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BRIEFING

Unequal results

Improving and reconciling the UK's household income statistics

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Acknowledgements

The discussion of top income measurement in this note draws heavily on two papers by Richard Burkhauser, Nicolas Hérault, Stephen Jenkins and Roger Wilkins. Special thanks to Stephen Jenkins and to staff at the ONS and DWP for their time, and to all those who joined us for a discussion of these topics. Any errors remain the author's own.

Summary

It is increasingly recognised that headline economic measures such as GDP, average earnings and unemployment are not sufficient, and that household income (or consumption or wealth) and its distribution is a crucial metric of economic well-being. The surveys on which household income information is based are therefore central to understanding the challenges policymakers must tackle and measuring the impact of policy changes when they do. But surveys have limited sample sizes, have no requirement for people to respond, and respondents may not give complete or correct details when they do. This is in contrast to tax data (and benefit data), which is far more detailed and accurate (excepting tax evasion) but generally provides no information about families and is kept under extremely tight guard.

There is also a need for greater consistency in income statistics. The Department for Work and Pensions (DWP) and Office for National Statistics (ONS) both produce income and inequality statistics – and both have received the National Statistics quality stamp – but they have notably disagreed at times. While the Chancellor and Prime Minister have recently used the ONS statistics (the Effects of Taxes and Benefits on Household Income – ETB) to state that “income inequality is at its lowest level in 30 years”, this is not true in the higher quality DWP statistics (Households Below Average Income – HBAI). Differences stem from both the degree of top income accuracy and the use of different methods.

So how can household income statistics be improved and the different sources reconciled?

There are some general improvements that could be made to the utility and comparability of both publications. One technical but important difference is in whether or not income statistics refer to the distribution of households or of individuals: i.e. whether or not more weight is given to larger households. We show that this choice does have implications for long-run inequality trends and conclude that ONS should switch to individual weighting – in line with DWP and international best practice. ONS could also include additional variables in its datasets to allow robust comparison – and ultimately combination – with HBAI, such as HBAI-consistent definitions of pensioners and of income (there are small differences regarding benefits-in-kind and tuition fees).

Perhaps the most important problem with both datasets is the inaccuracy of top incomes. Work by Burkhauser et al. shows that the unadjusted household survey data greatly underestimates the incomes of the top few per cent compared to tax data. In the case of the top 0.1 per cent, often only around half of income is captured. An attempt is made to correct this in HBAI using tax data from HMRC. No such attempt is currently made in ONS's ETB and so this data greatly underestimates the scale of top incomes. This has a large effect on inequality trends too, as the share of income going to the richest has increased. HBAI's top income correction is a key cause of differing trends between HBAI and ETB. Despite often being the timeliest, ETB is therefore not the best source for overall disposable income inequality statistics. But HBAI – although it was a pioneer internationally – is also far from perfect. The top income ('SPI') adjustment is crude, covers only the very top of the distribution, is based on projections rather than outturn data, has varied slightly over time, and is partially undocumented. Both ONS and DWP, working with HMRC, must be given the resources to update and improve on their current methods as soon as possible.

There are many more household finance questions not covered in this note (not least regarding expenditure and inflation measures), but we recommend a number of steps that would greatly improve the communication, consistency and quality of UK income and inequality statistics.

Recommendations

The ONS and DWP's income, inequality and poverty publications are important sources of information for the public and policymakers. There are some small but important changes that could be made to both:

1. **ONS should extend its inequality statistics back to 1961 or earlier – rather than 1977 – and it and DWP should aim for these to receive National Statistics status**
2. **The 1960 Family Expenditure Survey should be digitised, with funding sought from research councils and trusts**
3. **DWP should seek to make its annual HBAI publication more prominent and user-friendly, recognising that these results are the number one source for household income and inequality trends and learning lessons from the ONS's statistical bulletins**

In the near future both the ONS and DWP will have household income surveys with large sample sizes. To maximise the utility and consistency of these:

4. **ONS should include additional variables in its datasets to facilitate comparison – and combination – with HBAI, such as HBAI-consistent definitions of income and pensioners**
5. **ONS and DWP should explore whether their survey designs and microdata could eventually be formally linked to produce a single, very large source of household income data**
6. **ONS and DWP should reconsider their treatment of tuition fee loans in household surveys (HBAI currently records receipt of these loans as disposable income) – and whether inheritances and capital gains could be captured as supplementary information (they are currently not included at all)**
7. **ONS should include in its household income survey a measure of income that includes imputed rent**
8. **ONS should switch from household weighting to person weighting for its equivalised income statistics**
9. **ONS and others should consistently equivalise incomes relative to those of couples, rather than the single adult reference point still used in some releases and datasets**
10. **ONS, DWP and other stakeholders should regularly explore and outline the judgements and empirical evidence underlying equivalisation factors**

The measurement of top incomes is important both in itself and to overall income and inequality figures, but surveys are very weak at capturing them. To urgently improve this:

11. **ONS and UKSA should make clear that ETB is known to underestimate top incomes and that HBAI is therefore currently the superior source for measures such as the disposable income Gini**
12. **ONS, in reforming its surveys and using administrative data, should attach high importance to the accuracy of top income statistics, using Real Time Information and other sources and building on the DWP's experience of top income adjustment**
13. **HMRC should finally release unit record SPI data for 2008-09, 2011-12 and 2012-13; and documentation on its SPI methodologies**
14. **DWP should improve its HBAI top income adjustment to more comprehensively correct for underestimation and inequality within the top income group, and periodically revise earlier figures using outturn data and a consistent method**
15. **Given that the tax data is an imperfect measure of incomes due to tax evasion, researchers and government should aim to quantify the scale of income missing from the UK tax data across the distribution and across time**

Although not the focus of this paper, as it is a problem shared by both ETB and HBAI, inaccurate incomes near the bottom of the distribution are sorely in need of improvement too.

16. **ONS and DWP should use administrative benefit data including the Universal Credit system to improve the quality of data for lower income households, where there are very significant inaccuracies**

Some of these recommendations could be implemented easily, and much work is already underway at the ONS, but others will require additional resources and determination.

17. **Government should provide the resources required for ONS, HMRC, and DWP to attain by 2020 the high standards the public would expect for household income statistics**

Introduction

Although GDP, employment and average earnings are (rightly) key economic barometers,^[1] household incomes and inequalities are indispensable measures of living standards. Indeed, there has been increased recognition across the world of the need for economic statistics to give increased emphasis to the distribution of growth as well as averages. Household survey data has proven invaluable for assessing the challenges facing the UK and for measuring the impact of policy changes. Household income data forms the basis of much Resolution Foundation work, for instance, and was the basis for the government's assessment of progress in reducing poverty.

But the recognition of the importance of distribution; heightened concerns about inequality; and increased potential for big data and data sharing all give cause to think about whether the UK's current data is as good as it can be. It is not. Worse, perhaps, two official sources have published quite different inequality figures.

This briefing note explores why this is, some of the improvements already planned, and what else needs to be done to give the UK world-leading household income data to continue to inform debate and public policy.

Two publications, two different inequality trends

In the Autumn Budget 2017, the Chancellor stated that “income inequality is at its lowest level in 30 years”^[2] – a claim that he and the Prime Minister have both made before.^[3] Are they right? According to the Office of National Statistics (ONS), yes. According to the Department for Work and Pensions (DWP), no.

There are two frequently used sources of household income and inequality figures in the UK.

- » The **Effects of Taxes and Benefits on Household Income (ETB)** data is produced by the ONS using the Living Costs and Food Survey – and formerly the Expenditure and Food Survey (2001-2007) and Family Expenditure Survey (1977-2001). The Living Costs and Food Survey provides data about expenditure^[4] and income for a random sample of just under 5,000 households, with weights to match and represent the overall population. ETB uses some aggregate administrative data to try and improve the quality of this raw data.^[5]
- » The **Households Below Average Income (HBAI) data** is produced by the DWP using the Family Resources Survey (the fieldwork for which is done by ONS and NatCen).^[6] This produces a sample of over 19,000 households, which is also weighted to match and represent the overall population. Incomes of the ‘very rich’ are adjusted using administrative data from HMRC's Survey of Personal Incomes (SPI), a random sample of personal tax data. HBAI is available from 1994-95, though for Northern Ireland only from 2002-03, but the Institute for Fiscal Studies (IFS) has created consistent data going back to 1961 using the Family Expenditure Survey.^[7]

[1] Though GDP per capita and GDP per hour worked are for most purposes better barometers than total GDP.

[2] For more details see HM Treasury, [Impact on households: distributional analysis to accompany Autumn Budget 2017](#), November 2017

[3] Conservative Party conference 2017; and [Mansion House 2017: Speech by the Chancellor of the Exchequer](#), June 2017

[4] Income, rather than expenditure, is the focus of this note. However, L Gardiner et al., [Consuming forces: generational living standards measured through household consumption](#), Resolution Foundation, September 2017 has recently outlined some problems with the existing consumption data.

[5] ONS, [The effects of taxes and benefits on household income, methodology and coherence: financial year ending 2015](#), May 2016

[6] DWP, [Family Resources Survey, UK, 2015-16, Background note and methodology](#), March 2017

[7] A Goodman & S Webb, [Institute for Fiscal Studies Households Below Average Income Dataset 1961-1991](#), 1995

Both ETB and HBAI (neither named very accurately) result in government publications – both of which have received National Statistics status from the United Kingdom Statistics Authority – and the underlying (but redacted) microdata is available to registered users. ETB (and the Living Costs and Food Survey) has been of particular use for research on expenditure, indirect taxes and public services, and HBAI has been the country's best resource on poverty and material deprivation. However, they have also become the primary sources of information on overall household incomes and inequality – and it is important that this usage is reflected in the design of the surveys and publications. Some change is already underway.

