

Testimony of Yannet Lathrop

National Employment Law Project

In Support of a \$15 Minimum Wage in Vermont, and Against a Youth Wage

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Thank you, Sen. Sirotkin and members of the Senate Committee on Economic Development, Housing and General Affairs for the opportunity to testify today. My name is Yannet Lathrop, and I am a researcher and policy analyst for the National Employment Law Project (NELP). NELP is a non-profit, non-partisan research and advocacy organization specializing in employment policy. We are based in New York with offices across the country. Our staff are recognized as policy experts on a wide range of workforce issues, including unemployment insurance, wage and hour enforcement, and the minimum wage. We have worked with dozens of city councils, state legislatures and the U.S. Congress on measures to boost pay for low-wage workers and improve labor standards. We track both, the economic experience of state and local jurisdictions that have increased their wage floor, and the academic research on the minimum wage. As a result, we have developed a strong expertise on the analysis of minimum wage policy.

NELP testifies today in support of a \$15 minimum wage in Vermont. This policy would help an estimated 87,000 workers better meet their basic needs. If Vermont approves a \$15 minimum wage, the state would join a growing number of jurisdictions across the country that have enacted or are pushing for similar policies. Four states—New York, New Jersey, Massachusetts, and California—have already adopted statewide \$15 minimum wage policies, and additional states—including Connecticut, Maryland, Illinois and Hawaii—are currently considering similar legislation for \$15 to \$17 wage floors. In addition, more than two-dozen cities and counties from Washington, D.C. to Minneapolis to Flagstaff, Arizona have approved \$15 minimum wage legislation of their own, or have campaigns underway.

NELP also testifies against a subminimum wage for secondary students. Youth worker exemptions are not only harmful policies to Vermont’s young workers, but they advance the interest of powerful business groups that seek to keep wages down for all workers. A memo leaked in December 2017 from a well-known corporate lobbyist revealed a proposal for a multi-million dollar corporate campaign to undermine the success of minimum wage campaigns by pushing for youth carve-outs. The proposed corporate campaign would attempt to create “sympathy” for “youth victims” supposedly harmed by higher wages. However, the memo makes it clear that the real impetus for a youth exemption is what its author termed the “sobering ripple effect on all entry-level wage rates”—in other words, that keeping youth wages low would help keep all wages low.

The most rigorous modern research on the impact of higher minimum wages—including robust increases to \$13 or more—shows that these policies boost worker earnings with little to no adverse impact on employment, and that the implementation of higher local wages has proven manageable for employers. The few analyses showing adverse effects—such as the University of Washington’s study of Seattle’s minimum wage increase—were shown to have serious flaws that compromised their findings. As a result, the authors of that study were forced to reverse their position on the minimum wage.

A robust minimum wage benefits not only low-wage workers, but also businesses and the economy as a whole. Higher minimum wages have raised pay for workers in the face of larger economic trends that have led to stagnant and falling wages across the bottom of our economy. They also have been shown to reduce economic hardship, lifting workers out of poverty, and improving other life outcomes. The increased consumer spending triggered by higher wages can have the effect of boosting demand for goods and services and keeping money circulating in the economy, creating a virtuous cycle that benefits workers, businesses and the economy. These positive benefits have led a growing number of business owners and economists to endorse a \$15 minimum wage.

In Washington, D.C., Senator Bernie Sanders recently introduced a \$15 minimum wage bill, the Raise the Wage Act of 2019 (S.150), which was co-sponsored by 30 other U.S. Senators, including Senator Patrick Leahy. Its companion bill in the U.S. House of Representatives (H.R.582) was similarly strongly received, with nearly 200 co-sponsors, including Congressman Peter Welch. The Raise the Wage Act would not only raise the federal minimum wage to \$15 by 2024, but would also gradually phase out the sub-minimum wages for tipped, youth and disabled workers, and index the minimum wage to the median wage.

In what follows, I will expand many on these and other key points, and will summarize the economic evidence on the impact of the minimum wage.

The Need for a \$15 Minimum Wage in Vermont

Workers throughout Vermont need to earn at least \$15 per hour today, just to afford the basics; by 2024, they will need much more.

According to analysis by the Economic Policy Institute (EPI), an estimated 87,000 workers in Vermont (nearly 30 percent of the state's workforce) would benefit from the adoption of a \$15 by 2024 minimum wage.¹ The average worker who works year-round would receive an extra \$1,710 in annual earnings.²

Facing some of the highest costs of living in the nation, these workers need to earn more than \$15 per hour *today* just to afford the basics. By 2024, they will need even more. Analysis of EPI's Family Budget Calculator shows that **even single workers in the least expensive counties of Vermont (Essex and Orleans) need more than \$19 per hour today to make ends meet.** By 2024, these workers will need to earn an hourly wage of \$22 or more. In these counties, single and married workers caring for at least one child—as well as all workers in Burlington, regardless of marital or parental status—need to earn significantly more.

Housing expenses, alone, can quickly drain the budgets of low-income families. The benchmark for affordable housing is 30 percent of income.³ Yet, in Vermont, with housing costs continuously climbing while paychecks remain flat, an increasing number of low- and middle-income families are having to spend more than 30 percent of their total household budgets on housing.⁴

Today, in rural Vermont, rent for a modest one-bedroom apartment averages \$811 per month, or 43 percent of *pre-tax* earnings from full-time work at the current state minimum wage.⁵ In the Burlington metropolitan area, a one-bedroom apartment averages \$1,121, or 60 percent of gross minimum wage full-time earnings.⁶ Rent for apartments with two or more bedrooms, which parents raising children would need, cost more and account for even larger percentages of gross monthly earnings. (See Appendix 2 for additional estimates by county or region, and apartment size).

The typical worker earning less than \$15 in Vermont is a woman over 25 who works full-time and is likely to have at least some college experience.

The Economic Policy Institute estimates that 86 percent of workers who would benefit from a \$15 minimum wage are 20 or older, and 41 percent are 40 or older.⁷ Additionally:

- **Gender:** More than half (58 percent) are women.⁸
- **Race and ethnicity:** While only 10 percent of benefitting workers are workers of color, these workers tend to benefit more significantly. Looking at each racial or ethnic group separately, the Economic Policy Institute finds that 38 percent of African Americans and Latinos, and 46 percent of workers of Asian or other racial or ethnic backgrounds would benefit from a \$15 minimum wage increase in Vermont, compared to just 28 percent of all white Vermont workers.⁹
- **Work hours:** The majority (56 percent) work full-time.¹⁰
- **Education:** A significant share (45 percent) of impacted workers have some level of post-secondary education: 36 percent have some college experience or an Associate's degree, and an additional 9 percent have a Bachelor's degree or higher.¹¹
- **Family income:** Sixty-one percent of benefitting workers live in households with a family annual income of less than \$50,000.¹²

The Case Against Minimum Wage Youth Exemptions

Vermont should reject proposals to adopt a lower youth minimum wage, which would hurt young workers while benefitting few employers

Although S.23 takes an important step towards a more robust wage floor in Vermont, it also includes a harmful provision that would exempt secondary students from the full minimum wage (henceforth referred to as “youth wage” or “young worker exemption”). We urge the Vermont legislature to reject this and any other proposal to adopt a youth wage.

