

# The Effects of the New York City Minimum Wage Increases on Earnings, Poverty, and Material Hardship: Evidence from the Poverty Tracker

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## Introduction and Key Findings

Over the past 30 years, wage growth at the bottom of the income distribution has stagnated,<sup>1</sup> and the federal minimum wage has left many full-time workers across the country below the poverty line.<sup>2</sup> The value of the federal minimum wage peaked in 1968 at \$12.46 in 2021 dollars and has only fallen since then; today, the federal minimum wage is \$7.25.<sup>3</sup> Acknowledging the lack of purchasing power provided by the federal minimum wage, policymakers and advocates at the federal level have pushed for raising the federal minimum to \$15 per hour. Raising the federal minimum wage to \$15 per hour was also included in the initial drafts of the Biden Administration's American Rescue Plan but dropped from the policy package after a close vote in the Senate.<sup>4</sup> While efforts to raise the federal minimum to \$15 per hour have not yet found legislative success, states and cities have used local legislation to raise the wage floor in their jurisdictions – and New York City and State were some of first to put in place statutes that would gradually raise the local minimum wage to \$15 per hour.<sup>5</sup>

The first wage increase in New York City went into effect on January 1<sup>st</sup>, 2017, when the local minimum wage rose from \$9.25 to \$11 per hour for most workers in the City. In 2018, the City raised the minimum wage to \$13 per hour, and it hit \$15 per hour on January 1<sup>st</sup>, 2019.<sup>6</sup> To date, there has been extensive debate about whether or not an increase to the minimum wage would actually make people better off. Advocates for the increase, such as workers in the Fight for \$15 movement, show that wages have significantly depreciated over time,<sup>7</sup> meaning those working a minimum wage job struggle to keep a roof over their head and food on the table, particularly in high-cost cities like New York. With a raise, however, these workers would be somewhat less economically insecure. Opponents argue that raising the minimum wage leads employers to cut hours or to hire fewer workers, thereby hurting those whom the raise is supposed to help. Others argue that minimum wage increases are poorly targeted and only benefit very young workers – teenagers and young adults, specifically.<sup>8</sup> The Poverty Tracker data allows us to examine these competing narratives and assess how workers in our sample fared after these wage increases, assessing both the benefits and potential costs.

This report examines the impact that the New York City minimum wage increases in 2017, 2018, and 2019 had on low-wage workers in the Poverty Tracker sample in terms of earnings, poverty, material hardship, employment, and benefit receipt. Note that many studies of changes to the minimum wage focus just on employment or income, while, due to lack of data, far fewer examine poverty and material hardship, two outcomes that are crucial to our understanding of these policy changes.<sup>9</sup>

<sup>1</sup> Mishel, L., Gould, E., & Bivens, J. (2015). Wage stagnation in nine charts. *Economic Policy Institute*, 6, 2-13. Access [here](#).

<sup>2</sup> The federal minimum wage has been set at \$7.25 since 2009.

<sup>3</sup> Cooper, D., Gould, E., & Zipperer, B. (2019). Low-wage workers are suffering from a decline in the real value of the federal minimum wage. *Washington: Economic Policy Institute*. Access [here](#).

<sup>4</sup> <https://www.washingtonpost.com/politics/2021/03/06/sinema-thumbs-down/>

<sup>5</sup> As of this writing, eight states put in place plans to raise the minimum wage in their region to \$15 per hour.

<sup>6</sup> These wages apply to workers in businesses with more than 10 employees; the minimum wage increased more gradually for smaller businesses.

<sup>7</sup> Mishel, L., Gould, E., & Bivens, J. (2015).

<sup>8</sup> Vedder, R. K., & Gallaway, L. E. (2001). Does the minimum wage reduce poverty? *Employment Policies Institute*, June. Access [here](#).

<sup>9</sup> Note that our results are specific to our sample of workers in New York City.

We find that:

**Counter to claims that the minimum wage increase would be target inefficient and not benefit workers struggling financially, financial hardships were most common among minimum wage workers in New York City compared to other workers.**

- Workers without a college degree, Black and Latino workers, women, younger workers, and those living in households with children were all overrepresented among workers who likely benefitted from the wage increases. More than 80 percent of workers in the sample likely affected by the wage increases were Black or Latino.
- Prior to the wage increase, minimum wage workers faced significantly higher rates of poverty and material hardship relative to other workers.

**The minimum wage increases contributed to significant increase in annual earnings of affected workers.**

- Average annual earnings for those affected by all three wage increases rose by more than 66% between 2016 and 2019 (from \$11,900 to \$20,600). For comparison, average earnings of lower-wage workers with wages just above \$15 per hour (between \$16 and \$21) remained relatively stable between 2016 and 2019, hovering around \$30,000 per year.

**The minimum wage increases were not associated with any reductions in employment among minimum wage workers in the Poverty Tracker sample.**

**As the annual earnings of affected workers rose, their poverty rates fell.**

- In 2016, roughly 50 percent of workers who would eventually be affected by all three wage increases lived in poverty. By 2019, the poverty rate of this group fell to 35 percent.

**The minimum wage increases were substantial, but not enough to expect a significant reduction in material hardship.**

- There was little variation in the risk of material hardship among workers earnings less than \$21 per hour prior to the wage increases.
- The risk of material hardship among minimum wage workers did not fall with the wage increases, which makes sense as it was only wages above \$21 per hour that are associated with significant reductions in hardship.

**Workers affected by the minimum wage increase were significantly less likely to receive SNAP benefits after the wage increases went into effect.**

- Roughly 40 percent of workers who would eventually be affected by the wage increases received SNAP benefits in 2016 versus 24 percent in 2019.

Overall, the New York City minimum wage increases increased were associated with significant increases in earnings and reduced the risk of poverty among those likely affected, and these gains were not offset by employment losses. Rates of material hardship, however, continue to be elevated among those affected by the wage increases and among those with even higher wages – pointing to the high cost of living in NYC

Lastly, it is worth noting that a \$15 hourly wage in New York City is below what some term a living wage in a high-cost area. The MIT Living Wage Calculator estimates that a single adult without children would need an hourly wage of \$25.42 per hour to cover the basic costs of living in New York City, and the estimated living wage for workers with children is significantly higher.<sup>10</sup>

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<sup>10</sup> Access the MIT Living Wage calculator [here](#).

