Impact of Amazon's $15 Minimum Wage on the Economic Condition of Warehouse Workers

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Delivering packages to customers' homes is central to Amazon's e-commerce business. Its success in rapidly delivering the goods it sells has built public confidence in its retail model. Amazon appears to be using rapid, low-cost delivery as a loss-leader to expand its retail market share. However, some of these losses are being transferred in the form of low wages to logistics workers employed by Amazon and its subcontractors (*Too Big to Govern*, page 31).

Amazon raised the wages for its warehouse workers to a minimum of $15 an hour on November 1, 2018. In the Economic Roundtable report, *Too Big to Govern*, we recommend that the minimum wage be raised to $20 an hour. In this addendum to the report we explore the impact of the $15 wage floor on improving the economic condition of warehouse workers and the extent to which workers paid $15 an hour are able to afford the basic necessities of life.

Approach

The most detailed and informative source of information about the economic condition of Amazon's warehouse workers is the Public Use Microdata Sample (PUMS) of the U.S. Census Bureau's American Community Survey (ACS). As explained in *Too Big to Govern*, we matched workers employed on the footprint of Amazon warehouses with PUMS records to analyze their economic condition.

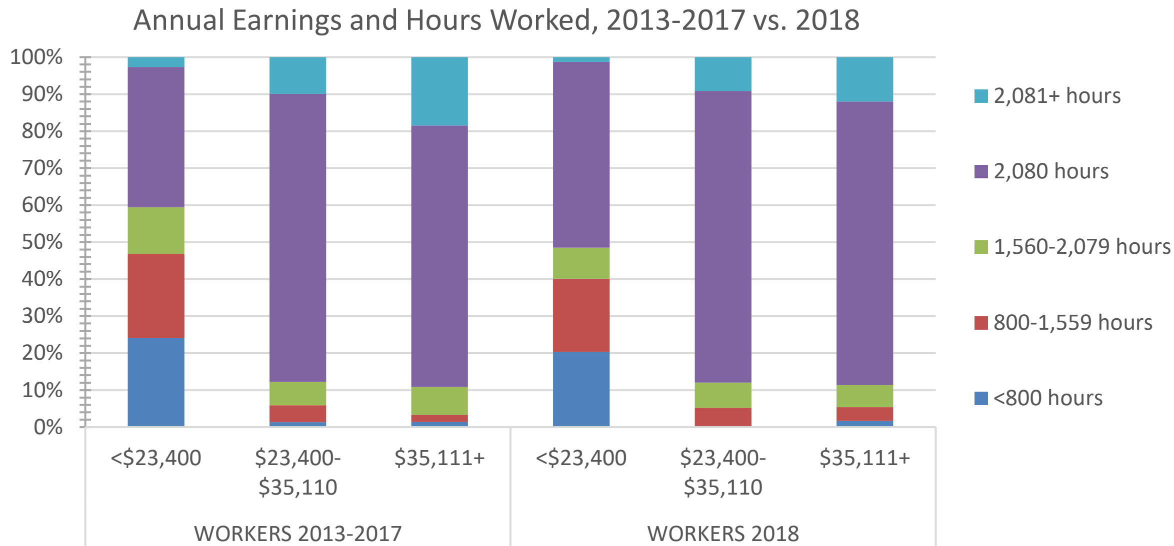
The ACS is a rolling survey that is carried out each year as 12 monthly independent samples. The survey asks about employment and earnings in the past 12 months. There is a larger five-year sample of weighted PUMS records of line warehouse workers for 2013 to 2017, and a smaller one-year sample of workers for 2018. The 2018 sample probably captures a very small part of the effect from Amazon's $15 minimum wage. This would come from the impact of the higher wages in November on the 12-month earnings of workers surveyed in December.