The ETB has a limited sample size. To boost this, and to further other goals, the ONS will in future combine the design of the Living Costs and Food Survey with that of another survey – the Survey of Living Conditions (which also contributes to international 'EU-SILC' data). From 2017-18 its sample size for income analysis should therefore jump from around 5,000 to around 17,000.^[8] Eventually, this may also be aligned with the Wealth and Assets Survey in order to allow the side-by-side analysis of income, expenditure, wealth and – in ETB – the value of public services received.

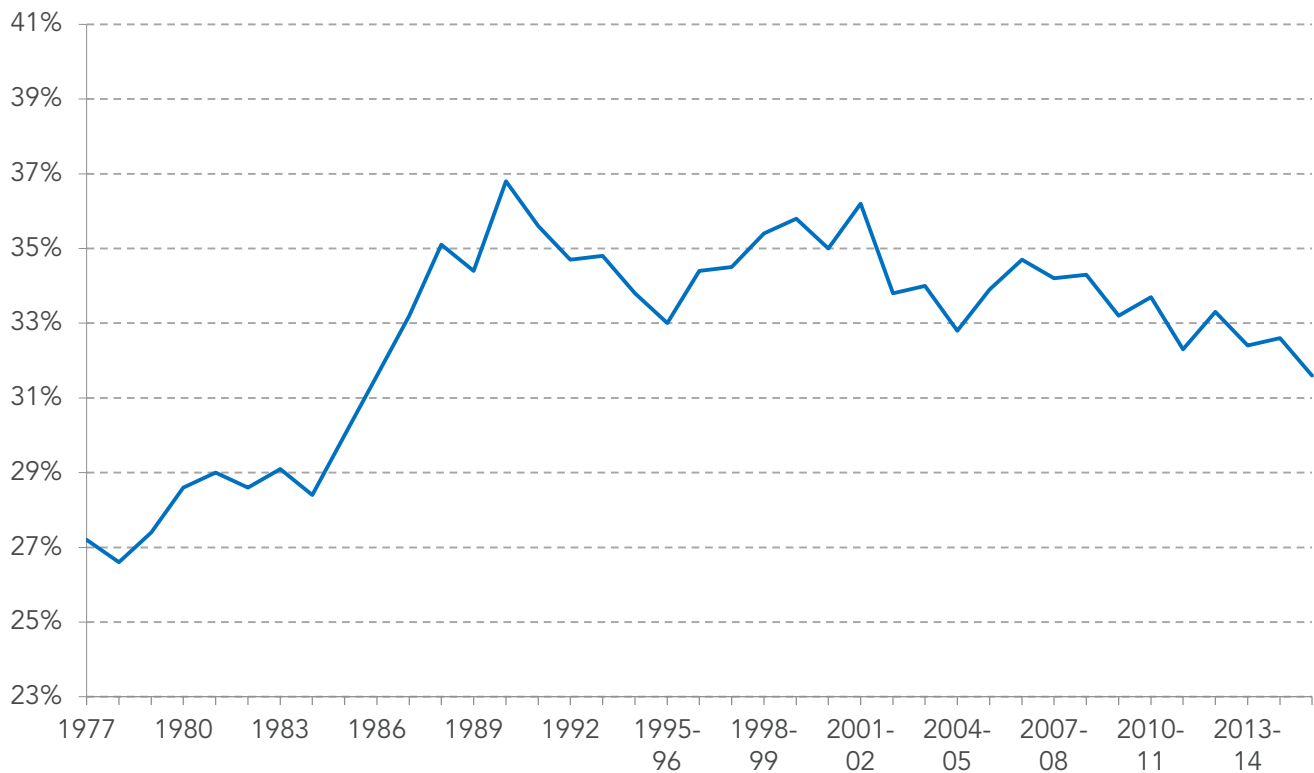
These ONS plans are exciting and ambitious. What's more, with the Digital Economy Act 2017 the ONS will be able to make greater use of administrative data from HMRC, DWP, local government and other sources. This has huge potential. Indeed, you could be forgiven for asking why the government relies so heavily on household income surveys at all when it has our tax records, benefit records and more (not to mention the data held by banks and other private institutions).

For now, however, the ETB and HBAI – and their disagreement regarding inequality – are our focus. Why do they disagree, can they be reconciled and how can each build on the strengths of the other?

ETB and HBAI inequality results have diverged

Back in January 2017, the ONS published [Household disposable income and inequality in the UK: financial year ending 2016](#), showing that the Gini measure of inequality for household disposable income (not accounting for housing) in 2015-16 had fallen back to where it had been in 1986. The Chancellor and Prime Minister therefore had a solid basis for their claim that inequality is at its lowest for 30 years (or at least was in the most recent data available). Figure 1 shows the Gini statistics from this release, with a notable downward trend in inequality since the mid-1990s though with few changes as dramatic as the 1980s increases in inequality.

[8] ONS, [Family Finance Surveys User Conference 2017](#)

Figure 1: ETB figures show inequality in 2015-16 was the (joint) lowest since 1985*Gini coefficient for equivalised household disposable income*

Notes: UK

Source: ONS, *Household disposable income and inequality in the UK: financial year ending 2016* (ETB)

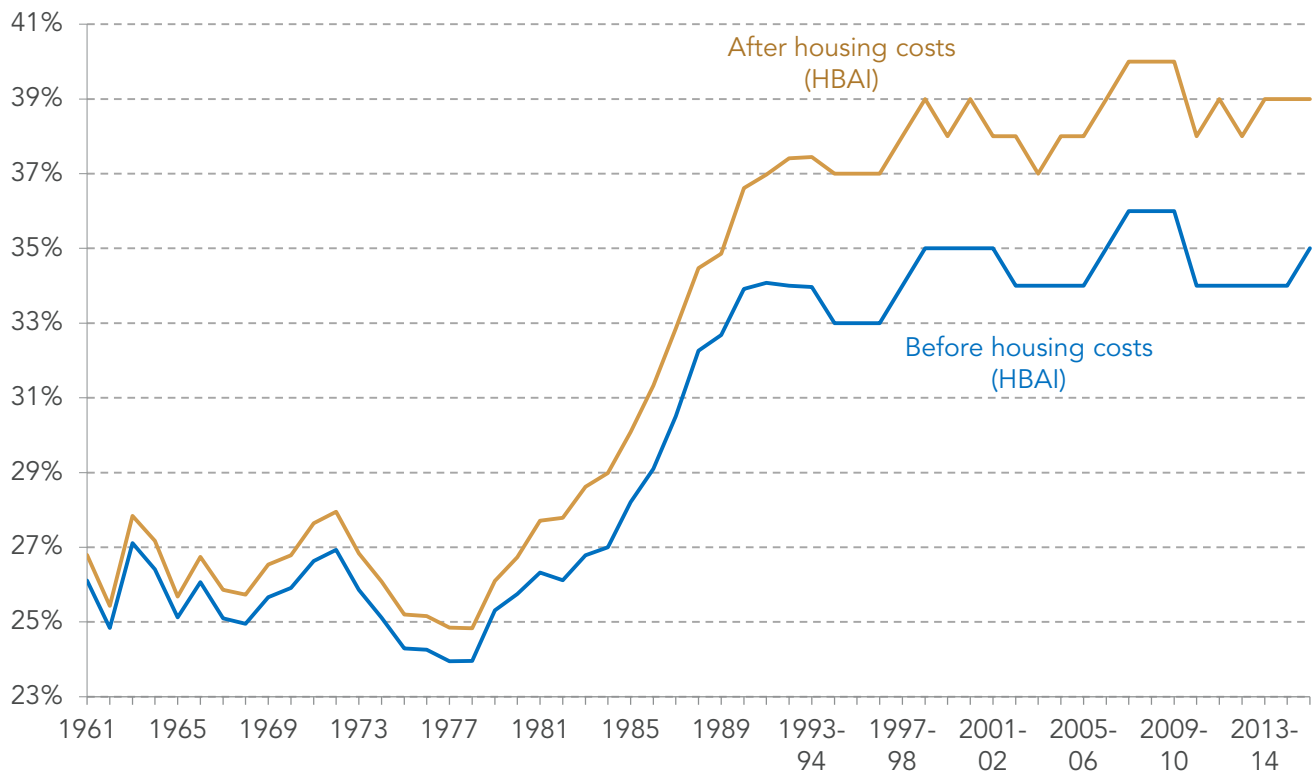
Although not shown, the ONS's provisional 'nowcast' for 2016-17 predicts that inequality in that year was broadly unchanged from 2015-16 (a very small further fall).^[9]

In contrast to Figure 1, and the Chancellor and Prime Minister's claim, Figure 2 shows the Gini figures published in March 2017 by the DWP in its [Households Below Average Income: 1994/95 to 2015/16](#) release. These show inequality (before housing costs) to have been broadly flat over the past twenty years, if anything with a small uptick, though note that values since 1994-95 are (unhelpfully) heavily rounded. If housing costs are accounted for in calculating disposable income then there is a more pronounced increase in inequality since the early 1990s, and we return to the treatment of housing costs further below.

[9] ONS, [Nowcasting household income in the UK: financial year ending 2017](#), July 2017

Figure 2: HBAI figures show inequality has been flat or risen slightly

Gini coefficient for equivalised household disposable income



Notes: UK from 2002-03 onwards, GB before then.^[10] DWP rounds its figures (1994-95 onwards) to the nearest integer. These figures include SPI top-income adjustment.

Source: DWP, *Households Below Average Income: An analysis of the UK income distribution: 1994/95-2015/16*; Institute for Fiscal Studies, *Living Standards, Inequality and Poverty Spread-sheet 2015-16*

Given the data in the two official sources (and leaving housing aside), users may ask: is the UK's Gini measure of inequality 31.6 per cent (ETB) or is it 35 per cent (HBAI)? Is inequality no higher than in 1986 (ETB) or has it risen considerably since then (HBAI/IFS)?