Under current law, employers are allowed to pay secondary school students \$3 less than the full minimum wage—but only during the school year. The youth wage provision of S.23 expands this exemption year-round. As a result, an estimated 10,000 teen workers in the state (73 percent of the state’s teen workforce), who would otherwise benefit from a \$15 minimum wage policy,¹³ would be negatively impacted.

Teens make up only 11 percent of the workforce benefitting from a \$15 minimum wage in Vermont.¹⁴ Given their small numbers, the benefits of a youth wage would be very modest for most businesses in the state. Nonetheless, this policy would harm young and adult workers alike, as it would incentivize an increasing number of employers to hire young workers in place of adults and to adopt a high-turnover staffing model to maintain a young workforce. An indirect consequence of this policy would be to drive down wages for low-wage adult workers.

Vermont should not seek to be the first state to adopt a lower youth wage alongside a \$15 minimum wage

Of the four states that have adopted a \$15 minimum wage to date, none have included permanent lower wages for young workers. Vermont should not be the first.

California and New York were the first states to adopt \$15 minimum wage laws in 2016—followed by Massachusetts in 2018, and New Jersey, which became the fourth state to do so just earlier this week. Although proposals for permanent youth wages were raised in two of those states (New Jersey and Massachusetts),¹⁵ their legislatures ultimately rejected those proposals.¹⁶

To the extent states or cities have adopted youth wages in the past, they are often time-limited to allow for a lower minimum wage only for periods often ranging from 30 to 120 days. But even this structure encourages low-wage employers to churn through staff to hire new young workers and continue to pay sub-minimum wages.

Youth exemptions are plain bad policy, as it would punish some of the state’s most vulnerable workers and encourage discrimination based on age. Vermont should follow the lead of New York, Massachusetts, New Jersey and California, and ensure that all workers share in the state’s economic growth and prosperity and the benefits of a \$15 wage floor.

Profitable fast food and retail chains with high-turnover staffing models would be the main beneficiaries of a young worker exemption in Vermont

When minimum wage increases are proposed, some employers argue that a lower minimum wage for young workers is necessary to encourage employers to hire teens despite their limited work experience, or to

cushion the impact of a higher minimum wage on businesses. However, youth wages are bad policy, which **create loopholes** that mainly benefit high-turnover businesses and serve to encourage other employers to pursue that same harmful business model at the expense of good, stable jobs for all workers.

Businesses that commonly adopt high-turnover staffing models are fast food and retail chains. Often, these employers pay some of the lowest wages, while posting high profits.¹⁷ According to some estimates, the rate of turnover for these businesses can be as high as 120 to 200 percent on an annual basis.¹⁸ This is the equivalent of replacing their entire staff once every six to twelve months.

Although national chains do not dominate the business landscape of Vermont, some are actively seeking to enter, expand or enhance their presence in the state.¹⁹ Hence, a rejection of the youth wage is imperative, even in Vermont. A youth wage would not only benefit large fast food and retail chains at the expense of teens, but its adoption would also be **unfair to small businesses and conscientious employers** who already struggle to compete with big businesses while treating their employees of any age fairly.²⁰

A youth wage in Vermont would harm all workers in the state, and would unwittingly advance corporate attacks on the minimum wage

Calling the minimum wage an “expensive legislation” in a 2017 leaked memo, corporate lobbyist and well-known minimum opponent, Rick Berman, outlined a multi-million dollar corporate strategy to undermine the nation’s growing support for a \$15 minimum wage. As *The Intercept* reported, that strategy includes pushing for youth wages, which would have “a sobering ripple effect on all entry level wage rates.”²¹

According to *The Intercept*, Berman, who “is well-known for setting up groups that appear as authentic academic policy shops and grassroots organizations but are actually fronts for his business clients,” has in the past or currently represents clients such as Philip Morris—which hired Berman to “downplay the risks of secondhand smoke”—as well as the alcohol, meat, soda, and processed food industries.²²

Concerned that “[s]upport for doubling the Federal minimum wage to \$15 and reducing tip credits does not trigger public concern,” in the memo Berman proposes that “[t]he industry response most likely to gain traction with the public is to emphasize the plight of low-skilled youth who have unemployment rates 4-5 times higher than the national rate and who are stranded on the sideline of the job market.” Berman explains that a “bipartisan public is receptive to lower ‘apprentice’ or ‘intern’ wage rates for young people,” and that a “youth’ wage will have a sobering ripple effect on all entry level wages.”²³

The leaked memo shows that corporations view the youth wage not as a path to better wages for young workers, but as a way to undermine support for higher wages and to keep wages low for all workers.

Lower youth wages harm college-bound teens from low- and middle-income families who use their earnings to pay some of their college expenses

In Vermont and throughout the country, many young people struggle to meet the increasing costs of a post-secondary education. Although the proposed expansion of Vermont’s current young worker exemption would be limited to secondary school students, this policy could nonetheless have a negative impact on college-bound young workers from low- and middle-income families, who work long hours during the summer break to save for college.

High tuition and decreasing funds for grants and scholarships forces many college students to work long hours, which can compromise their graduation rates. In the U.S., nearly 50 percent of students pursuing a two-year degree, and over 40 percent of students pursuing a four-year degree work 35 hours or more per week.²⁴

Earning at least \$15 per hour would enable many college-bound teens in Vermont to save money for tuition and living expenses, which would allow them to limit their work hours to 20 hours a week once they are in college, and take out fewer loans. Choosing to do the opposite—exempting high school students from a \$15 minimum wage—could hurt their career prospects and futures, as they would be forced to take out larger amounts of student loans, or work close to full time when in college, which would put them at risk of dropping out.²⁵

According to U.S. Census data, 12,000 young people in Vermont aged 19 and under worked in 2018.²⁶ Nationally, approximately half of all 18 and 19 year olds are students enrolled in two- or four-year college or university programs.²⁷ The overwhelming majority of them (70 percent) work,²⁸ as they struggle with rising tuition and cost of living, and the prospect a future mired by crushing student loan debt.

Low wages can put students at risk of poverty, adverse health outcomes and homelessness. Research also shows that many working college students struggle with poverty. A worrying two-thirds of the country's community college students are food insecure, and 50 percent are housing insecure.²⁹ Food and housing insecurity can significantly affect college students' health, wellbeing and ability to graduate.

State-of-the-art economic research shows that contrary to opponents' claims, raising the minimum wage does not cost young workers their jobs

Opponents of a strong minimum wage for young workers sometimes argue that a higher minimum wage causes higher rates of youth unemployment. This is simply not the case.

