

Understanding inequality

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Understanding inequality: multiple angles

- A.** There is a mismatch between expressed concerns about and perceptions of (rising) inequality and measured realities
- Which also has relevance for the public's demand for redistribution by the government
- B.** Potential explanations for the mismatch to explore with you:
1. The summary measures we use don't tally with how people think about inequality?
 2. People's perceptions about the income distribution are wrong?
 3. Headline measures do not focus on the dimensions of 'inequality' that are most salient nowadays?
 4. The survey data underlying the measured realities are wrong?

A. Mismatch between

(i) expressed concerns about
(rising) inequality, and

(ii) measured realities

Australia at risk of US-style inequality and dead end jobs, warns ACTU

AM By senior business correspondent [Peter Ryan](#)

Updated 5 Mar 2019, 1:39am



PHOTO: The ACTU says Australia is in an income recession as wage growth remains subdued. (Wikimedia commons/Martin Kingsley/CC BY 2.0)

"Anaemic" wages growth, a widening gap between rich and poor and a "powerful elite" of banks, insurers and multinationals are the main outcomes for Australians from 27 years without a recession.

That is the ACTU's take on inequality in Australia today — it is warning the policies of the Morrison Government could result in an American-style economy of dead end jobs, poverty pay levels and zero job security.

The peak union body has released a paper on inequality, declaring a potential "economic, social and political disaster" ahead of the federal election, as it warns that slow wages growth has caused the biggest fall in living standards in 30 years.

RELATED STORY: [Profits and wages are rising but it depends on which industry you're in](#)

RELATED STORY: [Australian workers still to see much growth in their wages](#)

RELATED STORY: [The signs suggest house prices will keep falling — but most Australians don't believe it](#)

Key points:

- A report from the ACTU analysing ABS data shows living standards have declined dramatically since 2015
- The peak union body is calling for reforms to reduce job insecurity, lift wages and increase the Newstart allowance
- ACTU secretary Sally McManus says Australia is "more of a class society than we think we

Expressed concerns
and perceptions
about inequality
(AUS)

Concerns expressed about inequality (NZ)



BEN CURRAN/STUFF

A protester in 2011. Interest and concern about inequality has risen dramatically in recent years.

2013 [book](#) (Max Rashbrooke, ed.) →

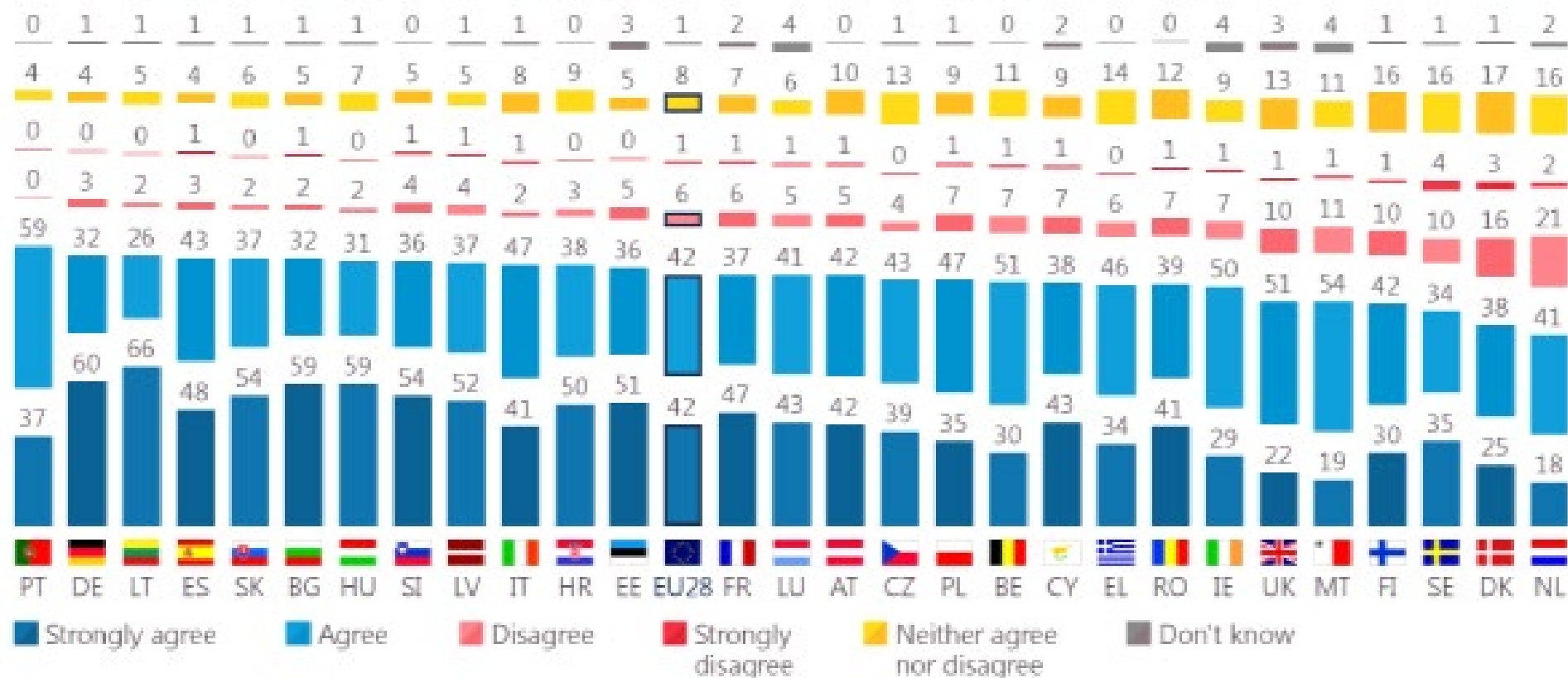
INEQUALITY
A NEW ZEALAND CRISIS

Income differences too great nowadays? (EU-28, 2017)

- Range of ‘strongly agree’/‘agree’: 96% (PT) to 59% (NL) with 84% for EU-28
- Positive association with measured inequality, but note DE

QA1.11 Please tell me to what extent you personally agree or disagree with the following statements.

Nowadays in (OUR COUNTRY) differences in people's incomes are too great (%)

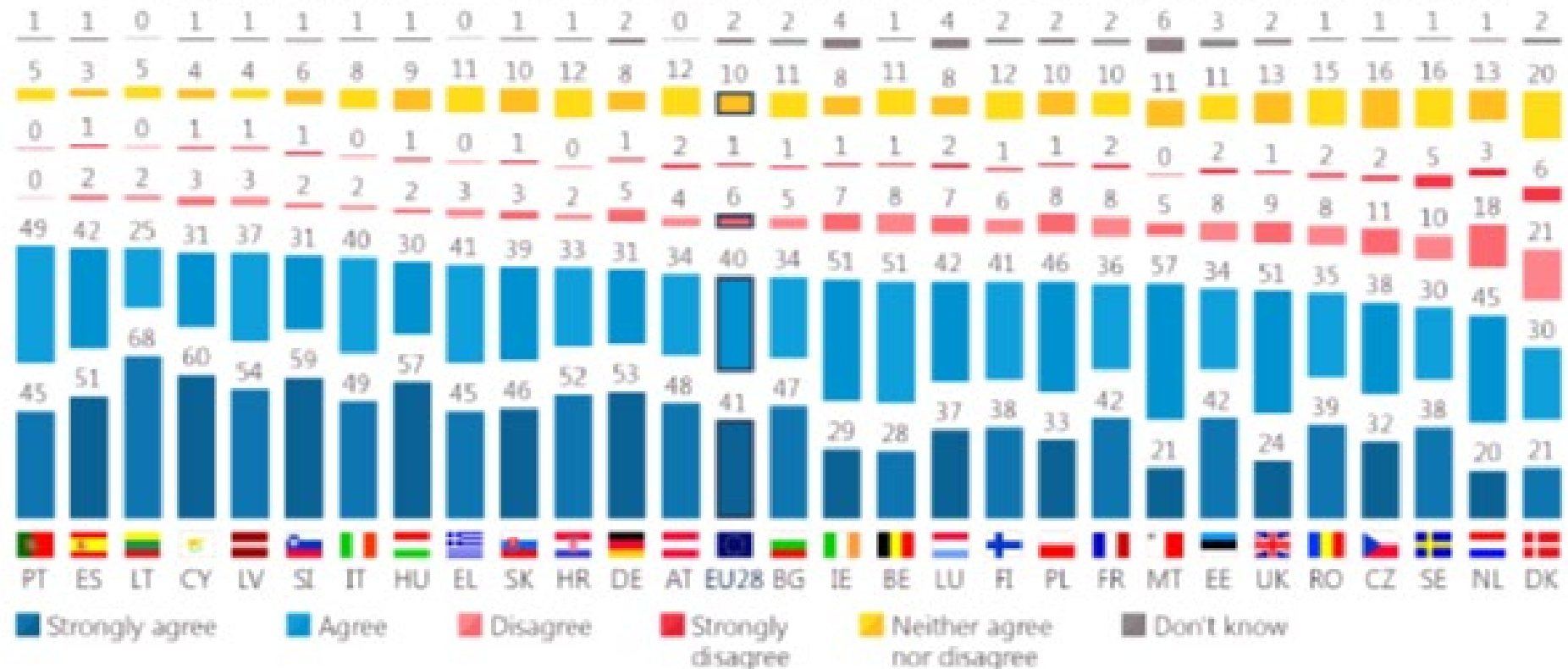


Government should take measures to reduce differences in income levels? (EU-28, 2017)

- Demand for redistribution positively correlated with expressed concerns about income differences (previous chart)
- Range of ‘strongly agree’/‘agree’: 94% (PT) to 51% (DK) with 81% for EU-28

QA1.12 Please tell me to what extent you personally agree or disagree with the following statements.

The government in (OUR COUNTRY) should take measures to reduce differences in income levels. (%)



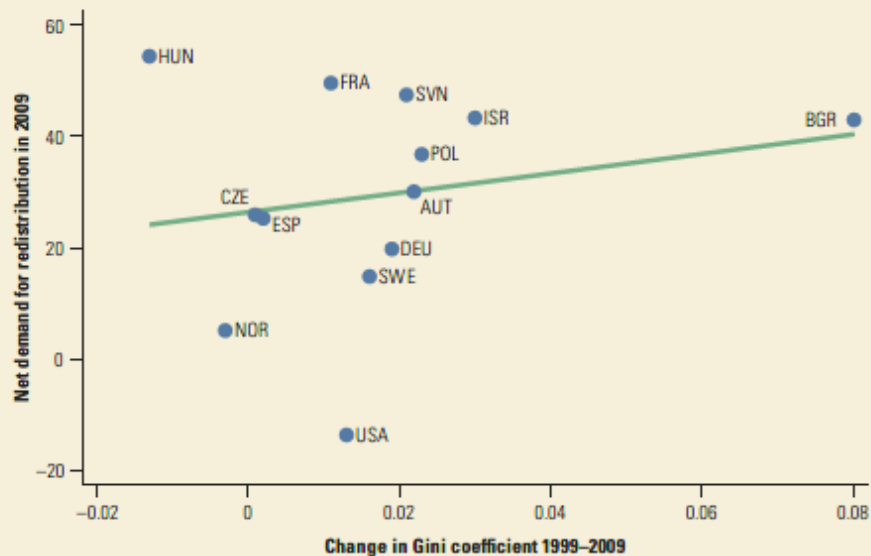


FIGURE 4.2
Measured changes in inequality explain little of the demand for redistribution

Demand for redistribution associated with perceived inequality not actual inequality

Source: Bussolo, Ferrer-i-Carbonell, Giolbas, and Torre 2018.

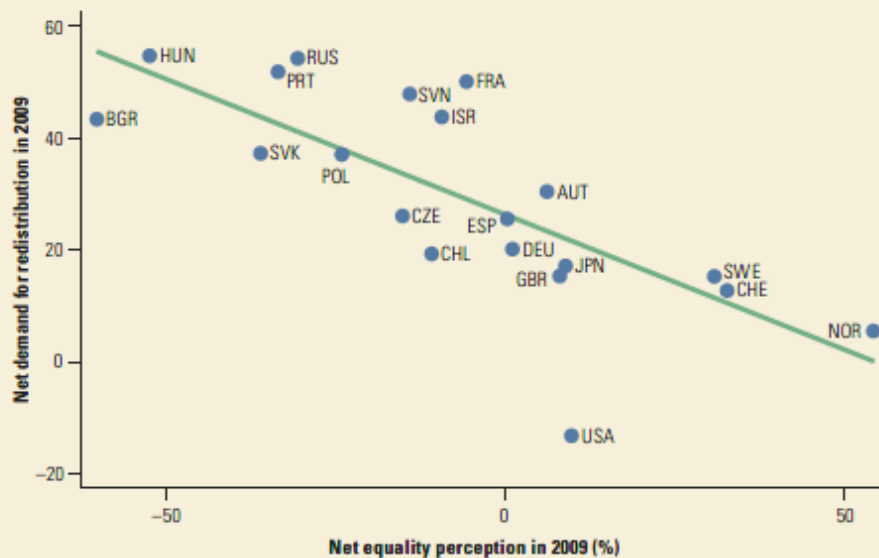


FIGURE 4.3
Perceived inequality correlates strongly with the demand for redistribution

Source: Bussolo et al. (2018) *Toward a New Social Contract. Taking On Distributional Tensions in Europe and Central Asia*, World Bank, using ISSP Social Inequality data

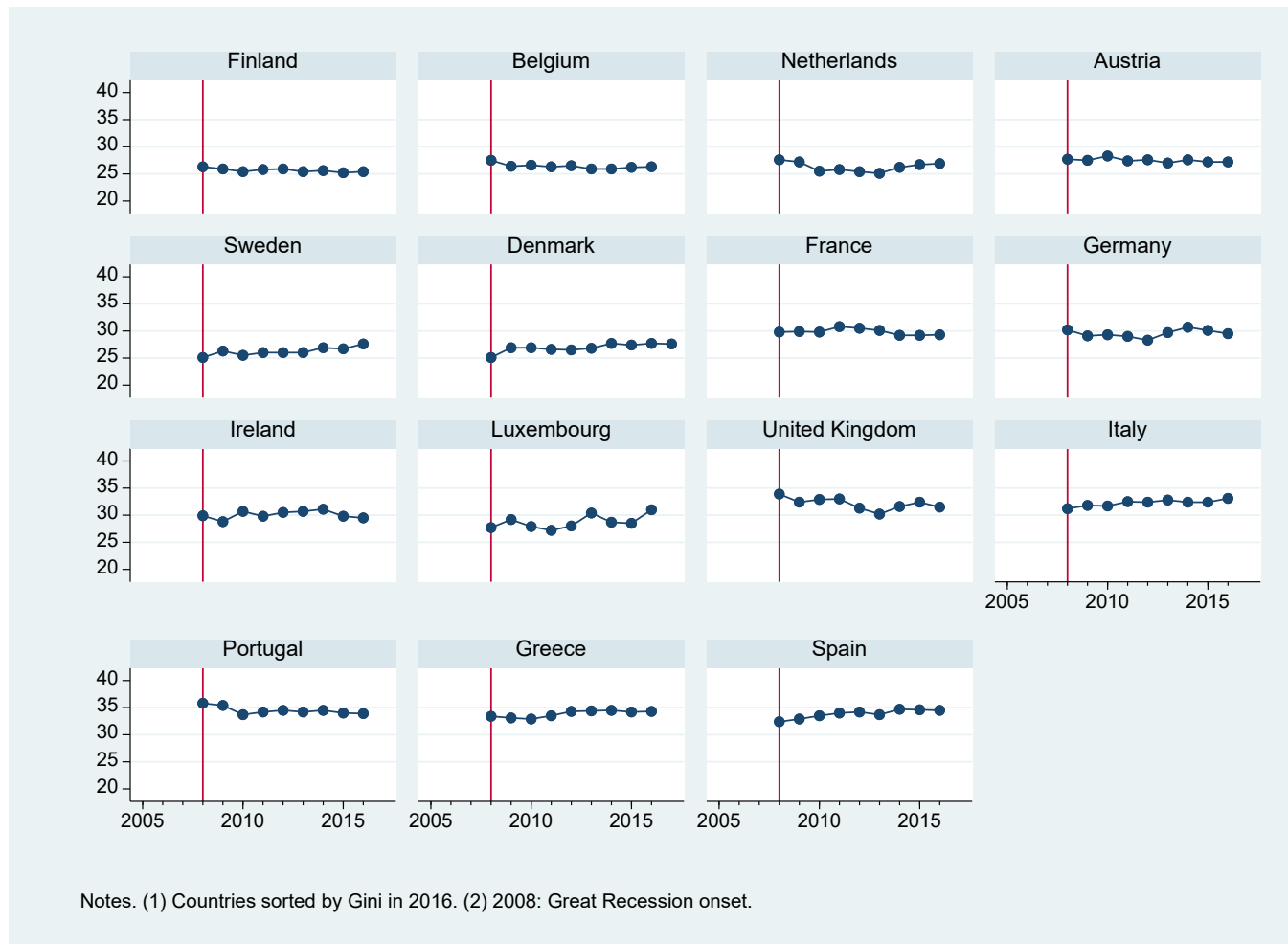
Demand for redistribution: % respondents agreeing with the statement “it is the responsibility of the government to reduce income differences between people with high incomes and those with low incomes

Source: Bussolo, Ferrer-i-Carbonell, Giolbas, and Torre 2018.

Note: Net equality perception is defined as the difference between the share of people believing their country is equal and the share of people believing their country is unequal.