Note that the two publications also give different results for income levels. ETB states that the median UK household disposable income in 2015-16 was £26,300, while the same figure in HBAI (on an annual basis) was £25,100 – a difference of 5 per cent. However, differences in income trends have not been as stark as those for inequality.

For reasons explored below, as well as the much larger sample size, we believe that HBAI is objectively the better resource for disposable income inequality at present – though it loses out to ETB in coming out later and being less well presented. In any case, it is far from ideal for the public and media to be confronted with two sets of official data that are seemingly measuring the same thing but giving different results. And the opportunity arises for those in political debate to pick and choose their data to match their argument, be that the most positive, the most negative or just the most interesting figures – even within the single measure of inequality discussed here.

The ETB and HBAI publications could be improved

Both publications have greatly improved the turnaround time between the end of the financial year in question and the publication of results (now 8-12 months) and microdata (somewhat

[10] The HBAI data does not include Northern Ireland from 1994-95 to 2001-02. However, the switch from GB to UK in many of the graphs in this note has very little impact. It very slightly increases the size of the fall in inequality between 2001-02 and 2002-03.

longer). The HBAI publication itself does however leave something to be desired compared to the ONS's user-friendly ETB website: with small, non-interactive charts and a vast array of (zipped) spreadsheets. It is also difficult to find the HBAI results through search engines, when they should be the country's primary source of income and inequality data.^[11]

One difference between the publications is the range of history covered. ETB gives National Statistics back to 1977. HBAI itself only goes back to 1994-95 (and 2002-03 for Northern Ireland), but its publication also gives statistics from the Institute for Fiscal Studies (IFS) going back to 1961. The digitised Family Expenditure Survey data underlying both this and the ETB goes back to 1961. Both ETB and HBAI cover a wide range of topics, but for headline inequality and income levels at least, the ONS should attempt to take its figures back further, and DWP should make more of its back series too. There is a clear public interest (now and for future generations) in providing as much historical perspective as possible. In fact, Family Expenditure Survey records for 1960 also exist but have never been digitised;^[12] while consistent data for 1953-54 has recently been put together thanks to academic work and research council funding.^[13] All of this could be used to give the public more information, given sufficient resources.

i Recommendations

1. **ONS** should extend its inequality statistics back to 1961 or earlier – rather than 1977 – and it and **DWP** should aim for these to receive National Statistics status
2. The 1960 Family Expenditure Survey should be digitised, with funding sought from **research councils and trusts**
3. **DWP** should seek to make its annual HBAI publication more prominent and user-friendly, recognising that these results are the number one source for household income and inequality trends and learning lessons from the ONS's statistical bulletins

Aligning and improving both surveys would lead to richer data

One reason for different results between ETB and HBAI are small differences in their definitions of income. ETB “includes benefits in kind provided by employers (for example, company cars) within income, but these are not included within HBAI”.^[14] And HBAI “includes certain benefits in kind provided by the state (such as free school meals and Healthy Start vouchers)” that are not included as disposable income in ETB (though they are recorded as part of ‘final income’). These benefits in kind are not necessarily insignificant. For example, all infant pupils have received free school meals since September 2014 and this was expected to save the parents affected over £400 per year per child.^[15] This played a small role in boosting incomes in HBAI – but not ETB – in 2014-15 and 2015-16.

[11] The HBAI publication has moved from being a 150+ report (for 2013-14 and earlier) to a 15 page infographic (for 2015-16 and 2016-17). Neither are particularly user-friendly.

[12] I Gazeley et al., *The Poor and the Poorest, fifty years on: Evidence from British Household Expenditure Surveys of the 1950s and 1960s*, 2016. Although the Family Expenditure Survey was conducted in 1957, 1958 and 1959 – and some summary data is available – it appears that the original returns have not survived.

[13] I Gazeley et al., *The Poor and the Poorest, fifty years on: Evidence from British Household Expenditure Surveys of the 1950s and 1960s*, 2016. Note that “there were also a number of large scale household investigations during the 1919-1939 interwar period that have yet to be digitised”.

[14] ONS, *Household disposable income and inequality in the UK: financial year ending 2016*, January 2017

[15] Department for Education & Deputy Prime Minister's Office, *Free school lunch for every child in infant school*

The treatment of tuition fees also differs between the two, and neither approach seems ideal. In ETB, student loan repayments are not deducted from income. In HBAI they are – which seems appropriate – but in addition the *receipt* of tuition fee loans by students is classed as disposable income. That means that young people become measurably better off when tuition fees – and therefore tuition fee loans – go up. Both methodologies fail a common sense test given that we want household income surveys to tell us meaningful things about living standards.^[16] There is no perfect solution, but the best approach would be to not count tuition fee loans as income and to deduct repayments from disposable income.

For the most part, however, the two sources use the same definitions of income. It may therefore be possible to combine both sets of data to give larger sample sizes – roughly doubling the size in future – and so reduce noise and allow finer analysis, particularly when looking at incomes by region, age group or other divisions.^[17] A much larger sample and reduced noise might also allow researchers to analyse income trends on a quarterly or biannual basis, and – speculatively – for preliminary statistics for the first half of the financial year to be shared as a more timely indicator of household incomes. Greater comparison and integration of the two data sources would also be aided by a common indicator for the pensioner/retiree population, where HBAI's “pensioner” group and ETB's “retired” definition are currently very different.^[18]

Some of the definitions that both surveys share, however, are themselves disputable. In particular, inheritance is not classed as income in either survey and nor are capital gains.^[19] This may make sense from a national accounts point of view, but from the perspective of living standards, distribution and poverty (and reconciling income data with household consumption and saving), there are strong theoretical arguments for including them within the income calculation.^[20] Fully doing so may be too radical a change in practice but, given the importance of both,^[21] ONS and DWP should explore whether additional questions could be asked about these. The possible combination of the ONS's income surveys with the Wealth and Assets Survey may help on that side.

The ONS should also seek to account for the role of housing in financial well-being. As shown in Figure 2, HBAI measures incomes both before and after housing costs. Both measures are useful, and the lack of any consideration of housing costs (or, conversely, the benefit that comes from home ownership) in the ETB income data is a significant weakness. Note, for example, that a rise in home ownership – all else equal – would currently be recorded as a reduction in overall incomes due to a lower housing benefit bill and lower rental income. There are a number of ways in which housing can be accounted for, but given that imputed rental income is included in the National Accounts and in the CPIH measure of inflation, a new measure of income that includes this would be a consistent solution for the ONS.^[22] This was recommended in a 2012 report,^[23] and again might be aided by the planned combination of the ONS's income surveys with the Wealth

[16] A Corlett, [Did raising tuition fees flatter measurements of young people's incomes?](#), Resolution Foundation blog, October 2017

[17] This is something the Economic Statistics Centre of Excellence (ESCoE) has begun to look at. A Aitken & M Weale, *Pooling Household Income Data*, ESCoE, June 2017 (unpublished)

[18] See the ETB and HBAI publications for more details.

[19] Oddly, “parental contributions to students living away from home” are deducted from parents and added to students' incomes in HBAI, but no other direct transfers between households are captured.

[20] The Haig-Simons definition of income is of consumption plus change in net worth, which would include gifts/inheritances and capital gains (and imputed income). H Simons, *Personal income taxation: the definition of income as a problem of fiscal policy*, 1938. On capital gains, see also A Atkinson, *Inequality*, 2015, Chapter 1

[21] For example, housing capital gains in 2003 exceeded net pay for 17 per cent of homeowners. C D'Arcy & L Gardiner, [The generation of wealth: asset accumulation across and within cohorts](#), June 2017

[22] Exactly how to do this is a very complex question with many possible approaches. C Balcazar et al., *Rent-imputation for welfare measurement: a review of methodologies and empirical findings*, World Bank, 2017

[23] M Brewer & C O'Dea, [Measuring living standards with income and consumption: evidence from the UK](#), IFS, March 2012

and Assets Survey (which contains house value estimates). Using imputed rental income would undoubtedly produce different results to HBAI's income after housing costs measure, but on balance a new perspective would be more valuable here than consistency between surveys.

i Recommendations

4. **ONS** should include additional variables in its datasets to facilitate comparison – and combination – with HBAI, such as HBAI-consistent definitions of income and pensioners
5. **ONS and DWP** should explore whether their survey designs and microdata could eventually be formally linked to produce a single, very large source of household income data
6. **ONS and DWP** should reconsider their treatment of tuition fee loans in household surveys (HBAI currently records receipt of these loans as disposable income) – and whether inheritances and capital gains could be captured as supplementary information (they are currently not included at all)
7. **ONS** should include in its household income survey a measure of income that includes imputed rent

The differences – and similarities – explored above do not, however, explain the significant differences in inequality levels and trends that we see between the two official sources. There are two crucial differences. One relates to the results for the richest households, explored later. The other rests on a fundamental question of what we actually mean by 'inequality'. Inequality between what?

Individuals as the most meaningful unit of living standards analysis

One difference between the two publications relates to a simple methodological choice that could be resolved relatively easily. This difference is about weighting and the unit of analysis used.

It should be noted first that our most common measure of living standards is equivalised household disposable income, and that this is calculated on a household level. That is, incomes are assumed to be shared equally between everyone in the household (hence all those in Household 1 in Table 1 having the same equivalised income). This is the case in both ETB and HBAI and is generally agreed to be the best – or least bad – way to assess living standards, especially for children and other non-earners. Where the surveys have differed, however, is on the separate matter of whether analysis of the distribution of equivalised income uses individuals or households as its basis.

