Capacity Building workshop on Impact Evaluation of Employment Programs

Using administrative data for randomized control trials

Julieta Trias, Gdańsk, February 21, 2017
What is administrative data?

• Data originally **collected for three main purposes:** monitoring of government programs and interventions, targeting government interventions, enabling regulation and auditing

• **Derived from an administrative source,** usually a government unit (sectoral ministries, program implementation and administration units, etc.)

• Often of **high frequency** and with **large coverage** of target group (e.g. children enrolled in school, migration records, vital records, social security records, etc.)
Benefits of using administrative data

• Large sample sizes / high frequency
• Reporting at the local level
• Official data definitions
• Low cost
• Analysis can be repeated routinely, quick and at low cost
Drawbacks and limitations

• Privacy
• Access -> Requires coordination between different government levels and institutions
• Administration lacks research capacity and regulations
• Fewer variables that might limit the scope of the analysis
• Data might not cover all the population needed for the evaluation, for instance non beneficiaries
• Format -> Information recorded in different data platforms and not organized for statistical analysis
How can we solve some limitations?

- Anonymization
- Complement administrative data with surveys to collect additional data
Can government use admin data to improve the effectiveness of policies?

• Does the program work?
• What is the long term impact?
• Which delivery modality is more cost effective?
• What is the impact of enhancing the program vs the old model? [Enhanced program vs usual business]

But also more basic questions:
• How to increase participation in the program?
UK and the Behavioral Insight Team

• Behavioral Insight Team, initially at the Cabinet office, use RCT and administrative data to improve program design and the effectiveness of policies in the UK and overseas.

• Need to prove that the financial benefits of their activities outweigh the cost
How to help people to go back to work?

• Pilot to reorganize administrative process in jobcentres
  ✓ Treatment: New commitment focus intervention
  ✓ Control: Old regime

1. Cut down process
2. Commitments
3. Strengths identification

Increase in 5 pp in off-flow rates from benefits
Using text messages to prompt people to turn up to recruitment events

Percentage turning up to recruiting events following different SMS

N=1224

Encouraging repayment of court fines

Repayment rates

Source: Behavioural Insights Team & HMCTS, 2012
Oregon Health Insurance Experiment - US

• In 2008, Oregon had money to cover some but not all of those eligible for a previously-closed Medicaid expansion program
  • Covers low-income, uninsured adults not categorically eligible for Medicaid (not on welfare, disability, etc.)
• Chose lottery for fairness reasons
  • Asked interested individuals to sign up on a list
  • Randomly selected about 30,000 of 75,000
• Study impact of Medicaid to low-income, uninsured adults via random assignment
Data and Results

- **Administrative data** (~75,000): Hospital discharge records, emergency room visits, earnings, etc.
- **Mail surveys** (sent to ~55,000 people): health care use, financial strain, self-reported health and well-being
- **In person interviews and physical health exams** (~12,000): Clinical measures (blood pressure, cholesterol, blood sugar, etc.), medication, medical history (e.g. dates of diagnoses)

**Results:**
- Increase health care use
- No impact on employment or income
- Reduction of out of pockets costs
- Improve self reported health and mental health
Long-term follow-up: Project STAR

• Randomized students and teachers in K-3rd grade to different classrooms [Tennessee, mid-1980s]
• Original analyses found
  • Assignment to smaller or higher-quality class improved test scores
  • But gains faded out by 8th grade
• Longer-term analysis
  • Linked students to tax returns to study outcomes at ages 25-27 (eventually longer)
  • Found improvements in markers of adult success
    • Earnings, college attendance, quality of college, home ownership
    • Potential explanation / reconciliation: improvement in non-cognitive skills
Has Poland used administrative data?

Efforts to merge information

Case: Careers of University of Warsaw students

• Government wanted to evaluate the success of graduates in the labor market. Project financed from EU funds.

• What data is available?
  • University track graduates through voluntary surveys – Is this enough?
  • University registry
  • ZUS (Social Insurance Institution) has data on labor market outcomes (employed, income, firm, tax, etc).
  • Data was linked and anonymized.
Trends but not measures of effectiveness

% of graduates not employed in the following months of graduations

Average wages in the following months – employed full time

Average time in months to find any job after diploma: 0.31 months
Average time in months to get a job under a labor code contract: 2.83 months
Expanding the data

• The project ZUS / IBE / UW was used to create a similar system for the entire country.
• Similar systems have been established, among others, in the Nordic countries, Spain, Austria, Lithuania and Hungary.
• Connecting the ZUS and POL-on systems [POL-on: integrated system of information of Science and Higher Education- monitoring system of professional careers of graduates].
• But now the evaluation needs to be designed...
Trying to plan an RCT: *Digital School*

• Digitalization of schools has for years been one of the priorities of the government
• Question: How to support schools to digitization supported the development of the competence of the students and gave access to digital resources?
• EU projects covering the entire country (digital resources, training) accompanied by a government project of limited scope
• Hundreds of local governments with specific characteristics applied for the program
• Schools that received support were selected at random
Discussion

• How to use your administrative data to evaluate projects?
• Are there any other administrative data you could use but you don’t have access?
• What are the limitations?
• What is needed to address these limitations?
• What are the benefits for your work? Why would you need impact evaluation?