The New York City minimum wage increases to \$15 moved closer to but do not meet these living-wage targets. The results presented in this report grapple with this tension – the minimum wage increases between 2017 and 2019 were significant – amounting to a 62 percent increase in the wage floor; but even such a significant shift is not a guarantee against economic insecurity.

## The New York City minimum wage increase schedule

For background, Table 1 presents the scheduled minimum wage increases for New York City. Prior to 2017, the minimum wage was \$9.25. For large employers (defined as those with more than 10 employees), it was raised to \$11 per hour in 2017, \$13 in 2018, and \$15 in 2019. The wage increase was more gradual for smaller employers, reaching \$15 per hour by 2020. In Table 1, we also show the annual earnings (pre-tax) for someone working full-time, full-year<sup>11</sup> at each wage level, as well as the annual earnings based on the employment levels of minimum-wage workers in the Poverty Tracker sample.<sup>12</sup>

**Table 1. The Scheduled Minimum Wage Increases in New York City**

	<b>Large Employers</b> <i>(more than 10 employees)</i>	<b>Small Employers</b> <i>(10 employees or fewer)</i>	<b>Annual Pre-Tax Earnings, Large Employer,</b> <i>Full Time, Full Year</i>	<b>Annual Pre-Tax Earnings, Large Employer,</b> <i>Average Months and Hours Worked Among Minimum-Wage Workers</i>
<b>Before 2017</b>	\$9.25	\$9.25	\$16,190	\$11, 640
<b>Effective 2017</b>	\$11.00	\$10.50	\$19,250	\$13,840
<b>Effective 2018</b>	\$13.00	\$12.00	\$22,750	\$16,360
<b>Effective 2019</b>	\$15.00	\$13.50	\$26,250	\$18,871

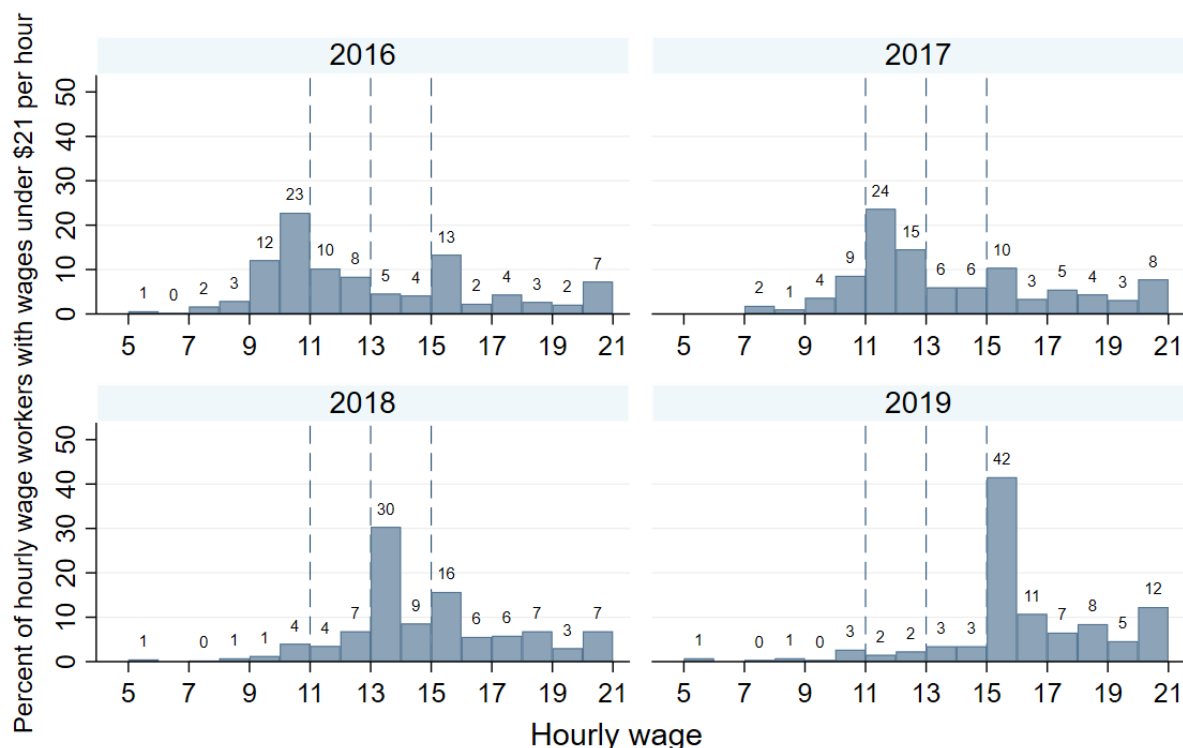
<sup>11</sup> Based on a 35 hour work week and 50 weeks of work for the year.

<sup>12</sup> On average, minimum-wage workers in the Poverty Tracker sample who directly benefited from the 2017 and 2018 minimum wage increases were employed for 9.54 months of the year and worked 31.65 hours in a typical week.

## Did workers' wages rise as a result of the city's minimum wage increases?

To begin, we determined whether or not the scheduled minimum wage increases were actually evident in the Poverty Tracker data collected in the relevant years, and we observe a marked shift in the wage distribution coinciding with the wage increases that went into effect between 2017 and 2019. Figure 1 presents the distribution of wages among workers earning less than \$21 per hour from the Poverty Tracker sample in each year from 2016 to 2019.

**Figure 1. Wage distribution of hourly wage workers with wages below \$21 per hour (2016 – 2019)**



In 2016, **35 percent** of workers with wages under \$21 per hour had an hourly wage between **\$9 and \$11** and **18 percent** had a wage between \$11 and \$13 per hour (Figure 1). In 2017, when the minimum wage for most workers in New York City rose to \$11 per hour, we see the share earning between **\$9 and \$11** per hour fall to **13 percent** and the share earning between **\$11 and \$13** rise to **39 percent**.

There is a similar shift in the distribution of wages evident in 2018, when the minimum wage rose to \$13. As a result of this shift, by 2018, **39 percent** of workers with hourly wages below \$21 had a wage between **\$13 and \$15 per hour**, while in 2016 only nine percent of these workers fell in this wage group.