The differing approaches are perhaps most clearly illustrated by looking at median incomes, and what exactly is meant by 'median'. In HBAI (and most Resolution Foundation work), the median (or 'typical') income is calculated by ranking the entire population and selecting the individual half way up (or down) the distribution. The crucial difference in ETB is that it is households, rather than individuals, that are ranked. These two approaches are demonstrated in a simple example in Table 1, where the income of the 'median individual' and the 'median household' are not the same thing.

Table 1: What does 'median income' actually mean?

Household	Individual	Equivalised household disposable income (£)	
Household 1	Person 1	500	
	Person 2	500	
	Person 3	500	
	Person 4	500	
	Person 5	500	← Median individual
	Person 6	500	
	Person 7	500	
Household 2	Person 8	700	← Median household
Household 3	Person 9	1000	

Moving beyond the median, the same question applies when measuring inequality. Is the inequality we wish to measure between everyone in the population, in which case Table 1's inequality would be between seven people on £500, one person on £700 and one person on £1,000; or is it between three household units of £500, £700, and £1,000? This choice has significant implications for the measurement of inequality and poverty. In this made-up example, if the absolute poverty line were £600, should we conclude that the poverty rate is 33 per cent (one in three households) or 78 per cent (seven out of nine individuals)? The former approach would (ignoring equivalisation here) mean that the poverty rate would be pushed down if impoverished people combined their households – as there would then be fewer poor households – and be pushed up if they separated, regardless of what had actually happened to their living standards.

The literature seems clear that living standards and inequality analysis is best done using individuals as the ultimate unit of analysis.

The international statisticians' guide on this topic states that:^[24]

Equivalised disposable household income can be household weighted, but since it can be viewed as a measure of the economic resources available to each individual in a household, income measures for equivalised estimates are generally based on numbers of people rather than numbers of households. This is referred to as person weighting and ensures that people in large households are given as much weight in the distribution as people in small households.

Academic literature and government reviews have come to the same conclusion.^{[25],[26]}

Different countries may use different approaches (regrettably), but the Australian Bureau of Statistics, for example, says that "means and medians are calculated with respect to the relevant number of persons. This enables people in large households to have the same contribution to the

[24] UN, *Canberra Group Handbook on Household Income Statistics, Second Edition*, 2011

[25] S Danziger & M Taussig, *The income unit and the anatomy of income distribution*, 1979. "Distributions that weight the incomes of all units [i.e. households] once weight the welfare of persons in n-person units as just 1/nth the welfare of persons living by themselves. To be consistent with individualistic social welfare functions, equal weight must be given to each person's income... Thus... we do suggest that persons are the optimal choice for weights."

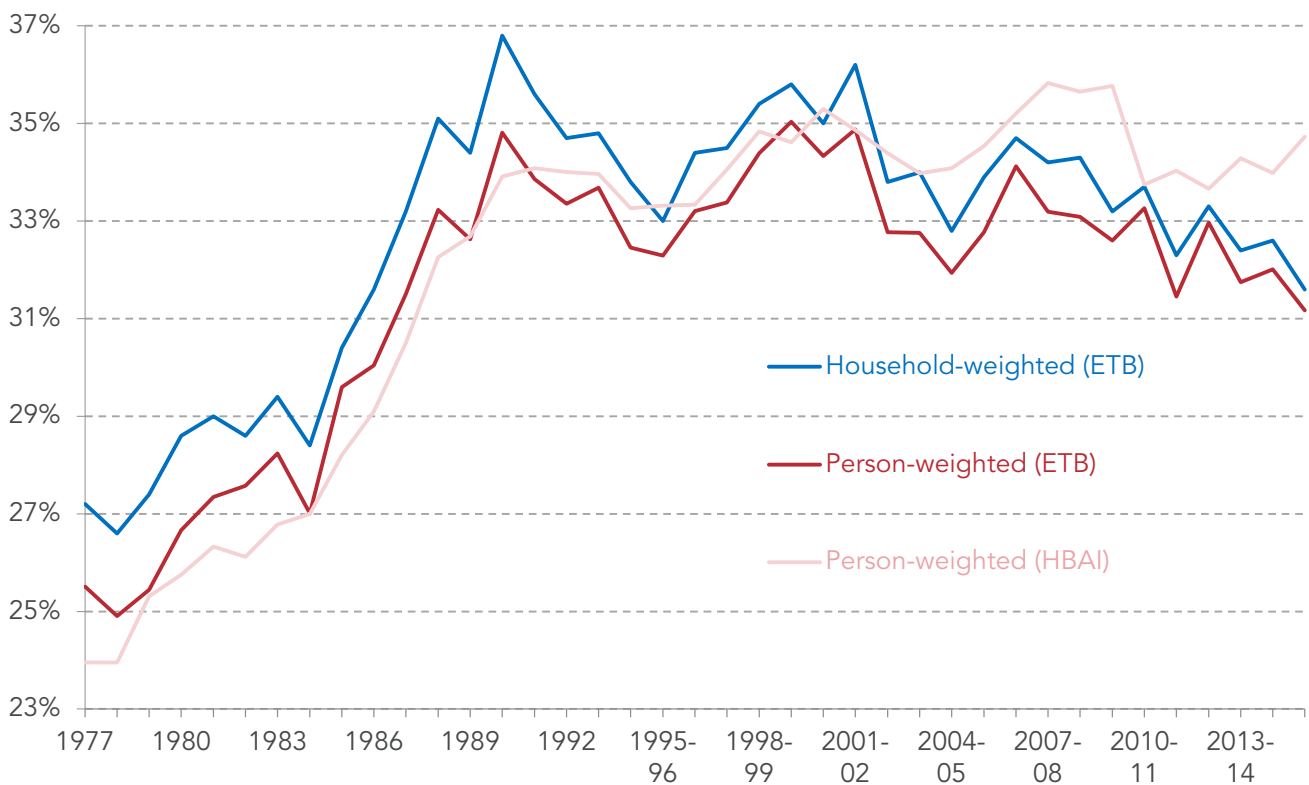
[26] DHSS, *Low Income Statistics: Report of a Technical Review*, 1988. "It is also important to ensure that all individuals, within households or units, are given equal weight, since simply to count the households or assessment units themselves would ignore the varying numbers in such units."

mean/median as people living alone, and is possible because equivalised disposable household income is an indicator of the economic resources available to each individual in a household.^[27] Statistics Canada has also switched to the 'international norm' of person weights.^[28] In addition, the internationally-agreed Sustainable Development Goals feature targets for reducing inequality and poverty – including in the UK – that are based on proportions of the population (not proportions of households).

There is a more basic point, however, that those publishing and discussing UK incomes and inequality should share a consistent definition where possible. There is nothing to be gained by the simultaneous use of two subtly different meanings of 'median' and 'inequality' (and recall that both ONS and DWP inequality series are official National Statistics). The choice of weighting in HBAI could be changed, but as argued above, person weighting is more appropriate and so ONS should switch.^[29] This is not a technically difficult change to implement, requiring only a few extra lines of code.^[30]

Figure 3: The choice of weighting is important for long-run inequality trends

Gini coefficient for equivalised household disposable income



Notes: ETB data is for the UK. HBAI data is for the UK from 2002-03 onwards, GB before then.

Source: RF analysis of ETB; HBAI from Institute for Fiscal Studies, *Living Standards, Inequality and Poverty Spreadsheet 2015-16*

[27] Australian Bureau of Statistics, [Household Income and Income Distribution, Australia, 2011-12](#)

[28] Statistics Canada, [Revising Statistics Canada's Low Income Measure](#), 2010

[29] The EU-SILC series produced by the ONS already uses individual weighting.

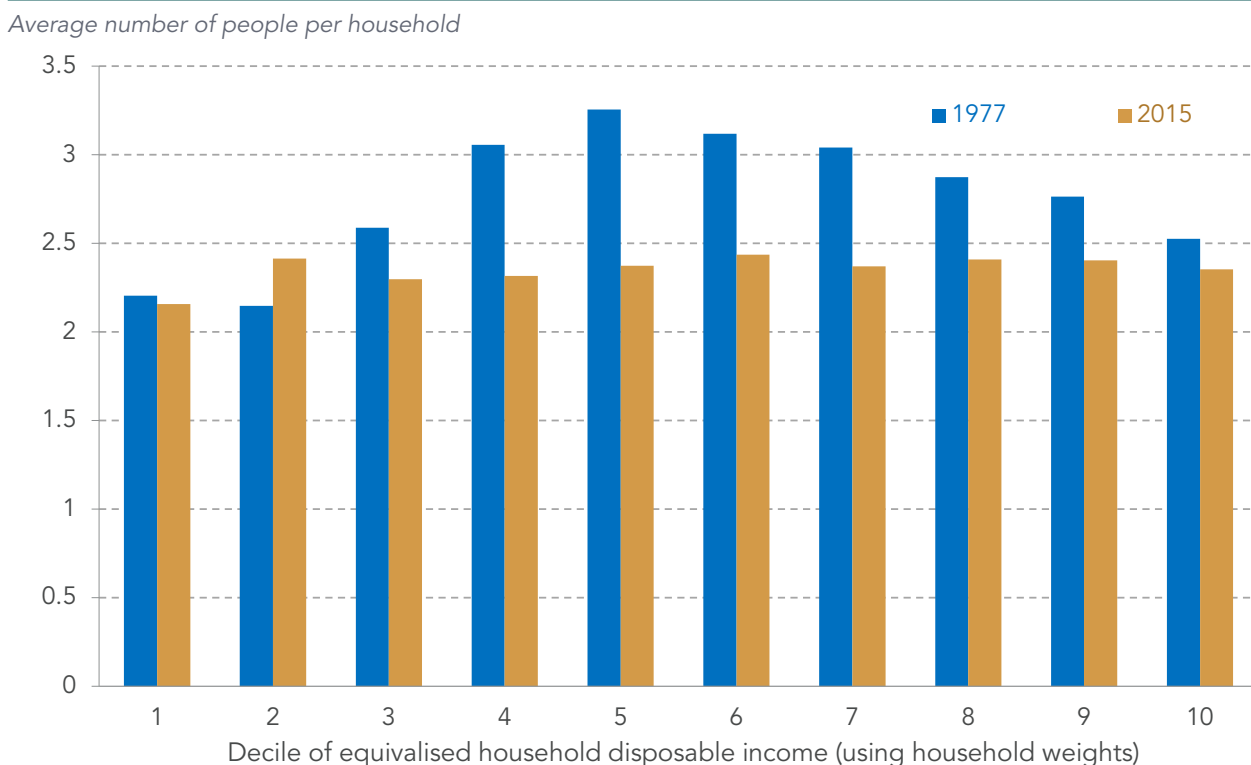
[30] ETB contains weights for each household, to correctly match and represent the number of UK households. We simply multiply this by the number of people in that household to give person weights.