To provide a clearer picture of the impact of higher wages on the lives of warehouse workers we compare the economic condition of full-time workers in three income groups. We define full-time as 1,560 or more hours of work a year, which represents at least 30 hours of work for all 52 weeks of the year. This is the benchmark for full-time employment set by the Affordable Care Act. These are line workers, that is, non-supervisory and non-professional warehouse workers who make up 87 percent of the warehouse labor force.

The three groups of full-time line warehouse workers who we compare are:

1. Workers earning *less than $23,400* (all dollars are adjusted to 2018), that is, less than $15 times 1,560 hours.

Figure 1



2. Workers earning *$23,400 to $35,110*, which represents 30 to 45 hours of work at $15 an hour for all 52 weeks of the year.
3. Workers earning *$35,111 or more*, which represents full-time employment with a wage of roughly $20 an hour.

Part-time employment in Amazon's warehouses is concentrated among workers earning less than $23,400 a year, as shown in *Figure 1,* which breaks out number of hours worked per year for each wage group in the PUMS samples from both 2013 to 2017 and 2018. Both samples show that part-time employment is concentrated among workers with lower earnings. By limiting our comparison to full-time workers broken out by income group we are able to compare workers whose primary or exclusive source of income is their warehouse job, and see the effect that different wage levels have on their lives.

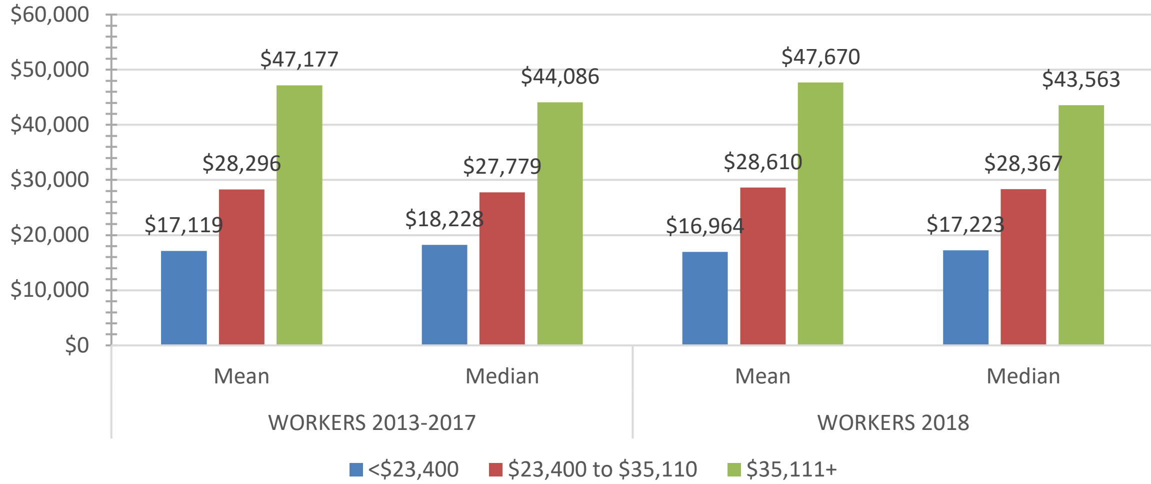
Poverty Rate among Warehouse Workers at Different Wage Levels

The three wage groups serve roughly as surrogates for workers earning less than $15 an hour, workers earning roughly $15 an hour, and workers earning roughly $20 an hour, as shown by the mean and median annual earnings shown for each group in *Figure 2*.

It isn't at all surprising, but it's still important to document that as wages increase, poverty rates decrease, as shown in *Figure 3*. We see the following decrease in poverty rates among full-time line warehouse workers as their wages increase:

- Among workers earning *less than $15 an hour*, 17 percent of the 2013-2017 sample and 14 percent of the 2018 sample were in poverty. Another 43 percent of both samples was just above poverty, with incomes that were 100 to 199 percent of the poverty threshold.