Finally, by 2019, we see a sharp rise in the share of workers with wages above **\$15 per hour**, with **42 percent** of workers reporting hourly wages between \$15 and \$16 per hour, up from **13 percent** in 2016.

In all years, we see workers reporting wages below the new statutory minimums that apply to workers in businesses with more than 10 employees; this group includes those who saw a smaller increase in their wage because they work for a smaller employer, as well as those who receive, legally or illegally, sub-minimum wages (see footnote for additional information about sub-minimum wages).<sup>13</sup>

<sup>13</sup> Some employers are legally allowed to pay employees sub-minimum wages if they receive tips as part of their pay, if the employee is below a certain age.

## Who was affected by minimum wage increases between 2017 and 2019?

It has been argued that increases to the minimum wage do not benefit the most financially vulnerable workers – i.e., the increases have poor “target efficiency.” When looking at a possible increase to the federal minimum wage from \$7.25 to \$10.10, one scholar writes, “few beneficiaries of minimum wage increases live in poor households,”<sup>14</sup> and based on an analysis of hardship among minimum wage workers in the Survey of Income and Program Participation (SIPP), he finds that “just 10.5 percent reported difficulty paying utility bills on time, just 7.6 percent reported difficulty paying rent, and just 9.6 percent reported difficulty seeing a doctor when needed.”<sup>15</sup> Here, however, we show that, while this may have been the case when looking at this federal minimum wage increase, the finding is not generalizable to the New York City minimum wage increases between 2017 and 2019. The Poverty Tracker data show that economically vulnerable workers were overrepresented among the possible beneficiaries of the New York City minimum wage increases in terms of rates of poverty and hardship, as well as other factors. Here, we show rates of poverty and material hardship, demographic characteristics, and employment characteristics for three groups:<sup>16</sup>

- **Minimum-wage workers**, defined as those whose wages were below \$15 per hour (i.e., anyone who we expect could have benefitted from the wage increases between 2017 and 2019)
- **Low-wage workers**, which includes those with wages between \$15 and \$21 per hour in 2016; and,
- **Higher-wage workers**, defined as those with earnings over \$21 per hour in 2016.

### Poverty and hardship

Within the population of workers, minimum wage workers were the most likely to face poverty and material hardship in 2016. Minimum-wage workers were significantly more likely than higher-wage workers to be in poverty in the year before the wage increases than higher wage workers. In 2016, **40 percent** of minimum-wage workers who would eventually be affected by the wage increase were in poverty in comparison to **18 percent** of workers with wages between \$15 and \$21 per hour and **12 percent** of higher-wage workers.<sup>17</sup> Supplemental analyses also show that 76% of minimum wage workers were living below 200% of the poverty threshold in 2016 (see Appendix B, Figure B-1).

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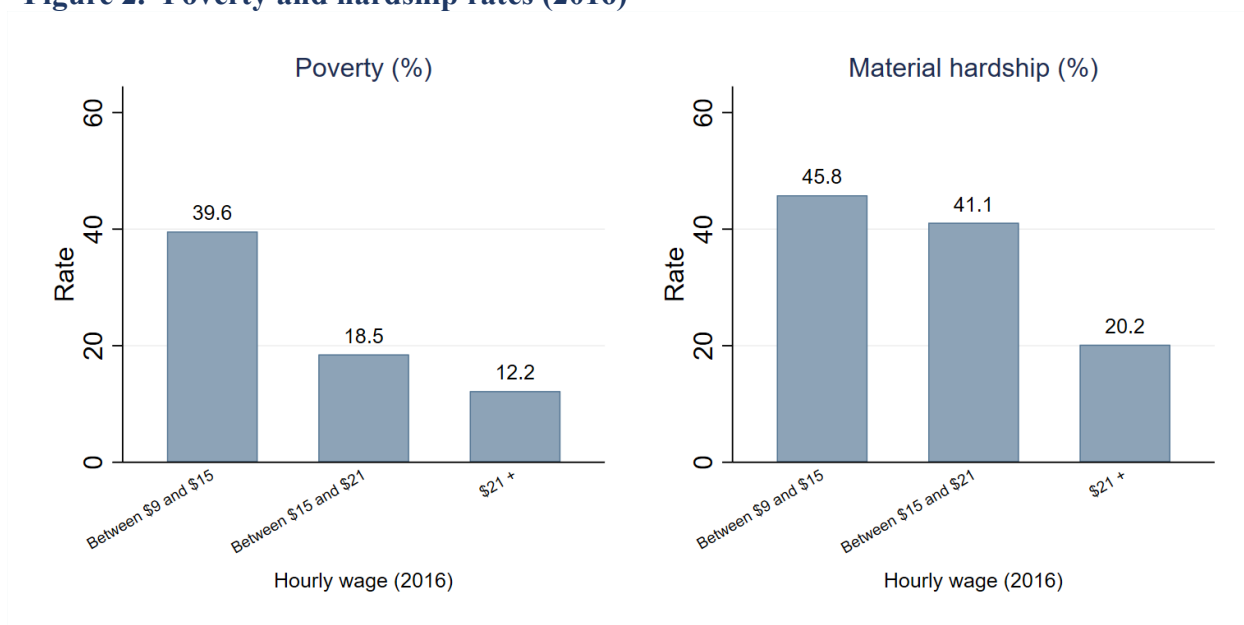
<sup>14</sup> Sabia, J. J. (2014). Minimum wages: A poor way to reduce poverty. *Cato Institute Tax and Budget Bulletin*, (70). Access [here](#).

<sup>15</sup> Sabia, J. J. (2014).

<sup>16</sup> Note that these populations include salaried workers; to determine the hourly wage of a salaried worker, we divided their annual salary by their months of employment and their usual hours worked.

<sup>17</sup> The poverty rate among higher-wage workers is greater than the pre-tax, pre-transfer poverty due to out-of-pocket spending on medical care and child care.

**Figure 2. Poverty and hardship rates (2016)**



Relative to higher-wage workers in 2016, minimum-wage workers were also much more at risk of facing material hardships (Figure 2). The Poverty Tracker measures material hardship in five domains (see textbox), and an individual is deemed to be in material hardship if they face any of these five hardships. In 2016, **46 percent** of workers who would eventually be affected by the wage increase and **41 percent** of low-wage workers (\$15 to \$21 per hour) endured some form of **material hardship** in 2016 – more than twice the rate of material hardship observed in higher-wage workers (**20 percent**). The high rates of material hardship among those with wages between \$15 and \$21 per hour also suggest that, while these wage rates may reduce the risk of poverty, wages need to be even higher to provide significant added protection against experiences of material hardship.