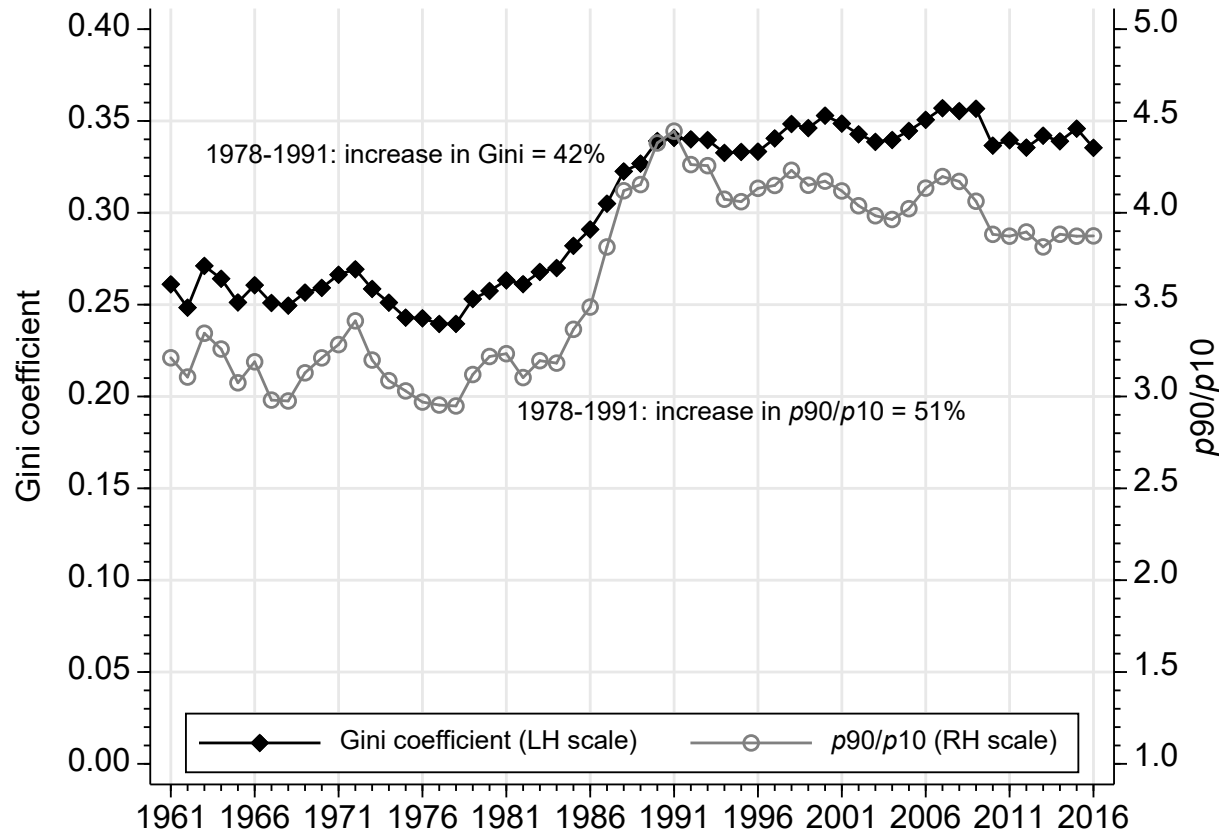
Measured realities: inequality levels and trends (EU15)

- 2008–2016: little change in Gini since GFC onset



Source: SPJ from [Eurostat database](#) (EU-SILC data). Countries ranked within each chart by Gini in 2016. Red vertical line marks 2008 (onset of GFC)

Measured realities: little change in UK income inequality since the start of 1990s (Gini, $p90/p10$)

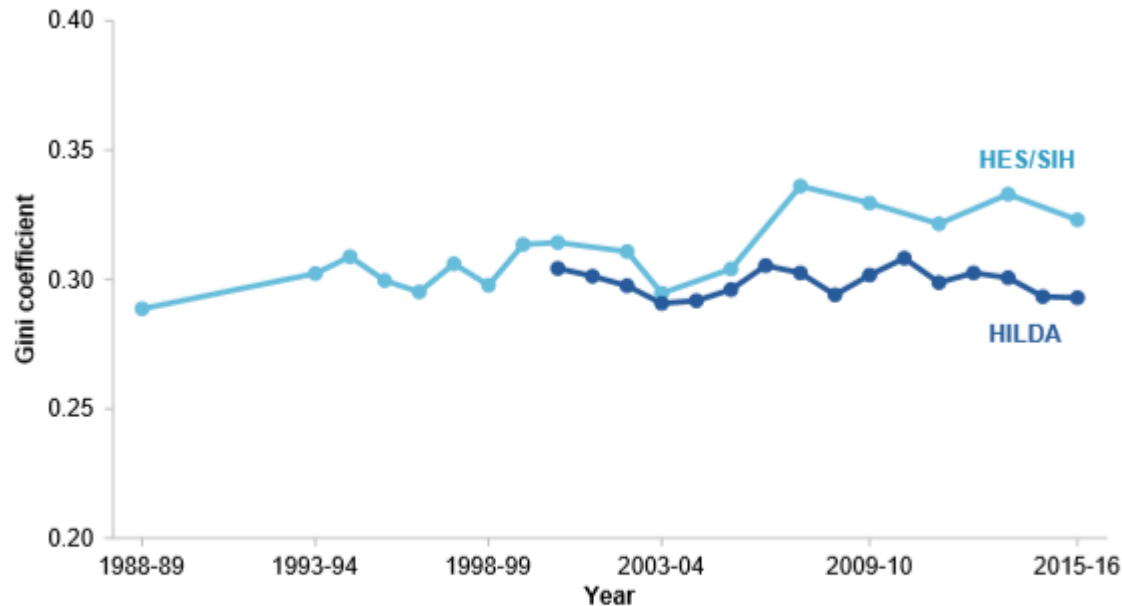


Source: updated from Jenkins (2015), '[The income distribution in the UK: a picture of advantage and disadvantage](#)', in: Dean and Platt (eds.), *Social Advantage and Disadvantage*, OUP. Estimates based on Family Expenditure Survey and (since 1994/95) Family Resources Survey: see spreadsheet accompanying [Cribb et al. \(2018\)](#).

Measured realities: little change in AUS income inequality since around the GFC (Gini)

Figure 3.2 **Different datasets show different trends in inequality**

Gini coefficients for equivalised disposable income, HES/SIH and HILDA^a



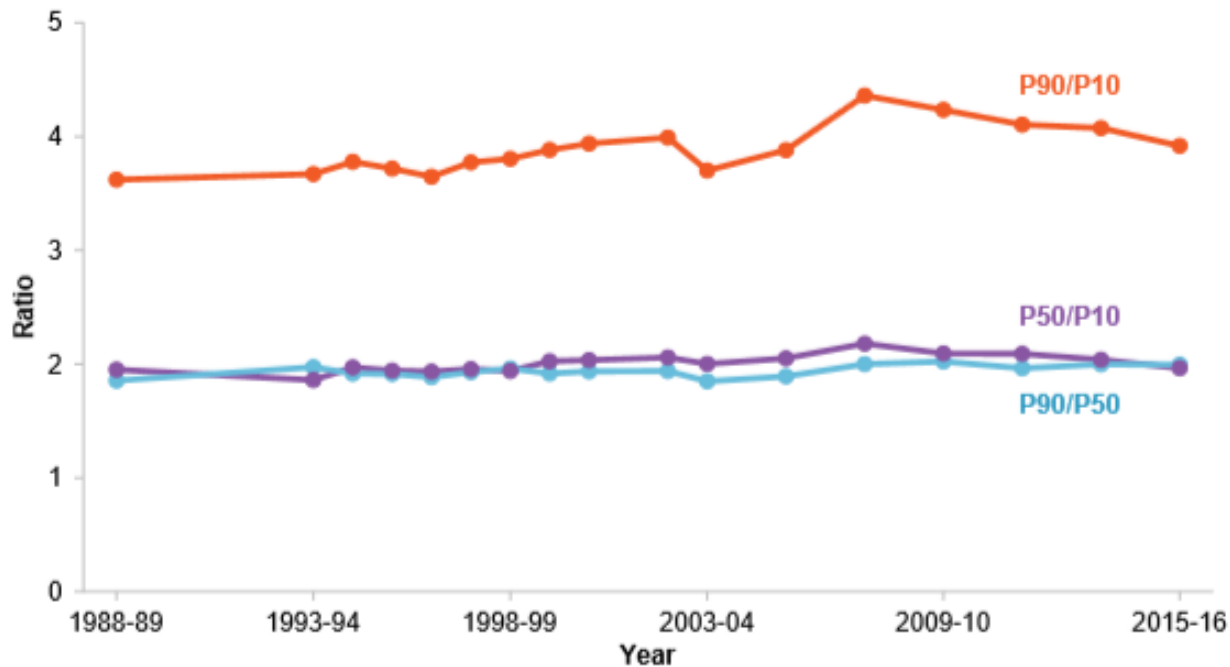
^a Estimates for 1988-89, 1993-94 and 1998-99 are HES. All others are SIH. The discrepancy between datasets is partly due to methodological differences (box 3.1).

Sources: Productivity Commission estimates using: ABS (*Microdata: Household Expenditure, Income and Housing, 2015-16*, Cat. no. 6540.0, released 25/10/17); ABS HES Basic confidentialised unit record files for years 1988-89 through 2009-10 as available at 25/10/17; ABS SIH Basic confidentialised unit record files for years 1993-94 through 2013-14 as available at 25/10/17; Melbourne Institute (*Household, Income and Labour Dynamics in Australia (HILDA) Survey, Release 16*).

Source: Productivity Commission (2018), [Rising Inequality? A stocktake of the evidence](#). NB changes in HES/SIH definitions and methods over time affecting comparability (Wilkins, '[Evaluating the evidence on income inequality in Australia in the 2000s](#)', *Economic Record*, 2014)

Measured realities: little change in AUS income inequality since around the GFC

Figure 3.3 **Quantile ratios suggest similar trends in inequality**
Quantile ratios of equivalised disposable income^a

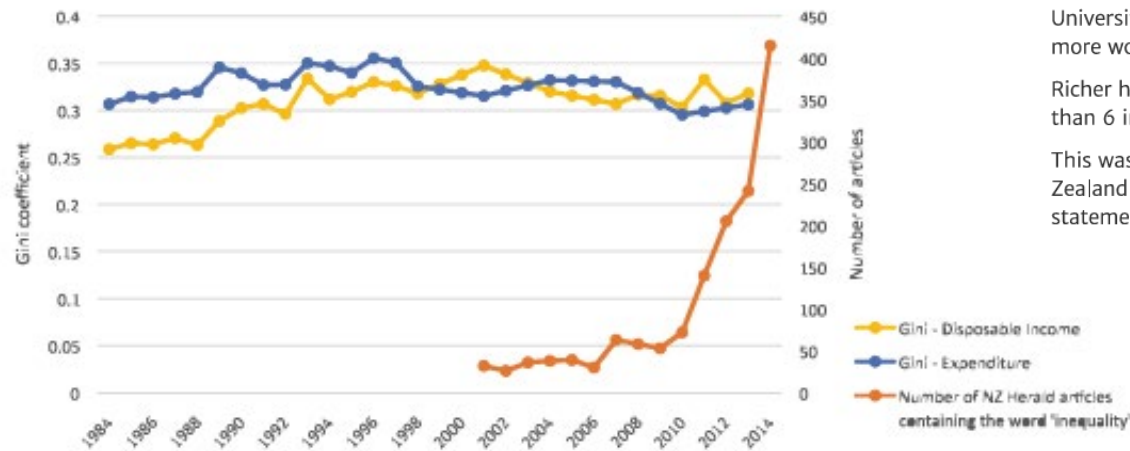


^a Estimates for 1988-89, 1993-94 and 1998-99 are HES. All others are SIH.

Sources: Productivity Commission estimates using: ABS (*Microdata: Household Expenditure, Income and Housing, 2015-16*, Cat. no. 6540.0, released 25/10/17); ABS HES Basic confidentialised unit record files for years 1988-89 through 2009-10 as available at 25/10/17; ABS SIH Basic confidentialised unit record files for years 1993-94 through 2013-14 as available at 25/10/17.

Mismatch between expressed concerns about (rising) inequality and measured realities: NZ

Figure 37: Inequality trends and reporting on inequality (1984–2014)



Media mentions of the word increased six-fold between 2004 and 2012. Almost 8 out of every 10 respondents (79.6 per cent) to our 39,600 person Stuff/Massey University survey agreed "inequality is too higher and/or growing fast," with far more women agreeing than men.

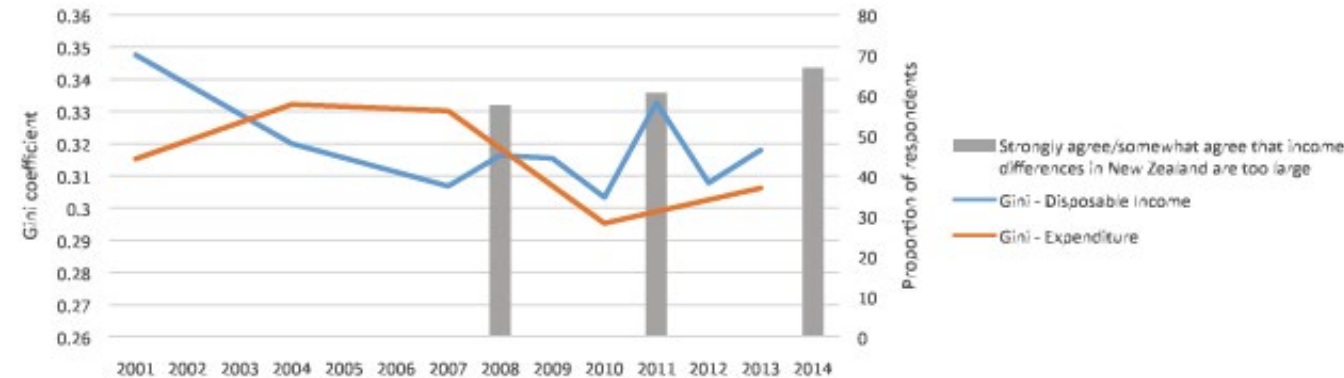
Richer households were less inclined to agree, but even at the top bracket more than 6 in 10 agreed.

This was a far higher figure than the 6 in 10 who agreed that "poverty in New Zealand is real and unjust," and the 52 per cent who disagreed with the statement that "New Zealand is a land of equal opportunity".

Source: [online article](#) based on pre-election Stuff/Massey survey (Henry Cooke, 18 August 2017)

Sources: Newspaper reporting on inequality: Bryce Edwards, 2014, <http://liberation.typepad.com/>; Christopher Ball and John Creedy, "Inequality in New Zealand 1983/84 to 2013/14," Working Paper 15/06 (Wellington: New Zealand Treasury, 2015).

Figure 38: Inequality trends and perceptions that income differences are too large (2001–14)

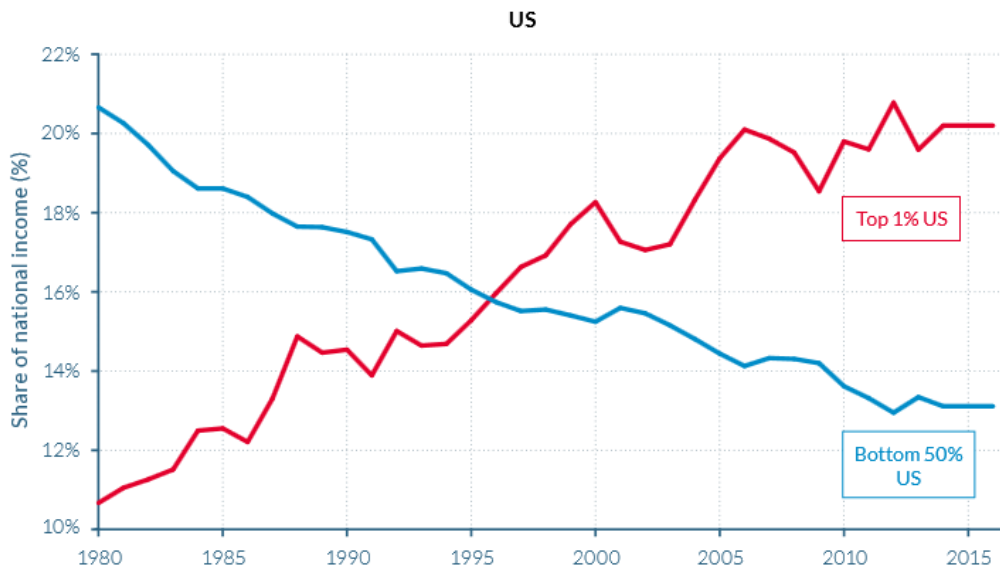


Source: Wilkinson and Jeram, *The Inequality Paradox. Why Inequality Matters Even Though It Has Barely Changed*, New Zealand Initiative, 2016

Source: New Zealand Election Study (2008, 2011, 2014); Christopher Ball and John Creedy, "Inequality in New Zealand 1983/84 to 2013/14," Working Paper 15/06 (Wellington: New Zealand Treasury, 2015).