But does it matter? Figure 3 shows the ETB data using household weights and using person weights (i.e. accounting for the number of people in each household). In recent years, the shift is not huge, but historically the difference was greater. From 1977 to 1991, the average difference between the two methods was 1.6 percentage points (compared to 0.4 recently). Clearly the choice is not insignificant for levels or trends.

Figure 3 also shows the HBAI results (person weighted). Moving ETB to the same approach reduces the historic difference between the two (the historic data here being the IFS's).^[31] Since the turn of the millennium, however, this switch actually *increases* the size of the gap between the two surveys: the explanation for the large, remaining difference is explored later.

There is a good reason why the choice of weighting has an effect on historical trends. As Figure 4 shows, back at the start of the ETB series, in 1977, households around the middle of the equalised income distribution were disproportionately large. This means that more people lived in middle-income households than you might think if you did not look at household size. So while inequality back then was considerably lower than today even using the ONS's approach of household weighting, this does not reflect the fact that low and high income households did not have so many people in as the middle-income households: i.e. inequality among the country's whole population was even lower than the household figures suggest. In contrast, in 2015 average household size was relatively flat across the household income distribution, meaning that moving between household and population weights makes relatively little difference.

Figure 4: Historically, households in the middle of the income distribution typically contained more people than those with high and low incomes



Notes: UK

Source: RF analysis of ETB

[31] One very minor other difference between the two sets of figures is that HBAI does not allow households to record a negative income overall, whereas ETB does.

This kind of trend, regarding the number of people in different kinds of households, is something that our income and inequality figures should capture: again making the case for person weighting.

i Recommendations

8. **ONS** should switch from household weighting to person weighting for its equivalised income statistics

The equivalisation process could be more consistent and more transparent

There are other simple changes that could also be made to improve consistency between surveys. While it is the norm in both HBAI and ETB for incomes to be equivalised relative to those of childless couples, in other ONS publications (including Family Spending and the underlying Living Costs and Food Survey data) and some others (the British Household Panel Survey and Understanding Society) equivalised incomes use childless single adults as the reference household type. This difference does not necessarily have any meaningful impact, but equivalising relative to a childless couple seems sensible given that this group has the median and modal equivalisation factor, while incomes equivalised to those of a single childless adult would appear 'too low' to the 84 per cent of adults who live in larger households.^[32] Sticking to one standard would help avoid unnecessary confusion.

More broadly, it is important to comment on the importance of equivalisation for household income statistics. Economies of scale for different family types are now consistently recognised using the 'OECD-modified' scale. However – while this consistency over time, between surveys and even between countries – is useful, the particular equivalisation scale used is an important judgement that deserves more scrutiny, including greater empirical analysis about whether it is currently (and historically) a good reflection of the relative needs of different family types in the UK.^[33]

i Recommendations

9. **ONS and others** should consistently equivalise incomes relative to those of couples, rather than the single adult reference point still used in some releases and datasets
10. **ONS, DWP and other stakeholders** should regularly explore and outline the judgements and empirical evidence underlying equivalisation factors

[32] RF analysis of HBAI, 2015-16

[33] One existing piece of work is D Hirsch et al., [The cost of a child in the twenty-first century](#), Child Poverty Action Group, September 2012, Annex 2. Its calculations "suggest that equivalence scales underestimate considerably the relative needs of single people and of children aged five to 14, and overestimate the relative needs of couples and of pensioners". A Zaidi & T Burchardt, [Comparing Incomes When Needs Differ: Equivalisation for the Extra Costs of Disability in the UK](#), 2005 shows that equivalisation could also attempt to reflect the additional costs of disability.

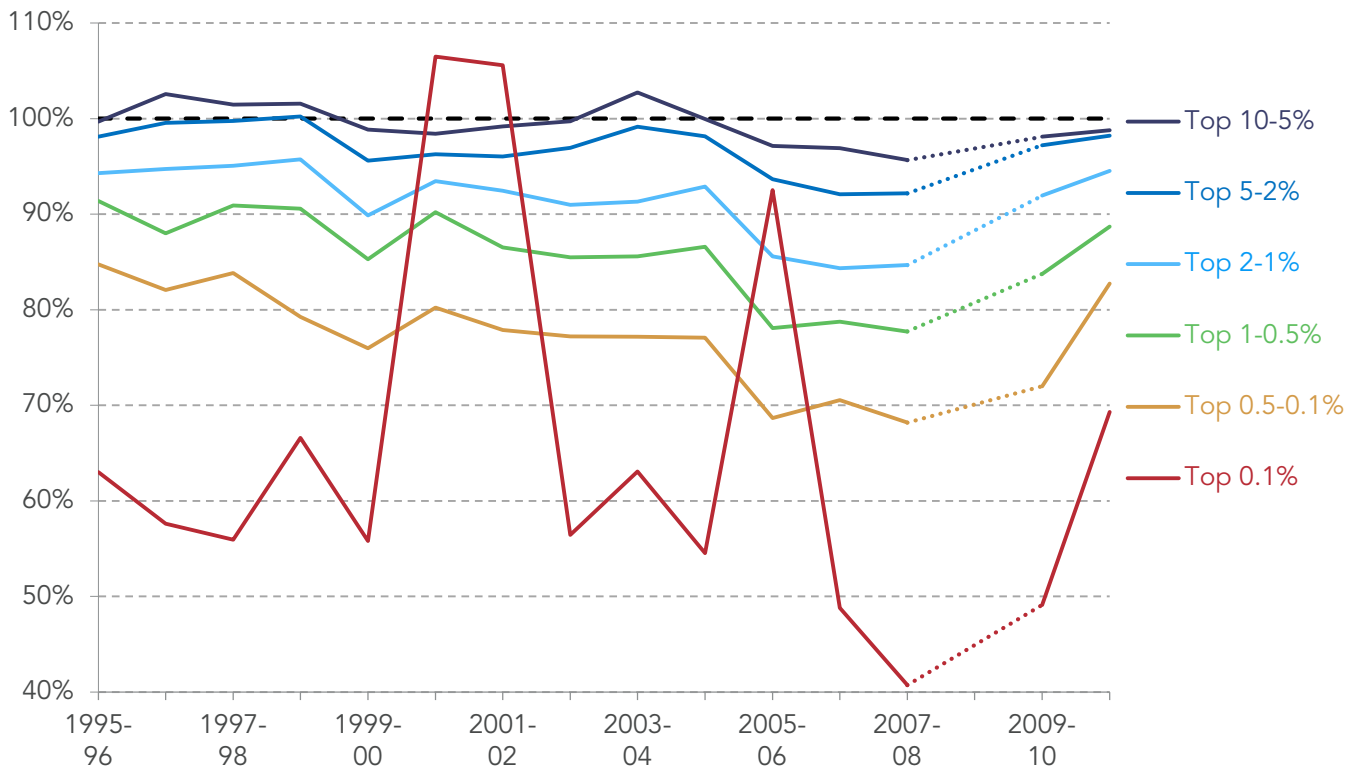
Getting top incomes right

We have so far outlined a number of changes that are mostly relatively easy to implement and would improve the quality and consistency of UK income stats. However, these are not as important – nor as difficult to do – as accurately measuring high household incomes.

Surveys are known to significantly underestimate top incomes (more due to under-reporting than due to richer households not responding to surveys, it seems^[34]). This can be shown by comparing the survey data with HMRC's tax data, a sample of which is available as the Survey of Personal Incomes (SPI). Figure 5 compares incomes for different groups as recorded in the raw HBAI survey data and in the SPI tax data. The incomes of the richest 0.1 per cent can be very volatile in the surveys (as the top few individual values can have a large effect) but in most years between 30 and 60 per cent of their income is not captured by the survey. For the rest of the top 5 per cent – but less so beyond that – there are also large amounts of income missing. And these gaps have changed over time. (Note that incomes in 2010-11 were distorted by the introduction of a new higher tax rate, which prompted a shift of income into the 2009-10 tax year.)

Figure 5: Before adjustment, household surveys greatly underestimate top incomes

Ratio of individual gross income totals in the unadjusted HBAI to those in the SPI tax data, by income group



Notes: UK from 2002-03 onwards, GB before then. HMRC has not yet released SPI data for 2008-09.