**Severe food hardship:** Running out of food or often worrying food would run out without enough money to buy more

**Severe housing hardship:** Having to stay in a shelter or other place not meant for regular housing, or having to move in with others because of costs

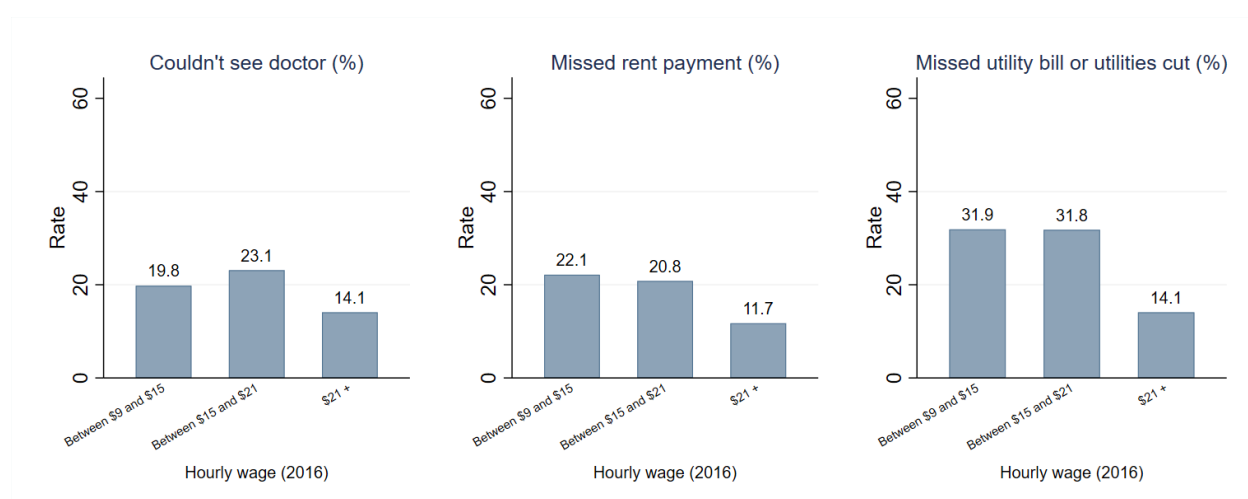
**Severe bills hardship:** Having utilities cut off because of a lack of money

**Severe financial hardship:** Often running out of money between paychecks or pay cycles

**Medical hardship:** Not being able to see a medical professional because of cost

As mentioned earlier, Sabia (2014) found that difficulty paying rent, utilities bills, or seeing a doctor because of cost were not common experience among workers in the SIPP whom they expect would benefit from a federal minimum wage increase. When looking at these specific forms of hardship among New Yorkers benefitting from the 2017 to 2019 minimum wage increase (Figure 3), however, the results show that these experiences were common among those benefitting from the wage increase, as well as those with somewhat higher earnings.

**Figure 3. Prevalence of specific hardships (2016)**



The results documented here run counter to the notion that minimum-wage increases are poorly targeted and do not benefit workers facing poverty and material hardship. In fact, the New York City minimum wage increases between 2017 and 2019 benefitted the workers in the Poverty Tracker sample facing the highest levels of financial distress.

### Demographic characteristics

Workers without a college degree, workers of color, women, younger workers, and those in families with children were overrepresented in the populations that directly benefited from the minimum wage increases. Table 1 compares the demographic composition of the population of minimum-wage workers, low-wage workers, and higher-wage workers, showing that:

- Minimum-wage workers were significantly less likely than higher-wage workers to have a college degree. **Eighty percent** of minimum-wage workers did not have a college degree compared to **61 percent** of low-wage workers and **25 percent** of workers with higher wages.
- The majority of minimum-wage workers were Black or Latino (**82 percent**). In contrast, Black and Latino made up roughly **68 percent** of the population of low-wage workers and **35 percent** of workers with higher wages.
- Women made up a larger share of minimum-wage workers (**71 percent**) than of higher-wage workers (**55 percent**).
- Regarding age, younger workers benefitted the most from these wage increases, as half (**50 percent**) of the minimum-wage workers in the sample were under age 35. In contrast, a quarter (**25 percent**) of the higher-wage workers sampled were under 35.
- Roughly half (**49 percent**) of minimum-wage workers were in families with children, which was less common among higher-wage workers (**33 percent**). Minimum-wage workers were also more likely to be single than higher-wage workers (**74 percent versus 42 percent**).

**Table 1. Demographic Composition of the Population Minimum-Wage Workers, Low-Wage Workers, and Higher-Wage Workers**

	Minimum-wage workers (<\$15)	Lower-wage workers (\$15 to \$21)	Higher-wage workers (\$21+)
<b>Educational attainment</b>			
High school degree or less	51%	33%	9%
Some college	29%	28%	16%
College +	20%	39%	75%
<b>Race/ethnicity</b>			
Asian, Non-Latino	4%	6%	4%
Black, Non-Latino	36%	30%	19%
Latino	46%	38%	16%
Multiracial or another race	8%	5%	4%
White, Non-Latino	7%	20%	57%
<b>Sex</b>			
Female	71%	63%	55%
Male	29%	37%	45%
<b>Age</b>			
18 to 35	50%	44%	25%
36 to 50	25%	33%	35%
51 to 65	21%	20%	32%
66 +	3%	3%	8%
<b>Children in family</b>			
In a family without children	51%	57%	67%
In a family with children	49%	43%	33%
<b>Marital/cohabiting status</b>			
Single	74%	59%	42%
Married or cohabiting	26%	41%	58%



## Employment Characteristics

Those who benefited from minimum wage increases were also most likely to be those with less work stability. In 2016, minimum-wage workers reported working an average of about eight months (**7.5 months**) per year, and **nearly half (46 percent)** were employed part-time (see Table 3). In comparison, on average higher-wage workers in the sample worked for almost the entire year (**10.8 months**), and just **18 percent** worked part-time. As discussed earlier, without access to full-time, full-year work and low-cost childcare, minimum wage workers are left far below the poverty line. These findings on employment characteristics speak to the importance of access to stable work with sufficient hours as part of the guarantee of economic security associated with work.

