	-0.03	Tennessee	0.829	-0.01	0.916	-0.02
Louisiana	0.799	-0.04	0.875	-0.06	Texas	0.840	0.00	0.934	0.00
Maine	0.828	-0.01	0.937	0.00	Utah	0.835	0.00	0.932	0.00
Maryland	0.860	0.02	0.964	0.03	Vermont	0.820	-0.02	0.910	-0.02
Massachusetts	0.836	0.00	0.935	0.00	Virginia	0.760	-0.08	0.913	-0.02
Michigan	0.831	-0.01	0.921	-0.01	Washington	0.870	0.03	0.981	0.05
Minnesota	0.819	-0.02	0.927	-0.01	West Virginia	0.815	-0.02	0.929	0.00
Mississippi	0.828	-0.01	0.919	-0.02	Wisconsin	0.819	-0.02	0.914	-0.02
Missouri	0.838	0.00	0.940	0.01	Wyoming	0.788	-0.05	0.891	-0.04

Columns (1) and (3) represent gender wage gap calculated using coefficients for the State variable from Equations (1) and (2) respectively. Columns (2) and (4) represent the difference in each state's earnings ratio relative to the national mean.

Figures

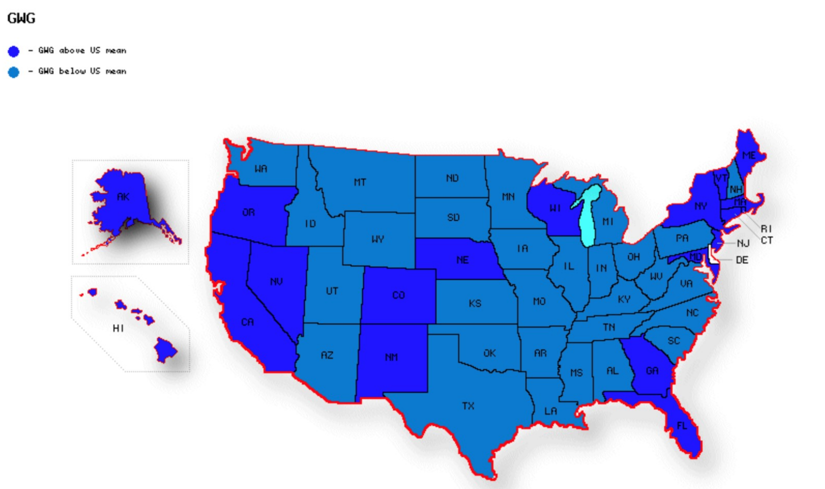

Figure 1: Average State Gender Wage Gaps Relative to US Average