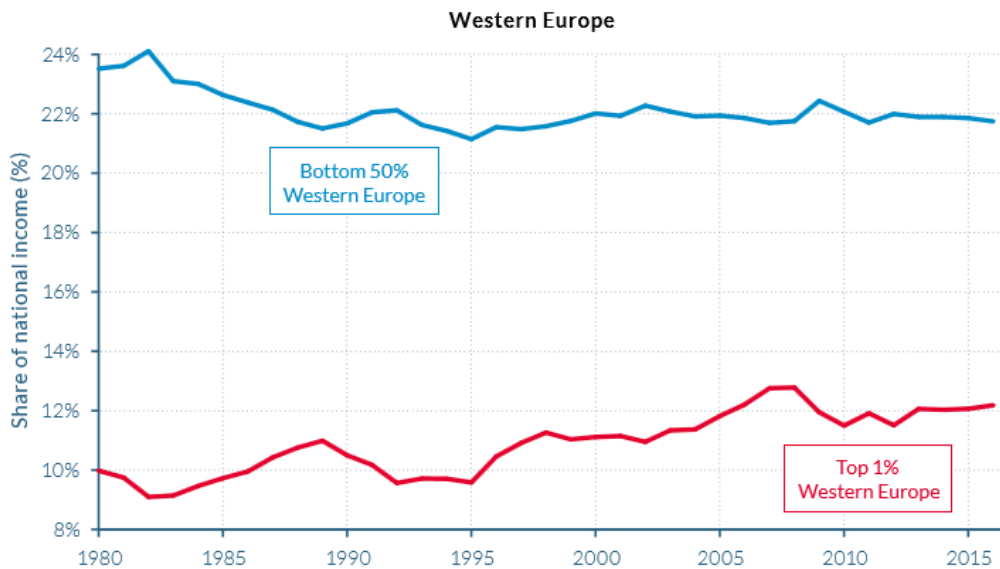
Figure E3

Top 1% vs. Bottom 50% national income shares in the US and Western Europe, 1980–2016:
Diverging income inequality trajectories



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

In 2016, 12% of national income was received by the top 1% in Western Europe, compared to 20% in the United States. In 1980, 10% of national income was received by the top 1% in Western Europe, compared to 11% in the United States.



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

In 2016, 22% of national income was received by the Bottom 50% in Western Europe

Measured realities: the USA is different

Source: Piketty et al., [World Income Report 2018](#)

B. Potential explanations for mismatch

1. The summary measures we use don't tally with how people perceive 'inequality'?

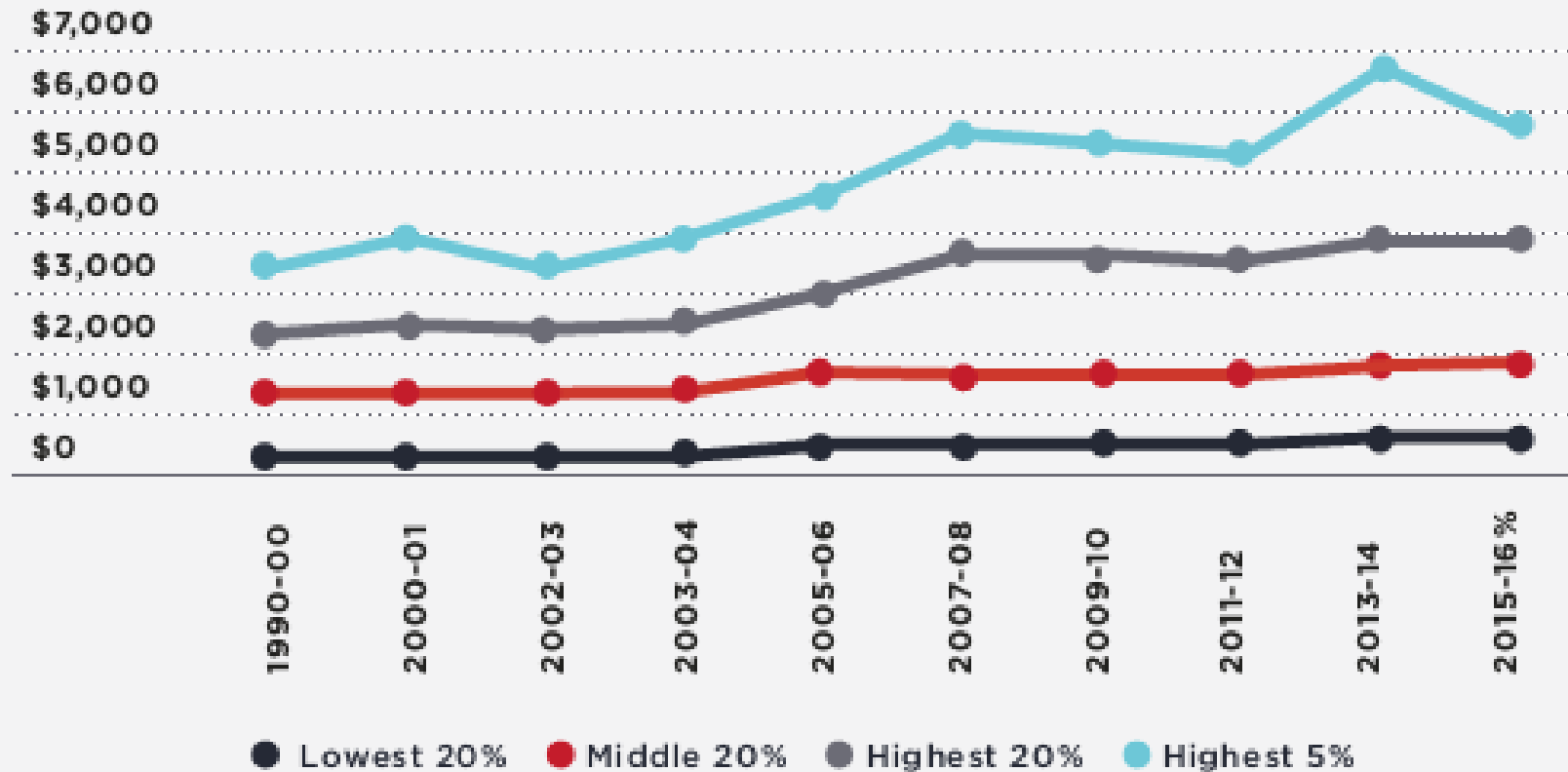
- Perceptions relate to real income levels and (differential) real income growth?
- Absolute versus relative inequality?
- More fundamental differences?

Nature of concern about inequality depends on how equally income growth is shared [?]

- Hypothesis: fundamentally, it's real income levels that matter; 'inequality' concerns grow if differences in income growth are increasingly perceived as unfair
 - “[T]he justice for me is concentrated on lifting incomes of those that don't have a decent income. It's not a burning ambition for me to make sure that David Beckham earns less money. . . [T]he issue isn't in fact whether the very richest person ends up becoming richer. . . the most important thing is to level up, not level down.” Tony Blair, BBC Newsnight interview, 5 June 2001
- Absolute inequality (or mobility) measures would better represent this concern than standard relative measures like the Gini
 - Absolute inequality indices aggregate income *differences* from the mean rather than income *ratios* to the mean (or income shares) as standard relative indices do
- So, let's look at how trends in real income growth differ across the distribution from bottom to top ...

Trends in real income levels, AUS

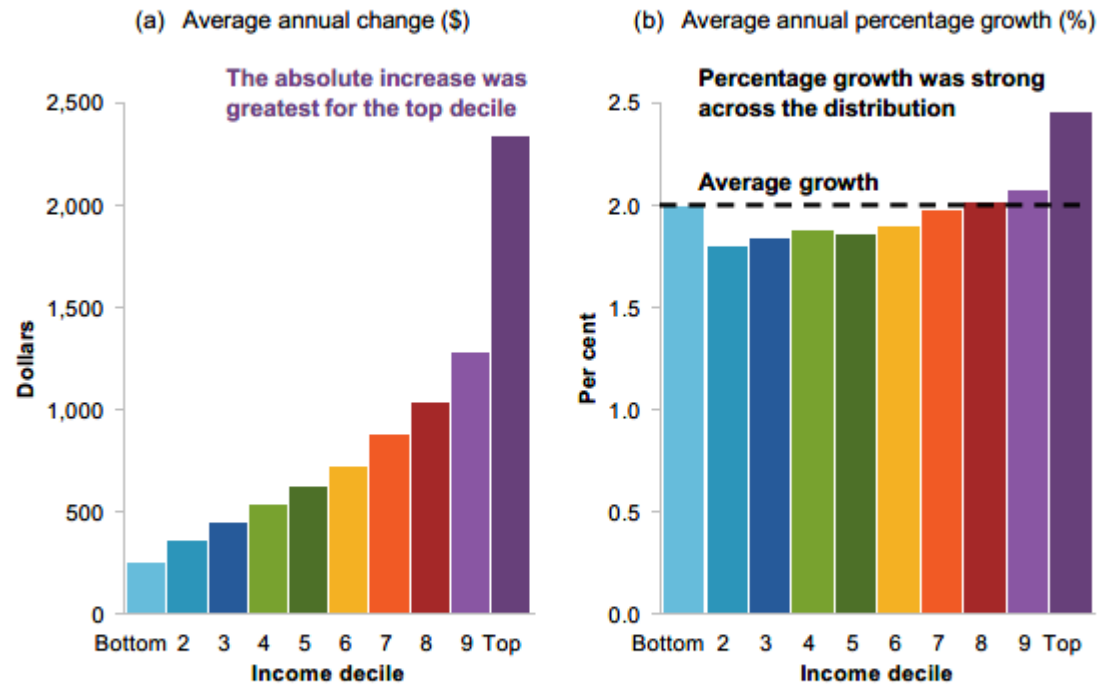
Trends in average weekly disposable income 2000 to 2016 (in 2016 dollars)



Source: ACOSS and UNSW Sydney, [Inequality in Australia 2018](#).

In absolute terms, the richest 10% have pulled away a lot over the last 2 decades

Figure 3.5 Average income has grown for all income deciles
Average equivalised disposable income by income decile, 1988-89 to 2015-16^a



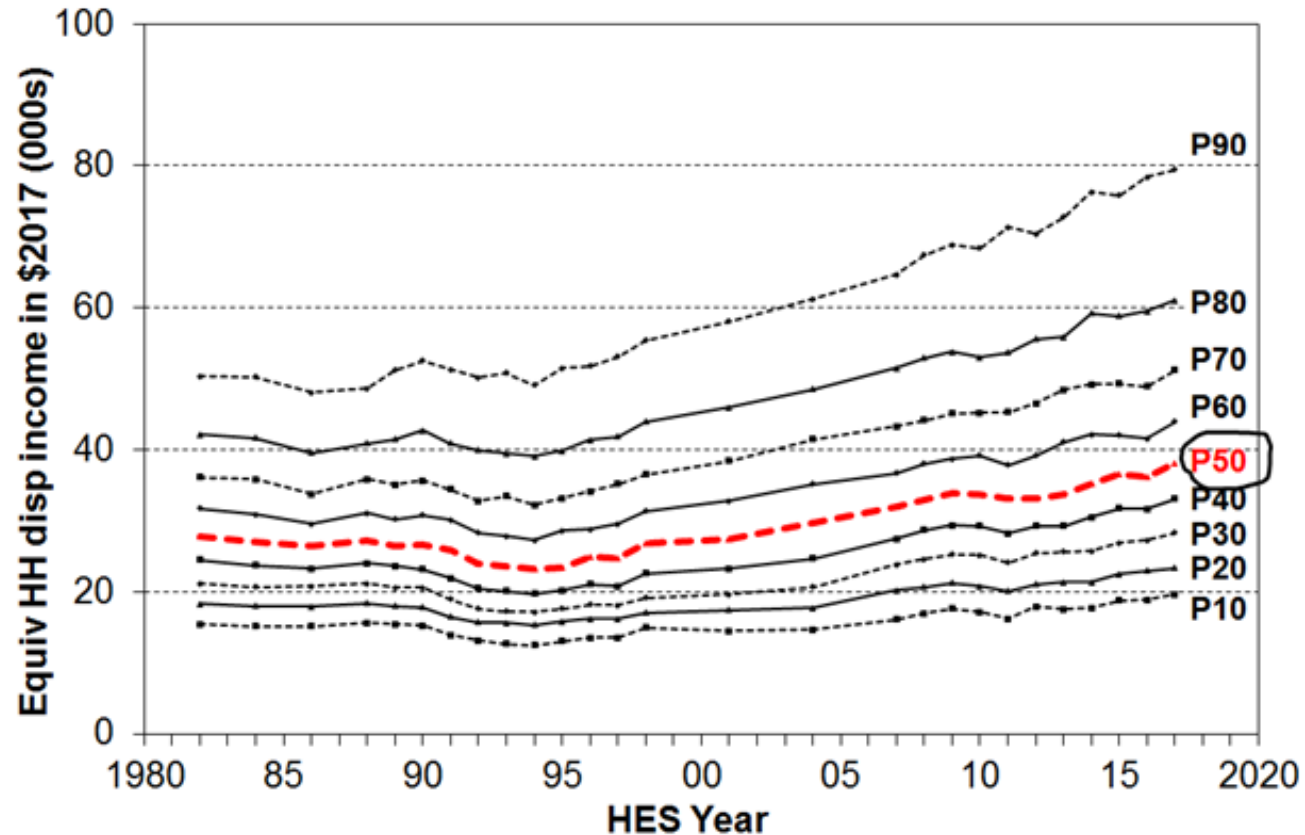
^a Both percentage and dollar growth in real terms (2016-17 dollars).

Sources: Productivity Commission estimates using: ABS (Microdata: Household Expenditure, Income and Housing, 2015-16, Cat. no. 6540.0, released 25/10/17) and ABS HES Basic confidentialised unit record file for 1988-89 as available at 25/10/17.

Trends in real income levels, NZ

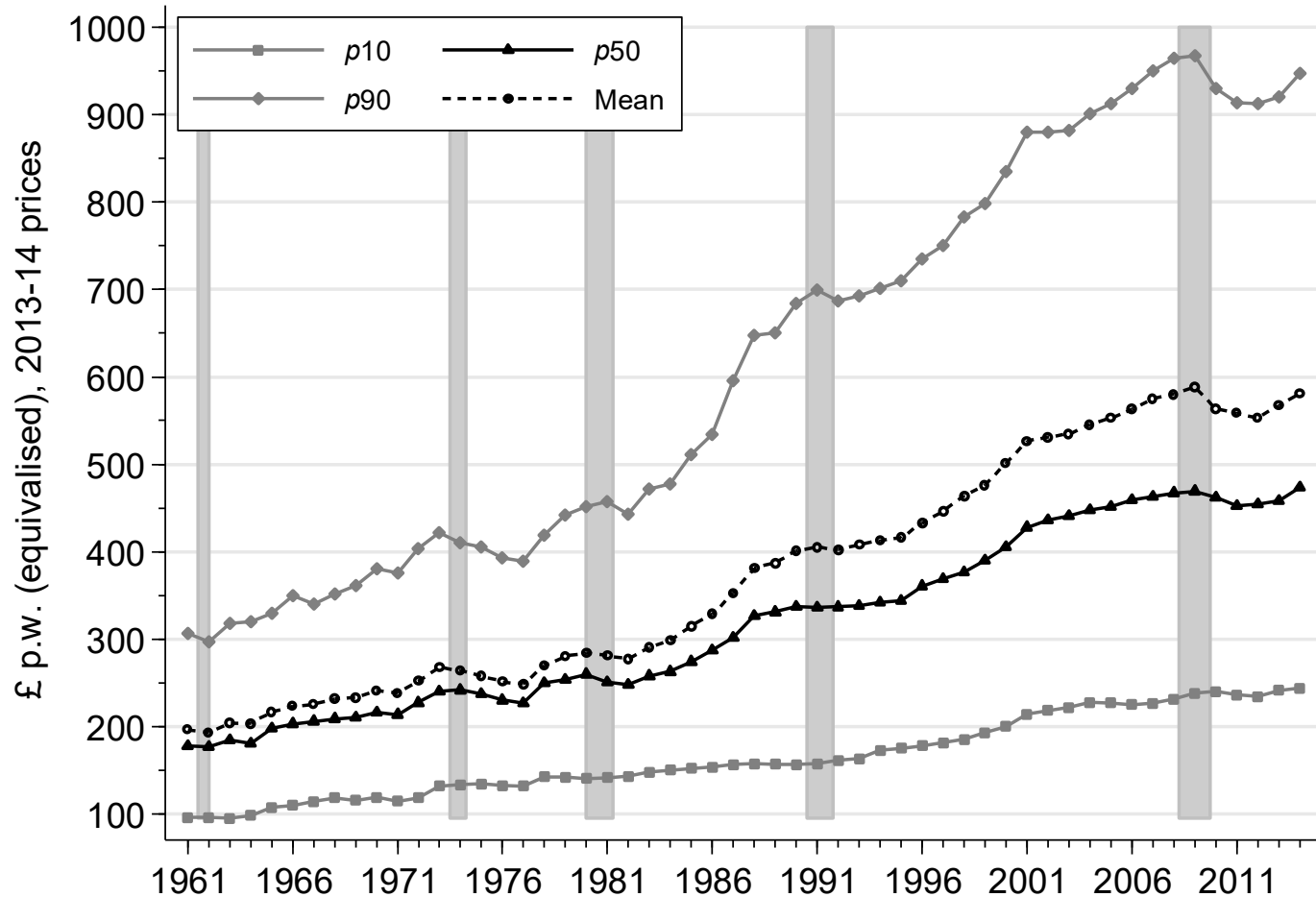
Figure D.6

Real equivalised household incomes (BHC): decile boundaries, 1982 to 2017



Source: Perry (2018), [Household Incomes Report](#), MSD (emphasis in original)