**Table 2. Employment Characteristics of Minimum-Wage Workers, Low-Wage Workers, and Higher-Wage Workers (2016)**

	Minimum-wage workers (<\$15)	Lower-wage workers (\$15 to \$21)	Higher-wage workers (\$21+)
Average months worked	7.5	9.3	10.8
Usual hours worked per week	32.1	36.9	39.5
Full-time or part-time worker			
Full-time	54%	74%	82%
Part-time	46%	26%	18%

## Did the minimum wage increase improve the economic well-being of affected workers?

The results discussed so far highlight how the workers who could be directly impacted by the minimum wage increases were in economically precarious positions. Not only were they more likely to be part of historically disadvantaged groups that have faced adversity in terms of wage discrimination less stability in terms of work, but they also have high rates of poverty and material hardship. A natural follow up question is, did the minimum wage increases in these years benefit these workers by increasing their earnings, and reducing their risk of poverty and hardship? And further, were the benefits of the minimum wage increase mitigated in any way by reductions in employment or benefit receipt? We answer these questions by examining the effect of the minimum wages increases on five measures of economic well-being: annual earnings, poverty status, experiences of material hardship, employment levels, and use of government benefits. We begin by explaining our methodology for identifying these effects and then turn to our results.

## **Methods**

The Poverty Tracker surveys coinciding with the minimum wage increases collected information about annual income, poverty status, material hardship, and employment<sup>18</sup> before and after the wages increases went into effect. We compare the changes in these outcomes among minimum-wage workers to a **comparison group** to identify impacts associated with the change in the minimum wage. By assessing the outcomes for these groups, we can compare what actually happened to those affected by the wage increase to what might have happened absent the policy change (as represented by the comparison group).

Our **comparison group** is made up of low-wage workers with wages between \$16 and \$21 in 2016 (i.e., before the wage increases went into effect) who were not affected by the subsequent wage increase. We compare the economic trajectories of those workers affected by each wage increase (2017, 2018, and 2019) to the comparison group in order to identify the effects of the policy changes. Note that, because there were three wage increases, we have three “treated” groups, and the size of these groups expands across the years as more workers are affected by the policy. These groups are defined as:

- 1) **Affected by 2017, 2018, and 2019 wage increases:** Workers with wages below \$11 per hour in 2016.
- 2) **Affected by 2018, and 2019 wage increases:** Workers with wages below \$13 per hour in 2017.
- 3) **Affected by 2019 wage increase:** Workers with wages below \$15 per hour in 2018.

We note that there is variation in the “intensity” of the treatment across these three groups, as the first group that was affected by all three wage increases and experienced a greater absolute increase in their wages versus the third group which *also* includes individuals who were only affected by one of the wage increases. As such, we might expect the effect of the wage increases to be greatest for the group affected by all three wage increases.

With any study that examines changes between an affected group and a comparison group that are associated with a policy change, one is concerned that the changes they observe could actually be driven by the differences between the groups, as opposed to the policy shock. For this reason, we employ a fixed effects regression model in this analysis that allows us to control for all individual characteristics that do not vary over time – including observed characteristics, such as one’s race or ethnicity, as well as unobserved characteristics. With these models, we are able to isolate the changes in earnings, poverty status, experiences of material hardship, and employment that are associated with the wages increase, independent of these observed and unobserved characteristics.

## **The minimum wage increases and earnings**

The first order question when assessing the effect that the wage raises had on economic outcomes is – do we observe a change in annual earnings associated with the policy change? Figure 1 provides the answer to this question, showing the average earnings levels for workers affected by each of the wage increases and for the comparison group. The results show a clear pattern of rising earnings levels among affected workers coinciding with the wage increase, while more stable (though higher) earnings levels for the comparison group.

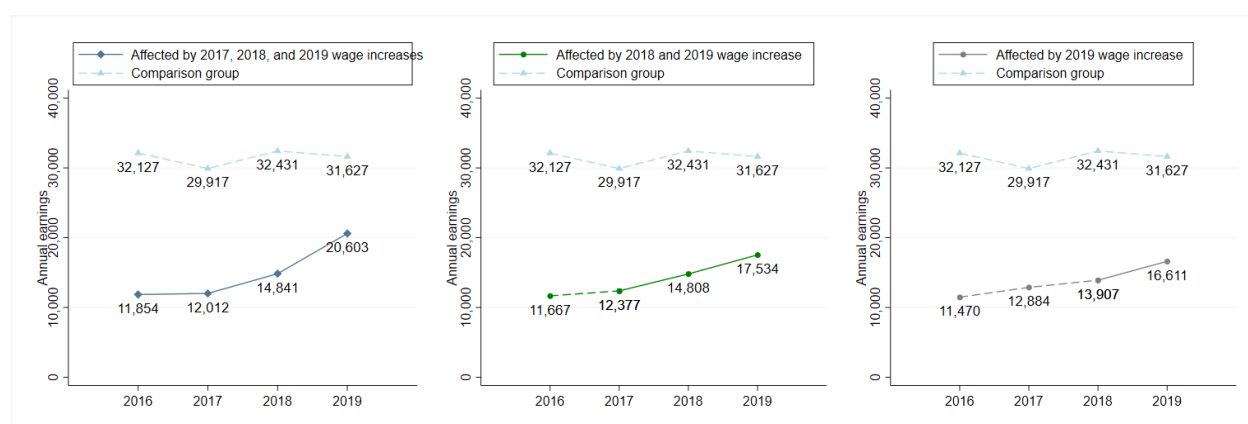
Starting with the group who benefitted the most from the wage increases (those affected by all three), average annual earnings (Figure 4) show an upward trajectory. In 2016, before the incremental wage

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<sup>18</sup> The Poverty Tracker collects a variety of information about employment, including the number of months worked in the 12 months prior, the usual hours worked, and current employment status.

increases began, their average annual earnings were \$11,511 per year (Figure 4, panel 1). In 2017, there was a modest increase (\$182) in average annual earnings (coinciding with the wage increase to \$11 per hour), though it was not statistically significant. By 2018, after being exposed to two possible wage increases, average annual earnings for this group rose by \$3,102 compared to average earnings in 2016 (Table 3). And by 2019, average annual earnings were \$8,476 higher compared to 2016 (Table 3). These results provide compelling evidence of the effect of the minimum wage on average earnings. If we had just seen an increase in one year, it could have been spurious, but the increasing magnitude of the effect on earnings from year to year suggests that this rise in earnings is driven by the wage increases. Looking at the trends for the comparison group (Figure 4), we also find that the upward trend in earnings was not a general trend for all workers, but was one specific to those affected by the wage increase. Annual earnings for the comparison group were \$32,127 in 2016 and \$31,627 in 2019, with some fluctuations in between.

