HOUSE OF COMMONS LIBRARY

BRIEFING PAPER

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Income inequality in the UK

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Summary

This briefing paper presents statistics on income inequality. The focus is on inequality in disposable incomes, i.e. income including benefits and after direct taxes.

In 2017/18, 42% of all disposable household income in the UK went to the 20% of people with the highest household incomes, while 7% went to the lowest-income 20% (based on disposable income before housing costs have been deducted).

A couple without children with disposable income below £251 per week, before housing costs, would have been in the 10% of people with the lowest household incomes in 2017/18. To be in the highest-income 10% required an income just under four times higher, of at least £998 per week. The statistics typically make adjustment for the number of people in the household (because this affects how much income the household needs in order to experience a given standard of living) so the thresholds are higher for larger households.

Trends in income inequality

Inequality in household incomes in the UK has remained at a roughly similar level since the early 1990s, but is higher than during the 1960s and 1970s. While the share of income going to the top 1% of individuals by household income increased during the 1990s and 2000s, there was some reduction in inequality among the rest of the population (based on incomes before housing costs) with the result that inequality overall was fairly stable during this period.

Following the 2008 recession, there was a small fall in income inequality as higher income households saw a larger fall in income in real terms (i.e. after adjusting for inflation) than households at the bottom of the distribution. This can be explained by the sharp fall in real earnings after the recession, while benefits levels initially remained more stable.

Measuring inequality

Measurement of income inequality is generally concerned with inequality in disposable incomes. The tax and benefit system acts to reduce inequality: disposable income is distributed more equally than income excluding benefits or before deducting taxes.

Various indicators may be used to track income inequality. For example, the Gini coefficient summarises income inequality into a single number between 0 and 100%. Other indicators discussed in this briefing paper include the ratio of incomes for individuals at different points on the household income distribution (how does the income of someone with a relatively high income compare to that of someone with a relatively low income?), and the share of total income going to different groups of households. By looking at these different indicators together, a more complete picture of income inequality is obtained.

International comparisons

OECD figures suggest that the UK has among the highest levels of income inequality in the European Union (as measured by the Gini coefficient), although income inequality is lower than in the United States. Data published by Eurostat, the statistical office of the European Union, gives a more positive picture, indicating income inequality in the UK is lower than in several other EU countries although it is slightly higher than the EU average.

1. A picture of income in the UK

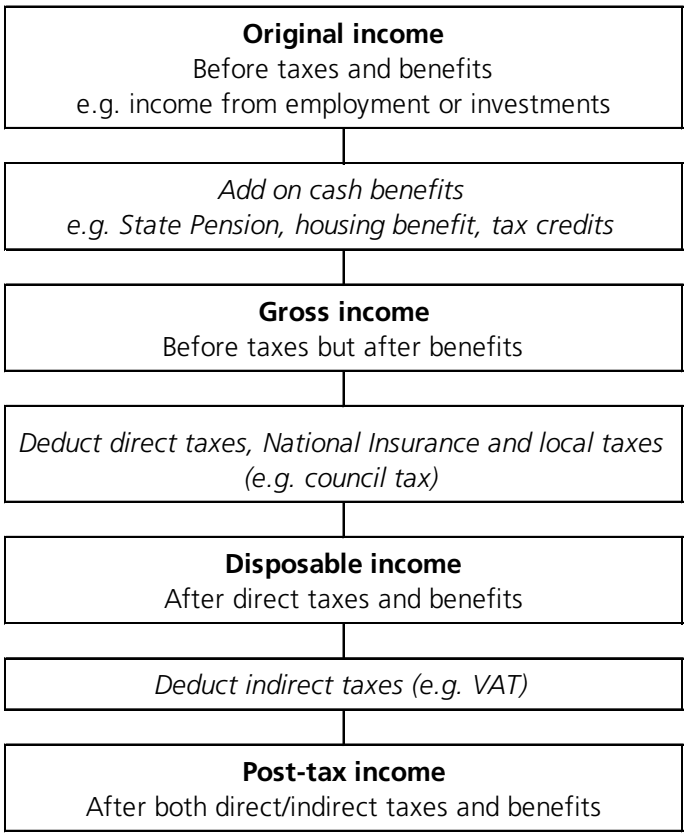
1.1 What do we mean by income

Individuals and households can obtain income from a range of sources. These include earnings from employment, cash benefits (for example the State Pension, housing benefit, tax credits, etc), investments, private pensions and other forms of income. Some of this income may be taxed.

