Intergenerational Effects of Unemployment Insurance: Evidence from Tax Data

Connor Cole, U.S. Department of the Treasury
Ruidi Huang, Southern Methodist University
Erik Mayer, University of Wisconsin-Madison
Corbin Miller, U.S. Department of the Treasury
Barton Willage, University of Colorado - Denver, UiB, and NBER

Disclaimer: All opinions expressed are those of the authors and do not represent the opinions of the U.S. Department of Treasury.
Motivation and Research Question

- Job loss is common and highly detrimental to workers
  - And these harms spill over to children’s education and earnings

- Unemployment insurance (UI) is the primary program to help displaced workers
  - Large and expensive program: 14 million claimants, $120 billion in 2009

- However, we know little about how UI generosity impacts children
  - Other programs such as Medicaid and EITC suggest possible spillovers

- Research question:
  - What effect does UI generosity have on displaced workers’ children?
US UI Policy Background

- Typical US UI replaces \( \sim 50\% \) of wages for 26 weeks
  - Conditional on minimum work/earnings history

- When labor markets are bad, federal government increases UI generosity
  - Either in replacement, length, or both
  - e.g. 99 weeks max during Great Recession
  - e.g. $600 additional during peak Covid

- Often triggered by state unemployment rates

- States can also introduce variation in UI generosity
UI Policy Variation

- Source of variation:
  - State-by-year maximum benefits (max per week × max weeks)
  - Most important control: sub-state economic conditions
  - Comparing people facing same economic conditions but different UI generosity

### Maximum Total Benefit

<table>
<thead>
<tr>
<th>Year</th>
<th>Maximum Total Benefit (Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>50,000</td>
</tr>
<tr>
<td>2002</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>100,000</td>
</tr>
<tr>
<td>2006</td>
<td>150,000</td>
</tr>
<tr>
<td>2008</td>
<td>2000</td>
</tr>
<tr>
<td>2010</td>
<td>2002</td>
</tr>
<tr>
<td>2012</td>
<td>2004</td>
</tr>
<tr>
<td>2014</td>
<td>2006</td>
</tr>
<tr>
<td>2016</td>
<td>2008</td>
</tr>
<tr>
<td>2018</td>
<td>2010</td>
</tr>
</tbody>
</table>

### Percent Change in Benefits

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Change in UI Generosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>-2.00</td>
</tr>
<tr>
<td>2002</td>
<td>0.00</td>
</tr>
<tr>
<td>2004</td>
<td>2.00</td>
</tr>
<tr>
<td>2006</td>
<td>4.00</td>
</tr>
<tr>
<td>2008</td>
<td>6.00</td>
</tr>
<tr>
<td>2010</td>
<td>8.00</td>
</tr>
<tr>
<td>2012</td>
<td>10.00</td>
</tr>
<tr>
<td>2014</td>
<td>12.00</td>
</tr>
<tr>
<td>2016</td>
<td>14.00</td>
</tr>
<tr>
<td>2018</td>
<td>16.00</td>
</tr>
</tbody>
</table>
Data

- Use universe of filers in US tax records to identify
  - UI claimants, 1999-2018 (1099-G)
    - State and year for merging UI generosity
  - Children of claimants (dependents from 1040)
  - Children attending higher education (1098-T)
  - Children’s labor market outcomes (W-2)
  - Children’s tax liability (1040)

- Child-by-parent-by-UI spell
Empirical Strategy

\[ y_{pcskt} = \beta_0 + \beta_1 \times MaxUI10000_{st} + State_s + Year_t + Child_{ct} + County_{kt} + \epsilon_{pcskt}, \]

- \( y_{pcskt} \): outcome of interest
  - child \( c \), parent \( p \) with UI in county \( k \), state \( s \), year \( t \)

- \( MaxUI10000_{st} \) is the max benefits in $10,000
  - \( \beta_1 \) is the coefficient of interest; effect of a $10,000 increase in max UI generosity

- \( State_s \) and \( Year_t \) are state and year FE

- \( Child_{ct} \) include individual-level controls
  - parent baseline wages, marital status, cumulative UI; child age, sex, birth year FE

- \( County_{kt} \) include county-level controls
  - unemployment rate, growth in personal income, population density, and share of the population that is white

- Ensures that job market faced by parents are not driving findings
Assumption: UI generosity is unrelated to baseline characteristics

Little evidence UI generosity related to these characteristics

Supports causal interpretation of our estimates
Main Results by Age Measured: Effects on Children

- $10,000 increase in maximum benefits for parents
  - No effect on children’s college attendance regardless of age measured
  - 0.1-0.5 ppt increase probability of employment at ages 23-29
  - $300 increase in wages at ages 23-29
  - $50 increase in tax liability at ages 23-29

- Increased UI generosity for parents improves children’s labor market outcomes
  - And the government recuperates much of the expenditure

W2 Earnings
Potential Mechanisms: Effects on Parents, Event Studies

- $10,000 increase in maximum benefits for parents
  - Increases benefits collected by $1,000
  - Decreases employment by 1 ppt and earnings by $1,000 in the short-run
  - Close to 0 net effect on total net household income

- Increased UI generosity for parents extends unemployment,
  - But no change in total resources; resources not mechanism
  - Potential mechanisms: reduced stress or increased time with children
Conclusion

- More generous UI for parents improves children’s long-run labor market outcomes

- Meaningful fraction of the marginal UI $ is recuperated by increased tax revenue

- Mechanisms: Not changes in resources; perhaps ↓ stress or ↑ time at home
Thank you!

All questions and comments welcome

Contact: Barton Willage, barton.willage@ucdenver.edu