**Figure 4. Minimum wage increases and annual earnings**



**Table 3. Minimum wage increases and year-to-year changes in average annual earnings**

	2017 Earnings	2018 Earnings	2019 Earnings
<b>Affected by 2017 wage increase</b>			
Change in earnings relative to 2016	185 (1183)	3102** (1167)	8476*** (1415)
<b>Affected by 2018 wage increase</b>			
Change in earnings relative to 2017		2466* (954)	5055*** (1126)
<b>Affected by 2019 wage increase</b>			
Change in earnings relative to 2018			2704* (1153)

Robust standard errors in parentheses. † p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

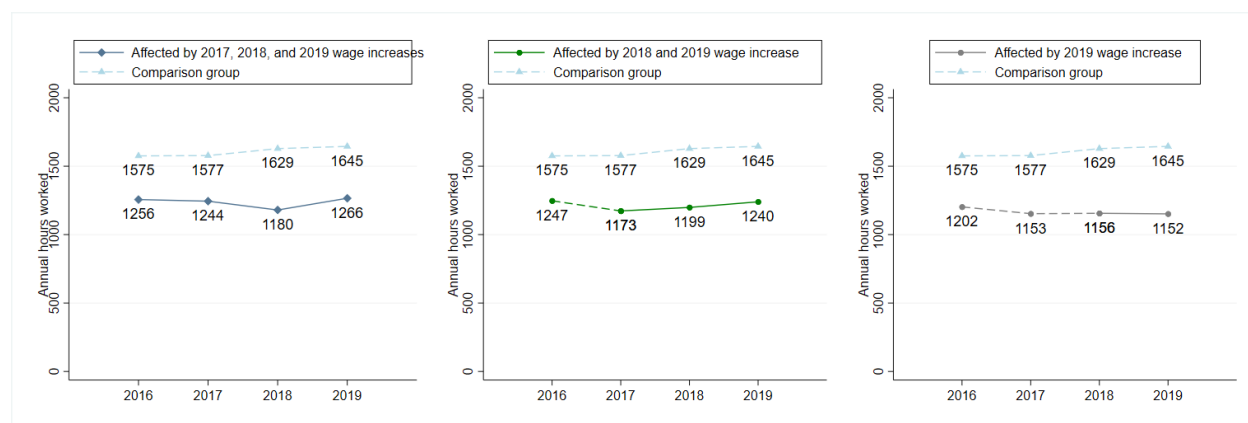
Additional evidence of the wage increases' positive effect on earnings is found when looking at the changes in annual earnings for those affected by the later-year wage increases (2018 and 2019). For those affected by the 2018 wage increase to \$13 per hour,<sup>19</sup> we see annual earnings rise by \$2,466 on average in 2018 compared to 2017 earnings, and by \$5,055 in 2019 (Table 3). Finally, when looking at the average change in earnings for all workers affected by the 2019 wage increase to \$15 per hour, annual earnings rose by \$2,704 between 2018 and 2019 (Table 3). These results show that the wage increases put more money in the pockets of minimum-wage workers in the Poverty Tracker sample.

<sup>19</sup> Note that this group includes those with wages below \$11 in 2016 and those with wages between \$11 and \$13 per hour in 2017.

### The minimum wage increases and employment

As discussed, there are concerns that the minimum wage increase could lead to declines in employment. But looking at the Poverty Tracker data, we do not observe significant reductions in annual hours worked among those affected by the minimum wage increase. Figure 5 plots the total annual hours worked among those affected by the wage increase and the comparison group. The first clear point is that those affected by the wage increase worked fewer hours, on average, than the comparison group, but this is expected as they were more likely to be part-time workers. The second clear takeaway is that there were not any substantial or significant year-to-year changes in the annual hours worked among affected workers in the years when the state raised the wage or among the comparison group. While we see the annual hours worked rising among the comparison group, test show that these year-to-year changes were not significantly different between the affected group and the comparison group. Overall, we find no evidence that the minimum wage increase lead to reduction in labor force participation among affected workers who were working before the wage increases went into effect.

**Figure 5. Minimum wage increases and annual hours worked of affected workers**



**Table 4. Minimum wage increases and year-to-year changes in average annual hours worked**

	2017 Annual Hours	2018 Annual Hours	2019 Annual Hours
<b>Affected by 2017 wage increase</b> Change in annual hours relative to 2016	-9 (66)	-52 (63)	11 (74)
<b>Affected by 2018 wage increase</b> Change in annual hours relative to 2017		0 (0)	21 (55)
<b>Affected by 2019 wage increase</b> Change in annual hours relative to 2018			15 (47)

Robust standard errors in parentheses. † p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

### The minimum wage increases and poverty

The increase in annual earnings associated with the wage increase also contributed to significant declines in the poverty rate among affected workers. Figure 6 charts the change in the poverty rate for those affected by the wage increases between 2017 and 2019. As we saw earnings rise, Figure 6 shows poverty rates falling. We again begin our discussion of these results by looking at the group likely affected by all three wage increases. The poverty rate of this group did not fall with the first wage increase to \$11 per hour in 2017, but by 2018, we see a 4 p.p. decline in the risk of poverty compared to 2016 (though not statistically significant). By 2019, when the minimum wage reaches \$15 per hour, we see the poverty rate of this group fall by 15 p.p. relative to 2016. The poverty rate of this group remains high (roughly 35%), but is still significantly lower than it was in 2016 (50.7%). Similarly, when looking at those affected by the 2018 and 2019 wage increases (Figure 6, panels 2 and 3), we see also sharp drops in the risk of poverty in 2019 when the minimum wage reached \$15 per hour. Results for the comparison group show a different trend; between 2016 and 2019, there was an increase in the poverty rate for this group, but this increase was not statistically significant. Together, the results show that the reduction in poverty was specific to the affected group and not a city-wide trend among workers.