The two most common measures of income are:

- **Gross income** means the sum of all income before tax, including cash benefits.
- **Disposable income** means the amount of money left after direct taxes, National Insurance contributions and council tax (or Northern Ireland rates) are deducted from gross income.

The flowchart summarises the different stages of household income:[1]



Household living standards

This note focuses on household incomes, rather than incomes of individuals. Household income is likely to prove a better guide to living standards than income of individuals, since we may expect income to be shared between household members. Certain forms of income are also determined by household composition – for example, tax credit awards or child benefit payments.

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[1] Adapted from ONS, *The Effects of Taxes and Benefits on Household Income, Financial Year Ending 2014*, 29 June 2015, Diagram A

Equivalisation: larger households need larger incomes

Statistics on household incomes are often **equivalised** (adjusted for household size and composition) to enable better comparisons of living standards. A large household is likely to need a higher level of income in order to enjoy the same standard of living as a smaller household.

Income before and after housing costs

Disposable income may be measured before or after deducting housing costs. There is more inequality in income after housing costs (AHC) than in income before housing costs (BHC), as poorer households tend to spend a higher share of their income on housing than those higher up the income distribution.

A BHC measure acknowledges that some households may choose to pay more for housing so that they can have a better quality of accommodation. On the other hand, variations in housing costs do not always reflect differences in housing quality (for example, due to geographical variations), in which case an AHC measure is more helpful.

Income and wealth

This note does not discuss inequalities in household wealth. While income measures the flow of money to a household at a single point in time, wealth can be built up and retained over many years. Consequently, inequality in household wealth tends to be greater than inequality in income. Statistics on the distribution of household wealth are provided in the ONS report, *Wealth in Great Britain Wave 5, 2014 to 2016* (1 February 2018).

Measuring living standards: an expenditure approach?

Measurement of inequality in household living standards tends to focus on differences in income. However, income may not be the best guide to a household's standard of living as some families have high or low incomes only temporarily. A practical problem is the difficulty of collecting accurate data, particularly at the bottom end of the income distribution, as households may under-report their income.

An alternative is to assess living standards based on household expenditure. Households experiencing a temporary drop in income may sustain their previous expenditure patterns to some degree by drawing on savings or taking on debt (in the expectation that their income is soon to increase again). Under-reporting also appears to be less of a problem when measuring expenditure than when measuring income: surveys find that households with the lowest reported incomes are not the lowest spenders.

To expenditure we can also add benefits derived from goods bought previously that are still being 'consumed' (for example, housing or cars). This gives a more positive picture of living standards for households who may be on low incomes but own their own home.

Nevertheless, an expenditure approach is not perfect. As with income-based measures, it does not take into account improvements in living standards arising from investment in public services. The accurate measurement of household expenditure brings its own problems and the survey used to collect data on household spending, the Living Costs and Food Survey, has fewer respondents than the Family Resources Survey used to collect incomes data. One could also argue that measuring living standards based on household expenditure is less intuitive than an approach based on household income.[2]