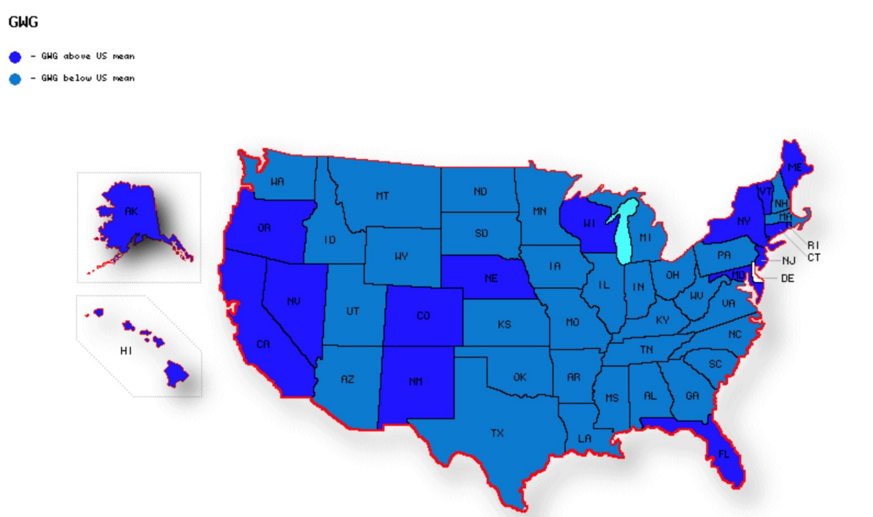

Figure 2: Adjusted State Gender Wage Gaps Relative to US Average

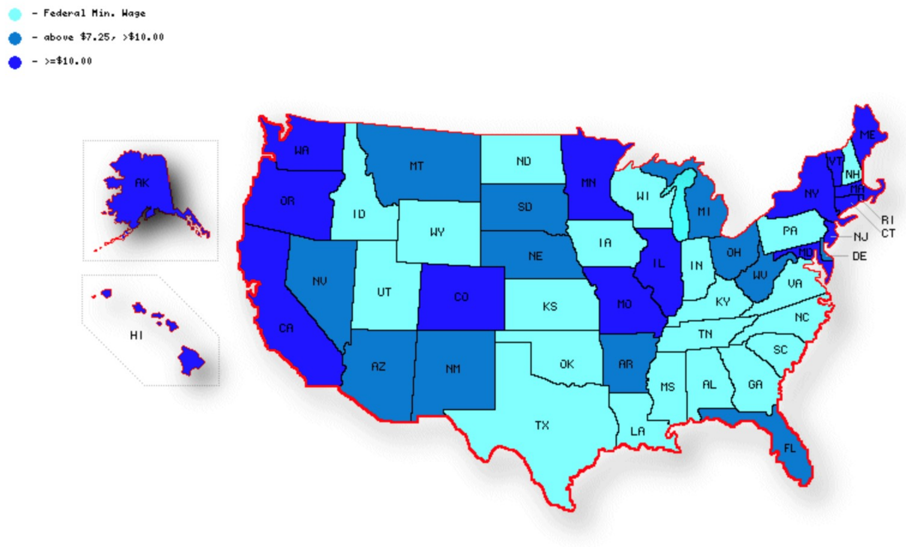

Figure 3: State Minimum Wages

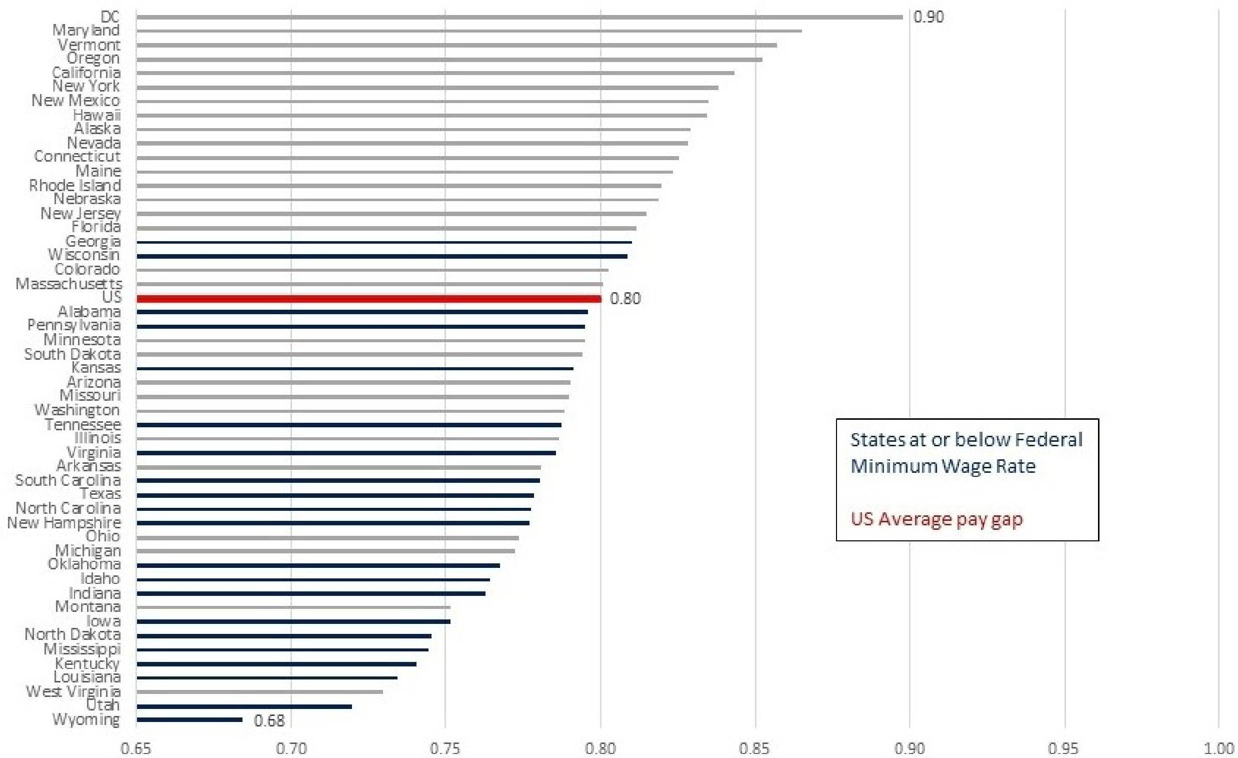

Figure 4: Minimum Wage and the Gender Wage Gap

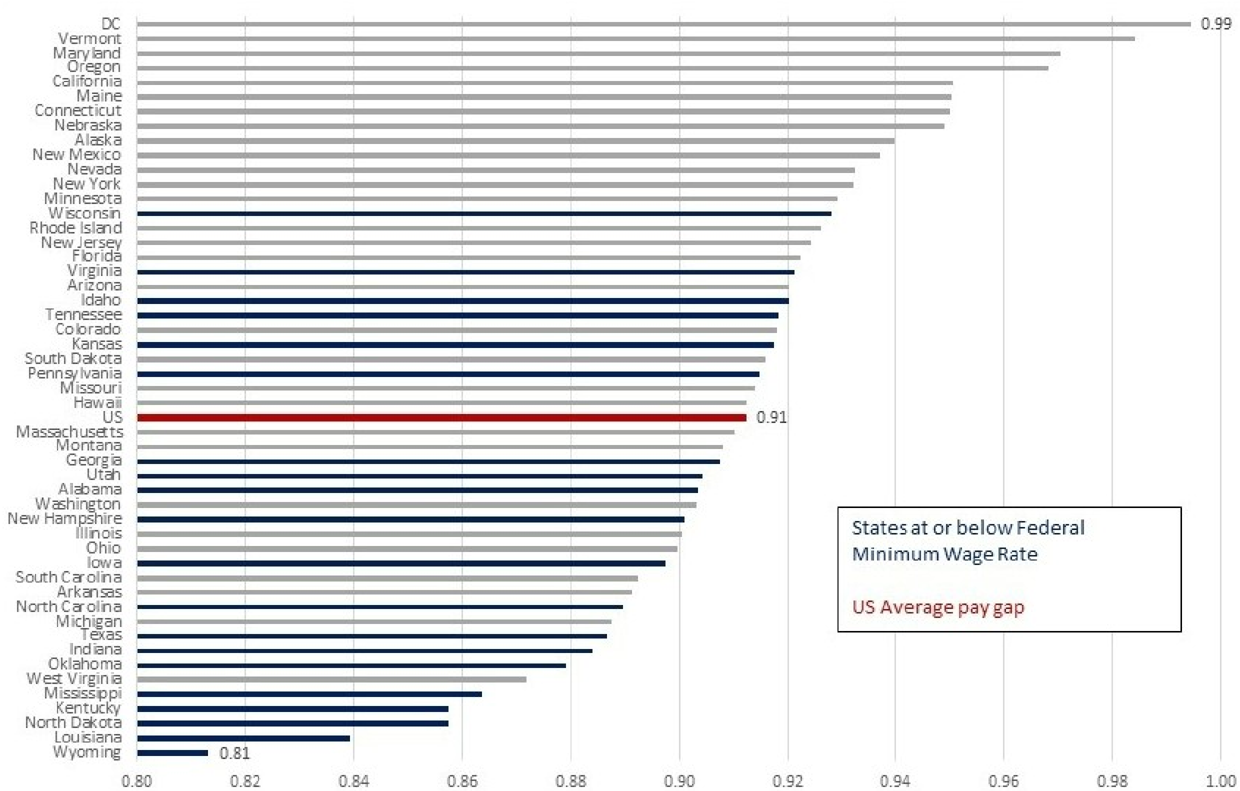

Figure 5: Minimum Wage and the Adjusted Gender Wage Gap

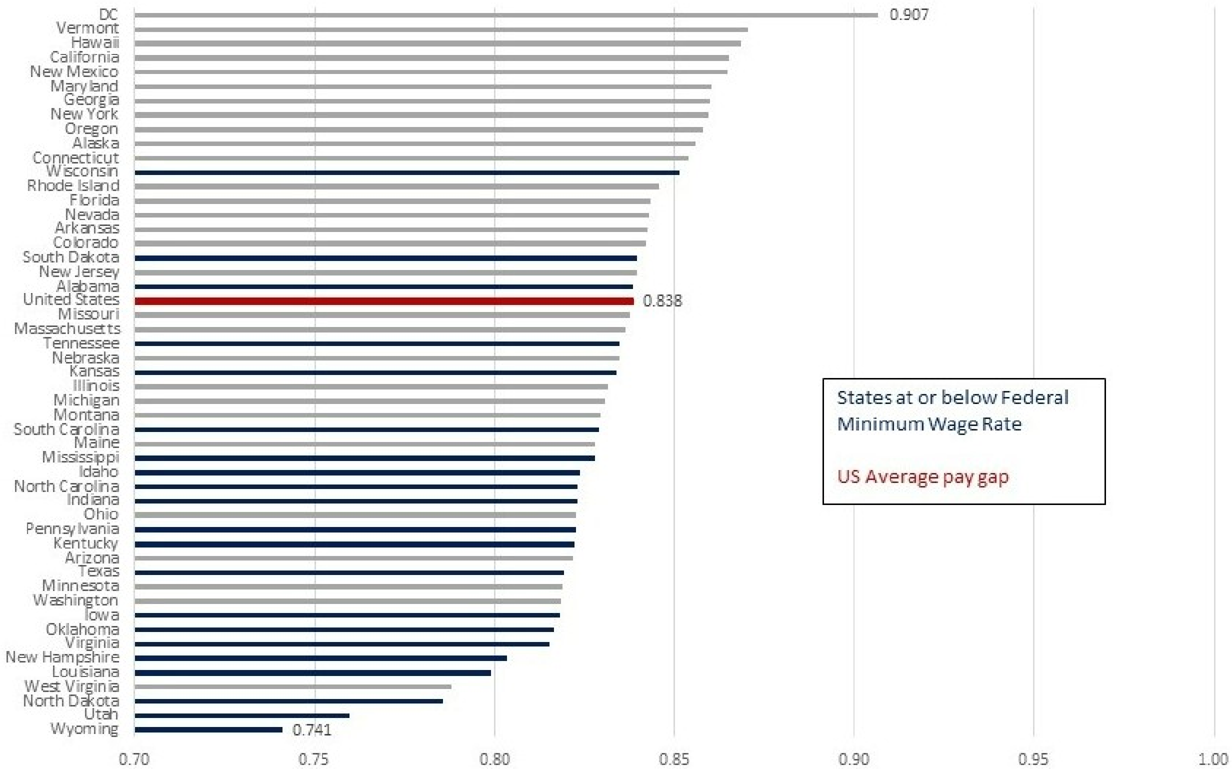

Figure 6: Minimum Wage and the Gender Wage Gap for Incomes above $25,000

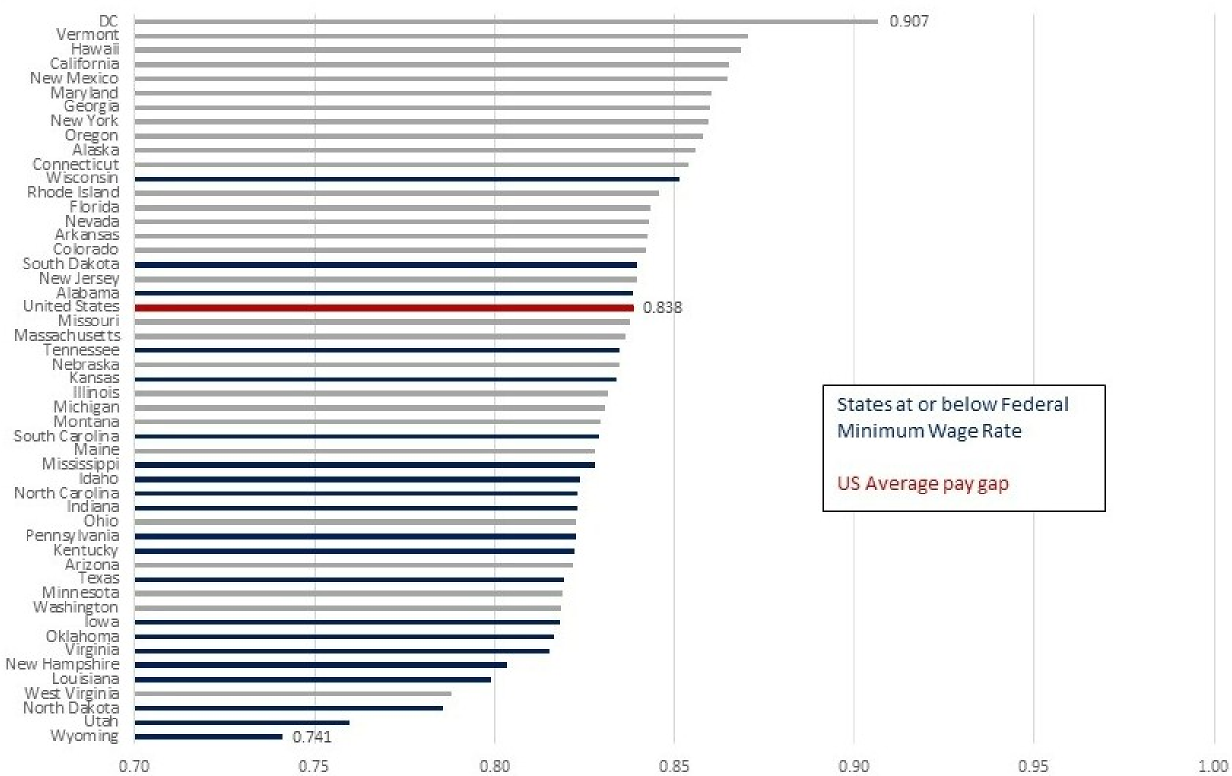

Figure 7: Minimum Wage and the Adjusted Gender Wage Gap for Incomes above $25,000

Appendix

Table A1: State Minimum Wages

State	(1) 2016	(2) 2017	(3) 2018	(4) 2019	(5) 2020	(6) 2021	State	(1) 2016	(2) 2017	(3) 2018	(4) 2019	(5) 2020	(6) 2021
Alabama	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	Montana	$8.05	$8.15	$8.30	$8.50	$8.65	$8.75
