ARE THE POOR GETTING POORER?
(AND THE RICH GETTING RICHER?)

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Outline: are the poor getting poorer?

• Perceptions versus realities
• Measuring income inequality & poverty
• What about income ‘mobility’ & poverty persistence?
• Some inequality & mobility evidence for New Zealand
Average responses to question: What proportion of the total household wealth do you think the wealthiest 1% own?

<table>
<thead>
<tr>
<th>% point difference</th>
<th>too low</th>
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<th>Avg. guess</th>
<th>Actual</th>
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Many different income-based (and non income-based) measures

**Inequality**: Gini coefficients & Lorenz curves

**Poverty**: headcount, poverty (income) gap, ‘inequality of poverty’

And many more (90:10 & 80:20 ratios, “income share of top 1%, 0.1% etc.”)

What measure of income? … before or after taxes and benefits?

Cross-sectional or longitudinal?
Reporting inequality & poverty measures

Is evidence cross-sectional or longitudinal?
Cross-sectional evidence: poverty

The headcount poverty measure …
Cross-sectional evidence: inequality

- Are the poor’s income growth rates falling behind?
- Cross sectional evidence on income growth …

Real household income growth by income decile
2009 to 2016

% change at the top of the decile

Source: Ministry of Social Development (2017)
Decile income growth rates over a long period

Real household income growth by income decile

1982-2016

% change at the top of the decile

Source: Ministry of Social Development (2017)
Inequality: the Lorenz curve & Gini coefficient

\[ G = 2 \times \text{(area A)} \]

Or areas: \( \frac{A}{(A + B)} \)

\( G = 1 \) : maximum inequality
\( G = 0 \) : maximum equality
Inequality: the Lorenz curve & Gini coefficient

$G = 1$ : maximum inequality
$G = 0$ : maximum equality
Inequality in New Zealand – Gini, 1982-2016

Source: Ministry of Social Development (2017)
Inequality in New Zealand - Gini

Source: Ball and Creedy (2015) 'Inequality in New Zealand 1983/84 to 2013/14'.

Gini

- Market income
- Expenditure
- Disposable income

Income Mobility

• Always some people are on low/high incomes
• But is it the *same* people, or different?
• What happens when we follow the same people over time?
  – Why choose *annual* measure of income?
  – Do initially low income people’s incomes grow more slowly?
  – What about when incomes are volatile from year to year?
The problem with annual measures ...

Note: Hypothetical data
Some recent longitudinal evidence for NZ

Inequality
• How does Gini change when measured using multiple year incomes? (IRD data)

Mobility
• Follow 30,000+ NZ individual taxpayers over five year periods (IRD data)
• Compare:
  o ‘incomes in each decile in two different years’ \( \Rightarrow \) measure income growth from \( t \) to \( t+1 \) (different individuals) [cross-sectional]
  o ‘income growth, from \( t \) to \( t+1 \), for the same individuals in a decile at \( t \)’ [longitudinal]

\( \Rightarrow \) How do income growth rates for ‘cross-sectional deciles’ and ‘longitudinal deciles’ differ?
Gini for taxable income measured over 1 to 19 years

- Inequality is much less when income is measured over several years
- It generally \text{starts} lower for ‘working age’ individuals but …
Lorenz curves for 2006 & 2010 incomes
Income growth rates: cross-sectional vs longitudinal

⇒ Longitudinal data reveal ‘regression towards the mean’ properties
⇒ Incomes of the ‘initially poorest’ grew much faster
More details are here ...

https://www.victoria.ac.nz/sacl/centres-and-institutes/cpf/publications/working-papers
Conclusions

• Be wary of statistics apparently showing changes in income inequality or poverty over time.

• Ask: are they cross-sectional ‘snapshots’ at different times, or ‘longitudinal’ – for the same people over time?

• Interpreting c-s snapshots needs care and can mislead e.g. there are always some people on very low or high incomes but what does this represent (is it short-term employment? children’s newspaper rounds?) and are they persistent?

• Longitudinal data (NZ & overseas) suggest clear tendencies for ‘regression towards the mean’ over time – the initially poorer (richer) grow faster (slower)

• It matters whether data are for households or individuals (inequality often looks greater across individuals than across households)
By this point you’re probably thinking ...