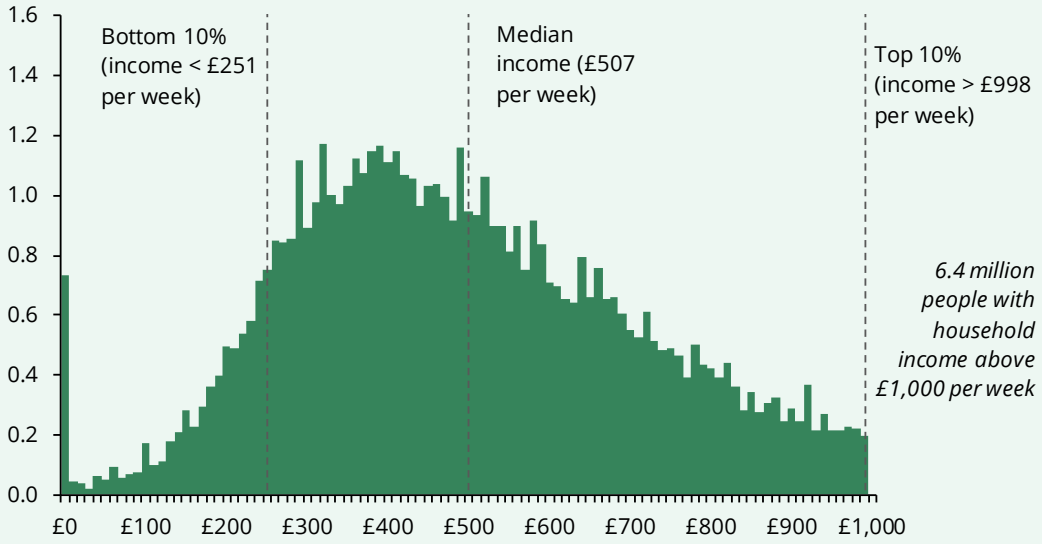
[2] For further information on the relative merits of assessing living standards based on consumption instead of income see: Mike Brewer and Cormac O'Dea, *Measuring living standards with income and consumption: evidence from the UK*, ISER Working Paper 2012-05, March 2012; Mike Brewer, Ben Etheridge and Cormac O'Dea, *Why are households that report the lowest incomes so well-off?*, University of Essex Department of Economics Discussion Paper series, No 736, April 2013

1.2 What counts as high and low income?

As noted above, analysis of the income distribution tends to concentrate on equivalised disposable household incomes. The chart shows the distribution of incomes on this basis in the latest year:

The distribution of household income in the UK, 2017/18

Number of people in each £10 band of weekly disposable household income (millions)



Notes: Income figures are equivalised and are measured before deducting housing costs

Source: DWP, *Households below average income, 1994/95 to 2017/18*, data behind chart 2.1 (BHC)

The equivalisation process adjusts reported income figures according to household size and composition (using a reference point of a childless couple). This is because a larger household is likely to need a higher income to enjoy the same standard of living as a smaller household.[3] So what income is received by different family types at different points along the distribution?

Disposable income (before housing costs)

An individual was at the **middle** of the distribution in 2017/18 if he or she lived in a household which had total disposable weekly household income of:[4]

- £507 for a couple with no children
- £340 for a single person with no children
- £542 for a single person with two children aged under 14
- £710 for a couple with two children aged under 14.

[3] Figures are adjusted using the OECD equivalence scale for income before housing costs. A single adult is given a weight of 0.67; each additional adult in the household or child aged 14 and over is given a weight of 0.33; each child under 14 years has a weight of 0.2. Therefore a couple without children has a weight of 0.67+0.33 = 1; a couple with two children under 14 has a weight of 0.67+0.33+0.2+0.2 = 1.4. Different equivalence scales may be applied to income after housing costs.

[4] DWP, *Households below average income: 1994/95 - 2017/18*, Table 2.2db and Library calculations using the OECD equivalence scale for income BHC

An individual was in the **bottom 10%** if he or she had household income less than:

- £251 for a couple with no children
- £169 for a single person with no children
- £353 for a single person with two children aged under 14
- £270 for a couple with two children aged under 14.

An individual was in the **top 10%** if he or she had household income greater than:

- £998 for a couple with no children
- £669 for a single person with no children
- £1,069 for a single person with two children aged under 14
- £1,399 for a couple with two children aged under 14.

Gross income

Disposable income is net of income tax, National Insurance, council tax and domestic rates, contributions to occupational pension schemes and student loan repayments, among other items. Therefore it is not perfectly correlated with gross income: households with the same gross income may face different deductions (for example, a household with two earners on £10,000 per year will pay less in income tax than a household with one earner on £20,000). Therefore someone with a relatively high gross income may occupy a lower position on the distribution of disposable income, and vice versa.[5]

An individual was at the **middle** of the gross income distribution in 2017/18 if his or her gross weekly household income was:[6]

- £622 for a couple with no children
- £417 for a single person with no children
- £666 for a single person with two children aged under 14
- £871 for a couple with two children aged under 14.

An individual was in the **bottom 10%** if he or she had household income less than:

- £291 for a couple with no children
- £195 for a single person with no children
- £311 for a single person with two children aged under 14
- £407 for a couple with two children aged under 14.