A recent study by University of California economists analyzed over three decades (1979 to 2014) of teen and restaurant employment data, comparing states with high average minimum wages and those with low average minimum wages (typically, equal to the federal minimum wage). The data did not show disemployment effects among restaurant workers and the effect on teen employment was only a fraction of the already negligible effect claimed by minimum wage opponents.³⁰

Previously, in 2011, this same team of economists had analyzed the effects of the minimum wage on teen employment in a state-of-the-art, peer reviewed study, "Do Minimum Wages Really Reduce Teen Employment?"³¹ The study carefully examined the impact of all U.S. minimum wage increases between 1990 and 2009 on teen workers—including minimum wage increases implemented during times of high unemployment, such as the national recessions of 1990–1991, 2001 and 2007–2009.³² The study found that the even during downturns in the business cycle and in regions with high unemployment, the impact of minimum wage increases on teen employment is the same: Negligible.³³

As *Bloomberg News* wrote in summarizing the study, "[This study is part of] a wave of new economic research [that] is disproving those arguments about job losses and youth employment. Previous studies tended not to control for regional economic trends that were already affecting employment levels, such as a manufacturing-dependent state that was shedding jobs. The new research looks at micro-level employment patterns for a more accurate employment picture. The studies find minimum-wage increases even provide an economic boost, albeit a small one, as strapped workers immediately spend their raises."³⁴

A review of the data shows that youth employment levels have been falling for decades, including a dramatic decline since 2000.³⁵ This trend is unrelated to the minimum wage and has continued regardless of whether the minimum wage has been flat or increasing, making it clear that this decline has nothing to do with the minimum wage.³⁶ There are multiple reasons for this decline, including the fact that more teens and other young workers are full-time students than in the past, and those seeking work face increasing competition from adult workers over 55, many of whom cannot afford to retire and are turning to low-wage jobs.³⁷

The National Movement for Higher Wages, and the Benefits of Raising the Minimum Wage

A growing list of jurisdictions are enacting \$15 minimum wage increases, reflecting continued concerns with low wages and popular support for bold change

With job growth skewed towards low-paying occupations over the past decade, and with household incomes barely budging for the majority of the population, there has been growing national momentum for action to raise the minimum wage. According to analysis by the Economic Policy Institute, U.S. median household income rose less than 2 percent between 2017 and 2018, a slower pace than the 5 percent observed in 2015,³⁸ and hourly wages similarly flatlined for most of the workforce.³⁹

The worsening prospects and opportunities for low-wage workers have prompted a record number of cities, counties, and states to enact higher minimum wages, often with overwhelming support from the public. Recent national polling data shows that a majority (55 percent) of registered voters support a \$15 minimum wage, including one in two Independents and over one-third (36 percent) of Republicans.⁴⁰ A 2015 poll of low-wage workers commissioned by NELP found that approximately 75 percent of low-wage workers support a \$15 minimum wage and a union.⁴¹

Since November 2012, an estimated 22 million low-wage workers throughout the country have won a combined \$68 billion in wage increases through a combination of states and cities raising their minimum wages; executive orders by city, state and federal leaders; and individual companies raising their pay scales.⁴² Of those workers, **nearly 11 million will receive gradual raises to \$15 per hour.**⁴³

Nearly three-dozen states and localities have adopted and are currently phasing in \$15 minimum wage laws. Two of the nation's biggest states—California and New York— approved statewide \$15 minimum wage policies in 2016, followed by Massachusetts in 2018, and New Jersey in 2019.⁴⁴ Additional states—including Connecticut, Maryland, Illinois and Hawaii—are currently or will soon be considering similar legislation for \$15 wage floors.⁴⁵ In addition, more than two-dozen cities and counties from Washington, D.C. to Minneapolis to Flagstaff, Arizona have approved \$15 minimum wage legislation of their own, or have campaigns underway.⁴⁶

The trend in localities and states pushing for higher minimum wage rates is likely to continue as wages decline or stagnate, inequality worsens or remains high, and obstructionists in Congress continue to block federal action on the minimum wage.

Higher earnings resulting from minimum wage increases can have significant income, health and educational benefits for low-income individuals and their families

By raising pay broadly across the bottom of the economy, substantial minimum wage increases can have very direct and tangible impacts on the lives of affected workers and their families, and can be **an effective strategy for addressing declining wages and opportunities for low-wage workers.**

For example, analysis of San Francisco's minimum wage policy—which, over the past decade, has remained significantly above the California and federal rates—shows that the City's minimum wage boosted pay by more than \$1.2 billion for more than 55,000 workers, and permanently raised citywide pay rates for the bottom 10 percent of its labor force.⁴⁷ (San Francisco voters first approved an \$8.50 minimum wage in 2003,⁴⁸ at the time one of the highest in the nation. The widely recognized success of this measure led Mayor

Ed Lee to broker an agreement with business and labor to place a new increase—this time to \$15—on the November 2014 ballot, which voters overwhelmingly approved).⁴⁹

Research also shows that higher incomes resulting from a minimum wage increase can also translate to a range of other important improvements in the lives of struggling low-paid workers and their households:

- **Decreased poverty:** For workers with the lowest earnings, a study shows that the additional pay can increase their net incomes and lift them and their families out of poverty.⁵⁰
- **Decreased rates of child abuse and neglect:** An analysis of child maltreatment rates found “evidence that increases in minimum wage reduce the risk of child welfare involvement, particularly for neglect reports and especially for young and school-aged children. Immediate access to increases in disposable income may affect family and child well-being by directly affecting a caregiver’s ability to provide a child with basic needs.”⁵¹
- **Improved educational outcomes:** A National Institutes of Health study determined that for children in low-income households, “[a]n additional \$4000 per year for the poorest households increases educational attainment by one year at age 21.”⁵²
- **Improved graduation rates:** A study by University of Massachusetts researchers found that high dropout rates among low-income children can be linked to parents’ low-wage jobs, and that youth in low-income families have a greater likelihood of experiencing health problems.⁵³
- **Improved health and wellbeing:** A California study estimated that an increase in the state’s minimum wage to \$13 per hour by 2017 “would significantly benefit [the] health and well-being” of Californians, and that they “would experience fewer chronic diseases and disabilities; less hunger, smoking and obesity; and lower rates of depression and bipolar illness. In the long run, raising the minimum wage would prevent the premature deaths of hundreds of lower-income Californians each year.”⁵⁴

Overview of the Economic Research on the Impact of Minimum Wage Increases

Decades of rigorous research shows that raising the minimum wage boosts workers' incomes without adverse employment effects

The most rigorous minimum wage research over the past two decades, which examines scores of state and local increases across the U.S., demonstrates that these measures have raised workers' incomes without reducing employment. The substantial weight of the scholarly evidence reflects a significant shift in the views of the economics profession, away from the simplistic view that higher minimum wages cost jobs. As *Bloomberg News* summarized in 2012:

[A] wave of new economic research is disproving those arguments about job losses and youth employment. Previous studies tended not to control for regional economic trends that were already affecting employment levels, such as a manufacturing-dependent state that was shedding jobs. The new research looks at micro-level employment patterns for a more accurate employment picture. The studies find minimum-wage increases even provide an economic boost, albeit a small one, as strapped workers immediately spend their raises.⁵⁵