Source: Copied from R Burkhauser, N Héroult, S Jenkins & R Wilkins, [Survey under-coverage of top incomes and estimation of inequality: what is the role of the UK's SPI adjustment?](#), June 2017 (Figure 1a)

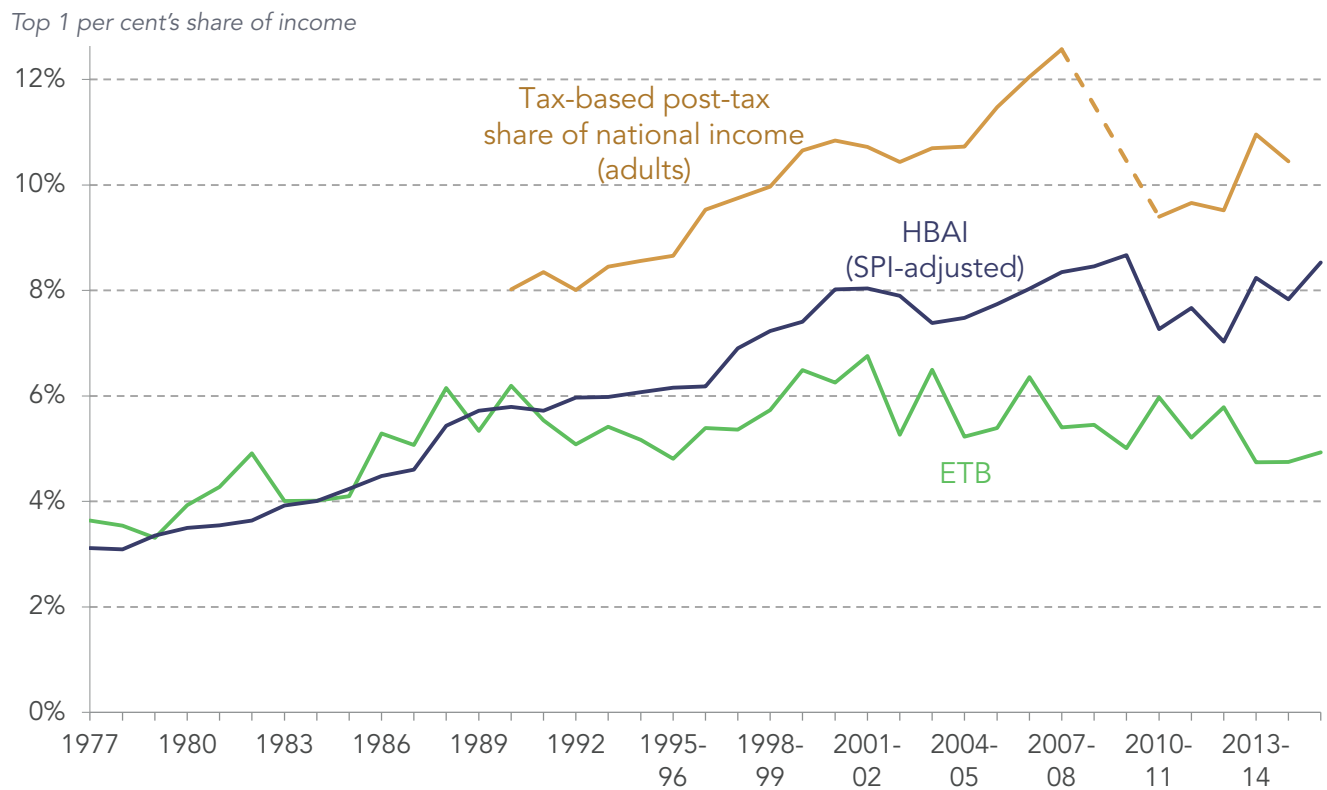
[34] R Burkhauser, N Héroult, S Jenkins & R Wilkins, [Survey under-coverage of top incomes and estimation of inequality: what is the role of the UK's SPI adjustment?](#), June 2017

Although this chart compares the pre-adjustment HBAI data to SPI, it also gives a sense of how wrong the ETB income data is likely to be at the top – given that no such adjustment is used there. Bear in mind also that because of the Living Costs and Food Survey's limited sample size at present, out of the entire top 0.1 per cent of the population – around 28,000 households – it will survey around five: inevitably leading to volatility and only a partial range.

One of the strengths of HBAI is that it not only uses the Family Resources Survey but is adjusted at the top of the income distribution using tax data from HMRC. In essence, the incomes of roughly the top 0.5 per cent of individuals in HBAI are replaced with figures given by HMRC. For that top group, this significantly (or completely) reduces the inaccuracy shown in Figure 5.

The presence of top income adjustment for HBAI but not for ETB is the main source of disagreement between the two sets of results, given the importance of top incomes. Figure 6 shows the top 1 per cent's share of household income in both sets of results.^[35] In ETB, the share rose slightly overall between 1985 and 2015, from 4.1 per cent to 4.9 per cent. In the adjusted HBAI, however, the top 1 per cent's share doubled from 4.2 per cent to 8.5 per cent.^[36] Also shown are individual-level results based solely on administrative data (but using a different definition), which similarly diverges from ETB.

Figure 6: A rise in the top 1 per cent's share of income over the past 30 years is not present in the ETB data



Notes: Gold line is individual income. Others are equalised household disposable income. HBAI data is UK from 2002-03 onwards, GB before then. ETB and tax data is for the UK.

Source: RF analysis of ETB, HBAI and the [World Wealth and Income Database](#)

[35] Note again that these may be affected by tax changes, such as the introduction of the 50p tax rate in 2010-11 leading to income being shifted into the 2009-10 tax year.

[36] The SPI adjustment for years prior to 1994-95 was done by A Goodman & S Webb, [Institute for Fiscal Studies Households Below Average Income Dataset 1961-1991](#), 1995

Using the ETB data it would be possible to say that the top 1 per cent's income share has been lower over the last three years than at any time since the mid-1980s. However, sources that use HMRC data show that to be clearly incorrect.

Now, it could be argued that the caveats above should lead users to avoid using measures of inequality that are affected by top incomes, such as Gini, the top 1 per cent share, or the Palma ratio (the ratio between the top 10 per cent's income and that of the bottom 40 per cent). Indeed, there is less disagreement between HBAI and ETB for measures such as the 90/10 ratio or 80/20 ratio. However, while we do not need to rely on any single measure alone, there is a lot to be said for a measure such as the Gini coefficient that encapsulates information about the entire distribution and is already relatively well-known. If anything, Gini is most commonly criticised (fairly or unfairly) for being insufficiently sensitive to the top (and bottom) of the income distribution. Given that the richest 5 per cent of the population account for around a fifth of all income (at least according to the adjusted – but still conservative – HBAI), simply trying to avoid measures that include them is not the solution, and Gini is the headline – and indeed only – measure used in the ETB publication despite that survey not capturing high incomes properly.^[37]

ONS, the UK Statistics Authority and users of the ETB inequality series, should therefore be clear that ETB greatly underestimates top incomes and that HBAI is a better source for measures that are affected by this.

Better guidance for users was also recommended in a 2015 review by the UK Statistics Authority, which discussed ETB and HBAI.^[38] It concluded:

There is a lack of guidance from ONS or DWP (either in the individual publications, or elsewhere) on whether the use of one measure is preferable in different circumstances, whether either of the statistics present a more robust measure, and the impact of adjustments on the measures. We judge that there is potential for user confusion in the absence of this guidance. [...] We recommend that statistical producers do more to explain and quantify how methodological differences between related statistics contribute to the different results; and present advice on whether one measure is preferable to another for a particular use.

This recommendation does not appear to have been acted upon, as recent ETB and HBAI publications do not give any clear explanation of differences or of which source is best for particular uses.

i Recommendations

11. **ONS and UKSA** should make clear that ETB is known to underestimate top incomes and that HBAI is therefore currently the superior source for measures such as the disposable income Gini

HBAI's top income data can be improved

HBAI's top income adjustment – while originally a pioneer internationally – is far from perfect, however.

First, as indicated above, the top income adjustment covers around the top 0.5 per cent of incomes. Yet, as Figure 5 showed, incomes appear to be significantly underestimated for the top 5 per cent, and therefore the adjustment stretches insufficiently far down the income distribution.

[37] ONS, [Household disposable income and inequality in the UK: financial year ending 2016](#), January 2017

[38] UKSA, [Monitoring Review: The Coherence and Accessibility of Official Statistics on Income and Earnings](#), February 2015

Second, the adjustment is relatively crude. All of the 'very rich' group subject to the adjustment are given the same income (though separated between Great Britain and Northern Ireland, and pensioners and non-pensioners). The group therefore matches the mean income(s) given by HMRC, but any information about inequality within this top 0.5 per cent is lost. So inequality figures from HBAI can be thought of as a combination of inequality within the bottom 99.5 per cent, inequality *between* that group and the top 0.5 per cent, but with zero inequality within the top 0.5 per cent. Overall inequality figures are therefore systematically underestimated.

Third, the proportion of the population subject to the SPI adjustment has varied over time (though in recent years fixed at 0.3 per cent of non-pensioners and 1.1 per cent of pensioners)^[39], which could be expected to introduce a source of error to comparisons over time given that the adjustment usually revises total incomes upwards.

Fourth, although the intention is nominally to use HMRC's tax data, the SPI adjustment is done not on the basis of outturn data but on projections. These projections use SPI data from one or two years earlier, survey data for wages (ASHE) and OBR forecasts for different types of income. The official figures and microdata are never revised. Note that the most recent concrete data we currently have for top incomes is from 2014-15.

Fifth, and finally, there is insufficient detail available about these processes. Large parts of the SPI and projection methodologies have never been made public.^[40] In addition, HMRC are yet to release unit record SPI data for 2008-09, 2011-12 and 2012-13 (with not even summary data for 2008-09). These delays and undocumented processes make it harder for anyone to try and assess historic UK income trends.

Two papers by Burkhauser et al. have attempted to do better than the existing SPI adjustment.^[41] They look at a broader range of top incomes (the top 10 per cent, and without splitting out some on the basis of pensioner status or living in Northern Ireland), allow incomes to vary partially within this group (adjusting each 0.1 per cent separately), use a consistent approach over time and use outturn tax data (from a slightly different source^[42]).