Figure 6. Minimum wage increases and poverty rates of affected workers

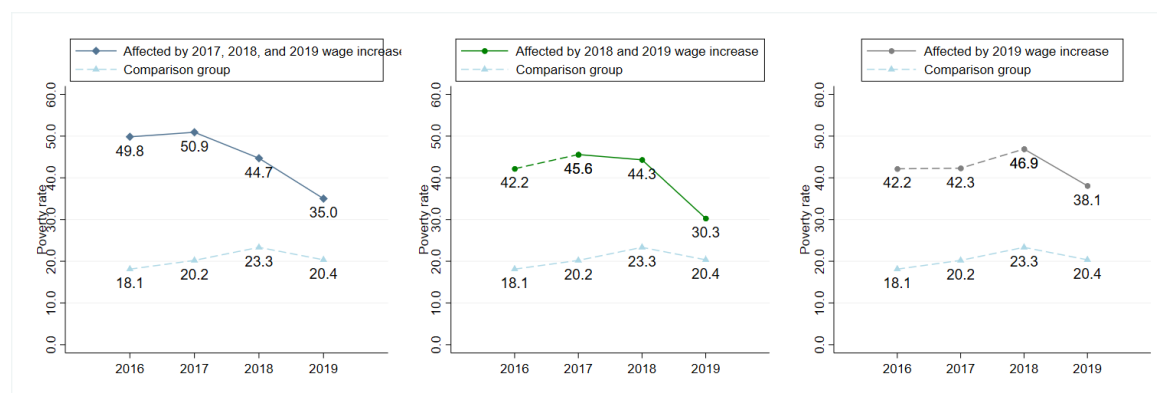


Table 5. Minimum wage increases and year-to-year changes in poverty rate

	2017 Poverty rate	2018 Poverty Rate	2019 Poverty Rate
<b>Affected by 2017 wage increase</b> Change in poverty rate relative to 2016	0.34 (5.79)	-4.07 (5.71)	-15.25* (6.93)
<b>Affected by 2018 wage increase</b> Change in poverty rate relative to 2017		-0.68 (4.92)	-14.75* (5.80)
<b>Affected by 2019 wage increase</b> Change in poverty rate relative to 2018			-8.81 (5.72)

Robust standard errors in parentheses. † p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Our analyses of earning and annual hours worked suggested that the minimum wage increases also families’ incomes – but were those increase substantial enough to move them above the poverty line? Looking at changes in the poverty rate shows that the initial wage increase to \$11 per hour was too modest to have an effect, but poverty rates of affected workers began to fall with the 2018 wage increase (specifically for those who were also affected by the 2017 increase). But the most substantial and only significant declines in poverty came with the minimum wage increase to \$15 per hour.

### The minimum wage increases and material hardship

While there are significant increases in earnings associated and declines in poverty associated with the minimum wage increases, the data do not show that the wage increases led to reductions in hardship. Figure 7 shows the average rates of hardship between 2016 and 2019 for those affected by the wages increases and for the comparison group. The year-to-year changes are smallest for those affected by all three wage increases (their rate of hardship in 2019 was 1.9 p.p. below that in 2016), which does not amount to a statistically significant decline. When we include those also affected by the later wage increases, we observe an increase in hardship, but this result is not statistically significant. We see do not see statistically significant changes in hardship among the comparison group between these years.

Figure 7. Minimum wage increases and rates of material hardship among of affected workers

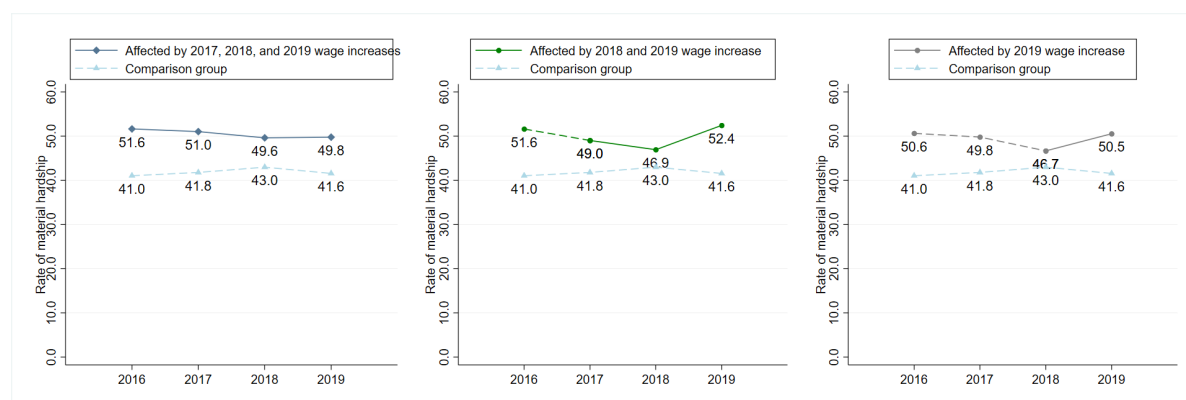


Table 6. Minimum wage increases and year-to-year changes in rates of material hardship

	2017 Hardship Rate	2018 Hardship Rate	2019 Hardship Rate
<b>Affected by 2017 wage increase</b>			
Change in hardship rate relative to 2016	-0.6 (5.3)	-2.0 (5.2)	-1.9 (6.3)
<b>Affected by 2018 wage increase</b>			
Change in hardship rate relative to 2017		-2.1 (3.9)	3.4 (5.5)
<b>Affected by 2019 wage increase</b>			
Change in hardship rate relative to 2018			3.9 (4.1)

Robust standard errors in parentheses. † p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

One might be surprised by the fact that we see reductions in poverty but no change in hardship in response to the wage increase. This, however, is less surprising when we consider the prevalence of hardship across the wage distribution *before* the wage increases went into effect. Roughly 46% of workers affected by the wage increase and 41% of workers with wages between \$15 and \$21 per hour faced material hardship in 2016. That is, there was very little difference in the risk of hardship among affected workers and those with slightly higher earning, thus we would not expect significant declines in hardship when wages rose but to a level still associated with high rates of hardship. The results do, however, suggest the need for additional research on the relationship between wages and material hardship.