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5 There is no specific equivalisation scale for gross income so when comparing between family types, we must use the same equivalisation scale as for disposable income before housing costs. Estimates are not directly comparable with estimates for gross household income published in the National Accounts or other sources.

6 House of Commons Library analysis of survey microdata (Department for Work and Pensions. (2019). *Households Below Average Income, 1994/95-2017/18*. [data collection]. *12th Edition*. UK Data Service. SN: 5828, http://doi.org/10.5255/UKDA-SN-5828-10). Analysis is based on rounded data so may differ slightly from equivalent figures published by the Government.

An individual was in the **top 10%** if he or she had household income greater than:

- £1,385 for a couple with no children
- £928 for a single person with no children
- £1,482 for a single person with two children aged under 14
- £1,939 for a couple with two children aged under 14.

1.3 Collecting data on incomes via surveys

Official statistics on household incomes are primarily collected through two large household surveys: the *Family Resources Survey* and the *Living Costs and Food Survey*. This note uses data from both surveys, although Family Resources Survey data may generally be considered superior.

The two surveys use slightly different definitions of income so results are not directly comparable. The Family Resources Survey also has a larger survey sample of over 19,000 households which allows it a greater level of precision. The Living Costs and Food Survey collects information from around 5,500 households.

Surveys may not perfectly record all income received by a household and may struggle to obtain accurate data for certain groups of households. Collecting accurate data on incomes of very high-income or low-income households is a particular challenge. Therefore, the Family Resources Survey adjusts the reported incomes figures for those households in the survey with the very highest incomes, using data on individual income from HMRC's Survey of Personal Incomes (which is based on tax returns). This helps correct for volatility in the survey figures.[7] There is no such adjustment in the Living Costs and Food Survey. Neither survey applies an adjustment to income figures for households reporting the lowest income.

Additionally, the surveys underestimate the total amount of benefit income received by households compared to administrative data for government expenditure on benefits. Analysis by the Resolution Foundation, a think tank, indicates that there was an unexplained gap of £37 billion between benefit income reported in the Family Resources Survey in 2016/17 and what the government actually spent. This represented around 4% of total disposable household income as recorded in the survey. The gap has also increased over time, from around 2% of total income at the start of the 2000s.[8] The box in section 2.1 looks at how this under-reporting might affect estimates of income inequality levels in the UK.

Sources

Incomes data from the Family Resources Survey is published in an annual publication from the Department for Work and Pensions,

7 For more details, see DWP, *Households Below Average Income (HBAI) Quality and Methodology Information Report, 2017/18*, p20

8 Adam Corlett et al, *The Living Standards Audit 2018*, Resolution Foundation Report, 24 July 2018

Households below average income. The latest data are for 2017/18 and were published on 28 March 2019.

Data from the Living Costs and Food Survey is published by the Office for National Statistics (ONS) in its annual bulletin *The effect of taxes and benefits on household incomes*, with data up to 2016/17[9], and in its more recent report *Household income inequality, UK: Financial year ending 2018*, which includes data for 2017/18. The Living Costs and Food Survey also collects data on household expenditure, published in the ONS *Family Spending* release.

For further information on the surveys and related publications see ONS, *A guide to sources of data on earnings and income* (February 2019).

[9] Data for 2017/18 from this release will be published on 30 May 2019

2. Indicators of income inequality

2.1 Gini coefficient

The Gini coefficient for income inequality was 34% before housing costs and 39% after housing costs in 2017/18.

