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The Impact of Minimum Wages on the U.S. Agricultural Sector

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Increasing minimum wages in recent years have many agribusiness owners and farm operators worried. What is the impact of state and federal minimum wage laws on farm profits, products and profitability?

When President Franklin Roosevelt introduced federal minimum wage legislation in the United States in 1938 as part of the Fair Labor Standards Act (FLSA), agricultural workers were largely excluded. That changed with the 1966 FLSA Amendment, which extended minimum wage coverage to agricultural workers. In 2009, the current federal minimum wage for covered non-exempt employees was set at $7.25.

Today, many states, counties and individual cities have their own minimum wage laws. These remain an important factor affecting wages in the agricultural sector. According to the National Agricultural Workers Survey (NAWS), nearly 40 percent of agricultural workers earn an hourly wage within 10 percent of the prevailing state-level minimum wage. But in some states, that is much higher than the federal minimum wage.

> **"California has gone completely nuts in the employee field," Wheaton said.**

Increased minimum wages over the last few years have many agribusiness owners and farm operators worried about increased labor costs. In an interview with a local NBC affiliate, California citrus and nut farmer Lorren Wheaton expressed concerns about the new minimum wage and other compulsory employee-related expenses.

"California has gone completely nuts in the employee field," Wheaton said.

These changes in the California minimum wage followed a four-year drought that had already strained farmers, an issue addressed by noted UC-Davis agricultural economist Philip Martin in the same NBC news story.

"I don't know whether this [new minimum wage legislation] will be the thing that pushes some people over the edge or not. But it certainly won't make it easier," Martin said. "Some [farmers] might not survive."

In this article, we summarize recent work we conducted exploring the impact of state and federal minimum wage laws on farm employment and wages.

Trends in State Minimum Wage Laws

Currently, four states have adopted minimum wages that are lower than the federal minimum, so the higher federal minimum wage applies. In 20 states, the minimum wage is pegged at the federal minimum. Twenty-one states and the District of Columbia have set their minimum wages at levels higher than the federal minimum. The minimum wages in California ($10.00 per hour), New York ($9.00) and Oregon ($9.75) are all substantially above the federal minimum of $7.25 per hour. This is also the case in several other states with large agricultural production such as Nebraska ($9.00) and Illinois ($8.25).

There has been much recent legislative activity surrounding state minimum wages. Several states and cities across the country have increased their minimum wages substantially or put legislation in place that will do so in the next few years.

- California: The governor signed legislation in 2016 raising mandatory minimum wage from $10 per hour to $15 per hour by 2022. A similar bill had been signed in New York just hours earlier.
- Oregon: A series of annual hikes will increase the minimum wage from $9.25 per hour to $13.50 ($12.50 in non-urban counties) by 2022. It will then be automatically indexed to inflation based on the U.S. Consumer Price Index.
- Washington: Voter-approved Initiative 1433, passed in 2016, will gradually increase the minimum wage from $9.47 per hour to $13.50 over the next three years and index the minimum wage to inflation afterward. Rather than taking the gradual approach, the city of Seattle adopted a new minimum wage ordinance in 2015 that has increased the city-wide minimum wage to $15 an hour for large (500+) employers.

Possible Impacts of Minimum Wages on Agricultural Businesses

"Agricultural producers are part of a global, competitive marketplace."

Higher minimum wages may have different effects on different farms based on the crop produced, the size of the farm and the proximity to large metropolitan areas. The agricultural sectors in states like North Carolina, California and Washington may be more vulnerable because agricultural production in these states — which includes large areas of vegetables, small fruits and nuts — is more labor intensive than agricultural production in other states where field crops like corn or soybeans are the primary agricultural products.

Small farm operators are also likely more vulnerable because they lack the scale to profitably mechanize. They are more likely to encounter obstacles in securing financing, as well. Finally, agribusiness owners in rural areas close to urban locations may face additional difficulties recruiting farm workers when minimum wages rise. Some workers may migrate to nearby urban centers where service or construction jobs, which are less physically demanding, become relatively more attractive when the minimum wage grows.

Agricultural producers are part of a globally connected and competitive marketplace. They buy inputs and sell crops whose prices are established at the global, not the local, level. Their competitors are often thousands of miles away, unlike service-sector establishments with nearby competitors. When minimum wages rise in a given state, all competitors of a service-sector establishment experience a similar increase in the cost of production. That may not be the case for agribusinesses: their competitors in other states or countries do not face the same increase in production costs.

Possible Impacts of Minimum Wages on Workers

While modest changes in minimum wages may not have a big impact on producers' costs, larger hikes may matter more. A recent analysis of Seattle's minimum wage legislation found that a significant increase brought about larger negative impacts on low-wage workers overall because fewer were hired (Jardim et al., 2017). The recent changes in minimum wages in states such as California, Oregon, Washington and New York may produce a similarly large impact on agricultural workers and producers.

With the preponderance of minimum wage increases around the country, it is important to understand and empirically evaluate how those wage changes might affect agricultural producers. There are two ways in which the mandated minimum wage can affect a farm worker's actual wage.

