Evidence-based Policy:
Do we have the data necessary to recognize good policy if we see it?

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Policy Lessons from the IZA Evaluation Dataset
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Road Map

- What is Australia's data story?

- How do good data support the evidence base?

- What data are we lacking?

- What have been the most important lessons along the way?

The data story for Australia

The Context

1995:

- I accidently migrate to OZ with husband and 4 kids.
- I meet Thai PhD student, supervised by Bob Gregory, who is working on native Americans using US census data.
- I become confused at a workshop because what appears to be regression analysis turns out to rest on very detailed descriptive tables – not unit record data – which cost a fortune to get from ABS.

The over time a bunch of stuff happened:

- Following our Canadian friends, we too had a "Data Liberation" campaign.
- The Immigration Department began to make its data freely available.
- ABS changed its pricing policy so that data are accessible to individual academics for no charge.
- Academics got access to the government's administrative unit record data.
- We launched HILDA – outside of the ABS.
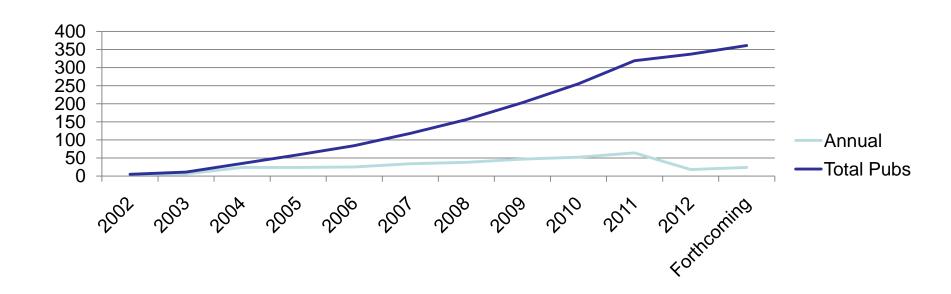
The Context

Now:

- HILDA has become one of the world's top 5 panel surveys (wave 11 now) – like SEOP, BHPS, PSID, SLID.

- Many academics have access to government's administrative data through research partnerships.

- The Australian government runs a bunch of panel surveys – e.g. LSAC and LSIC – outside of the ABS.

- ABS is not as relevant as you might think it should be … lots of OZ social science research uses non-ABS sources.

The evidence base rests on the data

Publications using HILDA data

What Evidence Should Policymakers Use?

Leigh (2009) argues that:

– Explosion – and increasing accessibility – of social and economic research in past several decades makes it impossible to read everything;

– Need an 'evidence hierarchy' (like in medicine) so that we give more weight to high-quality evidence.

Evidence Hierarchy for Australian Policymakers
1. Systematic reviews (meta analyses) of multiple randomized trials
2. High quality randomized trials
3. Systematic reviews (meta analyses) of natural experiments and before-after studies
4. Natural experiments (quasi-experiments) , e.g. Diff-in-diff, RDD, PSM
5. Before-after (pre-post) studies
6. Expert option and theoretical conjecture
All else equal, studies should also be preferred if they (i) are published in high-quality journals, (ii) use Australian data, (iii) are published more recently; and (iv) are similar to the policy being considered.

Adopting this evidence hierarchy poses substantial data hurtles:

Non- and quasi-experimental methods are data hungry:

- We can't always find the exogenous indentifying variation that is necessary -- i.e. "natural experiment", discontinuity, IV, or exclusion restriction.
- No matter how much we have, we don't observe everything we want.

We need more randomized trials:

- We need to work more closely with policymakers to design randomized trials of new and existing interventions.
- This is costly and doesn't always answer the full range of questions we are interested in.
- Policymakers are constrained in ways that don't fit well with what we are taught in econometrics!

The Real World

This paper discusses two common scenarios where evaluators must conduct impact evaluations when working under **budget, time or data constraints**. Under the first scenario the evaluator is not called in until **the project is already well advanced** and there is a **tight deadline** for completing the evaluation, frequently combined with a **limited budget** and **without access to baseline data**. Under the second scenario the evaluator is called in early, but for **budget, political, or methodological reasons it is not possible to collect baseline data on a control group and sometimes not even the project population.**

Bamberger, Rugh, Church, Fort (2004), "Shoestring Evaluation: Designing Impact Evaluations under Budget, Time, and Data Constraints" *American Journal of Evaluation*, Vol. 25(1) pp. 5 – 37.

And think about that footnote:

Everything else equal, studies should also be preferred if they:

  (i) are published in high-quality journals;
  (ii) use Australian data;
  (iii) are published more recently; and
  (iv) are similar to the policy being considered.

My wish list

What do we need?

A. Administrative data linked to survey data:

- Administrative data provide more accurate information about a range of issues … e.g. social assistance receipt, medical use, income, etc.

- Survey data fill in critically important information that can't be found in administrative data alone.

In Australia, there is one administrative agency – Centrelink -- that administers all transfer payments to the population.

- This includes baby bonus, childcare payments, sole parent pensions, unemployment payments, disability payments, student benefits, rent assistance, and old-age pension;

- Fortnightly payments records on entire population of getting benefits;

- Several secure data rooms at universities house a 1% sample;

- Grants and special projects allow other versions can be created (i.e. deal with small programs by increasing samples AND can link to survey data);

The Journeys Home Project

Longitudinal study of those recently homeless and vulnerable to homelessness.

The Plan:

- Two year study with 4 waves 6 months apart.
- Sampling frame is the records for all Centrelink IS since 1st July 2002. Vast majority of homeless persons on benefits and in the frame.
- Sample from those (i) currently homeless; (ii) predicted to have a high probability of homelessness;
- Link survey data to administrative records with people's permission.

The Details

- There are 138,091 people meeting the sampling restrictions in the data.
- Admin data provide contact details to the market research firm (55% of cases);
- Centrelink caseworkers and NGOs helped in making contact.
- In-scope sample issued to field is 2719 and wave 1 response rate 61.6%.

The Youth in Focus Project

The YIF project assesses the pathways through which socio-economic disadvantage is passed from one generation of Australians to the next.

This is a longitudinal study, with two key data sources:

- an inter-generational dataset based on administrative records of a cohort of 18 year olds and their parents;

- a longitudinal survey of a random sample of 18 year olds – and their mothers -- who appear in the administrative data.

Reference Population

- All 18 year olds born between 1 Oct 1987 and 31 March 31 1988 who appear in the Centrelink between 1991 and 2005.

- The 18 year old was listed as a dependent of an adult who received a government benefit or is now getting benefit in his own right.

- Comparing to census data suggests that over 98% of birth cohort is represented in the administrative data.

What do we need?

B. Wealth, asset, savings, expenditure, and consumption data linked to large-scale, nationally-representative panel data:

• We need to be able to move beyond our standard (imperfect) measures of income and to think about different concepts of economic well-being.

• The panel data provide the context for a range of critical questions:

  • How are resources shared within the household?

  • Is everyone equally poor?

  • How do the consumption needs of the disabled differ?

  • Can better financial management improve outcomes for the poor?

What do we need?

C.   Linked employer – employee data:

- There are a whole range of policy issues that can't be resolved by observing only one-side of the market … e.g. What's the origin of gender disparity in LM outcomes? How important are LM frictions?
- It's the best bet for understanding general equilibrium effects.

D.   Health data (including measurements) and genetic information linked to large-scale, nationally-representative panel data:

- Issues relating to health … e.g. healthy aging (old), healthy development (young), intergenerational transmission of health … are going to continue to be pressing policy issues and we need a strategy for answering them.
- It's the best bet for understanding the (endogenous) interconnections between the social, cultural, and biological dimensions of health.

What do we need?

E. Subjective data:

- It can be difficult to make progress on some issues without subjective data:
  - <u>Preferences and preference formation</u> : Relying only on revealed preferences is limiting. We require a lot of theoretical structure and stylized models to get at the parameters of the utility function. Subjective data can be an important complement.
  - <u>Expectations and expectation formation</u> : How important is bounded rationality: Why do people seem to deviate from seemingly rational behavior?

- What people think matters for understanding their behavior:
  - For example, statistical (objective) measures of discrimination do a very bad job of predicting who feels aggrieved by and acts on (subjective) discrimination.

- We care about what people think! Sometimes changing people's perceptions is the legitimate focus of policy.
  - It is not enough to make people safe in their neighborhoods – we also want them to feel safe.
  - We need to understand people's preferences, values, and social attitudes to understand the economic and political constraints that limits the policies we might actually adopt.
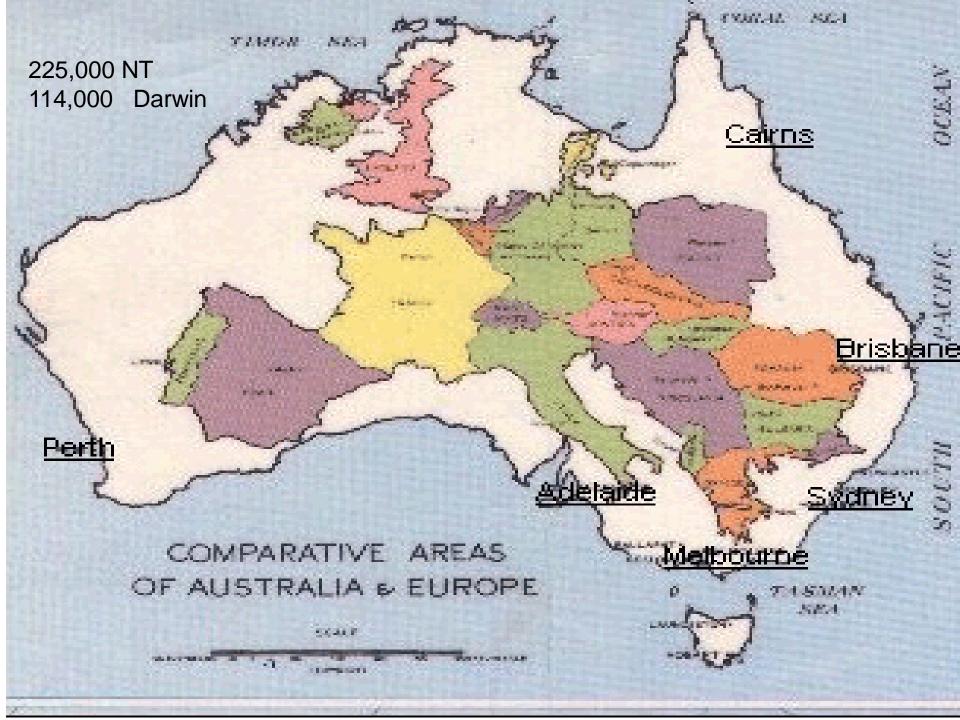
What do we need?

F.   Intergenerational Data:

- We know that policy impacts are often have profound implications for intergenerational equity … yet we don't typically evaluate them from that perspective.

G.   Data on extended families:

- We need to identify a way to analyze the economic and social relationships between extended family members. This is increasingly being done in developing countries, but is less common elsewhere.

- Accessing true intergenerational data is very difficult.

What do we need?

H.   Data on special groups and difficult populations:

- We know that policy impacts are often heterogeneous … yet we don't always sample or even identify these groups in a way that allows us to draw policy inferences for them.

- Some examples, in the Australian context:
    - Refugees … data on immigrant population as a whole are great, but we don't identify different types of migrants (family, skilled, refugee) precisely.
    - Aboriginals … A real challenge: They represent only 2% of the population (about 460,000 people in country of 23 million), are geographically dispersed, and speak over 20 languages widely (with another 180 or so in some use). Cultural sensitivities abound.
    - People in rural areas ("the bush") … 60% of the population lives in a capital city. The population of the NT is 225,000 with 114,000 in Darwin.
    - All of these groups are the focus of intense policy focus, disproportionate resources, and in the case of the rural population, disproportionate political influence.

225,000 NT
114,000   Darwin

Cairns

Brisbane

Perth

Adelaide   Sydney

Melbourne

COMPARATIVE AREAS
OF AUSTRALIA & EUROPE

A few little lessons I have learned along the way

It is important to be opportunistic and prioritize

You can do anything. But you can't do everything and you certainly can't do everything at once.

– If you don't know anything, learning something simple can be very powerful.

– Without serious, long-standing **research partnerships** between policymakers, academics, and other stakeholders very little progress can be made.

– Good luck helps a lot! You need to be in the right place, at the right time, and talking to the right person in order to find truly innovative data solutions.

It is important to be opportunistic and prioritize

- Always lead with your strong suit. In particular, exploit unique institutional arrangements which allow you to do what no one else can.

  - In Germany: The data underpinning the employment system provide a unique opportunity to study both firm and employee behavior. We couldn't easily replicate the IZA evaluation data set in Oz and we won't ever get a linked employer-employee data set.

  - In Scandinavian countries: A registration system, mature administrative data, and willingness to link data are allowing a lot of progress to be made on intergenerational and lifecycle issues.

  - In OZ: We have a comparative advantage in (i) immigration data (i.e. only 6 entry points into the country and 25% of population is foreign-born) and (ii) in linking administrative to survey data.

References

Leigh, A (2009) What evidence should social policymakers use? *Australian Treasury Economic Roundup*, Vol. 1, pp. 27 – 43.

Bamberger, M; Rugh, J; Church, M; and Fort, L (2004), "Shoestring Evaluation: Designing Impact Evaluations under Budget, Time, and Data Constraints" *American Journal of Evaluation*, Vol. 25(1) pp. 5 – 37

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