Economic Research — Introduction

What are economists trying to do in empirical studies?

- Establish relationships between variables
- Predict and explain
- Join theory and reality
# Economic Research

What does empirical research look like?

<table>
<thead>
<tr>
<th>General research structure</th>
<th>General article structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motivating question</td>
<td>1. Motivating question</td>
</tr>
<tr>
<td>2. Theoretical hypothesis</td>
<td>2. Literature review</td>
</tr>
<tr>
<td>3. Gather data</td>
<td>3. Introduce data</td>
</tr>
<tr>
<td>4. Analyze</td>
<td>4. Methodology/results</td>
</tr>
<tr>
<td>5. Conclude</td>
<td>5. Conclusion</td>
</tr>
</tbody>
</table>
Minimum Wage and Employment: Expectations

- With perfect competition, theory suggests that as the minimum wage increases, unemployment increases among low-skilled workers
  - Employers will substitute more expensive labor with equipment/other capital
  - Reduction in labor demand due to higher cost
- In reality, there’s conflicting evidence on both sides
- What do you think are the results of Card and Krueger’s research?
What’s the question, again?

“If we raise the minimum wage, making labor more costly, will we see a decrease in employment?”

How do we assess this?
Background

- In 1992, New Jersey’s minimum wage increased from $4.25 to $5.05
- Surveyed 410 fast-food restaurants in New Jersey and eastern Pennsylvania before and after the increase in minimum wage
- Reasoning for choosing fast-food restaurants:
  - Leading employers of low-wage employees
  - Comply with minimum wage regulations
  - Tasks and products of fast-food restaurants are typically similar, allowing for easier obtainment of reliable employment, wage, and price measures
  - Easy to construct sample frame
  - Past experience suggested that fast-food restaurants have a high response to telephone surveys
Sample frame consisted of restaurants from four fast-food chains
First wave of telephone surveys conducted about a month before scheduled wage increase
Second wave occurred eight months after wage increase
Collected information on meal prices, hours of operation, etc.
Difference in Difference Summary

- Scientific experiments use a control variable to understand the effects of a treatment
- Economists are often unable to create mass social experiments and instead have to rely on observational data
- Idea: identify a set of people who experience some treatment, then identify a similar group of people who did not receive the treatment
Difference in Difference Summary

- Assess some quality/measure for group receiving treatment (group 1) before beginning treatment (time t=0)
- Assess same quality/measure for control group (group 2) at time t=0
- Repeat measure some time after treatment (time t=1)

\[(Δ\text{measure}_{\text{group 1}} − Δ\text{measure}_{\text{group 2}})\]

is the treatment effect
Regression

Dummy:
- $\Delta E_i = a + bX_i + cNJ_i + \varepsilon_i$
- Where for store $i$, $E = \text{FTE employment}$, $X$ is a set of controls, $NJ$ is New Jersey dummy

Proportional wage increase:
- $\Delta E_i = a' + b'X_i + c'\text{GAP}_i + \varepsilon_i$
- Where $\text{GAP} = 5.05 - W_{1i}/W_{1i}$, or 0 for stores where minimum wage is non-binding (e.g. PA)
Findings

- Rise in minimum wage does not result in lower employment
- Contrary to expectations, full-time equivalent employment increased in NJ relative to PA

Possible explanations:
- Employers can offset costs by reducing non-wage compensation/benefits (e.g. free meal) → no evidence to support
- Adjustment of pay raise schedule → no evidence to support
- Increase in product prices → mixed evidence
What if….

- What if Pennsylvania makes for a poor control group?
  - Check: regress employment change on GAP and NJ to isolate effect of NJ from effect of active treatment
  - NJ coefficient insignificant

- What if unobserved demand shocks outweighed negative effects in NJ?
  - Check: regress variables at local level, where significant demand fluctuations ought to be heterogeneous
  - Effects are constant to different areas
Theoretical explanations

What really happened?

- Did firms cut fringe benefits? (e.g. free and reduced meals)
  - No, insignificant positive shifts in benefits observed
- Did firms stop giving raises to reward tenure?
  - Avg time to first raise increased by 2.5 weeks in NJ
  - Not statistically significant
- Did food prices increase?
  - Measure price of basket of products in stores
  - Some difference between PA and NJ; none within NJ
- Did firms stop opening stores?
  - Regress store openings on minimum wage changes
  - No significant effect
What happened, then?

- Firms may have adjusted quality of service
- Relative food prices may have changed
  - Perhaps labor-intensive products (entrées) rose in price, products that don’t include much labor (drinks, french fries) dropped in price
- To some extent: theoretical mystery
  - Maybe you can figure it out!
Recent Research and Criticisms

- David Neumark and William Wascher reviewed minimum wage research since 1990 (2006)
  - ⅔ of more than 100 studies suggested negative employment effects
  - 85% of credible studies (33) suggest negative employment effects
  - Evidence for low-skill workers being negatively affected is strong

- Arindrajit Dube, T. William Lester, and Michael Reich argue that location matters (2010):
  - Find no significant employment effects due to minimum wage increase
  - Argues that studies that do not account for local economic conditions tend to produce negative employment effects because they capture other shocks associated with low-skill employment
## Upcoming Topics

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/5</td>
<td>The Rise of Domestic Outsourcing and the Evolution of the German Wage Structure</td>
</tr>
<tr>
<td>10/19</td>
<td>Corruption, Norms, and Legal Enforcement: Evidence from Diplomatic Parking Tickets</td>
</tr>
<tr>
<td>11/2</td>
<td>How Important is Access to Jobs? Old Question - Improved Answer</td>
</tr>
<tr>
<td>11/16</td>
<td>A Direct Test of the Theory of Comparative Advantage: The Case of Japan</td>
</tr>
</tbody>
</table>
Fed Challenge

- Competition takes place on Nov 3rd. BU competes at the Boston Fed down at the Financial District.
- To apply, send your resume (including GPA, lists of econ courses you have taken, and if any, math/stats courses)

https://www.federalreserve.gov/conferences/fedchallenge.htm
https://www.newyorkfed.org/education/fedchallenge_college.html
Career Opportunities

Wellington Management Open House

Wednesday, October 4, 2017 5-7pm

RSVP by September 29th via the survey link on their website: www.wellington.com

Information session followed by networking opportunity
Career Opportunities

Barclays Asia Investment Bank Information Session

Monday, October 9, 2017 6-8pm

Register by September 24 by sending your resume to campusrecruitmentasia@barclays.com with the subject line “Registration for Barclays Asia Investment Bank Information Session in Boston”

Information session followed by networking opportunity
NETWORK OF THRONES: KINSHIP AND CONFLICT IN EUROPE

BY

SETH G. BENZELL

BU ALUM - MIT POST DOC
Thanks for coming and See you next week!

How to Keep in Touch

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Email us at uea@bu.edu