

## Raising the Minimum Wage Improves Nutrition Among Food-Insecure Households

By Mike Palazzolo, University of California, Davis, and Adithya Pattabhiramaiah, Georgia Institute of Technology

### Key Facts

Food insecurity affects around one in seven U.S. households with children, with the prevailing hourly federal minimum wage of \$7.25 branded a “starvation wage” by some policy advocates.

In our study, the median minimum-wage increase (6.6%) led minimum-wage households to increase their calories purchased by 3.0%, with those households most in need also buying healthier calories.

Raising the minimum wage may help alleviate food insecurity and nutritional inequality in the U.S.

Blame for widespread food insecurity across the U.S. is frequently directed at the prevailing minimum wage. In a recent study, we examined whether and to what extent increases to the minimum wage improved the quantity and nutritional quality of food purchased by minimum-wage earners. We found that households likely to be earning the minimum wage purchased more calories in response to minimum-wage increases. These gains were predominantly among households purchasing the least amount of food prior to the minimum wage rising. Although we found no evidence that the average household improved the nutritional content of calories purchased, the least healthy households did buy more healthy foods in response to rising minimum wages. A higher minimum wage may thus encourage some households to purchase more healthy calories, as well as helping households afford more calories overall. We also observed increased openness among minimum-wage households to purchasing new grocery items. Raising the minimum wage may help to mitigate food insecurity and nutritional inequality in the U.S.

Food insecurity, which in 2018 affected an estimated one in seven U.S. households with children, has been linked to a wide variety of negative health and developmental outcomes.<sup>1,2</sup> These include obesity, asthma, depression, and lower cognitive function. The vast majority of households suffering from food insecurity report worrying that their food will run out before they obtain money to purchase more, as well as being unable to afford to eat balanced meals. In light of this, public policy advocates and politicians alike have highlighted the link between food insecurity and wages, branding the prevailing hourly federal minimum wage of \$7.25 a “starvation wage”.<sup>3</sup>

In our study, we set out to document whether and to what extent increases to the minimum wage enabled minimum wage-earning households to purchase more and/or healthier food, and how their shopping baskets were affected as a result.<sup>4</sup>

### Examining the Impact of Minimum-Wage Increases on Grocery Shopping

We observed 309 minimum-wage increases for the localities in our data. Of these changes, 107 were for individual cities or counties. Overall, minimum wages changed noticeably during the decade under study, with the average locality increasing its minimum wage by 29 percent between 2007 and 2016. However, many individual minimum wage increases were small. The median and average minimum wage increases were \$.50 and \$.55, respectively, affording a mere \$80–\$88 extra per month (before taxes) to a fully employed minimum-wage earner.

We combined ten years of data from the Nielsen

Homescan panel data set with a proprietary data set on the content of nutrition labels. We examined within-household changes in (1) calories purchased and (2) the nutritional content of those calories, as measured by the Healthy Eating Index (HEI) and the Nutrient Profiling Model (NPM).<sup>5</sup> We then compared the purchase behavior of households earning up to the minimum wage with that of households earning just above the minimum wage, adopting a difference-in-differences-based identification strategy to measure the causal effect of rising minimum wages.

### Higher Minimum Wage Led to Purchase of More and, in Some Cases, Healthier Calories

We found that the minimum wage had a strong impact on minimum-wage earners’ ability to purchase calories. We estimated the elasticity of calories purchased with respect to the minimum wage to be .459. This implies that the median minimum-wage change (an increase of 6.6 percent) led minimum-wage households to increase their calories purchased by 3.0 percent and increase their calories purchased per adult equivalent by 3.9 percent. The effect of the minimum wage on calories purchased appears to be driven primarily by the households that were purchasing the fewest calories before a minimum wage increase. The calories purchased by these households are more than unit-elastic with respect to the minimum wage.

We also found that some minimum-wage households (namely, those that previously had the unhealthiest shopping baskets) improved the nutritional content of their shopping basket in response to rising minimum

1. USDA Economic Research Service (2020a), “Definitions of Food Security,” (September 9), <https://www.ers.usda.gov/topics/foodnutrition-assistance/food-security-in-the-us/definitions-of-foodsecurity>

2. USDA Economic Research Service (2020b), “Food Security and Nutrition Assistance,” (December 16), <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-security-and-nutrition-assistance/>

3. Hensch, Mark (2015), “Sanders Calls Minimum Wage a ‘Starvation Wage’,” The Hill (May 2), [https://thehill.com/blogs/ballot-box/dem-primaries/240871-](https://thehill.com/blogs/ballot-box/dem-primaries/240871-sanders-calls-minimum-wage-a-starvation-wage)

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4. Palazzolo, Mike, and Adithya Pattabhiramaiah. (2021). The Minimum Wage and Consumer Nutrition. *Journal of Marketing Research*. 58(5):845-869. <https://doi.org/10.1177/00222437211023475>

5. Allcott, Hunt, Rebecca Diamond, Jean Pierre Dub, Jessie Handbury, Ilya Rahkovsky, and Molly Schnell (2019), “Food Deserts and the Causes of Nutritional Inequality,” *Quarterly Journal of Economics*, 134 (4), 1793–1844.