Alaska	$9.75	$9.80	$9.84	$9.89	$10.19	$10.34	Nebraska	$9.00	$9.00	$9.00	$9.00	$9.00	$9.00
Arizona	$8.05	$10.00	$10.50	$11.00	$12.00	$12.15	Nevada	$8.25	$8.25	$8.25	$8.25	$9.00	$9.75
Arkansas	$8.00	$8.50	$8.50	$9.25	$10.00	$11.00	New Hampshire	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
California	$10.00	$10.50	$11.00	$12.00	$13.00	$14.00	New Jersey	$8.38	$8.44	$8.60	$10.00	$11.00	$12.00
Colorado	$8.31	$9.30	$10.20	$11.10	$12.00	$12.32	New Mexico	$7.50	$7.50	$7.50	$7.50	$9.00	$10.50
Connecticut	$9.60	$10.10	$10.10	$10.10	$12.00	$13.00	New York	$9.00	$9.70	$10.40	$11.10	$11.80	$12.50
Delaware	$8.25	$8.25	$8.25	$8.75	$9.25	$9.25	North Carolina	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
DC	$11.50	$12.50	$13.25	$14.00	$15.00	$15.20	North Dakota	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Florida	$8.05	$8.10	$8.25	$8.46	$8.56	$8.65	Ohio	$8.10	$8.15	$8.30	$8.55	$8.70	$8.80