They calculated that gross income inequality was higher in every year than in the existing, adjusted HBAI series; and that there was a greater increase in inequality between 2004-05 and 2007-08. Similarly, the top 1 per cent's share of income is higher and increased more until 2007-08.

Figure 7 shows the Gini measure with no adjustment, with the existing SPI adjustment and with their improved 'SPI2' adjustment. With no adjustment (and both using person weights), HBAI and ETB show similar inequality trends. These are underestimates relative to the SPI-adjusted HBAI. But this in turn is found to be an underestimate compared to the improved SPI2 method.^[43]

[39] R Burkhauser, N Hérault, S Jenkins & R Wilkins, [Survey under-coverage of top incomes and estimation of inequality: what is the role of the UK's SPI adjustment?](#), June 2017

[40] R Burkhauser, N Hérault, S Jenkins & R Wilkins, [Survey under-coverage of top incomes and estimation of inequality: what is the role of the UK's SPI adjustment?](#), June 2017

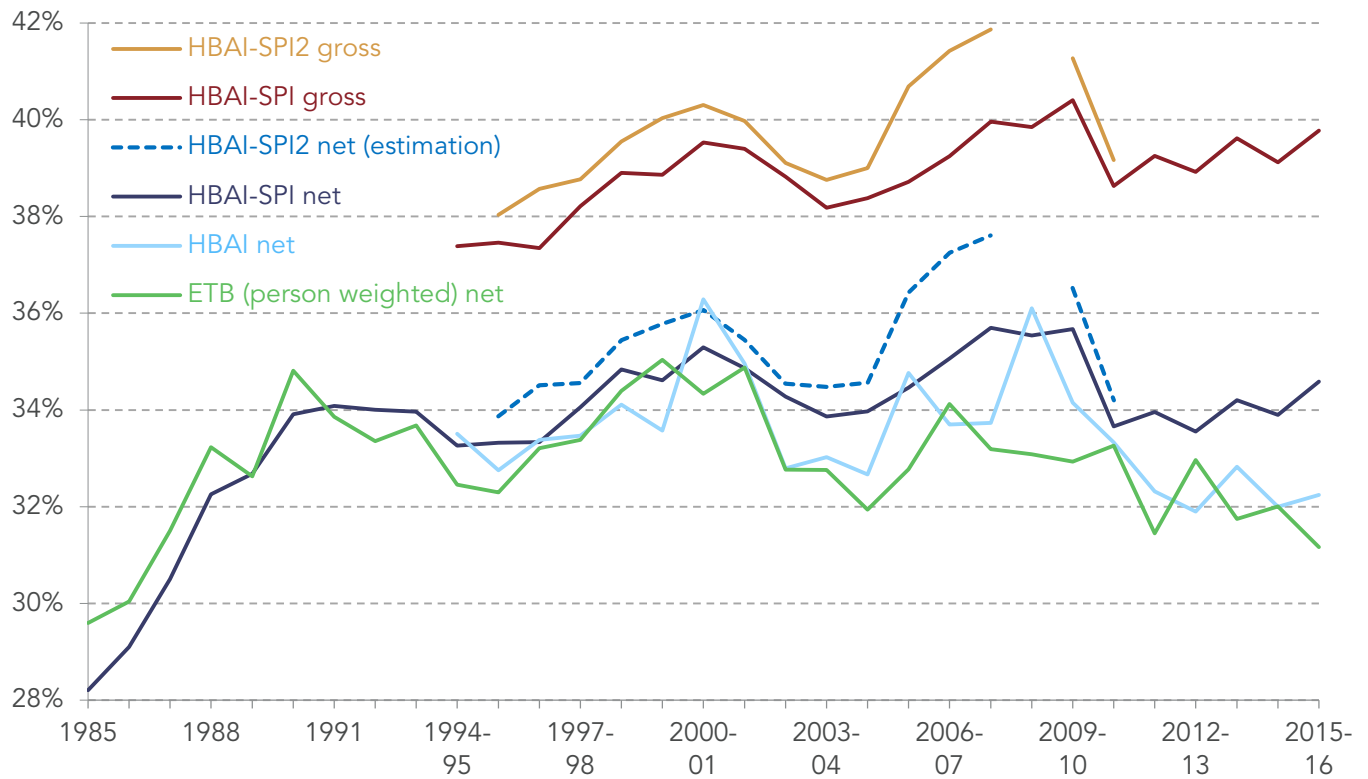
[41] R Burkhauser, N Hérault, S Jenkins & R Wilkins, [What Has Been Happening to UK Income Inequality since the Mid-1990s? Answers from Reconciled and Combined Household Survey and Tax Return Data](#), February 2016

[42] They use top income data from the World Wealth and Income Database (previously WTID), which in turn is updated for the UK using outturn SPI data.

[43] S Jenkins, [Pareto models, top incomes, and recent trends in UK income inequality](#), 2017 shows that other methods using the same tax data are possible and that these give similar results to the SPI2 approach.

Figure 7: An improved 'SPI2' adjustment makes a significant difference to inequality levels and trends

Gini coefficient for equivalised household income



Notes: HBAI data is UK from 2002-03 onwards, GB before then. ETB data is for the UK. Estimated HBAI-SPI2 net is a simplistic assumption using the HBAI-SPI2 gross series together with the difference between gross and net HBAI-SPI income inequality in each year.

Source: Gross income inequality from R Burkhauser, N Hérault, S Jenkins & R Wilkins, [What Has Been Happening to UK Income Inequality since the Mid-1990s? Answers from Reconciled and Combined Household Survey and Tax Return Data](#), February 2016 (Figure 8). HBAI-SPI net from IFS. ETB from ONS. HBAI net and HBAI-SPI2 net are RF analysis.

HBAI's top income adjustment is therefore in need of improvement (and historical revisions: Burkhauser et al. 2017 shows that the use of outturn data has a significant effect in isolation).

The ONS must urgently develop its own top income adjustment

The ONS needs to create a top income adjustment for ETB. Fortunately, the Digital Economy Act 2017 now allows the ONS to make use of administrative data such as HMRC's. This should open up a wealth of possibilities – particularly coupled with the increase in survey sample size outlined earlier. The exact approach will of course be a matter for the ONS and HMRC, and is somewhat complicated by the question of whether expenditure data can be similarly adjusted, but a lot can be learned from the UK's experience with the SPI adjustment (and the 'SPI2' research outlined above). One possibility would be for administrative data and survey data to be analysed separately rather than combined. For example, ONS could calculate perfectly income inequality among, say, the top 5 per cent using only administrative data, and then combine this statistically with survey-based estimates of household income inequality for the rest of the population plus the inequality between the two groups.^[44]

[44] S Jenkins, [Pareto models, top incomes, and recent trends in UK income inequality](#), 2017 looks at the potential for this approach

In any case, ONS should aim over 2018 and 2019 to develop a top income adjustment that:

- » correctly matches the tax data (and therefore better matches the National Accounts too);
- » fully captures inequality within the top income group;
- » can be produced in a timely manner; and
- » is applied retrospectively and consistently to the historic data.

There is a trade-off between the need for timeliness in household income statistics (already very slow compared to most economic statistics) and the delay it takes for taxes for a given year to be finalised. Indeed, ETB and HBAI publications now come before the self-assessment deadline for the year in question. However, other government digital reforms may help. The Making Tax Digital process aims to ultimately eliminate the need for end of year tax returns and produce more timely data,^[45] while the Real Time Information system will be an invaluable resource about earnings for ONS. At worst, both preliminary and revised household income and inequality results could be published.

There may also be a trade-off for ETB between providing statistics that are consistent and compatible with HBAI – a recommendation earlier in this note – and creating a top income adjustment that surpasses HBAI's. It may be that ONS's eventual top income adjustment could be used by DWP, or vice versa.

In addition to further supplementing survey-based data with administrative data, parallel work by the ONS is exploring the potential for an approach that uses *only* administrative data.^[46] Further work is needed to develop this and analyse how such results differ and why.

Finally, it must be noted that tax data of course underestimate incomes due to tax evasion. The greater the use of administrative tax data, the greater the need for information on how accurate in turn the tax data is as a measure of income: especially across the distribution and across time. To give a sense of scale, the 'tax gap' for income taxes in 2015-16 has been estimated at £14 billion, including 20 per cent of potential self-assessment liabilities.^[47] And 59 per cent of the self-employed are estimated to under-report their income.^[48] In addition, a recent paper has shown that 30-40 per cent of the top 0.01 per cent's wealth is held outside the UK, and the capital income that flows from this is unlikely to be entirely captured by HMRC.^[49] It has been estimated from leaks, amnesties and audits that in Scandinavia this group "evades 25-30 per cent" of its potential taxes, that "taking tax evasion into account increases the rise in inequality seen in tax data since the 1970s markedly" and that there is a "need to move beyond tax data to capture income and wealth at the top".^[50] This is a matter that deserves even more attention, though by its nature it is of course very hard to estimate, let alone measure accurately. For now, what is quite possible is for survey data to be adjusted to match tax data.