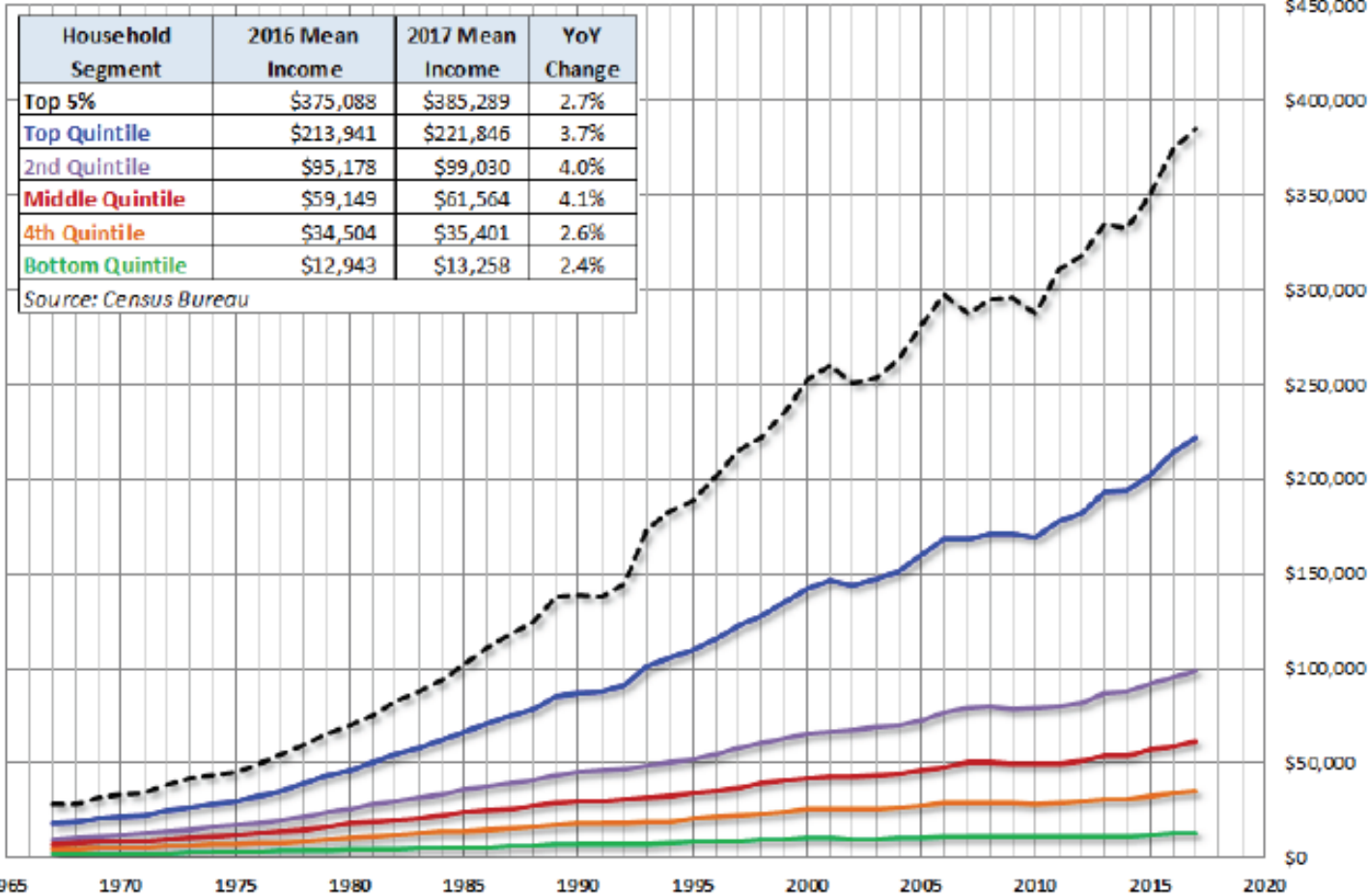
UK: real income levels since 1961



Source: Source: updated from Jenkins (2015), [‘The income distribution in the UK: a picture of advantage and disadvantage’](#), in: Dean and Platt (eds.), *Social Advantage and Disadvantage*, OUP. Estimates based on Family Expenditure Survey and (since 1994/95) Family Resources Survey. Grey shaded areas represent periods with at least two consecutive quarters of negative real GDP growth

USA: trends in real income levels (quintile group means)

Mean (Average) Household Income By Quintile and Top 5 Percent in 2017 Dollars



Real Income Growth Since 1967	
Top 5%	113.0%
Top Quintile	93.5%
2nd Quintile	55.4%
Middle Quintile	35.2%
4th Quintile	24.1%
Bottom Quintile	28.8%

More fundamental differences about what constitutes ‘inequality’?

Re-examining the basic axioms, à la Amiel and Cowell (*Thinking About Inequality*, CUP 1999):

- Which is the most unequal distribution of the 2 below?
 - Both distributions have the same total (\$35); individuals ‘anonymous’

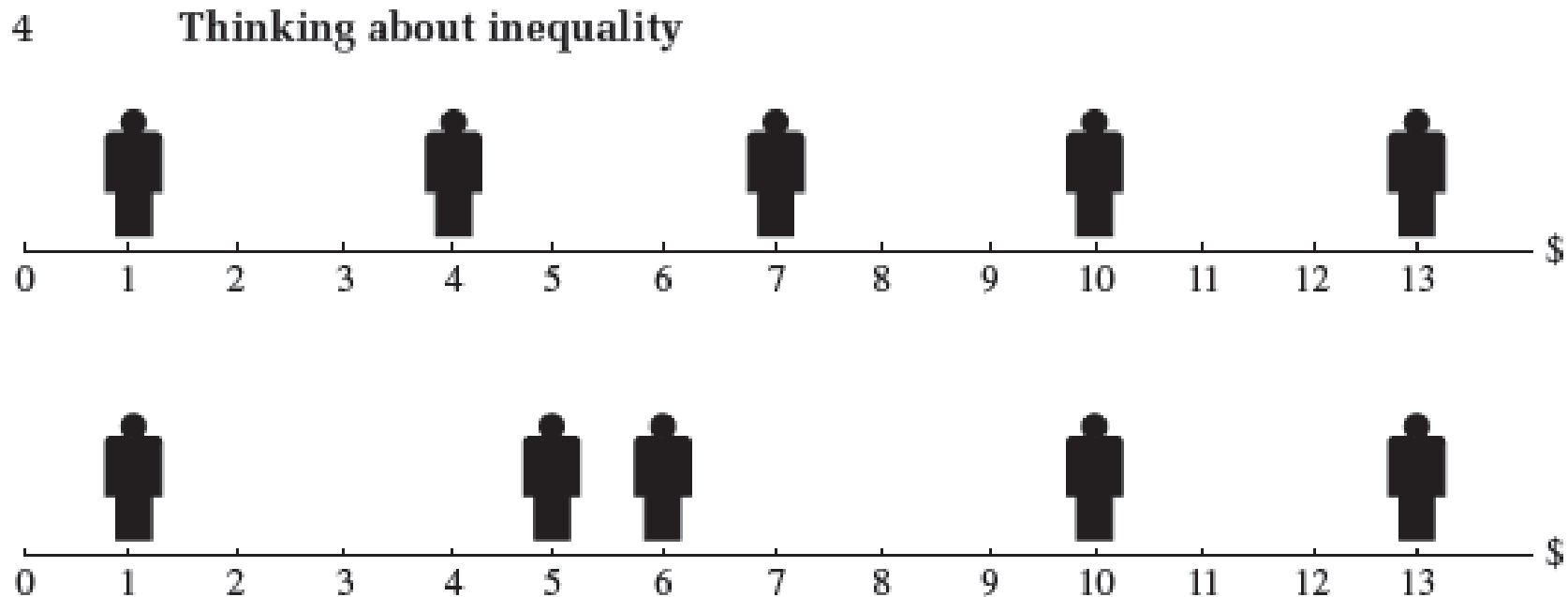


Figure 1.1. A simple distributional experiment.

Re-examining the basics (ctd)

- Population now divided into 2 groups, with the dividing line defining the groups set between the 2 people affected
- Which is the most unequal distribution?

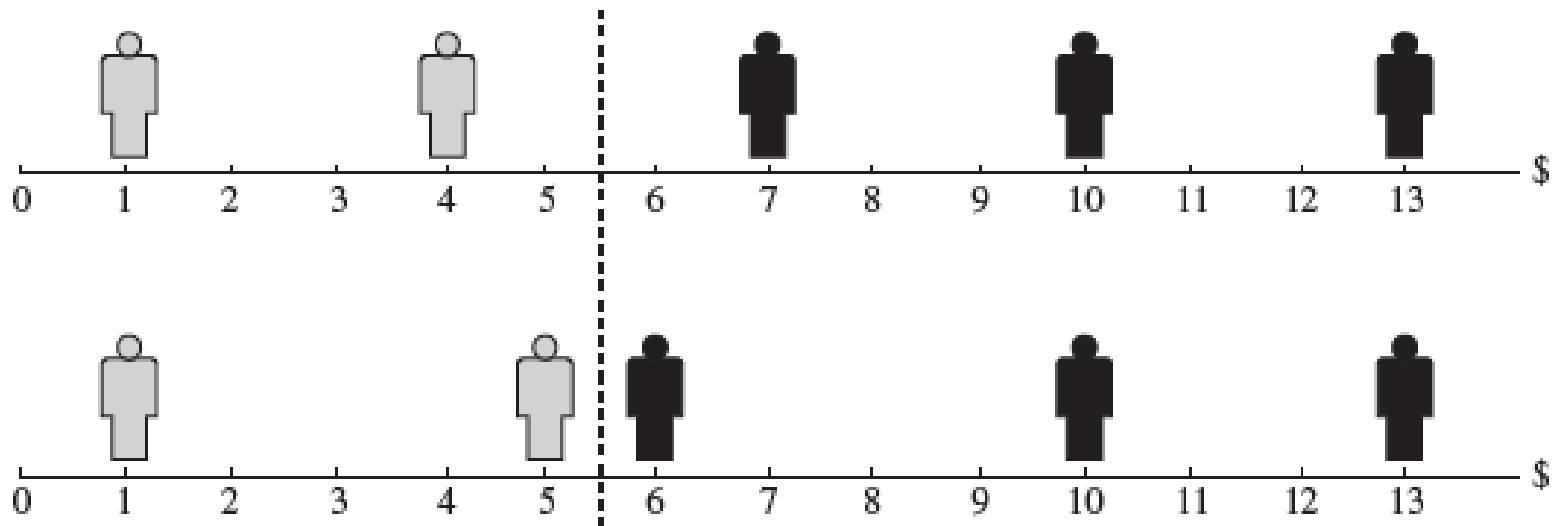


Figure 1.2. A simple distributional experiment: second view.

Re-examining the basics (ctd)

- Now, instead, highlight the 2 individuals with changing incomes
- Which is the most unequal distribution?

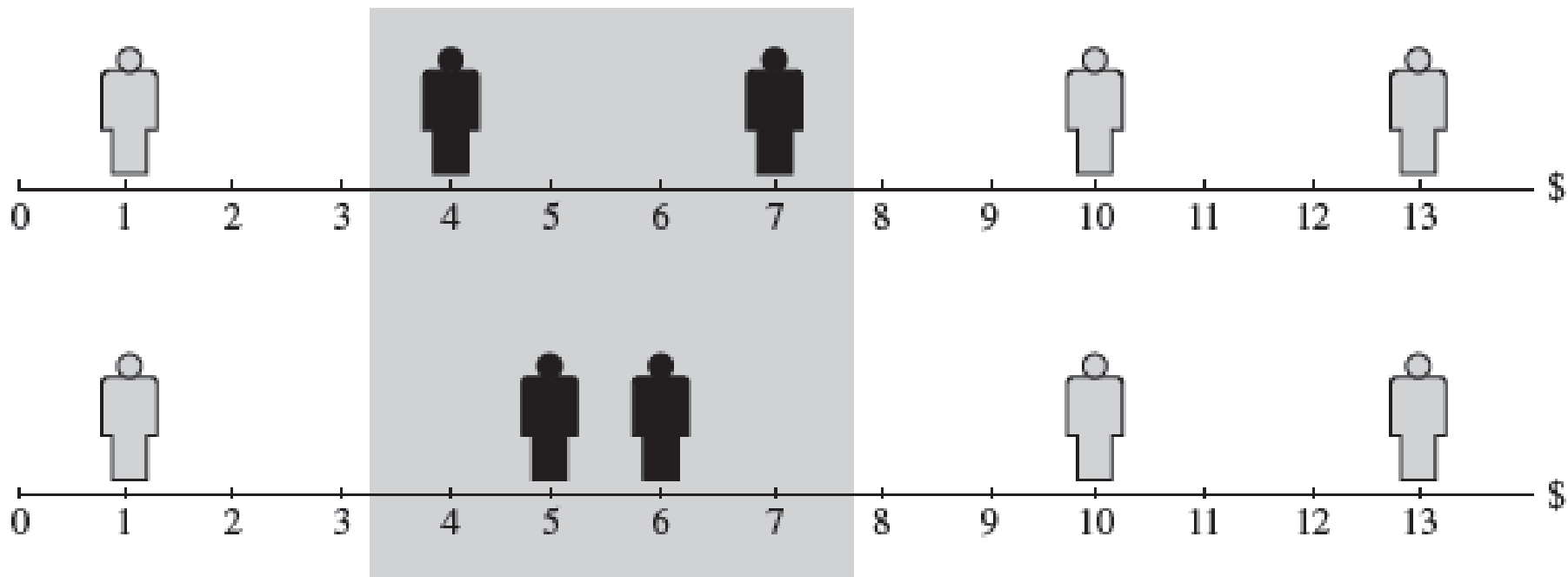


Figure 1.3. A simple distributional experiment: third view.

Re-examining the basics (ctd)

- The third view is the one incorporated into conventional inequality analysis: ‘a mean-preserving progressive transfer reduces inequality’!
- Amiel and Cowell’s example raises the issue of whether individuals’ reference points matter for assessing inequality
- More generally, their 1999 book contains extensive experimental evidence about whether individuals (students!) agree with the standard axioms of inequality analysis
 - Example on next slide

Re-examining the basics (ctd)

- Amiel and Cowell (2009): summary of experimental results:

Table 4.8. *Agreement with basic axioms: summary (percentage responses)*

	Numerical	Verbal
Scale independence	51	47
Population principle	58	66
Transfer principle	35	60
Decomposability	57	40

Note: Based on summaries of responses to questionnaire A1. Questionnaire A1 gave only a limited set of alternative verbal responses on the question relating to the transfer principle. When the richer set of alternatives of questionnaire A4 is allowed for the verbal responses, support for the transfer principle falls to 31% (see table 4.7).

- Disconcerting for inequality analysts?
- Should we change the basic axioms (and thence the measures we use)? If so, how?

Potential explanations for mismatch

2. People's perceptions about the distribution are wrong?

... in particular, do they underestimate inequality levels and (rising) trends?

What's your perception of income inequality in Australia?

Let's use the OECD's [Compare Your Income](#) tool to compare your perception with reality

What's your share of the pie?


English Français Español Português More


When you think about your household's income, do you feel rich, poor, or just average? Most of us have no idea – or the wrong idea – of how we compare with the rest of the population. But here, in 10 clicks, you can find out how many households are better or worse off than yours, and see how your ideal world compares.

[Click here to learn more about the methodology](#) used to build this tool.

Get Started

- 1 Tell us about you
- 2 Tell us about your ideal world
- 3 In reality...

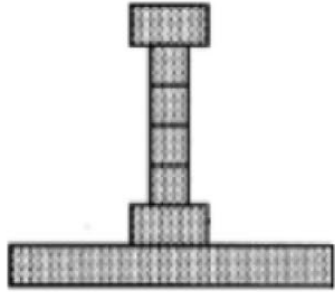


 **OECD**
BETTER POLICIES FOR BETTER LIVES

Compare Your Income includes ISSP instrument for eliciting respondent views about distributional shape

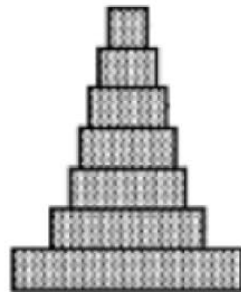
- Which diagram best describes Australia?

Q14. These five diagrams show different types of society. Please read the descriptions and look at the diagrams and decide which you think best describes <country> ..



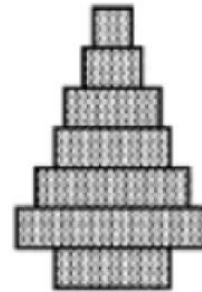
Type A

A small elite at the top, very few people in the middle and the great mass of people at the bottom.



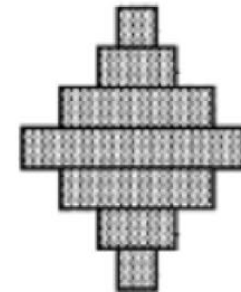
Type B

A society like a pyramid with a small elite at the top, more people in the middle, and most at the bottom.



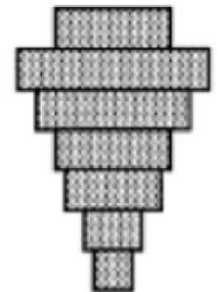
Type C

A pyramid except that just a few people are at the bottom.