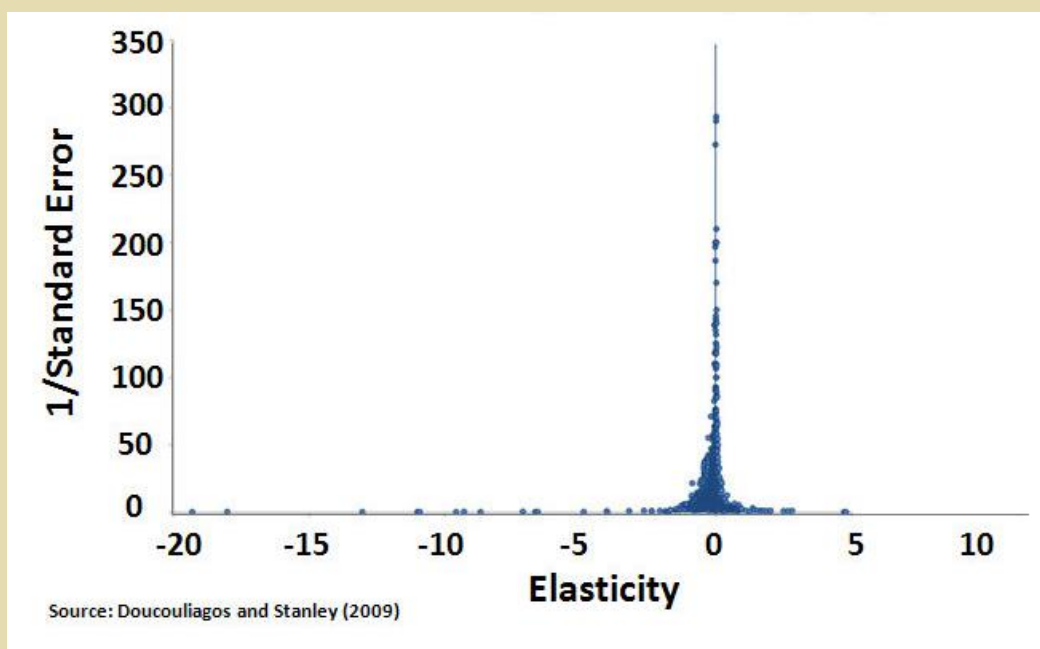
One of the most sophisticated studies coming out of this new wave of minimum wage research, “Minimum Wage Effects Across State Borders,” was published in 2010 by economists from the universities of California, Massachusetts, and North Carolina in the prestigious *Review of Economics and Statistics*.⁵⁶ That study carefully analyzed minimum wage impacts across state borders by comparing employment patterns in more than 250 pairs of neighboring counties in the U.S. that had different minimum wage rates between 1990 and 2006.⁵⁷ Consistent with a long line of similar research, the study found no difference in job growth rates in the 250 pairs of neighboring counties—such as Washington State’s Spokane County compared with Idaho’s Kootenai County where the minimum wage was substantially lower—and found no evidence that higher minimum wages harmed states’ competitiveness by pushing businesses across the state line.⁵⁸

The study’s innovative approach of comparing neighboring counties on either side of a state line is generally recognized as especially effective at isolating the true impact of minimum wage differences, since neighboring counties otherwise tend to have very similar economic conditions. The study was lauded as state-of-the-art by the nation’s top labor economists, such as Lawrence Katz of Harvard University, and David Autor and Michael Greenstone from the Massachusetts Institute of Technology.⁵⁹ (By contrast, studies often cited by minimum wage opponents, which compare one state to another—and especially those comparing states in different regions of the U.S.—cannot as effectively isolate the impact of the minimum wage, because different states face different economic conditions, of which varying minimum wage rates is but one.)

However, it is not simply individual studies, but the whole body of the most rigorous modern research on the minimum wage that now indicates that higher minimum wages have had little impact on employment levels. This is most clearly demonstrated by several recent “meta-studies” surveying research in the field. For example, a meta-study of 64 individual studies on the impact of minimum wage increases, published in the *British Journal of Industrial Relations* in 2009 by economists Hristos Doucouliagos and T. D. Stanley, shows that the bulk of the studies find close to no impact on employment.⁶⁰

This is vividly illustrated in Figure 4, below, which arrays the 1,492 different findings from 64 different studies, mapping their conclusions on employment impacts against the statistical precision of the findings. As economist Jared Bernstein summarizes, “the strong clumping around zero [impact on jobs] provides a useful summary of decades of research on this question [of whether minimum wage increases cost jobs].”⁶¹

Figure 4. Research overwhelmingly finds that minimum wage increases have little to no effects on employment



Source: Jared Bernstein, "Raising the Minimum Wage: The Debate Begins...Again," *On the Economy*, February 14, 2013.

Drawing on the methodological insights of Doucouliagos and Stanley, a 2014 meta-study by Dale Belman and Paul Wolfson reviewed more than 70 studies and 439 distinct estimates to come to a very similar conclusion: "[I]t appears that if negative effects on employment are present, they are too small to be statistically detectable. Such effects would be too modest to have meaningful consequences in the dynamically changing labor markets of the United States."⁶²

In 2017, a cutting-edge and expansive study by researchers from the University of Massachusetts, University College London and the Economic Policy Institute examined state minimum wages from 1979 to 2016 using a methodology that compares the number of jobs in various wage categories (rather than total employment) prior to and following a minimum wage increase ("bunching method").⁶³ They found that jobs were not adversely impacted. The researchers concluded that "on average, the number of missing jobs paying below the new minimum during the five years following implementation closely matches the excess number of jobs paying just above minimum," and that "[t]his leaves the overall number of low-wage jobs essentially unchanged, while raising average earnings of workers below those thresholds."⁶⁴ As Jared Bernstein of the Center on Budget and Policy Priorities (CBPP) put it, "the researchers find that jobs largely just shift from around the old wage to around the new wage."⁶⁵ In this same summary, Bernstein looked at employment trends overall and in three low-wage sectors—retail, leisure and hospitality, and food services—among states that raised their minimum wages during 2013–2017 and states that did not raise their minimums. He found that, "[b]oth overall and in the lower-wage sectors, job growth was slightly faster in states that raised their wage floors and unemployment fell a bit more."⁶⁶

In another 2017 study, University of California economists analyzed over three decades (1979 to 2014) of teen and restaurant employment data, comparing states with high average minimum wages and those with low average minimum wages (typically, equal to the federal minimum wage). The data did not show disemployment effects among restaurant workers—who comprise a large share of low-wage workers

affected by a minimum wage policy—and the effect on teen employment was only a fraction of the already negligible impact claimed by minimum wage opponents.⁶⁷

Previously, in 2011, this same team of University of California economists had analyzed the impact of the minimum wage on teen employment in a peer-reviewed study, “Do Minimum Wages Really Reduce Teen Employment?”⁶⁸ The study carefully examined the impact of all U.S. minimum wage increases between 1990 and 2009—including those implemented during the recessions of 1990–1991, 2001 and 2007–2009—and found that the even during downturns in the business cycle, and in regions with high unemployment, the impact of minimum wage increases on teen employment was negligible.⁶⁹

Similarly, in an analysis released near the end of the Obama Administration by the White House Council of Economic Advisors, economists examined all U.S. minimum wage increases since the Great Recession. Like the lion’s share of recent rigorous research on the minimum wage, they found that the post-recession increases delivered significant raises to low-wage workers with little negative effect on job growth.⁷⁰

Finally, an earlier report (2006) published by the Fiscal Policy Institute examined state trends for small businesses employing fewer than 50 workers. It found that “employment and payrolls in small businesses grew faster in the states with minimum wages above the federal level . . .”⁷¹

The University of Washington study of Seattle’s minimum wage ordinance has serious issues leading to dubious conclusions; it cannot serve as guide for policymaking

In 2017, two separate teams of researchers—from the University of California at Berkeley, and the University of Washington—released conflicting analyses of the employment effects of the first two steps of Seattle’s \$15 minimum wage ordinance. (The initial step increased the minimum wage from \$9.47 to \$11.00 for large employers in 2015, and from \$11.00 to \$13 in 2016). The study by the University of California, which focused on the restaurant industry during the 2015-2016 period, and which employed sophisticated controls, did not find negative employment effects.⁷² The University of Washington study, which has been criticized by leading economists for its serious methodological flaws,⁷³ found a reduction in low-wage jobs and hours worked.⁷⁴

Chief among the University of Washington study’s problems are:

- **Outsized Low-Wage Job Losses.** The study’s main conclusion of substantial job losses is, ironically, also one of the first indicators that something is amiss with the analysis. The authors’ job loss estimates are far greater than those found for a synthetic control group, which they constructed of similar areas in Washington State where the minimum wage did not increase.