Figure 2
Mean and Median Annual Earnings of Full-Time Warehouse Workers by Income Group, 2013-2017 vs. 2018



- Among workers earning *$15 an hour*, 2 percent of the 2013-2017 sample and 4 percent of the 2018 sample were in poverty. Another 32 percent of the 2013-2017 sample and 37 percent of the 2018 sample were just above poverty.
- Among workers earning *roughly $20 an hour*, no one was in poverty and 13 percent of the 2013-2017 sample and 7 percent of the 2018 sample was just above poverty.

The comparison of workers earning less than $15 an hour to workers earning $15 an hour suggests that the step Amazon has already taken by raising its minimum wage to $15 has almost eliminated poverty among full-time workers and reduced the share who are close to the poverty threshold by about one-fifth. It also suggests that raising the wage floor to $20 an hour would

Figure 3
Annual Earnings and Household Income as Percent of the Poverty Threshold for Full-Time Workers, 2013-2017 vs. 2018

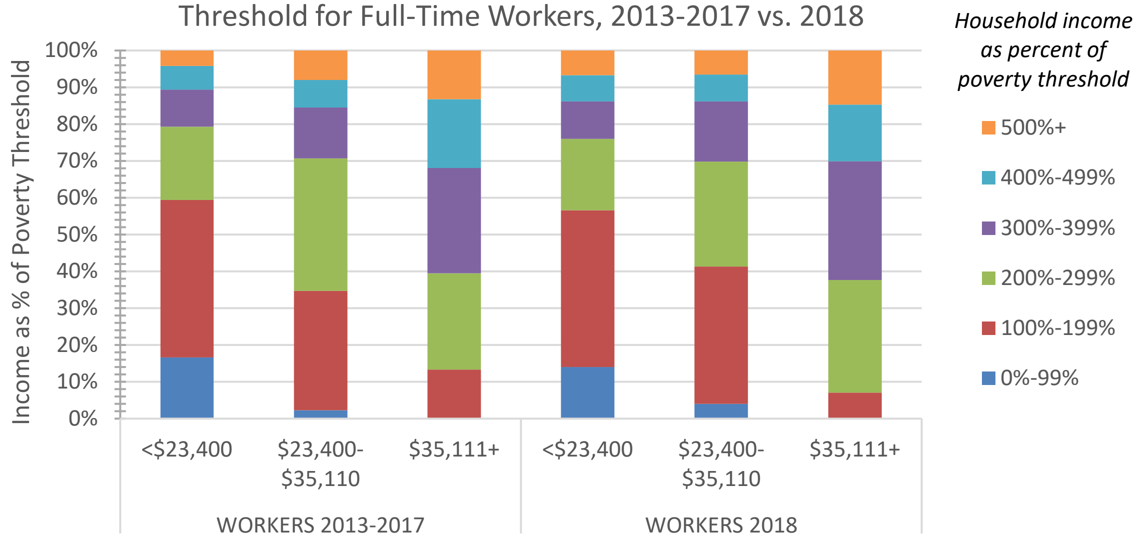
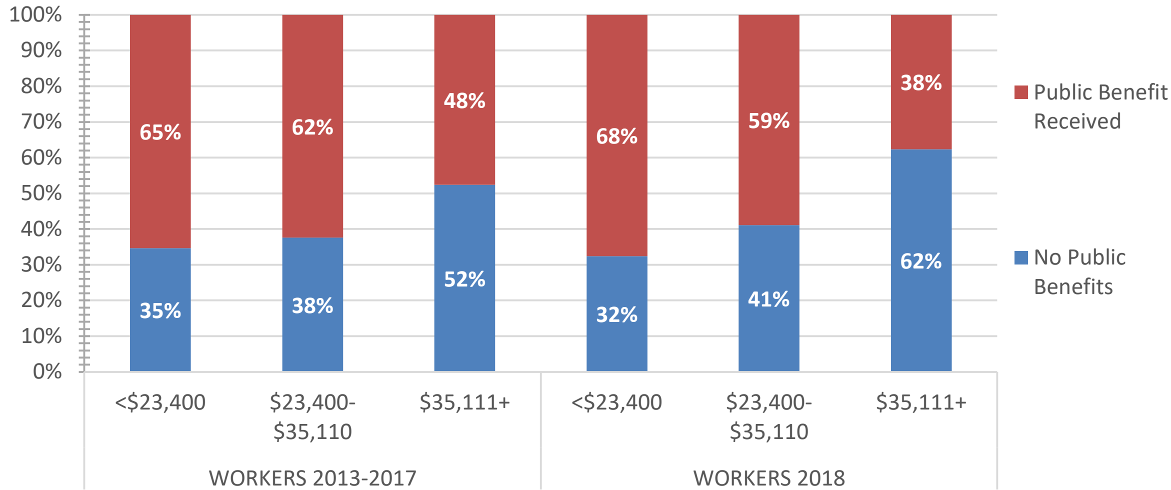