Type D

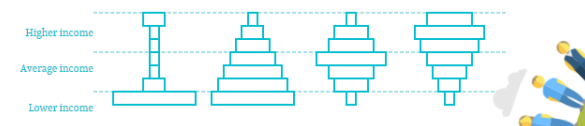
A society with most people in the middle.



Type E

Many people near the top, and only a few near the bottom.

The four diagrams below show various scenarios of how income can be shared among the population. According to you, which one best describes Australia's population?



The Australian reality according to OECD

“In reality, in Australia there is a considerable wealthy elite and a mass of people with either an average or low income”



How Australia looks:

What you think

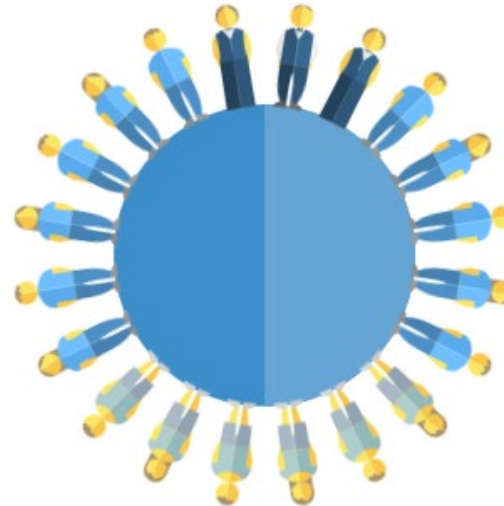
Your ideal

In reality

Next



^
In reality, in Australia there is a considerable wealthy elite and a mass of people with either an average or a low income.



The tool is built using the most recent income data from the [OECD Income Distribution Database](#), while for the questions related to perceptions of economic mobility data come from [Pew Research Center](#), a non-advocacy, global fact tank.

While the information collected by this tool is completely anonymous and confidential, once sufficient information has been collected, the OECD will do different types of analysis with the anonymised information on users' perceptions and make it publicly available.

Research shows mismatch of perceptions with reality

– but it's not clear that inequality under-estimated

- Gimpelson and Treisman (2018) '[Misperceiving inequality](#)', *Economics and Politics*, 30, 27–54: survey the literature and add original work:
 - “... Widespread ignorance and misperceptions emerge robustly, regardless of data source, operationalization, and measurement method. Moreover, perceived inequality—not the actual level—correlates strongly with demand for redistribution and reported conflict between rich and poor. We suggest that most theories about political effects of inequality need to be reframed as theories about effects of *perceived* inequality.”
 - Multiple aspects considered: degree of economic inequality in respondent's country; how it has been changing; respondent's place in the national income distribution
 - NB no clear evidence that inequality always under-estimated
 - E.g. share of wealth held by richest 1% over-estimated in most countries in chart reported by Ipsos Mori, “Perils of Perception 2015” (reproduced by Wilkinson & Jeram, [The Inequality Paradox](#), p. 61)
 - E.g. income inequality under-estimated [Page and Goldstein (2016), '[Subjective beliefs about the income distribution and preferences for redistribution](#)', *Social Choice and Welfare*; using a different elicitation tool from the ISSP one

Potential explanations for mismatch

3. Headline measures do not focus on the dimensions of ‘inequality’ that are most salient nowadays?

Explaining public concern re ‘inequality’: three other potential topics of salience

Not income inequality levels and trends so much, but rather one or more of the following:

1. Wealth inequality (or labour earnings) levels and trends?
2. The implications of growing or persistently high inequality rather than inequality itself?
3. Inequalities of opportunity?
4. Horizontal inequalities rather than vertical inequalities ?
 - Growing gaps between e.g. young/old, men/women, ethnic groups, migrant/native, indigenous/non-indigenous, urban/rural, etc.
 - Not looked at here (except parenthetically): can return to in the discussion at end

Explaining public concern re ‘inequality’: (1) wealth inequality levels and trends

“Most public discussion about inequality focuses on income (an economic flow), but wealth (an economic stock of assets) is a more fundamental indicator of people's social position and opportunities, and its distribution goes to the fairness and stability of a society.”

Source: ABC webpages, 15 September 2017. See also Sheil & Stilwell (2016), *The Wealth of the Nation*, [paywalled](#)

OPINION

The ABS is wrong: Inequality is getting worse in Australia

By Christopher Sheil and Frank Stilwell

Updated 15 Sep 2017, 7:26am



PHOTO: The gap between the haves and the have-nots keeps growing. (Reuters: David Gray)

The Australian Bureau of Statistics **announced this week** that "inequality has remained stable since 2013-4". Given that economic inequality has been increasing since 1980 and the widespread view that it has reached unacceptable levels, the ABS's report came as a welcome respite. Or did it?

RELATED STORY: [Where does your money go? Survey shows cost of essential living a burden](#)

Most public discussion about inequality focuses on income (an economic flow), but wealth (an economic stock of assets) is a more fundamental indicator of people's social position and opportunities, and its distribution goes to the fairness and stability of a society.

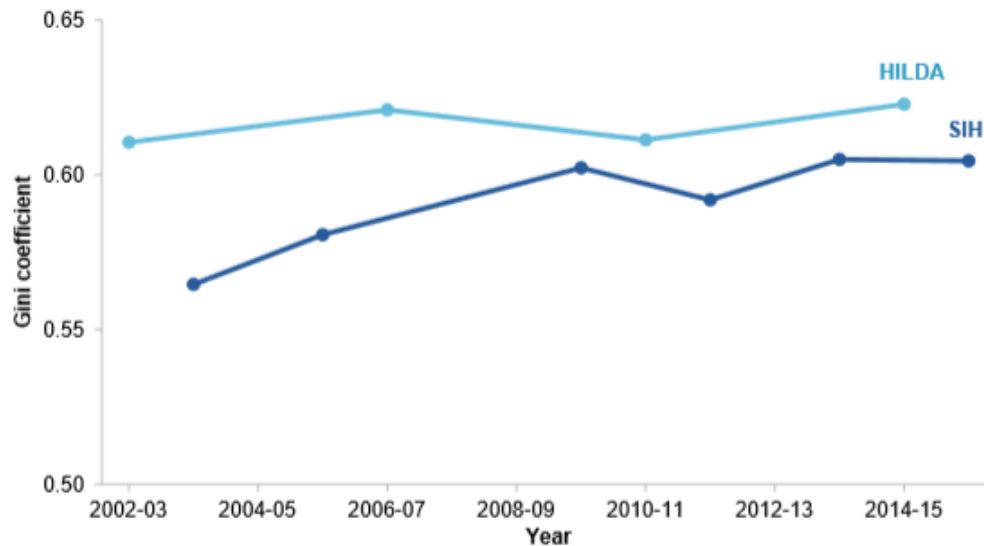
The ABS reports that the share of Australia's household wealth owned by the richest quintile (the top 20 per cent) has increased from 62.1 to 62.5 per cent since 2013-14.

An increase of just 0.4 per cent looks small, until you realise that's equal to half the total wealth owned by the poorest 20 per cent of households, whose share of the total wealth has fallen from 0.9 to 0.8 per cent.

“ Wealth inequality thus continues to increase at the extremes.

Explaining public concern re ‘inequality’: (1) wealth inequality levels and trends

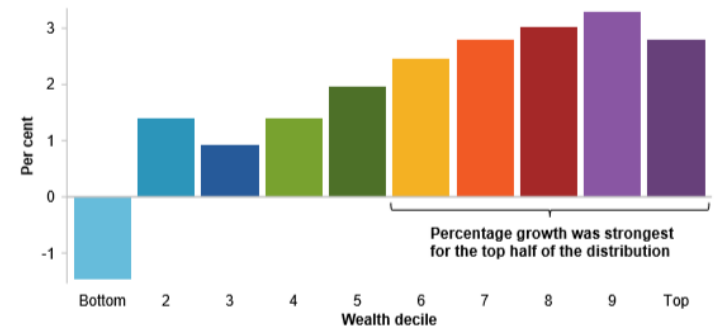
Figure 4.4 **Wealth inequality has risen since the early 2000s**
Gini coefficient of equivalised wealth, HILDA and SIH^a



^a Consistent with convention for Gini coefficients, negative values are treated as zero.

Sources: Productivity Commission estimates using: ABS (Microdata: Household Expenditure, Income and Housing, 2015-16, Cat. no. 6540.0, released 25/10/17); ABS SIH Basic confidentialised unit record files for years 1993-94 through 2013-14 as available at 25/10/17; Melbourne Institute (*Household, Income and Labour Dynamics in Australia (HILDA) Survey*, Release 16).

Figure 4.3 **Growth in wealth has been strongest in the upper deciles**
Average annual growth in wealth by wealth decile, 2003-04 to 2015-16^a



^a Average equivalised wealth, 2016-17 dollars. This broadly matches HILDA, except for the bottom decile which in HILDA grew by an average of about 11 per cent per year, from -\$5000 in 2002-03 to about -\$17 000 in 2014-15.

Source: Productivity Commission estimates using ABS (Microdata: Household Expenditure, Income and Housing, 2015-16, Cat. no. 6540.0, released 25/10/17).

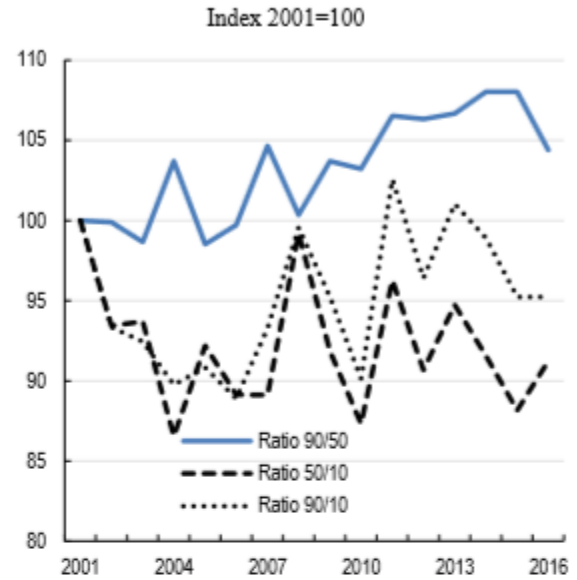
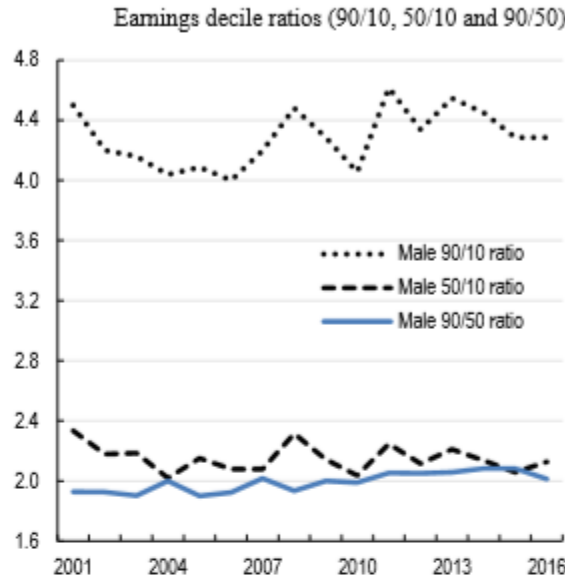
Figure 26. Decile earnings ratios (full-time employed) by gender

Explaining public concern re 'inequality': (1) Labour earnings inequality

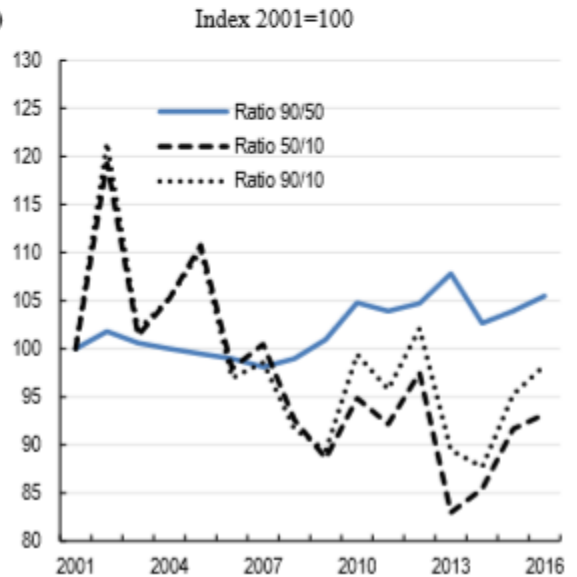
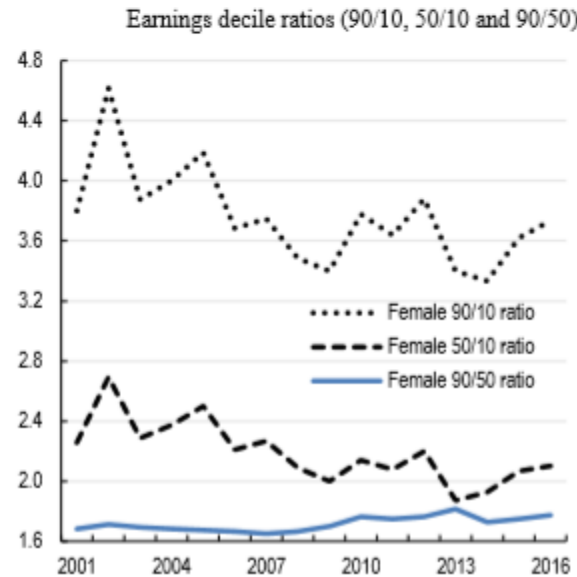
- But this has not increased a lot

Source: Sila and Dugain (2019), 'Income, wealth and earnings inequality in Australia: evidence from the HILDA survey, [OECD Economics Department Working Paper 1538](#)

A. Males



B. Females



Source: OECD calculations based on HILDA database.



Explaining public concern re ‘inequality’: (2) implications of inequality

Is the concern not so much growing or persistently high income inequalities per se, but how they play out in terms of other domains of people’s lives, i.e. the knock-on or indirect effects of income differences?

- Adverse effects of inequality on economic growth?
 - Cf. OECD (2015), [*In It Together. Why Less Inequality Benefits All*](#)
 - Not discussed here

More likely is related to ...

- What money ‘buys’: see overleaf

Explaining public concern re ‘inequality’: (2) implications of inequality, ctd.

- What money ‘buys’: persistently high income differences associated with growing differences in access to good housing, education, health care, legal aid, space, and access to opinion-forming / media etc.
- Big debate in the USA; growing in UK and Australia?
 - Nature of subject makes it hard to assess using standard large-N methods
- Examples (from left-of-centre writers)
 - Stiglitz (2012), *The Price of Inequality*
 - Chapters on top 1% and democracy/voting, shaping the perceptions of the bottom 99% re inequality, and erosion of the rule of law in favour of the top
 - Krugman (2019-06-24), [‘Notes on excessive wealth disorder’](#)
 - Column emphasises (i) soft corruption (ways in which people with policy influence may gain from promoting interests of the wealthy); (ii) campaign contributions; (iii) defining the agenda (media ownership, think tanks, and ‘simple tendency to assume that being rich also means being wise’)

Explaining public concern re ‘inequality’:

(3) inequalities of opportunity

- Emphasis on growing unfair inequalities of prospects, opportunities, resilience and vulnerability
 - Intra-generational: Income growth at top increasingly felt to be unfairly acquired; more rent-seeking behaviour by those at the top; increasing role of income-related social networks and connections; etc.
 - Intergenerational: inequalities of opportunity
 - (increasing?) role of family background, ethnicity, etc., in determining life chances
 - Prospects for younger birth cohorts worsening
 - Overlaps with worries about opportunities for wealth accumulation (owner-occupied housing, pensions)
 - Perhaps the earlier remarks about differential real income growth can also be put under this heading?
 - I.e. the death of the Prospect of Upward Mobility (POUM, [Benabou & Ok, QJE 2001](#)) if expectations about the future are formed by projecting from recent experience?
- Is this where unfair inequalities attitudes are now focused?

Inequality isn't getting worse, so why do we feel like it is?

By Melinda Cilento

Updated 26 Apr 2018, 3:02am



PHOTO: CEDA is calling for a regular independent and comprehensive assessment of inequality in Australia, with Productivity Commission five-yearly reviews. (Audience submitted: David Stefanoff)

Inequality drives a wedge between those seen to be benefitting from economic growth and those who are not, undermining social cohesion.

Conversely, improvements in income, wealth and the opportunities that underpin them, when shared broadly through society, support economic development and proactive economic reform agendas.

We should seek to ensure that each person is offered as equal a starting point as any other.

Has Australia done enough to ensure equality of opportunity? Have we done enough to deliver the "ladders of opportunity"?

The answer to that is in some areas, no.

