Agricultural labor supply & citizenship status

AEDE Spring Webinar Series
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Dr. Margaret Jodlowski
Introduction

• Well known that labor is a major pressure point across the agriculture/food supply chain
  • Pandemic-related impacts
  • Automation & visa workers: neither universal nor perfect solutions

• Common proposals in the policy space:
  • Change the legal status of current farmworkers
  • Offer paths to legal status for those not currently in the farm workforce

• Motivated by hope that workers will respond to the benefits this would provide
Research question

Do workers with different legal statuses respond differently to changes in labor market conditions?

Is one legal status more responsive to changes in wages than another?

Ultimately:

Do workers change their labor market behavior when their legal status changes?
Previous work has shown:

• Compositional changes in the agricultural workforce
  • Farmworkers are aging & increasingly female
  • Tightening immigration enforcement reduces:
    • Number of workers in agricultural labor force
    • Employment share of all low-educated, foreign-born individuals in all sectors

• In the general labor market:
  • Pervasive “wage penalty” for undocumented workers: 5-15% less in real wages
  • Wage gap increases as workers move up the wage distribution

• Other studies of legalization:
  • Legalization enhances labor market mobility
  • Legalized workers, especially women, increase their labor supply
About the data:
• Data are from the National Agricultural Worker Survey
  • Random sample of farmworkers
  • Interviewed at workplace and not at home

• Who is surveyed?
  • Crop workers
  • Currently employed
  • Survey timing designed to capture migrant/seasonal workers

• Who is not surveyed?
  • H-2A visa workers
  • Workers not currently working in agriculture
Farmworker labor supply behavior over time
Share of workers by legal status, over time:
Average hours per worker, by legal status:
Wage trends, by legal status:
Trend between hours worked and hourly wage, overall:
Trend between hours worked and hourly wage, 1990-2000:
Trend between hours worked and hourly wage, 2001-2016:
Trend between hours worked and hourly wage, 2016-2020:
Farmworker wage gaps by legal status
How large is the gap in wages between citizen and undocumented workers?
Where was this gap the largest 30 years ago?
And more recently:
What about between foreign-born documented versus undocumented workers?
Where was this gap the largest 30 years ago?
And more recently:
Farmworker on-farm characteristics by legal status
Primary task at time of interview, by legal status:
Primary crop at time of interview, by legal status:

- **Undocumented**: 10% Field crops, 41% Fruit & nuts, 28% Horticulture, 26% Vegetables, 5% Misc. or multiple
- **Foreign-born Documented**: 11% Field crops, 45% Fruit & nuts, 18% Horticulture, 25% Vegetables, 5% Misc. or multiple
- **Native Citizens**: 29% Field crops, 15% Fruit & nuts, 25% Horticulture, 22% Vegetables, 8% Misc. or multiple
Primary payment method at time of interview, by legal status:
## Farmworkers’ on-farm work:

<table>
<thead>
<tr>
<th></th>
<th>Native Citizens</th>
<th>Foreign-born Documented</th>
<th>Undocumented</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Real wage ($/hour)</strong></td>
<td>$12.97</td>
<td>$12.60</td>
<td>$11.59</td>
</tr>
<tr>
<td></td>
<td>($4.40)</td>
<td>($4.17)</td>
<td>($3.40)</td>
</tr>
<tr>
<td><strong>Weeks of farmwork last year</strong></td>
<td>35.4</td>
<td>38.5</td>
<td>37.4</td>
</tr>
<tr>
<td></td>
<td>(16.5)</td>
<td>(12.9)</td>
<td>(15.4)</td>
</tr>
<tr>
<td><strong>Work hours/week at current farm job</strong></td>
<td>43.1</td>
<td>44.7</td>
<td>43.3</td>
</tr>
<tr>
<td></td>
<td>(14.9)</td>
<td>(13.7)</td>
<td>(12.9)</td>
</tr>
<tr>
<td><strong>Number of farm employers last year</strong></td>
<td>1.2</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>(0.7)</td>
<td>(1.2)</td>
<td>(1.1)</td>
</tr>
</tbody>
</table>
How long do workers plan on staying in farmwork?

- As long as I am able: 69% (Undocumented), 79% (Foreign-born Documented), 60% (Native Citizens)
- > 5 years: 5% (Undocumented), 5% (Foreign-born Documented), 8% (Native Citizens)
- 4-5 years: 4% (Undocumented), 3% (Foreign-born Documented), 5% (Native Citizens)
- 1-3 years: 8% (Undocumented), 13% (Foreign-born Documented), 17% (Native Citizens)
- <1 year: 2% (Undocumented), 2% (Foreign-born Documented), 2% (Native Citizens)
Farmworker non-farm characteristics by legal status
Farmworkers’ non-farm work:
### Farmworkers’ non-farm work:

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</thead>
<tbody>
<tr>
<td>Real wage ($/hour) at most recent non-farm job</td>
<td>$13.39</td>
<td>$12.50</td>
<td>$11.38</td>
</tr>
<tr>
<td>(Real wage differential)</td>
<td>($5.68)</td>
<td>($4.86)</td>
<td>($3.60)</td>
</tr>
<tr>
<td>Weeks of non-farm work last year</td>
<td>6.6</td>
<td>2.3</td>
<td>2.4</td>
</tr>
<tr>
<td>(Weeks of non-farm work last year)</td>
<td>(13.3)</td>
<td>(7.8)</td>
<td>(8.1)</td>
</tr>
<tr>
<td>Work hours/week at most recent non-farm job</td>
<td>38.1</td>
<td>41.7</td>
<td>40.5</td>
</tr>
<tr>
<td>(Work hours/week at most recent non-farm job)</td>
<td>(13.9)</td>
<td>(13.5)</td>
<td>(12.6)</td>
</tr>
<tr>
<td>Number of non-farm jobs last year</td>
<td>1.2</td>
<td>1.2</td>
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</tr>
<tr>
<td>(Number of non-farm jobs last year)</td>
<td>(0.5)</td>
<td>(0.6)</td>
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Measuring farmworker responsiveness to wages
How do we measure how responsive workers are to changes in wages?

- Use elasticities to measure responsiveness

- Labor supply elasticity measures how the number of hours workers “supply” to the market changes when the wage changes:

  Example:

  ![Diagram showing the relationship between wage and hours supplied]

  ![Diagram showing the relationship between wage and hours supplied]

- Hold other worker characteristics constant (task, demographics, etc.)
How does this responsiveness differ by worker legal status?
How have these different levels of responsiveness changed over time?
Policy Implications:

• Evidence that policies designed to provide a path to legalization effectively move would increase workers’ responsiveness to wages

• Such a policy would have limited labor supply impacts in the middle period of our sample
  • Low labor supply response from immigrant workers in this period
  • Marked by the largest gaps between citizen and undocumented wages

• Given the relative wage levels, possible that such a policy would increase wage bill but may help to attract and retain workers
Conclusions:

• The timing of implementation matters a lot, as does the relative wage of one group to another

• Labor supply elasticities are low overall:
  • Open question: How much wages would need to rise to attract sufficient labor to the sector?

• Still unknown & a next step:
  • How do workers’ hours in agriculture change when their legal status changes?
Thank you!

Any questions?

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Number of workers, by legal status: