



Australian Government
Department of Families, Housing,
Community Services and Indigenous Affairs

The role of household panel surveys in evidence-based policy

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Since mid 1960s many democracies in the world reformed the public service

because
Economic and fiscal crises

- Globalisation and competition
- Failures of prevailing economic models
- Shortcomings in the public service

delivery

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The main aim of these reforms were to increase

The efficiency and effectiveness of service delivery

Effectively respond to citizen demands

Policy makers turned to the research community to

- **Track the impact of government–policies & social programs; and**
- **Demonstrate accountability**

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To meet this demand research community undertook analysis of data based on

- **Cross sectional data carried out at a particular point in time**
- **Repeated cross sectional data to assess trends**
- **Simulation studies to provide evidence on policy impact**
- **Cross sectional data found to be**

inadequate to meet policy demands
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Demand for longitudinal studies grew

Type of longitudinal studies

Repeated cross sectional surveys

But they measure aggregates not the
individuals;

Can use data longitudinally by comparing
people in a particular age in year t with those
in a subsequent age in $t+1$

Can measure net change (but not truly

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longitudinal



Administrative data linkage

- UK Longitudinal study linking population census records with administrative data
- Samples are large and analysis can cover all client groups
- Confidentiality issues limit linking
- Data coverage in administrative collection also limited by the purpose

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Retrospective surveys

Examples FWLS in UK

Results can be obtained without a long wait time;

Low cost

Problems:

- Recall error (long ago or not so happy events)
- Misplacement of dates (telescoping)
- Inaccuracies in responding (income and exp.)
- Survivor bias (persons unlikely to be available for interviewing due to poor health, deaths etc)



Prospective surveys (Panel surveys and cohort surveys)

True longitudinal surveys are Panel surveys (household panels or cohort surveys)

Cohort surveys: people with a given characteristic are followed over time (e.g. age cohort or marriage cohort)

Examples: LSAC (infants and children cohort 4 years)



Panel Surveys

- **The unit of analysis is the individual although household could be the primary sampling unit**
- **Individuals are followed over time and interviewed on regular intervals**
- **Have the advantage of both cross sectional and time series elements; and**
- **Better quality data and change at the individual can be measured with confidence**



Panel Surveys.....

Limited data can be collected retrospectively in Wave 1

Easier to add new modules in different Waves

Can couple with qualitative data collection on specific topics



Major panel Surveys

The Panel Study of Income Dynamics (PSID, USA)

The British Cohort Study

The German Socio-economic Panel

**The Canadian Survey of Labour and Income
Dynamics**

The European Community Household Panel

**The Household, Income, Labour Dynamics in
Australia (HILDA)**

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Advantages of panel survey data

- Ability to measure *gross* change
- Can identify transitions
- In-depth information on policy issues/impacts
- Determining causality
- Control for ‘unobservables’
- Access to a larger sample (pooling)
- Cross-country comparisons
- Measure inter-generational effects
- Measure age, period and cohort effects

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HILDA Survey

Commissioned by FaHCSIA

Managed by the Melbourne Institute

Started in 2001

Covered 13,069 persons in 7,682

households

Conducted annually the latest Wave in

2009

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The largest HHPS of its kind ever Conducted



An example (HILDA survey) Waves 1- 6

Data derived from the Report by Wilkins, Warren and Hahn, 2009

Poverty dynamics

Relative poverty is used as an indicator

The number of persons below the poverty line.

The poverty line is set at household income half the median household income of the relevant year.

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Cross-sectional element of the survey gives

Year	Relative poverty
2001	13.4
2002	12.9
2003	12.8
2004	12.5
2005	13.6
2006	11.9

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Longitudinal element show....

A. Persons in poverty, 2001 to 2006

- % Not in poverty 69.1

In poverty (%):

- Any one year 12.9
- Any two years 5.7
- Any three years 4.5
- Any four years 2.8
- Any five years 2.6
- All six years 2.6

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B: Poverty persistence

In poverty in	% in poverty also in		
Year	2001	2003	2005
• 2002	53.3	na	na
• 2003	49.7	na	na
• 2004	44.1	58.1	na
• 2005	46.7	55.1	na
• 2006	41.6	49.3	56.9

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Panel data also have some limitations...

Non-response and attrition

- Item and Wave non-response
- Attrition from subsequent Waves

Panel conditioning (time-in-sample bias)

Seam effect

Representativeness and sample size issues (coverage errors accumulate over time)

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We need to recognise that

- **Panel data are useful but should not be considered as a panacea**
- **Panel data should not be the only source for decision-making**
- **Still cross sectional data are useful**
- **To be useful panel surveys should consider minimising advantages and maximising disadvantages**

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To improve the quality of panel data:

- **Draw the initial sample to the highest quality;**
- **Implement clear and effective ‘following rules’;**
- **Control panel attrition and non-response;**
- **Use DI method to reduce wave inconsistencies; and**
- **Collect continuous information about changes between waves**

Duncan, G.J. 1992: “Household panel Studies: prospects and problems”

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