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RELATED STORY: [Educational outcomes will suffer as long as schools promote social segregation](#)

RELATED STORY: ["The notion of a fair go is bulls****": Inside the class divide](#)

RELATED STORY: [Good taste, bad taste? Here's what your habits reveal about your social class](#)

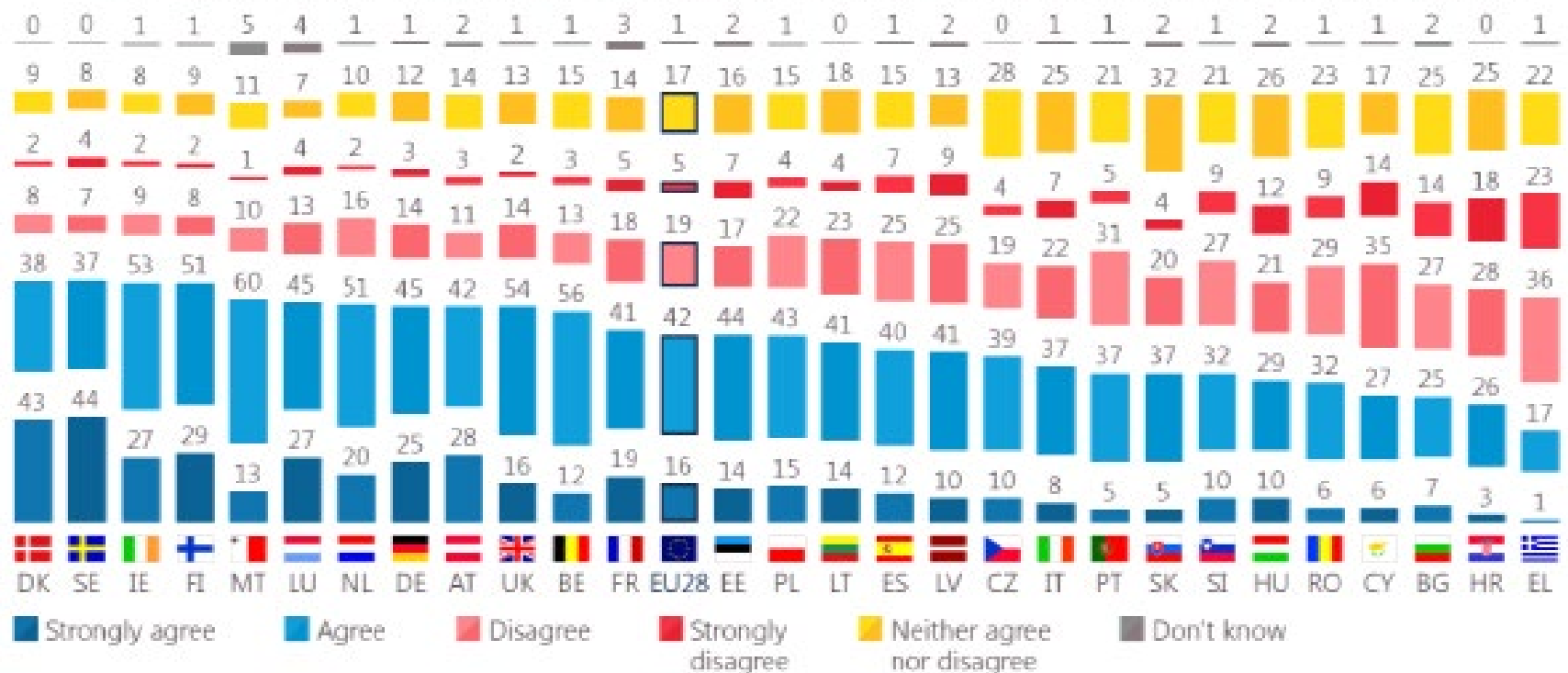
... because of inequalities of opportunity?

Are there equal opportunities for getting ahead in life? (EU-28, 2017)

- For only 3 countries (BG on), $\geq 51\%$ ‘disagree’/‘strongly disagree’
- But none of EU-28 has a majority answering ‘strongly agree’

QA1.5 Please tell me to what extent you personally agree or disagree with the following statements.

Nowadays in (OUR COUNTRY) I have equal opportunities for getting ahead in life, like everyone else (%)



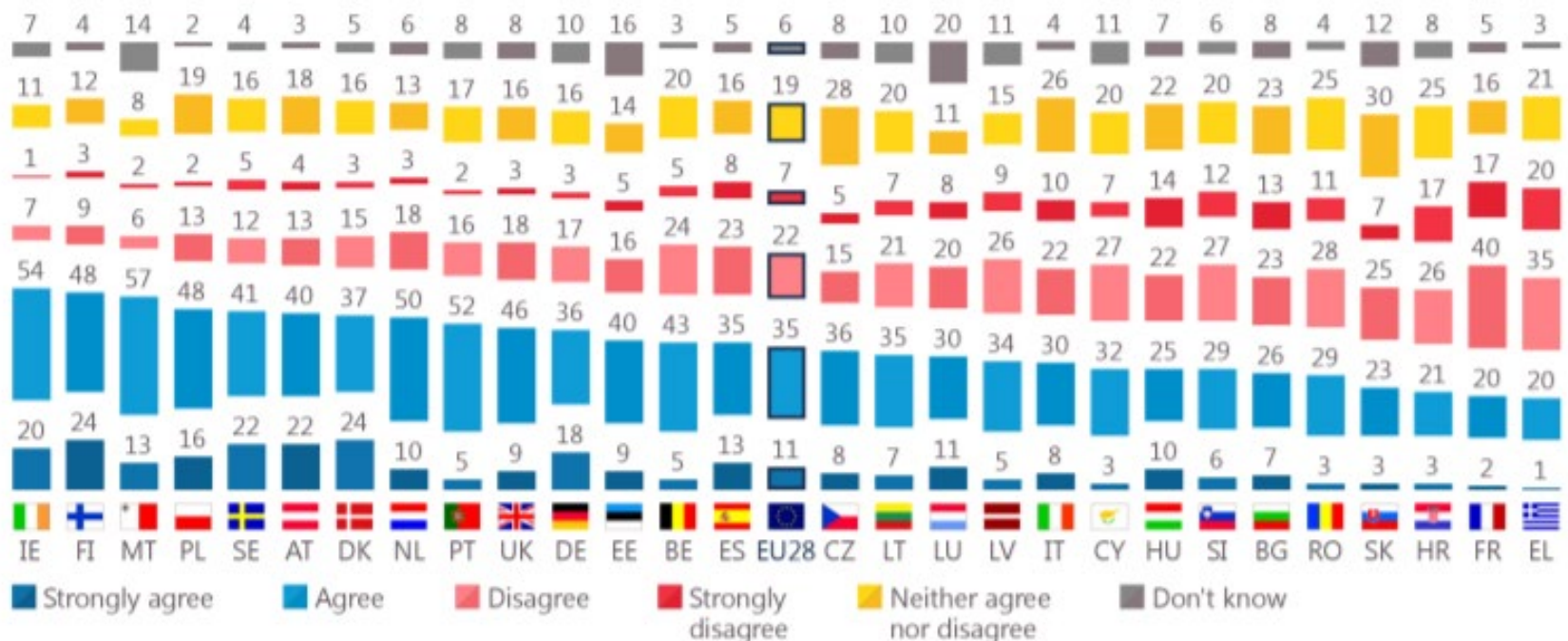
Source: Eurobarometer report: [Fairness, inequality and inter-generational mobility](#), 2018

Opportunities for getting ahead in life more equal than 30 years ago? (EU-28, 2017)

- 11 countries in which % ‘strongly agree’/‘agree’ (DE and leftwards) but note FR, EL
- No notable differences based on gender or age but there are *differences by education* and *differences by employment status*:
 - “Respondents who completed education aged 20 or over are the most likely to agree (49%), particularly to those who completed education prior to age 15. In more detail, those who did not complete primary school (33%) are much less likely to agree than those who at least completed primary schooling (43%-52%).
 - Managers (54%), students (53%) and other white collar workers (52%) are the most likely to agree, particularly compared to the unemployed (35%)”

QA1.9 Please tell me to what extent you personally agree or disagree with the following statements.

Compared with 30 years ago, opportunities for getting ahead in life have become more equal in (OUR COUNTRY) (%)

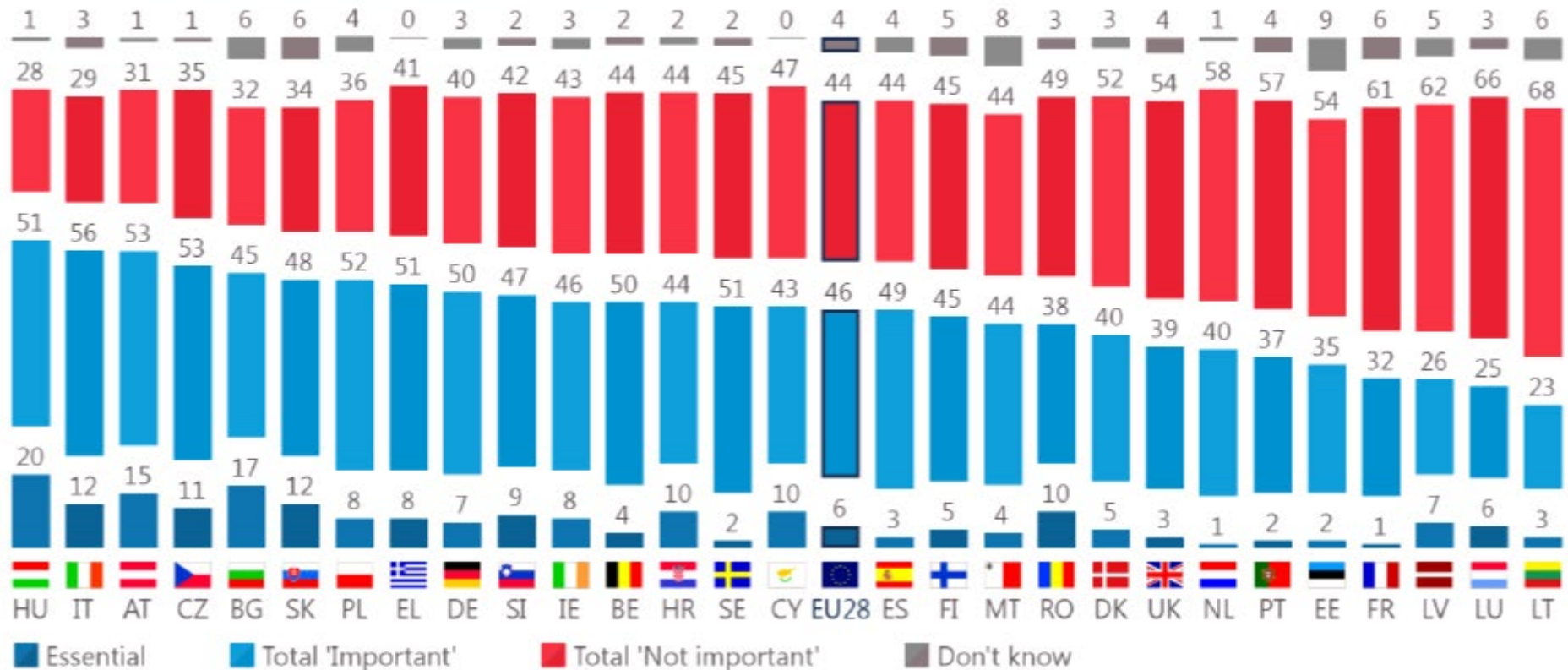


Importance of ethnic origin for getting ahead in life (EU-28, 2017)

- Only 9 countries in which fraction reporting 'not important' is > 50%

QA2.7 How important do you think each of the following are for getting ahead in life?

Being of a specific ethnic origin (%)



Will you have had a better/same/worse life than your parents' generation?

Mixed evidence about absolute mobility:

- In 14/23 countries, fraction reporting “will have had better life than parents’ generation” $\leq 50\%$
- But in only 2 countries do $> 50\%$ report “worse life”

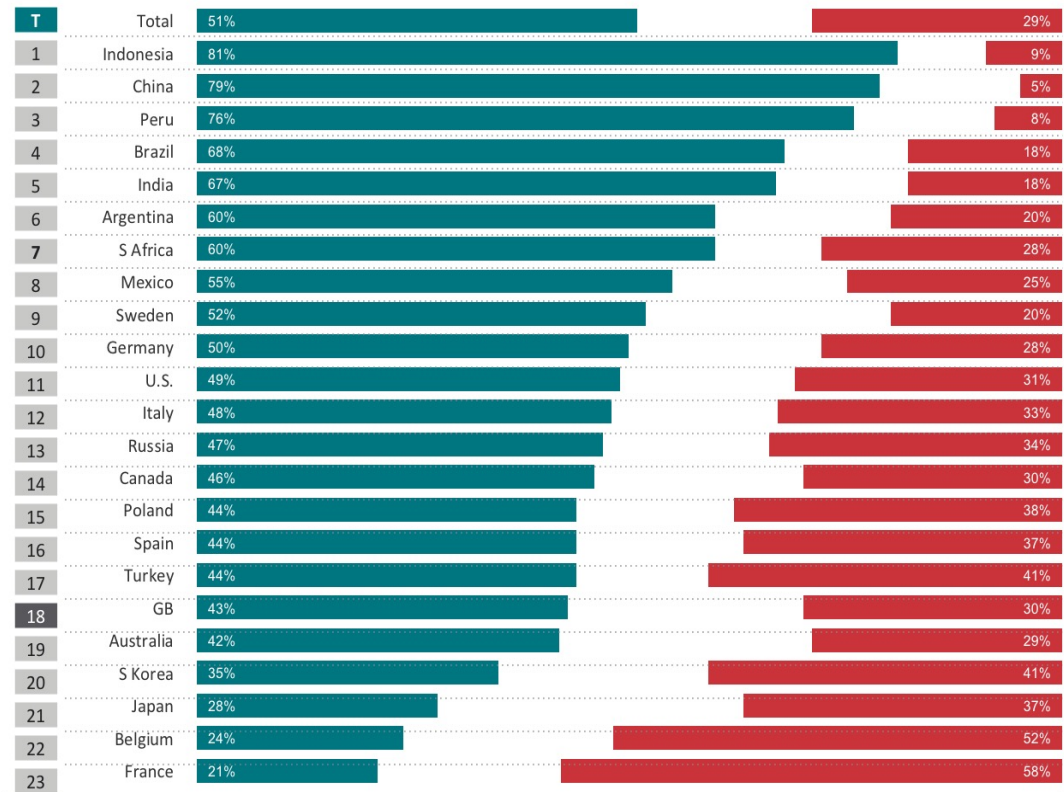
BETTER / WORSE LIFE THAN PARENTS

To what extent, if at all, do you feel that you will have had a better or worse life than your parents’ generation, or will it be about the same?

KEY:

Better 2016

Worse 2016



Base: 18,180 adults across 23 countries, online, 12th Sep – 11th Oct 2016

% children earning more than their parents: falling absolute mobility in the USA

Source: Chetty et al., [‘The fading American dream: Trends in absolute income mobility since 1940’](#), *Science* 356, 398–406, 28 April 2017

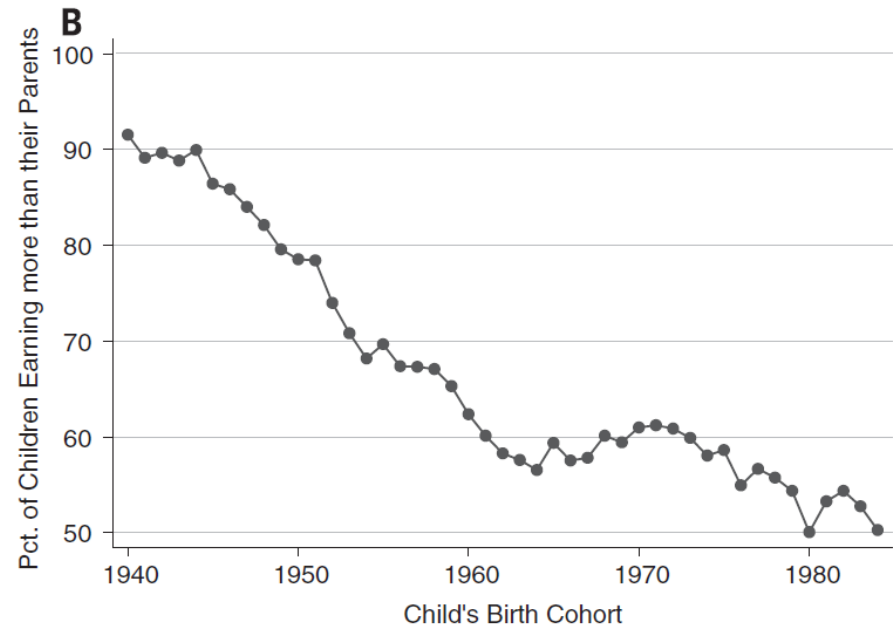
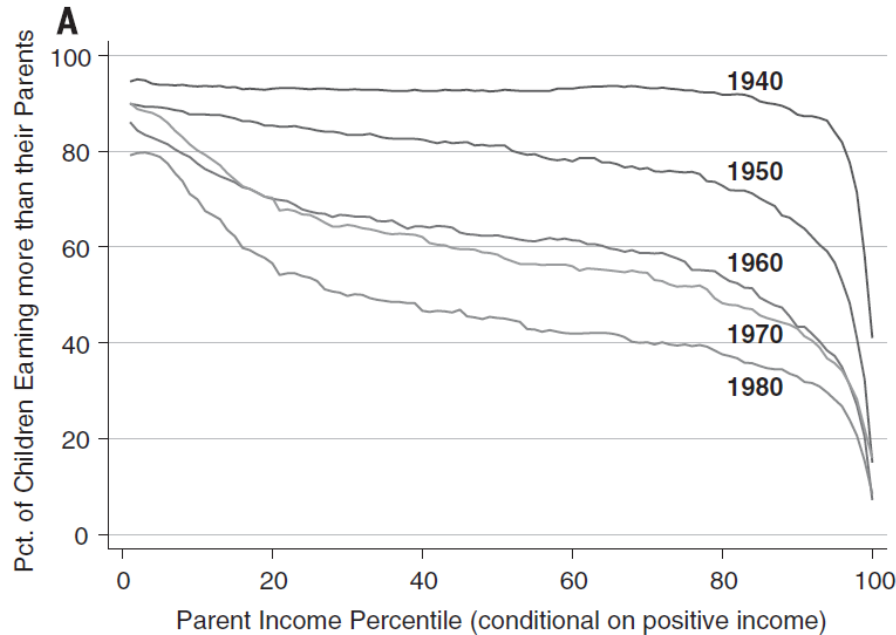