Georgia	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	Oklahoma	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Hawaii	$8.50	$9.25	$10.10	$10.10	$10.10	$10.10	Oregon	$9.75	$10.75	$10.75	$11.25	$12.00	$12.75
Idaho	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	Pennsylvania	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Illinois	$8.25	$8.25	$8.25	$8.25	$10.00	$11.00	Rhode Island	$9.00	$9.60	$10.10	$10.50	$11.50	$11.50
Indiana	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	South Carolina	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Iowa	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	South Dakota	$8.50	$8.65	$8.65	$9.10	$9.30	$9.45
Kansas	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	Tennessee	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Kentucky	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	Texas	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Louisiana	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	Utah	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Maine	$7.50	$9.00	$10.00	$11.00	$12.00	$12.15	Vermont	$9.60	$10.00	$10.50	$10.78	$10.96	$11.75
Maryland	$8.75	$9.25	$10.10	$10.10	$11.00	$11.75	Virginia	$7.25	$7.25	$7.25	$7.25	$7.25	$9.50
Massachusetts	$10.00	$11.00	$11.00	$12.00	$12.75	$13.50	Washington	$9.47	$11.00	$11.50	$12.00	$13.50	$13.69
Michigan	$8.50	$8.90	$9.25	$9.45	$9.65	$9.65	West Virginia	$8.75	$8.75	$8.75	$8.75	$8.75	$8.75
Minnesota	$9.50	$9.50	$9.65	$9.86	$10.00	$10.08	Wisconsin	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Mississippi	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	Wyoming	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
Missouri	$7.65	$7.70	$7.85	$8.60	$9.45	$10.30							

Note: States with no established minimum wage or minimum wage rates set below the Federal rate, the Federal minimum wage prevails.