Incredibly, the authors find a 9 percent decline in full-time-equivalent jobs paying under \$19 an hour, compared with only a 3 percent increase in wages. This is the equivalent of a *3 percent* job loss from a small *1 percent* minimum wage increase. That is a job loss estimate that is far above what other researchers—including perennial minimum wage critic, David Neumark—have found in the handful of past studies showing a negative impact.⁷⁵ Usually, if economists find a disemployment effect from an increase in the minimum wage, it is statistically insignificant or close to the zero mark.⁷⁶

While one may be tempted to rationalize these outsized findings by pointing to the high nominal value of a \$13 minimum wage, in reality this wage level is modest for a city like Seattle, which has been experiencing a boom in jobs and wages in recent years. One measure economists use to determine the strength of the minimum wage is the “Kaitz index,” or the ration of the minimum wage to the median hourly wage for full-time workers. A Kaitz index up to 55 percent is considered to be within the normal observed range, and in 2016, when the Seattle’s minimum wage rose to \$13, ratio was approximately 51 percent.⁷⁷

Thus, with a minimum-to-median wage ratio in the range of normal, it is reasonable to expect that any observed employment effects will also be within the bounds of past minimum wage research. But as explained above, a 3 percent job loss from a 1 percent wage increase is an outsized disemployment estimate that is far greater—up to 10 times greater, according to one estimate⁷⁸—than past research. And that points to fundamental problems with the study’s methodology and data.

- **Large Growth in High-Wage Jobs.** While finding that low-wage jobs paying under \$19 per hour saw a substantial decrease (9 percent) since the minimum wage ordinance went into effect, the authors also find a significant increase (21 percent) in higher-wage jobs that pay more than \$19 per hour,⁷⁹ including those in the \$30 range⁸⁰—sections of the wage distribution which should not be influenced by a moderate minimum wage increase. This nonsensical conclusion points to a failure to control for Seattle’s booming economy, which has been experiencing rapid job growth and low unemployment rates over the past few years.⁸¹ Tight labor markets, like Seattle’s, put pressure on employers to voluntarily raise wages in order to attract and retain staff, which results in a shift toward higher-paying jobs, independent of the minimum wage law.

Hence, a more logical interpretation of the observed decrease in lower-wage jobs and increase in higher-wage jobs is not that Seattle’s \$15 minimum wage ordinance was causing job losses, but rather, that market forces were naturally changing the city’s wage distribution towards higher wages without significant reductions in employment. Economists point to the study’s lack of a “spike” in the number of hours worked at the new minimum wage as evidence supporting this interpretation. They write,

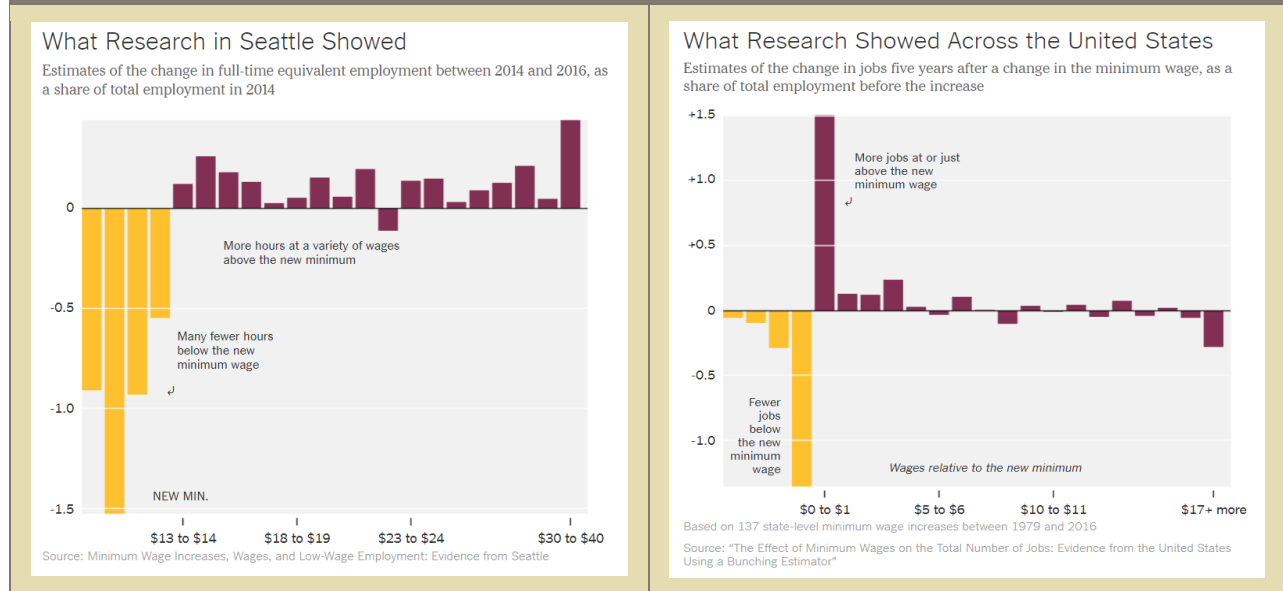
“Rather than a smooth distribution of workers at and above any statutory minimum wage, a regular feature of local, state, and federal minimum wages is that there are noticeably more workers who earn exactly any new minimum wage than there are just above the new minimum. This reflects the tendency of a new higher minimum wage to sweep workers who were below the new minimum just up to the new higher level, while leaving many (though not all) workers just above the minimum wage at or near where they were. In graphs of the wage distribution, this phenomenon creates a ‘spike’ in employment at exactly the new minimum wage. The fact that...the authors fail to detect any new spike due to the minimum wage increase to \$13.00, again suggests that the study is not estimating the true effects of the minimum wage and instead merely [reflects] wage growth in Seattle that is occurring regardless of [the] minimum wage increase.”⁸²

Figure 2, on the next page, shows a graphical representation of the University of Washington’s findings for Seattle (which *does not* show a spike), and of findings for 137 minimum wage increases over nearly 40 years, which do show a clear spike in the 5 years after the minimum wage increases.

Thus, the paradox of low-wage job losses in tandem with higher-wage job increases, and the lack of a spike, both point to the University of Washington researchers’ erroneous interpretation of the data and the unreliability of their findings.

- **Exclusion of 40 Percent of the Workforce from Its Analysis.** Another feature of the study that casts serious doubts on its conclusion is the authors’ exclusion of nearly 40 percent of the state’s workforce. Because the data did not allow the researchers to identify whether individual workers employed by businesses with multiple locations throughout Washington, work within or outside of Seattle, they left those workers out of the analysis. As a result, the study paints an incomplete picture of the true effects of the minimum wage increase, and fails to determine if the ordinance might have been switching employment from single-location businesses to multiple-locations establishments. (In fact, economic theory suggests that minimum wage increases can result in the elimination of the lowest-paid jobs, such as those that may be more typical in single-location businesses, and their replacement with jobs in higher-wage businesses).⁸³

Figure 5. The University of Washington’s findings for Seattle, which does not show a “spike,” vs. a summary of findings for 137 minimum wage increases over 40 years, clearly showing a spike⁸⁴



Experts find other areas of concern with the University of Washington study. However, these three flaws, by themselves, are significant enough that the study cannot be relied upon to paint an accurate picture of the employment effects of Seattle’s \$15 minimum wage ordinance, or to guide Vermont’s debate over whether or not to adopt similar legislation.