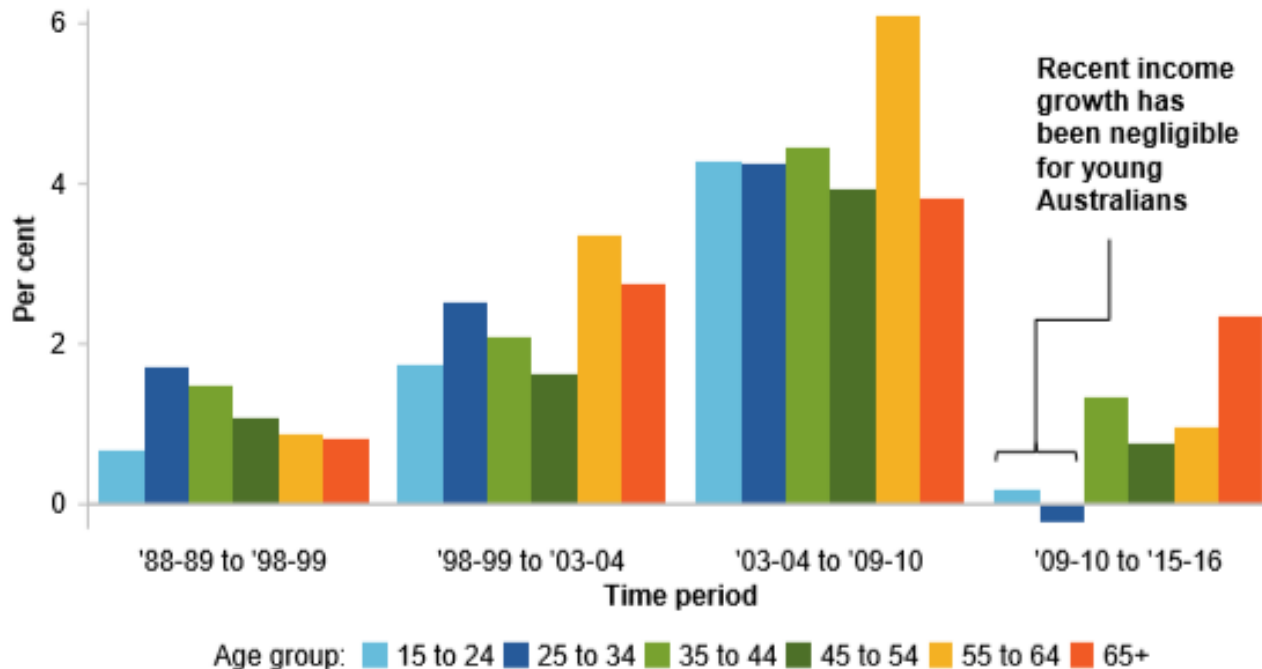
Fig. 1. Baseline estimates of absolute mobility by birth cohort. (A and B) The fraction of children earning more than their parents (“absolute mobility”) by parent income percentile for selected child birth cohorts (A) and on average by child birth cohort (B). Only parents with positive income are included in (A); within this group, parent income percentiles are constructed according to their ranks in the distribution of parents’ incomes within each child cohort. Parents with zero income are included in (B), defining absolute mobility as 100% for that subgroup when computing the mean rate

of absolute mobility by cohort. Child income is measured at age 30 in the CPS March supplement as the sum of individual and spousal income, excluding immigrants after 1994. Parent income is measured in the census as the sum of the spouses’ incomes for families in which the highest earner is between ages 25 and 35. Children’s and parents’ incomes are measured in real 2014 dollars using the CPI-U-RS. Absolute mobility is calculated by combining these income distributions with the copula estimated for the 1980 to 1982 cohorts in tax data by (12).

Intergenerational equity?

Figure 3.15 **Young people have seen little income growth recently**

Average annual growth rates in equivalised disposable income by time period and age group^a



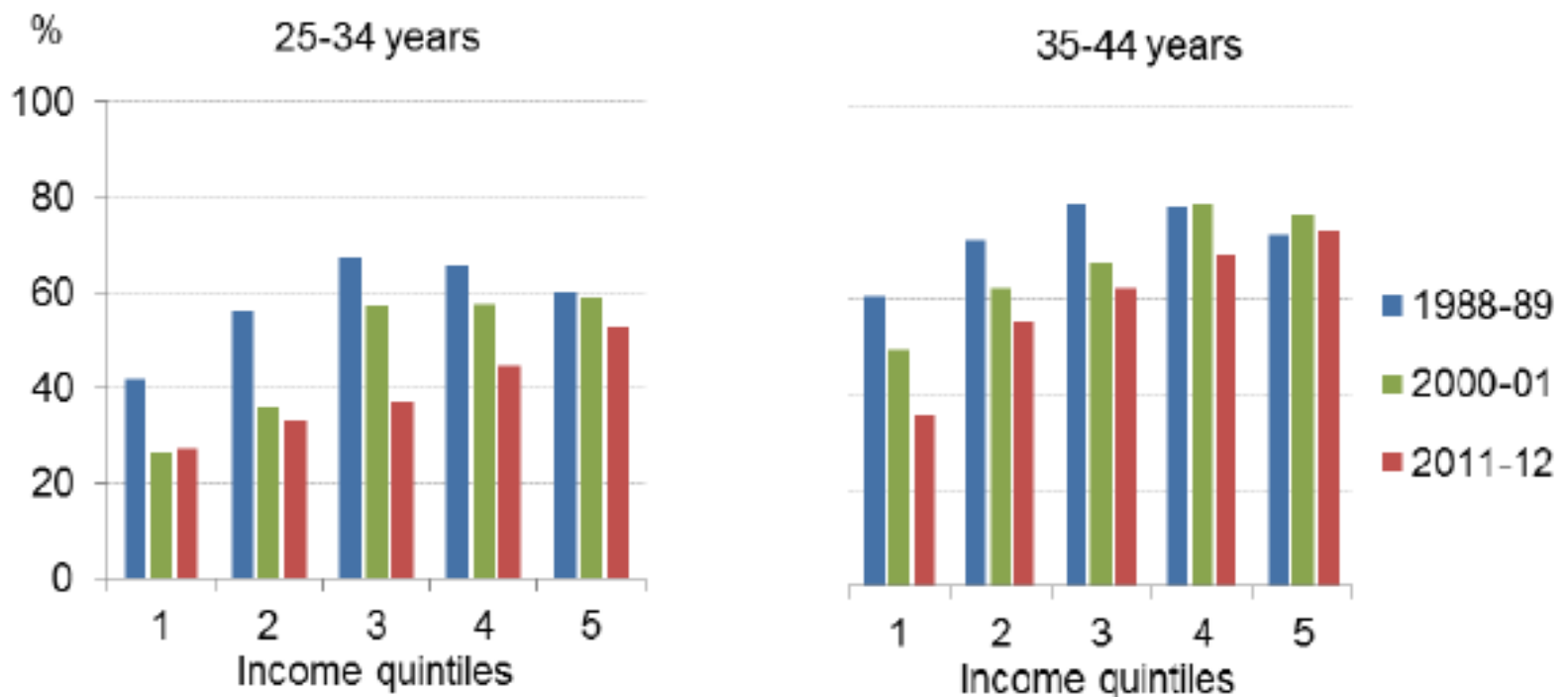
^a Growth is based on real income (2016-17 dollars). Time periods are determined by HES data. Data are not available for 1993-94. HILDA only covers the two most recent periods. The broad trends are similar, although growth of the 55 to 64 group is about equal with other groups for 2003-04 to 2009-10, and in the period 2009-10 to 2015-16, growth is below 1 per cent for all groups except those age 65 and above.

Sources: Productivity Commission estimates using: ABS (*Microdata: Household Expenditure, Income and Housing, 2015-16*, Cat. no. 6540.0, released 25/10/17) and ABS HES Basic confidentialised unit record files for years 1988-89 through 2009-10 as available at 25/10/17.

Source: Productivity Commission (2018), [Rising Inequality? A stocktake of the evidence](#)

Declining home ownership rates among younger people (AUS)

Figure 2: Home ownership rates for younger households by income quintiles, Australia



Source: ABS Surveys of Income and Housing, derived from basic confidentialised unit record files. Income quintiles are based on equivalised disposable household income.

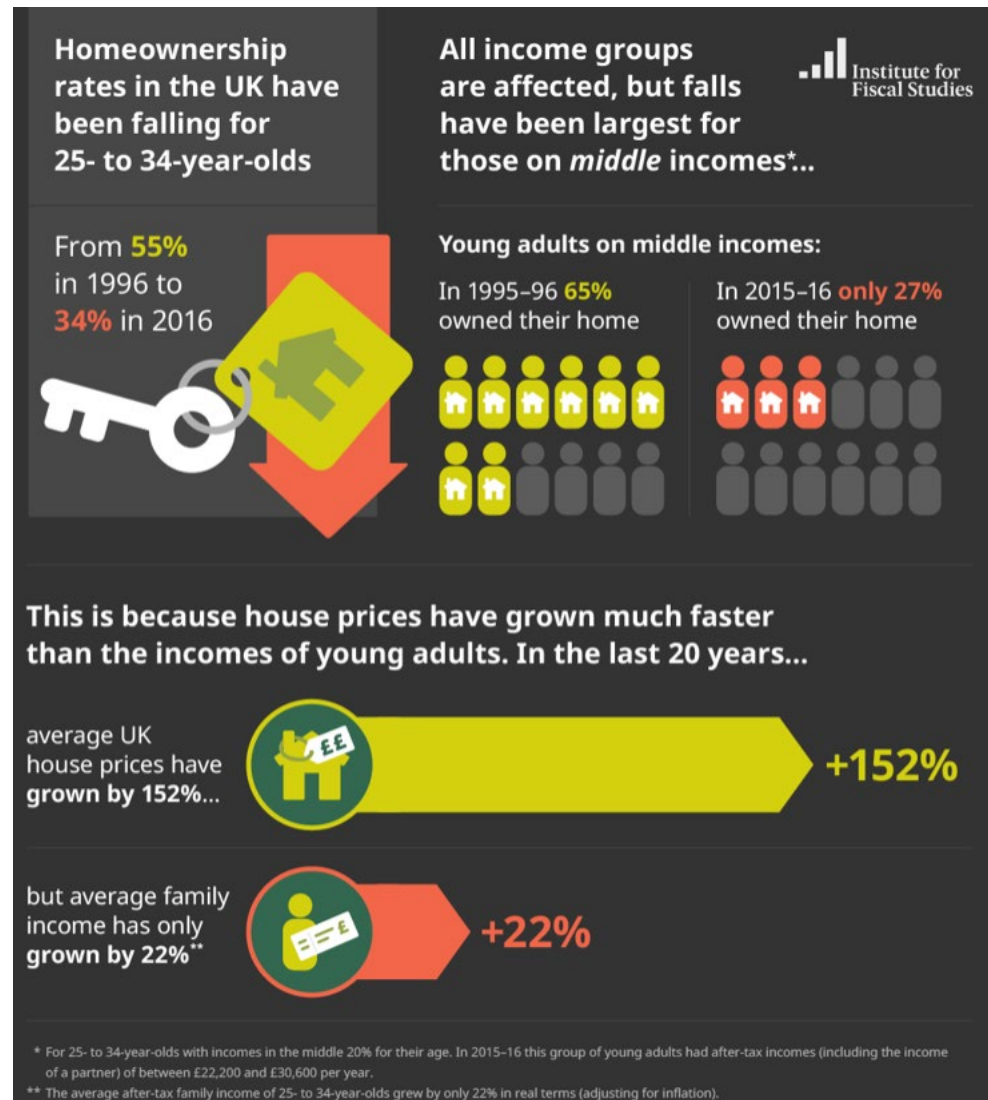
Source: Yates (2015), [Submission to the Standing Committee on Economics Inquiry into Home Ownership](#)

Declining home ownership rates among younger people (UK)

“The decline in the homeownership rate of young adults in Great Britain is an issue that has risen to the top of the political agenda.”

- **“Today’s young adults are significantly less likely to own a home at a given age than those born only five or ten years earlier.** At the age of 27, those born in the late 1980s had a homeownership rate of 25%, compared with 33% for those born five years earlier (in the early 1980s) and 43% for those born ten years earlier (in the late 1970s).
- **The falls in homeownership have been sharpest for young adults with middle incomes.** In 1995–96, 65% of those aged 25–34 with incomes in the middle 20% for their age owned their own home. Twenty years later, that figure was just 27%.
- **The key reason for the decline is the sharp rise in house prices relative to incomes. ...”**

Source: Cribb et al. (2018), [The decline of homeownership among young adults](#), Institute for Fiscal Studies



Rising *vulnerability* to poverty entry (EU)

TABLE 2.2 Income Associated with an 8 Percent Probability of Falling into Poverty

Country	Predicted income, US\$ PPP		Probability of falling into poverty, percent	
	2005–08	2011–14	2005–08	2011–14
<i>Eastern Europe</i>				
Bulgaria	14	32	9	9
Estonia	21	36	8	8
Poland	31	32	7	8
Hungary	30	32	8	9
Slovak Republic	20	31	10	7
Slovenia	33	39	8	8
<i>Southern Europe</i>				
Greece	40	43	8	9
Cyprus	54	46	8	8
Spain	32	47	8	8
<i>Continental Europe</i>				
Austria	41	51	8	8
France	32	37	8	8
Belgium	37	36	8	8
Netherlands	38	42	8	8
<i>Nordic Europe</i>				
Denmark	42	44	8	9
Iceland	37	50	3	8
Lithuania	25	29	7	9
Latvia	22	44	8	7
Norway	48	56	7	9
European Union	34	40	8	8

Source: Based on data of EU-SILC (European Union Statistics on Income and Living Conditions) (database), Eurostat, European Commission, Luxembourg, <http://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions>.

Note: The quantile selected is based on the probability closest to 8 percent (by country panel).

The income required to protect individuals from being vulnerable to falling into poverty rose between 2005-08 and 2011-14

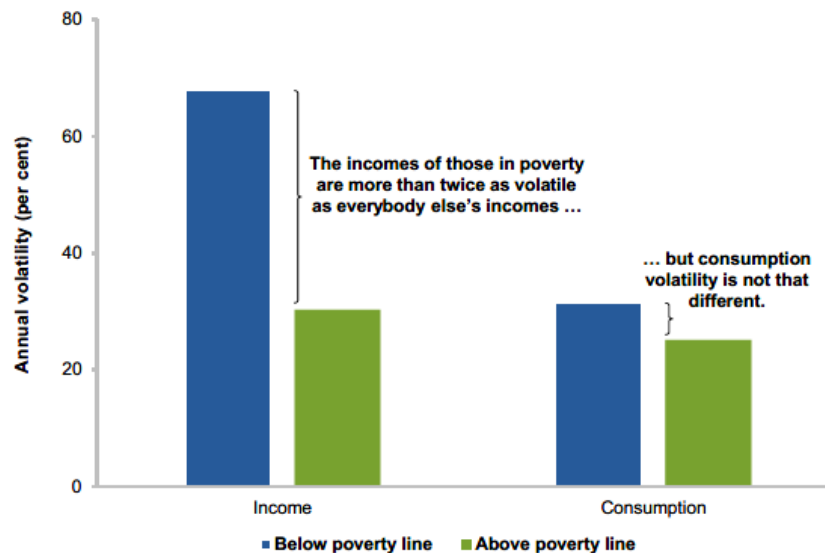
Source: Bussolo et al. (2018), *Toward a New Social Contract. Taking On Distributional Tensions in Europe and Central Asia*, World Bank, using EU-SILC panel data

Income volatility (AUS)

Substantial variability over time in people's incomes, but has this income 'risk' been increasing over time? We don't know ...