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wages. However, this improvement was counteracted by a worsening of the dietary health index of households with the healthiest shopping baskets before their local minimum wage rose.

Minimum-wage households that purchased more calories did not merely buy more of previously purchased food. Rather, one out of every three additional products they bought in response to the minimum wage rising was a product they were purchasing for the first time. Furthermore, minimum wage households that did not purchase more calories bought more new products in

a large proportion of the gap between them and the lowest dietary health quartile of households earning above minimum wage.

Given the relatively sizable magnitude of minimum wage changes currently being proposed at the national level, it is possible that future minimum-wage changes may have more success with improving the average healthiness of minimum-wage earners' shopping baskets than did the relatively small wage increases we observed in our data.

From a policy perspective, our findings—that increases to the minimum wage enable households to purchase more

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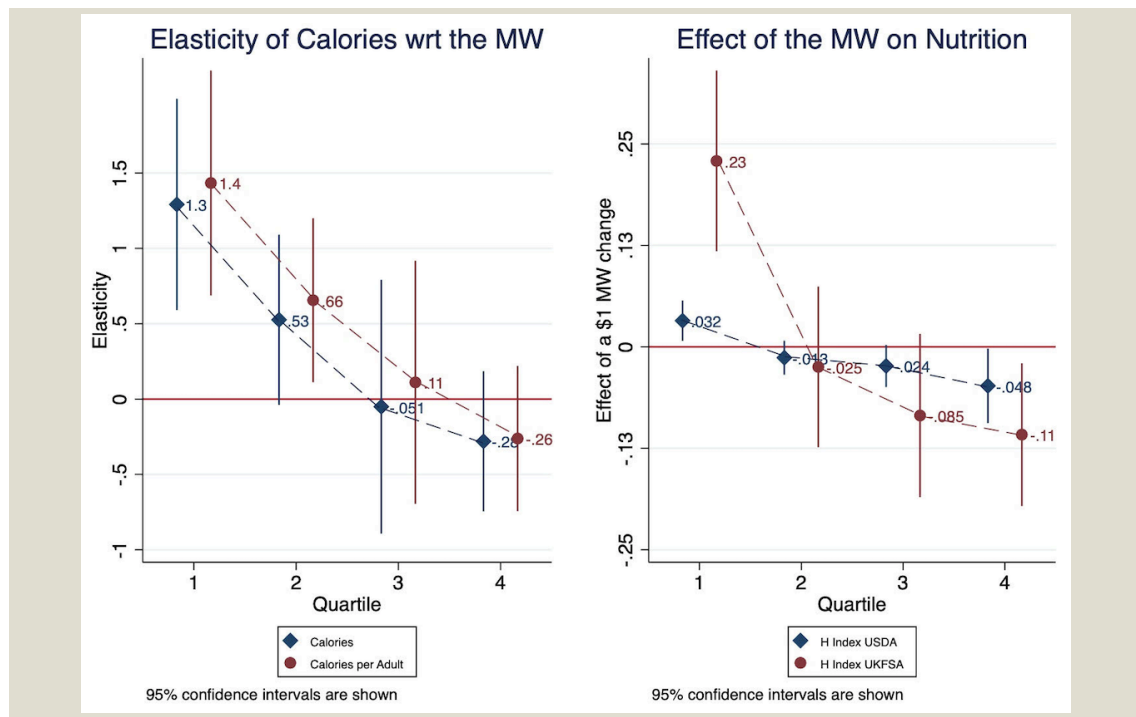


Figure 1

response to the minimum wage rising, but did so at the expense of products they had previously purchased. This kept the total volume of food they purchased constant. Moreover, we found that the households that improved the healthiness of their shopping baskets did so without drastically changing the categories from which they sourced their food.

## Raising Minimum Wages May Help Alleviate Food Insecurity and Nutritional Inequality

Households tended to purchase more calories when their capacity to buy food increased. Growth in calorie purchases following minimum-wages increases was driven entirely by households that previously purchased the least amount of food—that is, households that were more likely to be food insecure.

On average, minimum-wage households did not improve the average nutritional content of their calories in response to the minimum wage rising. However, households that previously ranked within the worst quartile on the dietary health indices did in fact purchase more healthy foods once minimum wages increased. We estimate that typical minimum-wage increase during our study period (\$.50 per hour) helped minimum-wage earners in the bottom-most dietary health quartile bridge

food, and in the case of at least some households, more healthy food—suggest that raising the minimum wage may help alleviate food insecurity and nutritional inequality in the United States.

*Mike Palazzolo is an assistant professor of marketing at the University of California, Davis.*

*Adithya Pattabhiramaiah is an assistant professor of marketing at the Georgia Institute of Technology.*

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Center for Poverty & Inequality Research  
University of California, Davis  
1 Shields Ave | Davis, CA 95616  
(530) 752-0401