In fact, in an updated paper from 2018, the University of Washington researchers back away from their initial conclusions, finding that, overall, workers benefitted from the increase.⁸⁵

Evidence from cities that were early adopters of high minimum wages similarly shows little adverse effects on jobs, and that implementation is manageable for employers

Beginning with SeaTac, Washington in 2012—joined later by Seattle, San Francisco, Minneapolis and dozens of other local jurisdictions—U.S. cities have been at the forefront of the movement to raise minimum wages to significant levels up to \$15, forging a path for states to do the same. Academic studies and the media are beginning to report on the experience of these cities, documenting the effects these policies are having on local economies. To date, both research and business press reports suggest these measures are boosting pay with little negative impact on employment.

Seattle. As referenced above, in June 2017, a team of University of California economists released a study that explored the impact of Seattle’s higher minimum wage (which currently requires large employers to pay their workers \$15 or \$15.45, depending on whether they provide medical benefits). The study focused on the restaurant industry—the largest low-paying sector where any negative effects on jobs would first appear. The study found that Seattle’s minimum wage, which ranged from \$10.50 to \$13 during the period analyzed, had raised pay for workers without any evidence of a negative impact on jobs.⁸⁶

Business press reports on Seattle’s economy and job market confirm that it is continuing to thrive as the \$15 minimum wage phases in. Today, Seattle has an unemployment rate of just 3.4 percent,⁸⁷ lower than both, Washington State⁸⁸ and the U.S unemployment rates.⁸⁹ As *Forbes* reported in 2017, “Higher Seattle Minimum

Wage Hasn't Hurt Restaurant Jobs Growth After a Year."⁹⁰ Earlier reporting in the *Puget Sound Business Journal* was titled "Apocalypse Not: \$15 and the Cuts that Never Came."⁹¹

San Francisco. San Francisco was one of the first U.S. cities to adopt a substantially higher minimum wage in 2003, followed in 2014 by the adoption of a gradual minimum wage increase to \$15 after SeaTac and Seattle. Four years after its 2003 minimum wage increase, a study published in Cornell University's *Industrial and Labor Relations Review* found that the city had raised pay without costing jobs.⁹² Today, the city's minimum wage has reached its \$15 target.

In 2018, University of California economists released a study of the impact of higher wage floors in six cities, including San Francisco. During the period studied, San Francisco had reached a minimum wage of \$13, while other cities had raised wages to \$10 or above. The researchers concluded that, "...minimum wages in the \$10 to \$13 range have statistically significant positive effects on earnings. At the individual city level, our estimated wage increases are proportional to the size of the minimum wage increases. On average across the six cities, we find that a 10 percent increase in the minimum wage increases earnings in the food services industry between 1.3 and 2.5 percent...In addition to our findings of positive effects on earnings, we do not detect negative significant employment effects in any of the individual cities, or when pooling them together."⁹³

Today, the city has a very low unemployment rate of 2.5 percent,⁹⁴ which is nearly 2 percentage points lower than its jobless rate in December 2014⁹⁵—the year in which the city adopted its \$15 minimum wage. Its restaurant sector sales grew from 5.4 percent to 6.6 percent from 2014 to 2015, a faster pace than comparable cities like New York.⁹⁶

San Jose. In 2012, voters in San Jose approved a \$10 minimum wage by high margins, despite predictions of gloom and doom by opponents.⁹⁷ Four years later, the City Council, acknowledging the need for more robust wages, unanimously voted to adopt a \$15 minimum wage.⁹⁸ In 2016, University of California researchers released a study of the city's \$10 minimum wage policy. The authors found that the \$10 minimum wage had raised pay without costing jobs,⁹⁹ which confirmed earlier observations reported by the media. As *The Wall Street Journal* reported a year after full implementation of the new minimum wage and two years before the study was released, "[f]ast-food hiring in the [San Jose] region accelerated once the higher wage was in place. By early [2014], the pace of employment gains in the San Jose area beat the improvement in the entire state of California."¹⁰⁰

Despite opponents' claims to the opposite, businesses of all sizes are comfortable with minimum wage increases

The positive experience of jurisdictions currently phasing in \$15 minimum wages are among the reasons that, despite claims to the contrary by minimum wage opponents, the majority business owners and executives in firms of all sizes are comfortable with higher minimum wages.

According to polling conducted by LuntzGlobal—an opinion research firm headed by leading Republican pollster Frank Luntz—on behalf of the Council of State Chambers, **80 percent of CEOs, business owners and executives at companies of all sizes support raising the minimum wage** in their states, while only 8 percent oppose it.¹⁰¹ Among small business owners, 59 percent favor raising the minimum wage, according to a poll by Manta.com.¹⁰²

Illustrative of the business community's support for higher wage floors is the fact that a growing number of business owners and economists are either voluntarily raising their minimum pay, or have publicly endorsed \$15 minimum wage proposals:

- **Retailers and Other Businesses:** Target, which employs 323,000 workers nationwide,¹⁰³ Amazon and a growing number of retailers, financial institutions, restaurants and other diverse businesses of

all sizes and throughout the country have recently announced they will raise their minimum pay to \$15.¹⁰⁴ Some of them have cited a need to attract and retain talent, disproving the myth that a higher wage is an unsurmountable challenge for employers.¹⁰⁵

- **Economists:** Citing a link between low minimum wages, stagnating incomes and growing wealth inequality, economists endorsed Senator Bernie Sanders' \$15 minimum wage bill in 2017, which would also gradually eliminate the sub-minimum tipped wage. Endorsers include economists from Vermont, Massachusetts, and Connecticut.¹⁰⁶

The Case for a Gradual Elimination of the Tipped Sub-Minimum Wage in Vermont

Eliminating the sub-minimum wage for tipped workers is crucial to making a real difference in the lives of low-wage workers

The elimination of the sub-minimum wage for tipped workers is crucial to improving the lives and economic prospects of low-wage workers. In addition to adopting a \$15 minimum wage without a youth wage, lawmakers in Vermont should consider the gradual elimination of the state's sub-minimum tipped wage, currently set at 50 percent of the standard minimum wage.

A sub-minimum wage for tipped workers has not always existed in Vermont or elsewhere in the country. Until 1966, there was no federal subminimum wage for tipped workers.¹⁰⁷ But with the 1966 expansion of the Fair Labor Standards Act (FLSA) to cover hotel, restaurant, and other leisure and hospitality employees who had previously been excluded by the FLSA, the law was amended to allow employers to pay tipped workers a sub-minimum wage of 50 percent of the full minimum wage.¹⁰⁸ In 1996, tipped worker's pay decreased further when Congress raised the federal minimum wage from \$4.25 to \$5.15, but froze the tipped minimum wage at \$2.13. This policy decoupled the tipped wage from the full minimum wage for the first time in the history of U.S. wage law, setting up over two decades of a frozen minimum wage for tipped workers¹⁰⁹ in most of the nation.

