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Caveats ahoy!

• Economic statistics...
• Focussing mainly on earnings data (rather than broader household income)
Why analyse earnings data?

• Earnings are a major component of income
• Clear links between income (inequalities) and health (inequalities)
  • Income inequality as a ‘fundamental cause’ of health inequality (Link et al (and many more))
• Need to narrow income (and broader socio-economic) inequalities to narrow health inequalities
• So need to **understand** the nature of those socio-economic inequalities
• Earnings data allow in-depth, detailed analyses...
What data?

- ASHE – ONS’ Annual Survey of Hours and Earnings
  - 1% sample of all employee jobs from HMRC PAYE records
  - Excludes self-employed (and, er, non-tax-payers)
- Trends in earnings inequalities 1997-2016 for:
  - 4 UK nations: Scotland, England, Wales, N. Ireland
  - 4 Scottish cities: Glasgow, Edinburgh, Aberdeen and Dundee
  - 7 (largest) cities in England: Liverpool, Manchester, Birmingham, Leeds, Sheffield, Bristol and London
Looking at what?

- Distribution of earnings over time
  - trends in absolute and relative inequalities
  - all, full-time, and part-time employment
- (By occupation type)
- Public vs. private sectors
- Low pay
- Gender inequalities in all the above

NB Er, very (mercifully) brief examples of all the above today...
Dull definitional stuff (stay awake – it’s still early)

• Gross weekly pay
• All earnings adjusted for inflation to 2016 prices (using CPI index)
• Analyses mainly by percentiles (10\textsuperscript{th} through to 90\textsuperscript{th})
• Crude measures of inequality:
  • Absolute gap = 90\textsuperscript{th}-10\textsuperscript{th}
  • Relative gap = 90\textsuperscript{th}/10\textsuperscript{th}
Bluffers’ guide to the statistical measures used
Made up data: 1% sample of all weekly earnings
Made up data: 1% sample of all weekly earnings

Absolute gap (£): 90th percentile minus 10th percentile
Relative gap: 90th percentile divided by 10th percentile
Let the graphs begin (sorry...
1. Changes in distribution of earnings
Earnings distribution 1997-2016, all jobs

Gross weekly pay (2016 prices) by percentile, all jobs, Scotland 1997-2016

Source: ONS Annual Survey of Hours & Earnings (ASHE)

Absolute gap: £622

Absolute gap: £808

Absolute gap: £739
Earnings distribution 1997-2016, all jobs

Gross weekly pay (2016 prices) by percentile, all jobs, Scotland 1997-2016
Source: ONS Annual Survey of Hours & Earnings (ASHE)

Absolute and relative inequalities in gross weekly earnings (2016 prices), all jobs, Scotland 1997-2016
Source: ONS Annual Survey of Hours & Earnings (ASHE)

Relative gap: 6.1
Absolute and relative inequalities, full-time & part-time employment
1. Changes in distribution of earnings

*Summary of key points*

• Impact of recession on earnings and (previously widening) inequalities

• Overall no reduction in inequalities
  • absolute inequalities have widened
2. Earnings in public vs. private sectors
a) Size of public employment sector

• Public sector jobs account for large proportion of all employee jobs in Scotland...
% of all employee jobs in public sector

Female employee jobs: % in public sector, 2016
Source: ONS Annual Survey of Hours & Earnings (ASHE)
a) Size of public employment sector

- Public sector jobs account for large proportion of all employee jobs in Scotland...
  - Approximately one in three of all employee jobs
  - 40% of all female employee jobs
- So *in theory* there is considerable potential for narrowing income inequalities...
- (...more so than in England?)
b) Public vs. private sectors: median earnings

- Bigger impact of recession on private sector
- Higher median earnings in public sector
b) Public vs. private sectors: median earnings

Median gross weekly earnings (2016 prices), all jobs, public & private sectors,
Scotland, 1997-2016.
Source: ONS Annual Survey of Hours & Earnings (ASHE)
b) Public vs. private sectors: median earnings

- Similar trend for full-time jobs
- Wider gap for part-time employment...
c) Public vs. private sectors: earnings distribution

• Changes over time in the **whole distribution** of earnings between public and private sectors...
Public vs. private sectors: % increase in earnings

This is particularly driven by big increases for the lowest paid part-time workers. But it’s broadly true of full-time jobs too...