### Benefit receipt and the minimum wage increase

Finally, we look at the effect of the minimum wage increase on benefit receipt, specifically zeroing in on receipt of SNAP benefits. Figure 8 shows the rate of SNAP receipt among affected workers as their wages rose. We see the most substantial decline in SNAP use among those affected by all three wage increases, falling by 12 p.p. (from 39% to 24%) between 2016 and 2019 for this group. While some might argue that this is a positive change, it is also indicative of the higher marginal tax that lower-wage workers pay when their wages increase as they end up losing more of each additional dollar earned due to reduced benefits. At the same time, we also see declining SNAP use among the comparison group from 2016 to 2019, but the declines are of a significantly smaller magnitude than those observed among the group affected by the wage increase.

Figure 8. Minimum wage increases and rates of SNAP use among of affected workers

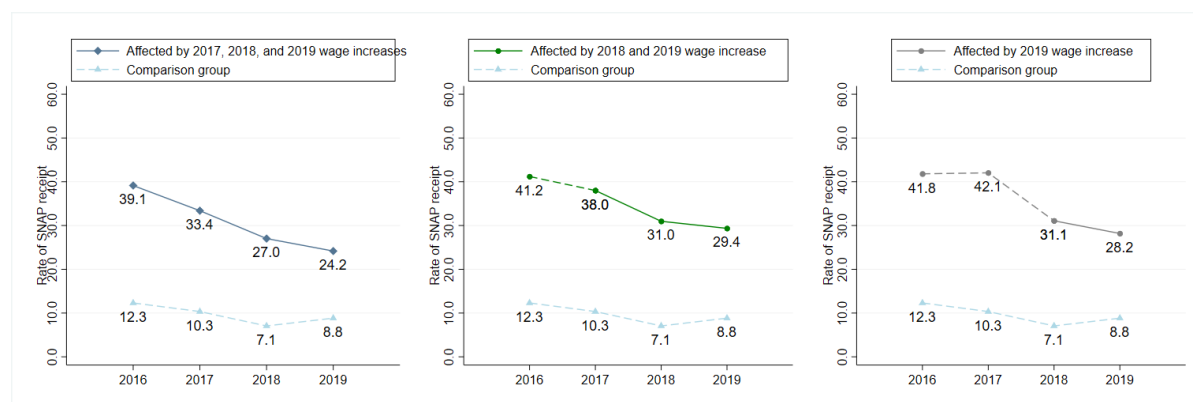


Table 7. Minimum wage increases and year-to-year changes in SNAP use

	2017 SNAP Use	2018 SNAP Use	2019 SNAP Use
<b>Affected by 2017 wage increase</b>			
Change in SNAP use relative to 2016	-7.0 (4.4)	-12.3** (4.3)	-12.4* (5.2)
<b>Affected by 2018 wage increase</b>			
Change in SNAP use relative to 2017		-6.9+ (3.7)	-8.6+ (4.4)
<b>Affected by 2019 wage increase</b>			
Change in SNAP use relative to 2018			-2.9 (4.6)

Robust standard errors in parentheses. † p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

## **Conclusion**

In 2017, New York City gave minimum-wage workers the first in a series of raises. Mixed results from prior research suggest that these raises might have helped these workers – increasing their income and potentially reducing financial stress – or hurt them – leading employers to cut their hours or not even reaching the workers who would benefit the most from a raise. Among workers in the Poverty Tracker sample, however, the theorized negative outcomes are not evident; workers who directly benefited from the minimum wage increase between 2017 and 2019 did not experience a significant reduction in employment. Instead, annual earnings among this group rose and the poverty rate among this group fell.

The minimum wage increases in New York City also benefitted workers in the Poverty Tracker sample who face the highest levels of financial distress – workers without a college degree, younger workers, and those living in a household with children. It also narrowed racial and ethnic wage gaps and gender wage gaps.

We do not, however, observe a statistically significant reduction in the rates of material hardship among those affected by these wage increases. The persistently high rates of material hardship among those affected by the minimum wage as well as those with wages up to \$21 per hour suggest that the minimum wage increases provided many workers with sufficient wages to move above the poverty line but not to guard against the material hardships associated with low wages. It is still hard to stretch \$15 per hour to cover the costs of all necessities.



## **Appendix A. The Supplemental Poverty Measure**

Every September, the U.S. government releases the latest results on national poverty using the Official Poverty Measure (OPM). The OPM was developed in the 1960s and compared families' total before-tax cash income with a poverty line, or threshold. The threshold was defined as three times the cost of a minimally adequate food budget during that time. With the exception of some minor adjustments, this measure has only been updated annually to account for changes in inflation.

But over time, this formula has become increasingly outdated. Food costs have become less important in family budgets, while things like housing and child care have become costlier. A focus on before-tax cash income ignores benefits that many families receive through the tax system, such as the Earned Income Tax Credit, or in non-cash form, such as food stamps or housing vouchers. Importantly, the poverty threshold under the OPM does not vary with costs of living, particularly housing costs, which are notoriously high in New York City.

The SPM improves the measurement of poverty on all of these fronts. The poverty threshold is based on contemporary spending on food, as well as on other necessities like clothing, shelter, and utilities. The poverty threshold in places like New York City is also higher given its higher than average housing costs, and the threshold is different for renters and homeowners. In 2018, the SPM threshold for a two-adult, two-child family of renters in New York City was \$35,730 (see Appendix A for the poverty threshold by family size). In the SPM, tax credits and non-cash benefits are also counted as income, and for families who incur them, medical, work, and child care costs are subtracted from income. The Poverty Tracker collects all the requisite data necessary to directly calculate the SPM in its sample of New Yorkers, and this data forms the basis of our income poverty statistics.

The Poverty Tracker measures poverty in New York City using the Supplemental Poverty Measure (discussed above). The New York City government also tracks trends in the city's poverty rate using the NYCgov Poverty Measure. There are slight differences between the construction of the SPM and the NYCgov Poverty Measure, thus they produce slightly different annual poverty rates. The differences between the NYCgov Poverty Measure and the SPM are discussed in the NYCgov Poverty Measure annual report.

## Appendix B. Supplemental analyses

Figure B-1. Share of workers below 200% of the poverty threshold (2016)