Figure 6.11 **Economic insecurity is higher among those below the poverty line^{a,b}**

Volatility of income and private consumption, 2005-06 to 2015-16

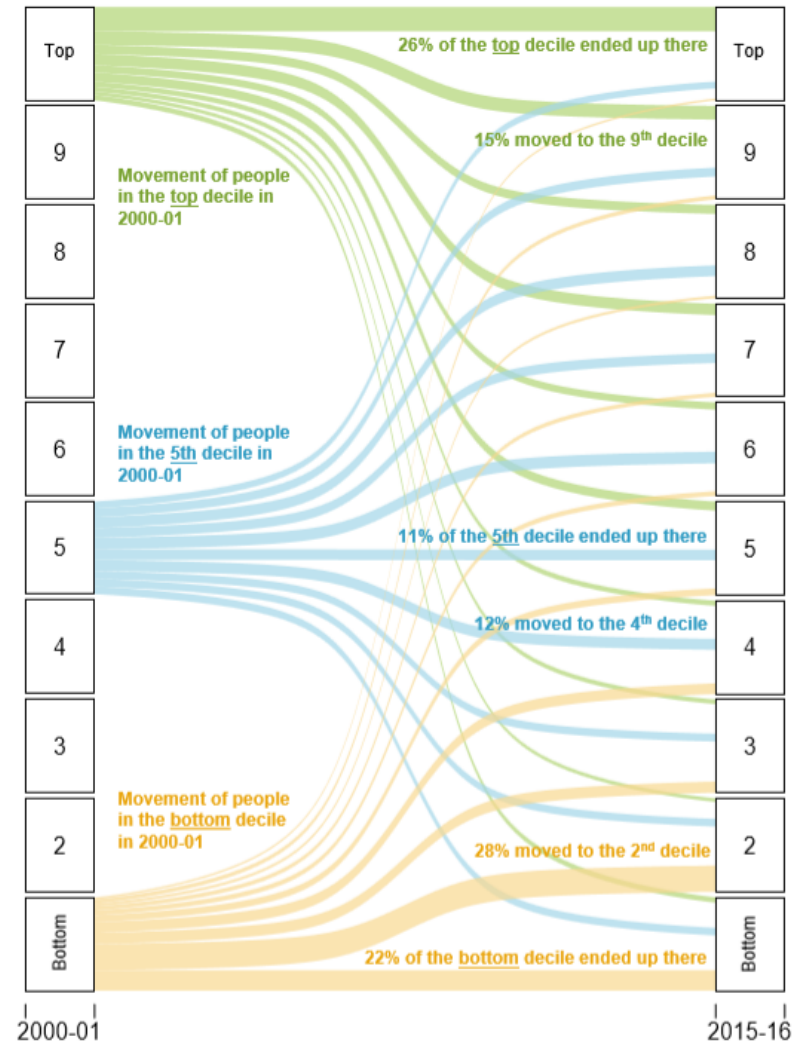


^a Volatility is measured as the standard deviation of the 2-year arc percentage change in income (see Hardy 2017 for more detail). Only survey respondents of working age (25–59 years) were included in the calculation of volatility. Negative incomes were set to zero. ^b Consumption does not include expenditure on consumer durables, such as vehicles or home appliances.

Source: Productivity Commission estimates using Melbourne Institute (*Household, Income and Labour Dynamics in Australia (HILDA) Survey*, Release 16).

Figure 5.5 **There is a lot of movement between income deciles**

Proportion of people in the top, 5th and bottom income deciles in 2000-01, by income decile in 2015-16^a



^a People may have spent time in other deciles in between 2000-01 and 2015-16.

Source: Productivity Commission estimates using Melbourne Institute (*Household, Income and Labour Dynamics in Australia (HILDA) Survey*, Release 16).

Source: Productivity Commission (2018), [Rising Inequality? A stocktake of the evidence](#)

Potential explanations for mismatch

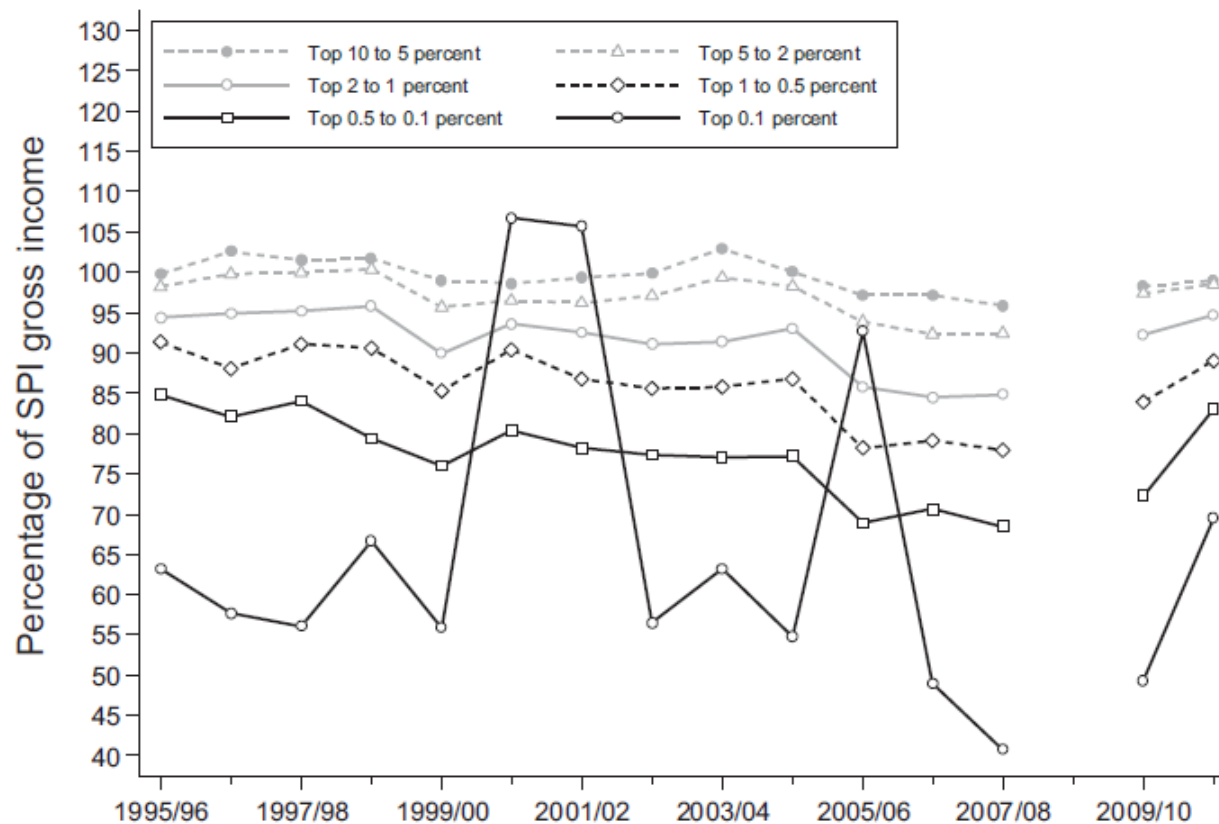
4. The survey data underlying the measured realities are wrong?

- Measurement lagging behind perceptions?
- Mismeasurement at the top of the income range means inequality estimates biased?
- Can we improve our estimates?

Survey under-coverage of top incomes, UK

- Ratios $< 100\%$ \Rightarrow survey under-coverage relative to tax data counterpart (“SPI”)
- Under-coverage down to c. $p95$, and increasing over time (lines slope downwards to the right)

a. Ratio of individual gross income total (HBAI) to individual gross income total (SPI), by income group



NB no SPI tax data for 2008/09; some interpretation issues at end (‘forestalling’)

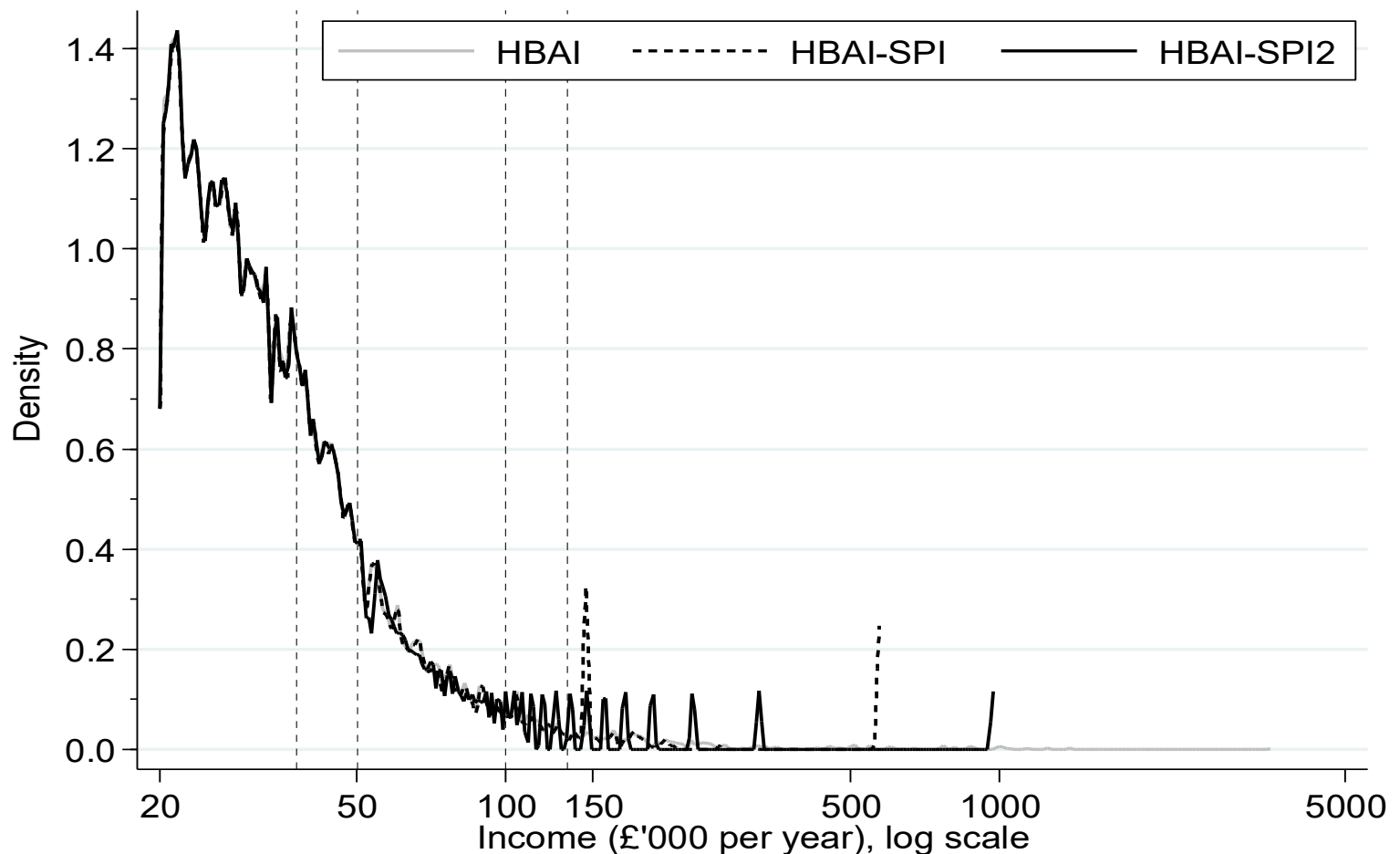
Source: [Burkhauser et al., Fiscal Studies, 2018](#). ‘HBAI’: cleaned-up income variables subfile of the Family Resources Survey. ‘SPI’: data from HMRC’s admin records on personal income tax returns

Addressing under-coverage at top by combining survey and tax data (UK)

- DWP’s pioneering (since early 1990s) “SPI adjustment”
 - Replace very small number of “very rich” survey respondents’ individual gross incomes in year t by cell-mean imputations ‘projected’ from tax data (SPI) for year $t-1$ or sometimes $t-2$
 - Benefit unit and household incomes are re-calculated post-imputation
 - Recalibration of FRS weights to better gross-up to population totals – shift in weight towards top income recipients (albeit small)
 - Uses only 4 cell-means (4 strata: GB/NI, pensioner/non-pensioner)
- [Burkhauser et al. \(OEP, 2018\)](#) better address under-coverage
 - Cell-mean imputations go further down distribution, and more fine-grained: more groups, more income-related cell means (no strata)
 - Calibrated against World (Top) Income Database estimates
 - See [Burkhauser, Hahn & Wilkins](#) (2016) for analogous AUS study

Burkhauser et al. (2018) SPI2 adjustments place more people in top income ranges than DWP's SPI adjustment

- Add density mass in survey at the top income ranges using estimates from the tax data
- Kernel density estimates of top incomes (2010/11) for unadjusted, SPI-adjusted and SPI2-adjusted incomes (top 5% variant)
- Vertical dotted lines show (L to R) p_{90} , p_{95} , p_{99} , and $p_{99.5}$ in the survey ('HBAI') data



Greater inequality rise according to our SPI2 estimates (compared to DWP's)

- *Inequality levels* are higher when we make the top income adjustment
- Greater *inequality increase*, especially 2004/05–2007/08
- The more top-sensitive the inequality index used (Theil rather than Gini), the greater is the estimated change
 - The rising concentration at the very top shown by WID top income shares is being picked up by top-sensitive indices

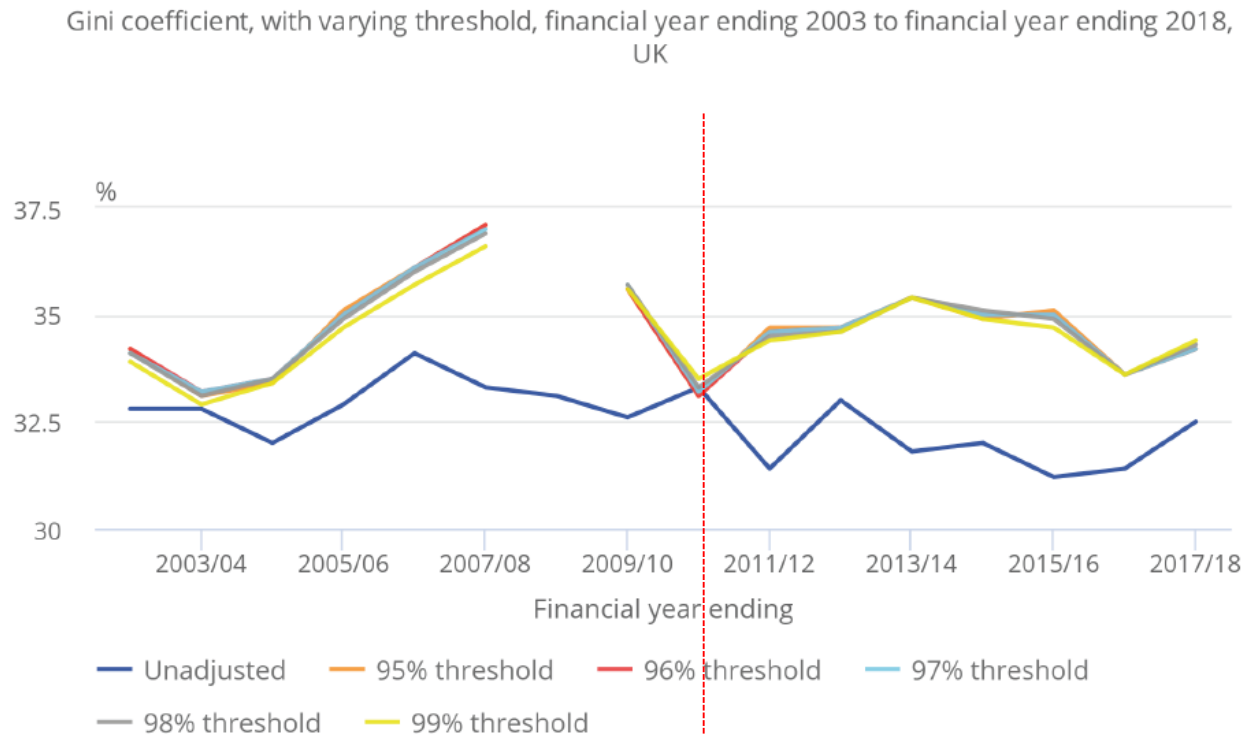
Inequality index	Data set	Income definition	Level				Percentage change			
			1995/96	2001/02	2004/05	2007/08	1995/96 to 2001/02	2001/02 to 2004/05	2004/05 to 2007/08	1995/96 to 2007/08
Gini coefficient	HBAI-SPI2	Gross	0.380	0.400	0.390	0.418	5.1	−2.4	7.1	9.8
	HBAI-SPI	Gross	0.375	0.394	0.384	0.399	5.2	−2.5	4.0	6.6
	HBAI-SPI	Net	0.333	0.349	0.339	0.357	4.7	−2.6	5.1	7.1
Theil index	HBAI-SPI2	Gross	0.275	0.333	0.317	0.396	21.3	−5.0	24.9	44.1
	HBAI-SPI	Gross	0.266	0.325	0.299	0.332	22.5	−8.0	10.7	24.8
	HBAI-SPI	Net	0.205	0.250	0.229	0.258	22.0	−8.3	12.7	26.0

- See also [Jenkins, *Economica*, 2017](#), for a different data-combination approach (summarising the distribution among the richest in the tax data using Pareto distributions) but with similar results

ONS are now using our approach

- [ONS \(2019\)](#) research confirms our findings regarding estimates of higher inequality levels when combined data are used, and also that inequality trends differ
- E.g. the unadjusted series shows an inequality decline between 2010/11 and 2015/16, whereas the new series based on our methods shows a rise

Figure 3: Adjustments give a similar rise in inequality regardless of threshold



Conclusions: questions for discussion

- What dimensions of ‘inequality’ are the most relevant / salient to the public?
 - Existing values surveys don’t tell us this; in any case there’s much diversity in perceptions within and between countries
 - Answers have implications for focus on distributional policy design – role of traditional income taxes and benefits versus acting more directly on domains of health, education, legal system, etc.
 - Cross-sectional versus longitudinal emphasis: tracking prospects and opportunities, resilience and vulnerability
- Information providers and communicators (including statistical agencies and government departments): what responsibilities do they have for better aligning perceptions of inequality with measured realities?
 - Applies across many social policy domains (e.g. numbers receiving benefits, immigrant numbers, etc.)
- How can the quality of the measured realities be improved?
 - What roles for data combination and/or data substitution?

Conclusions: questions for research

SPJ's suggestions:

- The fundamental axioms of inequality measurement: new experimental work following in Amiel & Cowell's footsteps, plus associated 'theory' (the implications of new/alternative axioms)
- Which dimensions of 'inequality' are the salient ones nowadays?
 - new survey research about people's views
- Continuing to improve the measured realities
 - Wealth as well as income
 - Surveys & admin registers: data combination (& substitution?)