If Vermont adopts a gradual elimination of the tipped sub-minimum wage, it would join the seven "One Fair Wage" states—Alaska, California, Minnesota, Montana, Nevada, Oregon, and Washington—that do not allow employers to pay their tipped staff a lower wage.¹¹⁰ Tipped workers in these One Fair Wage states receive the full minimum wage directly from their employers, and their tips function as gratuities should: As supplemental income over and above their base wages, in recognition of good service. Although not technically a One Fair Wage state, Hawaii also abolished the sub-minimum wage for most tipped workers, preserving a very limited tip credit of just 75 cents for tipped workers who average at least \$7.00 an hour in gratuities.¹¹¹

Last month, U.S. Senator from Vermont, Bernie Sanders, introduced a \$15 minimum wage bill, the Raise the Wage Act (S.150), which was co-sponsored by 30 other Senators, including Senator Patrick Leahy. Its companion bill in the U.S. House of Representatives (H.R.582) was similarly strongly received, with nearly 200 co-sponsors, including Congressman Peter Welch. The Raise the Wage Act would not only increase the federal minimum wage to \$15, but it would also gradually phase out the sub-minimum tipped wage.¹¹²

Although minimum wage opponents in the restaurant industry often claim that most tipped workers earn high incomes and do not need a raise, Bureau of Labor Statistics (BLS) data shows that **the typical tipped worker in Vermont earns just a few dollars above the state minimum wage**. According to the most recent BLS data, between November 2014 and May 2017, the median wage for restaurant servers in Vermont was \$14.40 per hour *including tips*, and the average was \$15.41 per hour, also including tips.¹¹³ During the period covered by the BLS data, the applicable minimum wage in Vermont was between \$8.73 and \$10.00 per hour,¹¹⁴ meaning that servers in the state earned between \$4.40 and \$6.68 above Vermont's wage floor—hardly the type of high incomes that the restaurant industry claims to be typical.

In addition to restaurant servers, other tipped jobs include car wash workers, nail salon workers, and pizza delivery drivers—notorious sweatshop occupations where pay is often even lower than in the restaurant industry.¹¹⁵

Tipped work is inherently uneven and often unpredictable. While most of us expect to be paid the same for every day or hour we work, for tipped workers this is often not the case. For example, restaurant servers can

earn substantially more on Friday or Saturday nights, but much less on other days of the week. Bad weather, a sluggish economy, the changing of the seasons, a less generous customer, and a host of other factors can also cause sudden drops in their tipped income and lead to economic insecurity. Not surprisingly, **tipped workers face poverty at twice the rate of non-tipped workers**, with waiters and bartenders at even higher risk of poverty.¹¹⁶

Tipped workers across the country are also significantly more likely to rely on public assistance to make ends meet. Close to half (46 percent) of tipped workers and their families rely on public benefits compared with 36 percent of non-tipped workers.¹¹⁷ Ultimately, shifting the responsibility to pay workers' wages to customers under the tipped sub-minimum wage system allows employers in a few select industries to benefit from a customer-funded subsidy at the expense of workers' economic security.

The complex sub-minimum wage system for tipped workers is difficult to enforce and results in widespread noncompliance

The sub-minimum tipped wage system is complex, difficult to implement and plagued by noncompliance. For example, both employers and employees find it difficult to track tip earnings, a task that is often complicated by tip sharing arrangements amongst workers. In addition, when tipped workers' earnings fall short of the full minimum wage, many will forego asking their employers to make up the difference—as employers are legally required to do—for fear that the employer may retaliate by giving more favorable shifts to workers who do not make such demands.¹¹⁸

Given the implementation challenges inherent in the subminimum wage system, it is not surprising that a 2014 report by the Obama Administration's National Economic Council and the U.S. Department of Labor found that one of the most prevalent violations amongst employers is failing to properly track employees' tips and make up the difference between an employee's base pay and the full minimum wage when tips fail to fill that gap.¹¹⁹ A survey found that more than 1 in 10 workers employed in predominantly tipped occupations earned hourly wages below the full federal minimum wage, including tips.¹²⁰

Vermont's restaurant industry is strong, and can afford to adapt to a \$15 minimum wage without a tip credit

While restaurant industry lobbyists often argue that eliminating the tipped sub-minimum wage would hurt restaurants and its workers, the facts belie those claims. In particular, the restaurant industry in One Fair Wage states is strong and projected to grow faster than in many of the states that have retained a sub-minimum tipped wage system.

According to projections by the National Restaurant Association (NRA), **nationwide restaurant sales were expected to have reached \$825 billion in 2018, a 3.25 percent increase over 2017.**¹²¹ According to the latest available information, in Vermont, restaurant sales were expected to reach \$1 billion in 2017. Restaurant and food service jobs currently make up 10 percent of employment in the state, and are expected to grow by a healthy 7 percent over the next ten years.¹²²

Many of the states with the strongest restaurant job growth do not allow a tipped minimum wage for tipped workers, and require employers to pay tipped workers some of the country's highest base wages. For example, restaurant employment in California—which has no subminimum wage for tipped workers and is phasing in a \$15 minimum wage—is projected to grow by 10 percent during the 2018–2028 period.¹²³ In California, the minimum wage is now \$11.00 per hour for small employers (25 or fewer employees) and \$12.00 for large employers (26 or more employees), and the minimum wage will reach \$15 for all employers by 2023.¹²⁴ In Oregon, where the minimum wage is currently between \$10.50 and \$12.00 and will increase to between \$12.50 and \$14.75 by 2022,¹²⁵ and which has no tipped sub-minimum wage, restaurant employment is projected to grow by 12.9 percent during that same period.¹²⁶ And in Washington State, where the

minimum wage is \$12.00¹²⁷ and will increase to \$13.50 by 2020,¹²⁸ restaurant employment growth during the same period is expected to grow by 11.4 percent.¹²⁹ According to the NRA's own projections, restaurant employment in the seven states without a tipped minimum wage will grow in the next decade at an average rate of 10.7 percent.¹³⁰

Moreover, a 2015 Cornell Hospitality Report looked at the impact of minimum wage increases on restaurant employment and business growth levels over twenty years across the United States. It found that raising the minimum wage (including the tipped wage) will raise restaurant industry wages but will not lead to "large or reliable effects on full-service and limited-service restaurant employment."¹³¹

Appendix 1: Hourly wage needed to afford a basic household budget in Vermont, by family size