1. It can have a direct impact if the covered worker's actual wage is below the newly adopted minimum wage. But even if the worker's wage is (just) above the new minimum wage, employers may choose to raise wages to avoid wage compression. This would be consistent with many studies showing that minimum wage increases also affect wages that are just above the new minimum wage.
2. The mandated minimum can affect farm workers' wages by making alternative employment relatively more desirable. For example, minimum wages raise pay for alternative employment in the service or construction industries. In order to keep or attract farm workers, agribusinesses may have to raise the wages they offer. Given that labor costs are about 17 percent of variable costs for agribusiness on average (ERS, USDA), minimum wage hikes could easily boost farm expenditure by a significant amount —especially for producers of labor-intensive crops and commodities (e.g. fruit, vegetables, and nursery products) for whom labor costs represent up to 40 percent of expenditures.

The consequences of minimum wage hikes for the U.S. agricultural industry could be far-reaching. Increasing the cost of labor for agricultural producers in the U.S. will have important implications for:

1. Farm labor demand — as minimum wages push farm worker wages up, demand for hired workers, and consequently employment, may drop
2. Structural changes and the composition of output in U.S. agriculture as (larger) farmers resort to a higher degree of mechanization and grow less labor-intensive crops
3. U.S. agricultural trade, both imports and exports of inputs and outputs, as less labor-intensive output is produced domestically, more will be sourced from abroad
4. Immigration policies, such as the H-2A program for temporary foreign agricultural workers, that keep the supply of farm workers in the U.S. from reaching critically low levels
5. Competitiveness of U.S. agricultural producers — especially producers of fruits, vegetables, nuts, and dairy — as they manage higher labor costs driven by increased minimum wages

Can Agricultural Laborers Earn Below the Minimum Wage?

Even in the presence of minimum wage laws, agricultural workers can be paid less than the minimum wage if enforcement is lacking or if they receive additional offsetting compensation (e.g. bonus or rent-free housing). The vast majority of agricultural workers are covered under the FLSA, with only a few exceptions. Most notably, some small agricultural employers are excluded from the federal minimum wage legislation—any employer in agriculture who did not utilize more than 500 "man days" of agricultural labor in any calendar quarter of the preceding calendar year is exempt from the minimum wage and overtime pay provisions of the FLSA for the current calendar year. A "man day" is defined as any day during which an employee performs agricultural work for at least one hour. State minimum wage regulations vary with some excluding small employers, as well. If workers are paid on a piece-rate basis, they still need to receive at least the equivalent of the required minimum hourly wage rate.

Our Findings

We evaluated the impact of the minimum wage on agricultural employment, annual earnings, hourly wages and weekly hours. With nearly a million employees, the agricultural sector is instrumental in promoting U.S. food security and food safety.

Based on National Agricultural Workers Survey (NAWS) data, we calculate that nearly 40 percent of all crop workers are paid within 10 percent of the prevailing state or federal minimum wage. Our econometric analysis drew on two comprehensive county-level data sets focused on the U.S. agricultural sector — the Census of Agriculture (CoA) and the NAWS. Our key finding from that effort is that there is a negative long-run effect of the minimum wage on overall agricultural employment, and that this effect is statistically and economically significant.

Specifically, we found that a 10 percent increase in the minimum wage is associated with a 4 percent decline in overall agricultural employment over a span of 10 to 20 years. We find that this effect is almost entirely driven by impacts in non-metropolitan counties. We found no significant impact of minimum wages on agricultural employment in metropolitan counties. On the other hand, agricultural employment in rural counties was found to be greater than the overall average — suggesting that a 10 percent minimum wage increase produces a long-run decline in agricultural employment of about 6.5 percent in the most remote rural counties.

Over 10-20 years, a 10% minimum wage increase is associated with a 4% decline in agricultural employment.

We also found that an increase in the minimum wage is associated with an increase in agricultural worker annual earnings, and that the long-run rise in earnings per worker is of a comparable size percentage-wise to the negative impacts on the number of jobs. The implication of this is that there is roughly no change in the long run in agricultural employers' expenses on hired labor.

We additionally found that a large fraction of the effect of the minimum wage on earnings occurs within 5 to 10 years, which is faster than the rate at which employment is impacted. That changes in employment take place over a longer horizon — i.e., more slowly — likely reflects the difficulty that agricultural employers face in trying to mechanize production in the short run or to substitute labor-intensive crops with less labor-intensive alternatives. Mechanization in general, and especially when it comes to harvesting, is a slow process. It takes time to develop and adopt new machines like lettuce or citrus harvesters that can substitute for human labor in the agricultural sector. Even today, many agricultural tasks require manual input because the technology is not yet available or because the initial cost of adoption is too high, especially for smaller producers.

Our empirical analysis confirmed that minimum wage increases the relative importance of capital inputs vis-à-vis labor over a comparable time frame and level as it impacts agricultural employment.

Conclusion

Nearly 40 percent of crop workers in the U.S. earn wages close to the prevailing state or federal minimum wage. It is typically assumed that minimum wages do not affect agricultural employment much, but our work suggests that the reality is more nuanced. There are likely little to no short-term impacts, perhaps because mechanization is difficult in the short run, but there could be larger negative long-term effects, especially in remote rural counties.

Research Cited

ERS, USDA – https://www.ers.usda.gov

Jardim, E., Long, M.C., Plotnick, R, van Inwegen, E., Vigdor, J., and H. Wething, 2017. "Minimum Wage Increases, Wages, and Low-Wage Employment: Evidence from Seattle," National Bureau of Economic Research working paper No. 23523.