Increases among low paid greater in Scotland cf England
2. Earnings in public vs. private sectors

*Summary of key points*

• Scale of public sector workforce in Scotland offers opportunities
• Private sector (associated with less secure employment) more affected by recession
• Widening gap in median earnings between two sectors
• Bigger increases among poorest paid in public sector (especially in Scotland)
  • So some narrowing of inequalities in that sector
3. Low pay
Low pay: % earning below ‘real’ living wage

• Living Wage Foundation: £8.25 per hour (outside London) (2016)
• In 2016 almost half a million Scottish jobs were paid below that level
  • One in five of all jobs
  • 40% of part-time jobs
  • But with a lot of variation across the country...
Low pay: % earning below ‘real’ living wage

% of part-time jobs paid below 'real' living wage hourly rate, Scotland 2016
Source: ONS Annual Survey of Hours & Earnings (ASHE)
Low pay: % earning below ‘real’ living wage

- Scale is alarming…
- …but it’s worse elsewhere in the UK…

% of all employee jobs paid below ‘real’ living wage hourly rate, 2016
Source: ONS Annual Survey of Hours & Earnings (ASHE)

% of part-time employee jobs paid below ‘real’ living wage hourly rate, 2016
Source: ONS Annual Survey of Hours & Earnings (ASHE)
3. Low pay

*Summary of key points:*
- Scale of low pay is considerable
- But worse elsewhere in the UK
- And possibly improving to a (slightly) better degree in Scotland
4. Gender inequalities in earnings

(Er, as described by a man...)}
Gross median weekly pay 2016, male & female full-time jobs
Source: ONS Annual Survey of Hours & Earnings (ASHE)
Gross median weekly pay, 1997 and 2016: % difference between male and female full-time earnings
Source: ONS Annual Survey of Hours & Earnings (ASHE)
b) Distribution of male & female weekly earnings

% difference in male and female gross full-time weekly earnings,

Source: ONS Annual Survey of Hours & Earnings (ASHE).
c) Lies, damned lies and statistics

- Size of the gap depends on the statistical measure used
- ‘Official’ measure uses:
  - Hourly (not weekly) earnings
  - Full-time only
  - Gap shown as percentage of male earnings
- But what is gender inequality?
- One of its many facets is disproportionate level of caring responsibilities which impacts on numbers of hours worked
- How you understand gender inequality influences:
  - choice of statistical measure, and therefore...
  - ...the size of the gap...
Different measures of gender gap: gross median earnings (full-time jobs), Scotland, England, N. Ireland and Wales, 2016

Source: ONS Annual Survey of Hours & Earnings (ASHE).
Different measures of gender gap: gross median earnings (all jobs), Scotland, England, N. Ireland and Wales, 2016
Source: ONS Annual Survey of Hours & Earnings (ASHE).
d) Gender inequality: public vs. private sector (NB full time, weekly)

- Gender gap has reduced in both public and private sectors
  - But remains much larger in private sector
  - Greater decrease in public sector in Scotland cf England

![Graph showing % difference between male and female gross median full-time weekly earnings, public and private sectors, Scotland & England, 1997-2016. Source: ONS Annual Survey of Hours & Earnings (ASHE).]
d) Gender inequality: public vs. private sector

- Greater gender gap in private sector seen at all levels of pay.
- Lower public sector gender gap in Scotland cf England at all levels of pay.
e) Gender inequality: low pay

- Lowest paid jobs predominantly held by women
- Around two thirds of all jobs paid below *minimum wage* e.g...
- Around two thirds of all jobs paid below *real living wage* e.g...
- Not just about part-time work: more women in low paid *full-time* jobs too...
4. Gender inequalities in earnings

*Summary of key points:*

- Size of gender gap depends on statistical measure used
- For full-time weekly earnings it’s still very high (e.g. 18% in Scotland in 2016)
- But it has decreased considerably over past 20 years everywhere
- Lower gap in public sector than private sector
  - Bigger reduction in public sector in Scotland than in England
- Biggest gap among higher earners
- Lowest paid jobs predominantly held by women
Will these graphs ever stop?

• Yes. It’s over.
Caveats ahoy! (again)

• A lot of caveats associated with earnings data e.g.:
  • Excludes self-employed
  • Only one component of income
  • Excludes unwaged – elderly, unemployed, too sick to work
  • So underestimates scale of inequalities
  • Gross earnings – tells us nothing about (progressive) taxation
  • Individual measure – tells us nothing about true household income

• However...:
  • Very large data set not associated with problems of survey-based income data
  • NB Overall trends in overall net household income are very similar...
    • Very similar trends in income (impact of recession etc)
    • Similarly widening absolute inequalities, flat relative inequalities
Conclusions & implications

• Reasons for optimism:
  • Reduction in gender inequalities
  • Potential of the size of the public sector to reduce inequalities
  • Evidence of some narrowing of inequalities in public sector (more so in Scotland cf England)
  • Likely influence of initiatives like Scottish Living Wage accreditation

• Reasons for pessimism
  • The private sector
  • Income inequalities are about to get wider
    • IFS forecasts, linked to effects of UK Government ‘austerity’ measures
    • Child poverty in Scotland estimated to rise to 38% by 2030
  • So health inequalities will widen further too
  • The scale of what’s required..
Income inequalities in the UK, 1961-2016
The end

• Further detail of any of the analyses available from: david.walsh.2@glasgow.ac.uk

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