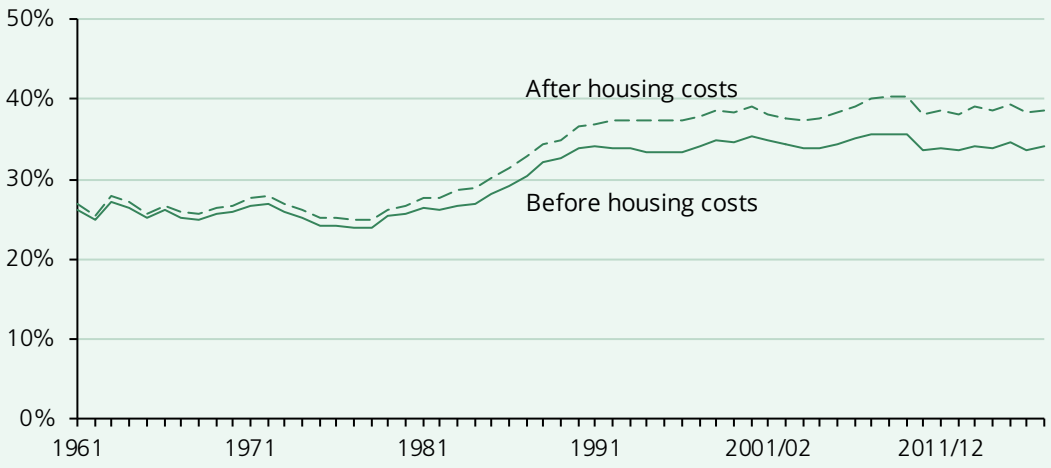
A widely used indicator of income inequality is the Gini coefficient. This summarises inequality in a single number which takes values between 0 and 100%. A higher value indicates greater inequality.

In the UK, inequality as measured by the Gini coefficient increased during the 1980s but from 1990 onwards has remained more stable, based on data from the *Family Resources Survey*. The latest estimate is for 2017/18 and shows that the Gini coefficient for the UK was 34% based on income before housing costs and 39% based on income after housing costs. Inequality levels are higher based on income after housing costs because lower-income households tend to spend a larger share of their income on housing than higher-income households.

The Gini coefficient was very little changed in 2017/18 compared with in the previous year. The big overarching economic development during the year was the rise in inflation. This was a consequence of the post-EU referendum fall in the pound which increased import prices. Median household income after inflation was unchanged compared with the previous year, only the fourth time in the past 30 years where the median income in real terms did not grow.[10] The Institute for Fiscal Studies (IFS) noted that incomes did not grow across most of the income distribution, resulting in little change in the Gini coefficient.

Gini coefficient for equivalised disposable income

Data for Great Britain, 1961 to 2002/03, and UK, 2002/03 to 2017/18



Source: Institute for Fiscal Studies, using data compiled from Family Expenditure Survey and Family Resources Survey

Income inequality on this measure was lower in 2017/18 than it was immediately before the economic recession began in 2008. Between 2009/10 and 2010/11, the Gini coefficient fell by 2% points based on incomes before housing costs (from 36% to 34%) as a result of real

[10] IFS Briefing Note BN246, *No growth in household incomes last year – for only the fourth time in the last 30 years*, 28 March 2019

incomes at the top of the distribution falling by more than at the bottom of the distribution.[11] The IFS explains:

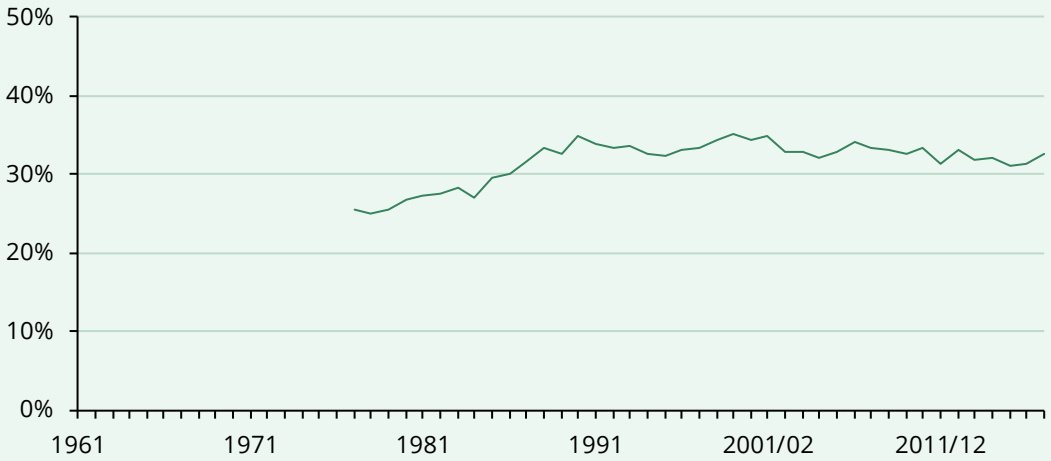
> The primary reason for the fall in inequality was that real earnings fell sharply while benefit entitlements remained relatively stable. Median income for non-working households (including pensioners) was 60% of that of working households in 2007/08, but 67% by 2012/13.[12]

