Who is Served by the Tip Credit? Effects of Minimum Wage Laws on Tipping, Employment, and Prices at Restaurants

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Disclaimer: The views expressed are those of the authors and not those of the U.S. Census Bureau. All results have been reviewed to ensure that no confidential information is disclosed (CBDRB-FY22-CES008-001, CBDRB-FY22-CES008-006).
How do businesses respond when the minimum cost of hiring workers rises?

- Choose to have fewer workers
- Raise prices
- Go out of business

Are the workers currently employed at the business better off?

- Earn more in base pay (wages) or in tips
- Fewer hours so earn less
- Lose their jobs
Why study restaurants?

- A dynamic portion of the U.S. economy where small business owners are still a significant share of the employers
  - Larger share of employment at small and young firms

- Prior to the pandemic, a growing section of our economy
  - Restaurants had a high net job creation rate
  - Entry-level jobs for younger workers

- Restaurants experienced a huge shock in 2020 Q1
  - Quarterly Workforce Indicators (QWI) report 2.5 million jobs lost
  - This industry can be disrupted by macro-economic shocks
Two minimum wages

Minimum wage

Wage

Minimum wage

Tip credit

Tipped subminimum

Wage
### Combining Federal and State Data

**Restaurant establishments (NAICS 722)**

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Census of Retail Trade (CRT)</strong></td>
<td>Longitudinal Business Database (LBD)</td>
</tr>
</tbody>
</table>
| All restaurants 1992-2018 | CRT every 5 years  
Collects state, type of restaurant, prices, revenue, employment, payroll |
| LBD every year | Federal tax filings with state, employment, payroll, revenue, firm survival |

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UI Wage records</strong></td>
<td>W-2 records</td>
</tr>
</tbody>
</table>
| All restaurant workers 2005-2018 | UI: EIN to SEIN to PIK  
- state, quarterly earnings, job tenure, limited hours data |
|  | W2: EIN to PIK  
- annual earnings, annual tips |

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary Statistics</strong></td>
<td>BDS and QWI 2018</td>
</tr>
<tr>
<td>Total number of restaurants</td>
<td>600,000</td>
</tr>
<tr>
<td>Total number of workers March 12th</td>
<td>12 million</td>
</tr>
<tr>
<td>Average quarterly earnings</td>
<td></td>
</tr>
</tbody>
</table>
- age 19-21: $1100  
- age 25-34: $2000 |
| Age distribution of workers |  56% under age 35 |
| Quarterly Job Transitions | 19% Hire rate  
18% Separation rate |
States laws provide a natural experiment for studying the effect of minimum wages
Levels of Minimum Wage by State, 2005
States have become more diverse over time
Levels of Minimum Wage by State, 2018
How we measure the impact of minimum wage: Compare changes over time across states

<table>
<thead>
<tr>
<th>State</th>
<th>2006 - 2005</th>
<th>Change in earnings across two years related to change in minimum wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>State XX</td>
<td>Min wage Diff = $5.25 - $4.00 = $1.25</td>
<td></td>
</tr>
<tr>
<td>State YY</td>
<td>Min wage Diff = $4.00 – $4.00 = $0.00</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restaurant</th>
<th>Earnings Diff Worker A</th>
<th>Earnings Diff Worker B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant 1</td>
<td>$25</td>
<td>$10</td>
</tr>
<tr>
<td>Restaurant 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Change in Regular Earnings due to 10% increase in Minimum Wages

Percentage change in earnings

2.3

1.2

Regular Minimum Wage  Tipped Minimum Wage

Results for all workers
Results for tipped workers

Change in Regular Earnings due to 10% increase in Minimum Wages

Percentage change in earnings

- Regular Minimum Wage
- Tipped Minimum Wage
Results for tipped workers

Change in Tip Earnings due to 10% increase in Minimum Wages

Percentage change in tip earnings

- 2.98
- 0.31

- Regular Minimum Wage
- Tipped Minimum Wage
Results for restaurants

<table>
<thead>
<tr>
<th></th>
<th>All Restaurants</th>
<th>Single Restaurants (not chains) with tipped workers or table service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular Min.</td>
<td>Regular Min. Wage rises</td>
</tr>
<tr>
<td>Employment</td>
<td>no signif. effect</td>
<td>no signif. effect</td>
</tr>
<tr>
<td>Base Payroll</td>
<td>rises ↑</td>
<td>rises ↑</td>
</tr>
<tr>
<td>Total Tips</td>
<td></td>
<td>rises ↑</td>
</tr>
<tr>
<td>Prices</td>
<td>rises ↑</td>
<td>no signif. effect</td>
</tr>
<tr>
<td>Revenue</td>
<td>rises ↑</td>
<td>no signif. effect</td>
</tr>
<tr>
<td>Exit</td>
<td>no signif. effect</td>
<td></td>
</tr>
</tbody>
</table>
Summary

• Combination of state and federal data provides insight on how law changes impact both businesses and workers
  • Workers earn more in the same job
  • Restaurants see a rise in payroll and often raise prices but don’t exit
• Heterogeneity in how laws impact businesses and workers
  • Tipped workers
  • Single establishment restaurants versus chains
• Future work
  • Further understand differences between table service and fast food restaurants
  • How does minimum wage impact age distribution of workers?
  • How does it impact worker turnover?
Thank you!

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