Figure 4

Use of Public Benefits by Annual Earnings for Full-Time Workers, 2013-2017 vs. 2018



completely eliminate poverty among full-time warehouse workers and reduce the share who are close to poverty by nearly three-quarters (71 percent) based on a comparison between the $15 an hour proxy group and the $20 an hour proxy group in both PUMS survey samples.

Reliance on Social Safety Net Supports

Raising the wage floor to $15 dollars an hour appears to have had only a slight effect on reducing the share of workers who rely on public assistance benefits, as shown in *Figure 4*. These benefits include Medi-Cal health insurance, food stamps (also called Cal Fresh), and cash public aid.

The share of workers receiving public benefits in the 2013 to 2017 PUMS sample fell from 65 percent among the proxy group for workers paid *less than $15 an hour* to 62 percent among the proxy group for workers receiving *$15*. The gap is larger in the 2018 PUMS sample, falling from 68 percent to 59 percent. Based on an average of the two PUMS samples, it appears that raising the wage floor to $15 produced a nine percent reduction in use of public benefits among workers who previously had earned less than $15 an hour.

A comparison of the $15 an hour proxy group and the $20 an hour proxy group suggests that raising the wage floor to $20 an hour would reduce the share of workers who rely on public assistance to meet essential household needs by another 29 percent. The fact that roughly 43 percent of workers in the highest wage group rely on public benefits is a reminder that even with a $20 an hour wage floor, providing $45,000 a year in earnings, it is very difficult to pay the basic costs for living in Southern California.

Housing Conditions

Increasing the minimum wage to $15 an hour is likely to have caused a modest reduction in the share of warehouse workers living in substandard housing conditions, as shown in *Figure 5*. A comparison of the *less-than-$15 proxy group* to the *$15 proxy group* shows that the share of workers who were adequately housed (i.e., no housing anomalies) increased from 39 percent to 41 percent in the 2013 to 2017 PUMS sample, and from 35 percent to 49 percent in the 2018 PUMS sample. An average of the two samples suggests that, among workers who had previously earned less than $15, raising the minimum wage to $15 increased the share of workers who were adequately housed by 13 percent.

Summary

Amazon's decision to raise its minimum wage to $15 an hour appears to have reduced the rate of poverty and near-poverty among warehouse workers, reduced reliance on public assistance and improved housing conditions. This demonstrates that raising the wage floor brings important improvements in the well-being of workers and their families.

However, many full-time workers earning $15 an hour still experience serious economic hardships. Among these workers:

- 38 percent are estimated to be in poverty or near poverty (199 percent or less of poverty threshold).
- 61 percent are estimated to rely on public assistance, most often for health care and food.
- 55 percent are estimated to live in substandard housing.

Raising the minimum wage for warehouse workers to $20 an hour will eliminate much of this economic hardship.

Figure 5
Housing Conditions of Full-Time Warehouse Workers by Earnings Group, 2013 to 2017 vs. 2018