[45] HMRC, [Making tax digital – roadmap](#)

[46] ONS, [Research Outputs: Income from Pay As You Earn \(PAYE\) and benefits for tax year ending 2016](#)

[47] HMRC, [Measuring tax gaps 2017 edition: tax gap estimates for 2015-16](#), October 2017

[48] This refers to taxpayers declaring only self-employment income. A Advani, [Who does and doesn't pay taxes?](#), IFS, October 2017

[49] A Alstadsæter, N Johannesen & G Zucman, [Who Owns the Wealth in Tax Havens? Macro Evidence and Implications for Global Inequality](#), September 2017

[50] A Alstadsæter, N Johannesen & G Zucman, [Tax Evasion and Inequality](#), October 2017

i Recommendations

12. **ONS**, in reforming its surveys and using administrative data, should attach high importance to the accuracy of top income statistics, using Real Time Information and other sources and building on the DWP's experience of top income adjustment
13. **HMRC** should finally release unit record SPI data for 2008-09, 2011-12 and 2012-13; and documentation on its SPI methodologies
14. **DWP** should improve its HBAI top income adjustment to more comprehensively correct for underestimation and inequality within the top income group, and periodically revise earlier figures using outturn data and a consistent method
15. Given that the tax data is an imperfect measure of incomes due to tax evasion, **researchers and government** should aim to quantify the scale of income missing from the UK tax data across the distribution and across time

Low income data needs fixing too

Fixing top incomes is key to reducing current inconsistencies between surveys. But for improving the general quality of the data, surveys must also try to measure benefit income more accurately. It is relatively easy to compare the total amount of benefits received in HBAI (the Family Resources Survey) with what the government knows has been spent, as we do in Figure 8. This shows, for example, that 9 per cent of Child Benefit spending is missing from the survey; along with 22 per cent of Housing Benefit spending; 38 per cent of Pension Credit spending, and so on.^[51] This is known to be a problem in the Living Costs and Food Survey (and therefore ETB) too.^[52] Such large inaccuracies in both surveys have a significant bearing on poverty figures – with incomes at the very bottom believed to be very inaccurate^[53] – as well as on assessment of the impact of benefit increases and cuts. What's more, the level of underestimation is believed to have varied over time.^[54]

[51] Note that "there are legitimate reasons why the fraction captured should be below 100 per cent (some benefits are paid to people outside the UK, and some are paid to people in the UK who do not live in private households, and who would therefore be outside the sampling frame...)." M Brewer & C O'Dea, [Measuring living standards with income and consumption: evidence from the UK](#), IFS, March 2012

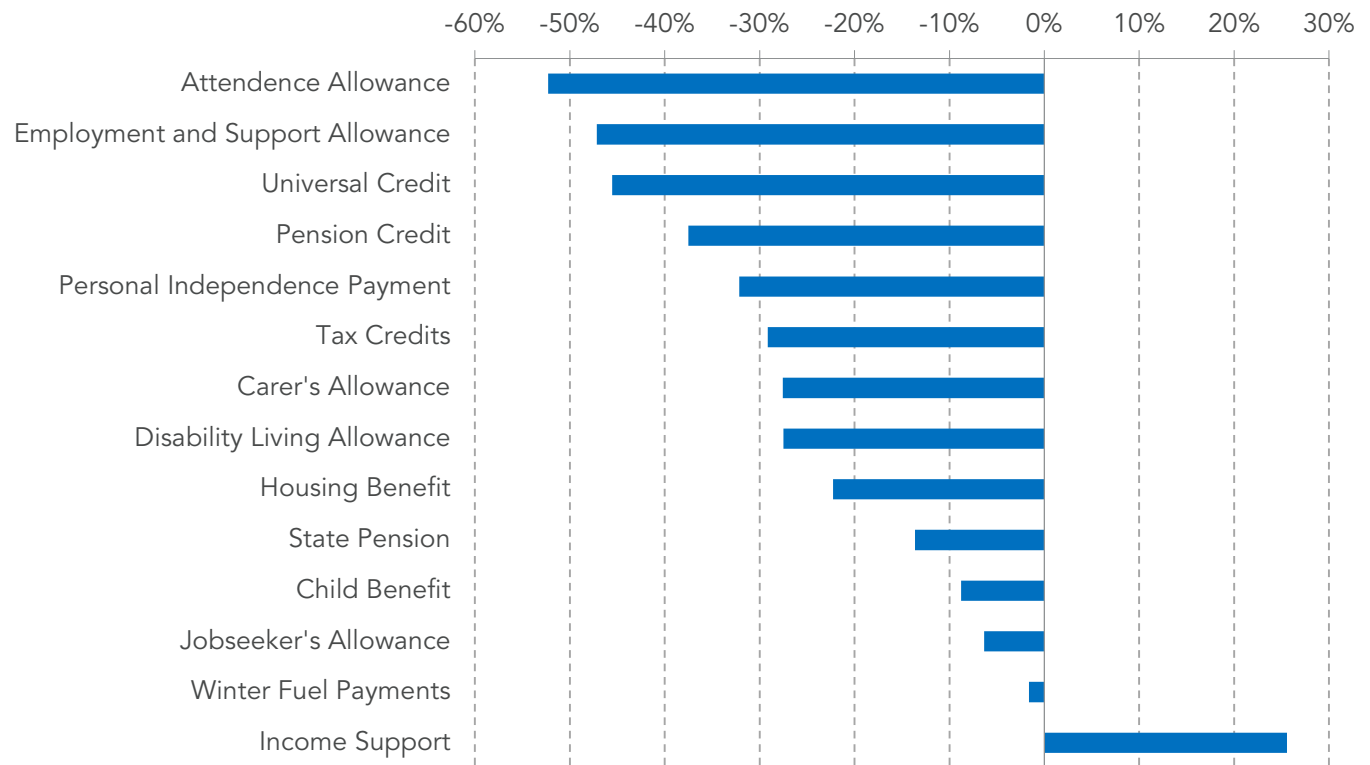
[52] M Brewer & C O'Dea, [Measuring living standards with income and consumption: evidence from the UK](#), IFS, March 2012

[53] M Brewer, B Etheridge & C O'Dea, [Why are Households that Report the Lowest Incomes So Well-off?](#), October 2017

[54] C Belfield et al., [Living Standards, Poverty and Inequality in the UK: 2015](#), IFS, July 2015

Figure 8: The Family Resources Survey is known to underestimate benefit spending

Underestimation of benefit spending in the Family Resources Survey relative to spending totals, 2015-16



Note: GB. The FRS does not cover people who do not live in private households or who live overseas.

Source: RF analysis of FRS 2015-16 and DWP, *Outturn and forecast: Spring Budget 2017*

These inaccuracies are something we hope to return to in future work but, again, administrative data could and should help. The ongoing roll-out of Universal Credit may make this somewhat easier than in the past, combining six benefits into one and eventually covering up to seven million families.^[55] The underlying system will include the details of their earnings (using Real Time Information) and benefits. Were ONS and DWP to make use of this to supplement their survey data – although easier said than done – accuracy could be greatly improved and the time burden on survey respondents potentially reduced.^[56]

[55] D Finch, *It's crunch time for Universal Credit – and big changes are needed*, Resolution Foundation blog, July 2017

[56] See S McKay, *Evaluating approaches to Family Resources Survey data linking*, DWP, 2012 for an existing exploration. It noted that "Once Universal Credit is established as the main benefit for those of working age, and assuming that increases the availability of earnings data, there will be a good opportunity to construct a suitably imputed and linked dataset."

i Recommendations

16. **ONS and DWP** should use administrative benefit data including the Universal Credit system to improve the quality of data for lower income households, where there are very significant inaccuracies

Finally we should note that the proportion of households selected (randomly) to be surveyed who respond fully is low. The overall Family Resources Survey response rate in 2015-16 was 56 per cent (48 per cent in London),^[57] the overall response rate for the Living Costs and Food Survey in Great Britain was 46 per cent,^[58] and the latest response rate for the Labour Force Survey (not covered in this note) was 42 per cent.^[59] And generally these have declined over time.^[60] These low response rates put a lot of pressure on the weighting process to try and give a representative population and correct aggregates. Again, administrative data could be used to both test and improve the surveys.

Some changes can easily be implemented, but big fixes will need resources

It should be stressed, however, that although surveys have known problems and although there is potential to make far better use of administrative data, these household surveys are an indispensable bedrock of much analysis – and in turn of much public debate, policy making and accountability. The sooner income and inequality statistics can be made more accurate and consistent, the better. So – although much work is already underway – the importance of measuring incomes correctly should be reflected in the priorities of ONS, DWP and HMRC and in the resources made available for such work at a time of competing needs.

i Recommendations

17. **Government** should provide the resources required for ONS, HMRC, and DWP to attain by 2020 the high standards the public would expect for household income statistics

[57] DWP, [Family Resources Survey 2015-16: Background note and methodology](#), March 2017

[58] ONS, [Family spending in the UK: financial year ending March 2016](#), February 2017

[59] ONS, [Labour force survey: Performance and quality monitoring report, April to June 2017](#)

[60] ONS, [Living Costs and Food Survey Technical Report for survey year: April 2015 to March 2016](#), February 2017

Conclusion

In a digital age of perceived 'alternative facts' and 'fake news', the importance of unbiased, reliable National Statistics is clear (as is the ability of civil society to replicate and assess those statistics). And inequality has become an important issue to the public,^[61] politicians and academia.^[62]

Indeed, the UK is committed to following the international 2030 Sustainable Development Goals, in which Goal 10 is to "reduce inequality within and among countries" and "progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average." Quite aside from the merit of achieving these goals, measuring them accurately will require considerable improvement nationally (including person-weighting and accurate top incomes) and internationally.^[63]

This note has recommended 17 steps – of varying degrees of difficulty – for the ONS, DWP and others. These would improve the accuracy, consistency, breadth, and usability of the UK's household income and inequality statistics. Great work is already underway at the ONS, and in our experience government statisticians are very open to suggestions and debate. However, the public will not get the quality of inequality statistics that they might expect without political will and a continued drive for improvement.

[61] Ipsos MORI, [Issues index](#), September 2017

[62] See for example popular books by Thomas Piketty, Anthony Atkinson, Branko Milanovic and Walter Scheidel

[63] Building up international data on incomes and global inequality, while not a focus of this note, was explored in part in A Corlett, [Examining an elephant: globalisation and the lower middle class of the rich world](#), Resolution Foundation, September 2016



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