Region	Family Size ^a	2019	2020	2021	2022	2023	2024
Burlington MSA	Single Adult	\$22.45	\$23.02	\$23.61	\$24.21	\$24.80	\$25.39
	1 Adult 1 Child	\$40.53	\$41.56	\$42.63	\$43.70	\$44.78	\$45.84
	2 Adults 2 Children	\$26.48	\$27.16	\$27.86	\$28.56	\$29.26	\$29.96
Addison County	Single Adult	\$21.87	\$22.42	\$23.00	\$23.58	\$24.16	\$24.73
	1 Adult 1 Child	\$34.04	\$34.91	\$35.81	\$36.71	\$37.61	\$38.51
	2 Adults 2 Children	\$22.88	\$23.46	\$24.07	\$24.67	\$25.28	\$25.88
Bennington County	Single Adult	\$21.49	\$22.04	\$22.60	\$23.17	\$23.74	\$24.30
	1 Adult 1 Child	\$31.83	\$32.64	\$33.48	\$34.33	\$35.17	\$36.00
	2 Adults 2 Children	\$21.45	\$22.99	\$22.56	\$23.13	\$23.69	\$24.26
Caledonia County	Single Adult	\$20.59	\$21.11	\$21.66	\$22.20	\$22.75	\$23.29
	1 Adult 1 Child	\$31.43	\$32.23	\$33.06	\$33.90	\$34.73	\$35.55
	2 Adults 2 Children	\$21.50	\$22.05	\$22.61	\$23.18	\$23.75	\$24.32
Chittenden County	Single Adult	\$22.61	\$23.19	\$23.79	\$24.39	\$24.98	\$25.58
	1 Adult 1 Child	\$41.50	\$42.56	\$43.66	\$44.76	\$45.85	\$46.95
	2 Adults 2 Children	\$27.11	\$27.80	\$28.51	\$29.23	\$29.95	\$30.66
Essex County	Single Adult	\$20.03	\$20.54	\$21.07	\$21.60	\$22.13	\$22.65
	1 Adult 1 Child	\$30.25	\$31.02	\$31.82	\$32.62	\$33.42	\$34.22
	2 Adults 2 Children	\$20.59	\$21.11	\$21.66	\$22.20	\$22.75	\$23.29

Appendix 1: Hourly wage needed to afford a basic household budget in Vermont, by family size

Region	Family Size ^a	2019	2020	2021	2022	2023	2024
Franklin County	Single Adult	\$21.42	\$21.97	\$22.54	\$23.10	\$23.67	\$24.23
	1 Adult 1 Child	\$37.48	\$38.44	\$39.43	\$40.42	\$41.41	\$42.40
	2 Adults 2 Children	\$24.85	\$25.49	\$26.14	\$26.80	\$27.46	\$28.11
Grand Isle County	Single Adult	\$23.14	\$23.74	\$24.35	\$24.96	\$25.57	\$26.18
	1 Adult 1 Child	\$41.24	\$42.29	\$43.38	\$44.47	\$45.56	\$46.65
	2 Adults 2 Children	\$26.62	\$27.30	\$28.00	\$28.71	\$29.41	\$30.11
Lamoille County	Single Adult	\$21.11	\$21.65	\$22.20	\$22.76	\$23.32	\$23.88
	1 Adult 1 Child	\$33.35	\$34.20	\$35.08	\$35.96	\$36.84	\$37.72
	2 Adults 2 Children	\$22.66	\$23.24	\$23.84	\$24.44	\$25.04	\$25.63
Orange County	Single Adult	\$21.55	\$22.10	\$22.67	\$23.24	\$23.81	\$24.38
	1 Adult 1 Child	\$32.83	\$33.67	\$34.54	\$35.40	\$36.27	\$37.14
	2 Adults 2 Children	\$22.35	\$22.92	\$23.51	\$24.10	\$24.69	\$25.28
Orleans County	Single Adult	\$19.51	\$20.01	\$20.52	\$21.04	\$21.55	\$22.07
	1 Adult 1 Child	\$29.86	\$30.63	\$31.42	\$32.21	\$33.00	\$33.78
	2 Adults 2 Children	\$20.49	\$21.01	\$21.56	\$22.10	\$22.64	\$23.18
Rutland County	Single Adult	\$20.35	\$20.87	\$21.40	\$21.94	\$22.48	\$23.02
	1 Adult 1 Child	\$30.75	\$31.54	\$32.35	\$33.17	\$33.98	\$34.79
	2 Adults 2 Children	\$20.88	\$21.41	\$21.96	\$22.51	\$23.06	\$23.61

Appendix 1: Hourly wage needed to afford a basic household budget in Vermont, by family size

Region	Family Size ^a	2019	2020	2021	2022	2023	2024
Washington County	Single Adult	\$21.43	\$21.97	\$22.54	\$23.10	\$23.67	\$24.23
	1 Adult 1 Child	\$33.83	\$34.70	\$35.59	\$36.49	\$37.38	\$38.27
	2 Adults 2 Children	\$22.75	\$23.33	\$23.93	\$24.54	\$25.14	\$25.74
Windham County	Single Adult	\$20.82	\$21.36	\$21.90	\$22.46	\$23.01	\$23.55
	1 Adult 1 Child	\$33.51	\$34.36	\$35.25	\$36.14	\$37.02	\$37.90
	2 Adults 2 Children	\$22.73	\$23.31	\$23.91	\$24.51	\$25.11	\$25.71
Windsor County	Single Adult	\$21.27	\$21.81	\$22.37	\$22.94	\$23.50	\$24.06
	1 Adult 1 Child	\$34.48	\$35.36	\$36.27	\$37.19	\$38.10	\$39.01
	2 Adults 2 Children	\$23.14	\$23.73	\$24.34	\$24.95	\$25.56	\$26.17

NELP analysis of Economic Policy Institute's *Family Budget Calculator*. Original EPI estimates in 2017 dollars. NELP's inflation adjustments and projections use Bureau of Labor Statistics' *CPI-U Current Series*, and Congressional Budget Office's *10-Year Economic Projections* supplemental data for *An Update to the Budget and Economic Outlook: 2019 to 2029* (January 2019). NELP estimates assume no median wage growth.

a. The "2 Adults 2 Children" category lists hourly wages per adult worker.

Appendix 2. Rent as a percent of pre-tax monthly earnings, by apartment size and region

Apartment Size	Studio		One Bedroom		Two Bedrooms		Three Bedrooms		Four Bedrooms	
	Rent	Pct. of Earnings	Rent	Pct. of Earnings	Rent	Pct. of Earnings	Rent	Pct. of Earnings	Rent	Pct. of Earnings
Burlington MSA	\$920	49%	\$1,121	60%	\$1,442	77%	\$1,921	103%	\$2,025	108%
Rural Vermont	\$754	40%	\$811	43%	\$997	53%	\$1,291	69%	\$1,496	80%
Addison County	\$784	42%	\$870	47%	\$1,021	55%	\$1,315	70%	\$1,580	85%
Bennington County	\$850	46%	\$874	47%	\$1,004	54%	\$1,362	73%	\$1,367	73%
Caledonia County	\$697	37%	\$702	38%	\$903	48%	\$1,132	61%	\$1,230	66%
Essex County	\$609	33%	\$623	33%	\$794	43%	\$995	53%	\$1,081	58%
Lamoille County	\$728	39%	\$848	45%	\$1,013	54%	\$1,270	68%	\$1,658	89%
Orange County	\$759	41%	\$764	41%	\$977	52%	\$1,254	67%	\$1,367	73%
Orleans County	\$601	32%	\$667	36%	\$791	42%	\$992	53%	\$1,119	60%
Rutland County	\$755	40%	\$772	41%	\$929	50%	\$1,213	65%	\$1,377	74%
Washington County	\$803	43%	\$808	43%	\$1,064	57%	\$1,338	72%	\$1,608	86%
Windham County	\$722	39%	\$835	45%	\$1,051	56%	\$1,318	71%	\$1,585	85%
Windsor County	\$759	41%	\$882	47%	\$1,074	58%	\$1,467	79%	\$1,732	93%

Source: National Low Income Housing Coalition, *Out of Reach 2018: Vermont*, <http://nlihc.org/oor/vermont>. Pre-tax estimates assume 2,080 hours of work per year at the current state minimum wage of \$10.78.

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