The longer-term picture shows that income inequality rose sharply during the 1980s, before largely stabilising in the 1990s.[13]

These figures are based on analysis of the Family Resources Survey although a broadly similar picture emerges using data from the Office for National Statistics' *Living Costs and Food Survey*. There are small differences arising between the two sources which partly reflect different methodologies. ONS has published a time series from 1977 onwards – figures are on a before housing costs basis only:

Gini coefficient for equivalised disposable income

Based on income before housing costs, UK, 1977 to 2017/18



Source: ONS, *Household income inequality, UK: Financial year ending 2018* , 26 Feb 2019, using data from the Living Costs and Food Survey and Family Expenditure Survey

Are levels of income inequality overstated? The effect of under-reporting of benefit income in household surveys

As discussed in section 1.3, the surveys used to collect data on household incomes appear to underestimate the amount of benefit income received by households compared to what the government actually spends on benefits. The size of this discrepancy has increased over time.

There is no easy way to correct for the discrepancy as we cannot know which households in the survey under-reported their income from benefits. Nevertheless, the Resolution Foundation has attempted to adjust Family Resources Survey data for 1994/95 to 2016/17 so that total benefit income in the survey balances with administrative data on benefit expenditure.

Their analysis shows that levels of income inequality are reduced once we factor in the missing benefit income in the survey data. (This is not surprising, as we would expect benefits to have a redistributive

11 DWP, *Households below average income, 2015/16* (and 2010/11 edition)
12 C Belfield, J Cribb, A Hood and R Joyce, *Living standards, poverty and inequality in the UK: 2014*, 15 July 2014, IFS Report R96, Chapter 3, p34
13 Resolution Foundation, *Last year saw living standards stagnate and poverty rise, blog post by Adam Corlett*, 28 March 2019

effect.) The Gini coefficient was around 2-3% points lower over the period based on the adjusted data, both before and after housing costs. Other measures of income inequality are also revised down. However, inequality still remains some way above the levels seen in the 1960s and 1970s.

Trends in inequality since 1994/95 also appear slightly more favourable using the adjusted data, although the Resolution Foundation comments, "The big picture remains that inequality has been broadly flat but high over this period".[14]

2.2 Percentile ratios

An alternative way of looking at inequality is to compare incomes at different points along the income distribution: how much more income is received by those near the top compared with people at the middle or the bottom?

The P90/P10 ratio compares income for someone at the 90th percentile of the distribution (the point at which 90% of individuals have lower household income and 10% have higher income; a relatively high income) with the 10th percentile (the point at which 10% have lower income and 90% have higher income; a relatively low income).

A person at the 90th percentile of the income distribution (a relatively high income) had an income **4 times higher** than someone at the 10th percentile (a relatively low income) in 2017/18, before housing costs.

- The **P90/P10 ratio** was 4.0 in 2017/18 based on incomes before housing costs (BHC), meaning someone at the 90th percentile had a household income four times larger than someone at the 10th percentile. The ratio was 5.2 on an after housing costs (AHC) basis.
- Similarly, the **P90/P50 ratio** compares the 90th percentile with the 50th percentile (i.e. the median). This ratio was 2.0 based on incomes BHC and 2.1 AHC in 2017/18.
- The **P50/P10 ratio** compares the median with the 10th percentile. This ratio was 2.0 based on incomes BHC and 2.5 AHC in 2016/17.

All three ratios increased during the 1980s (see charts below). However, the sharp increase in the P50/P10 ratio during the second half of the decade contrasts with a more gradual rise in the P90/P50 ratio since the late 1970s. Based on income BHC, the P90/P10 and P50/P10 ratios were slightly lower in 2017/18 than in 1990.

These percentile ratios show inequality is higher when income is measured AHC. The inclusion or exclusion of housing costs makes a greater difference at the lower end of the distribution, as can be seen by comparing the P50/P10 chart with the P90/P50 chart.

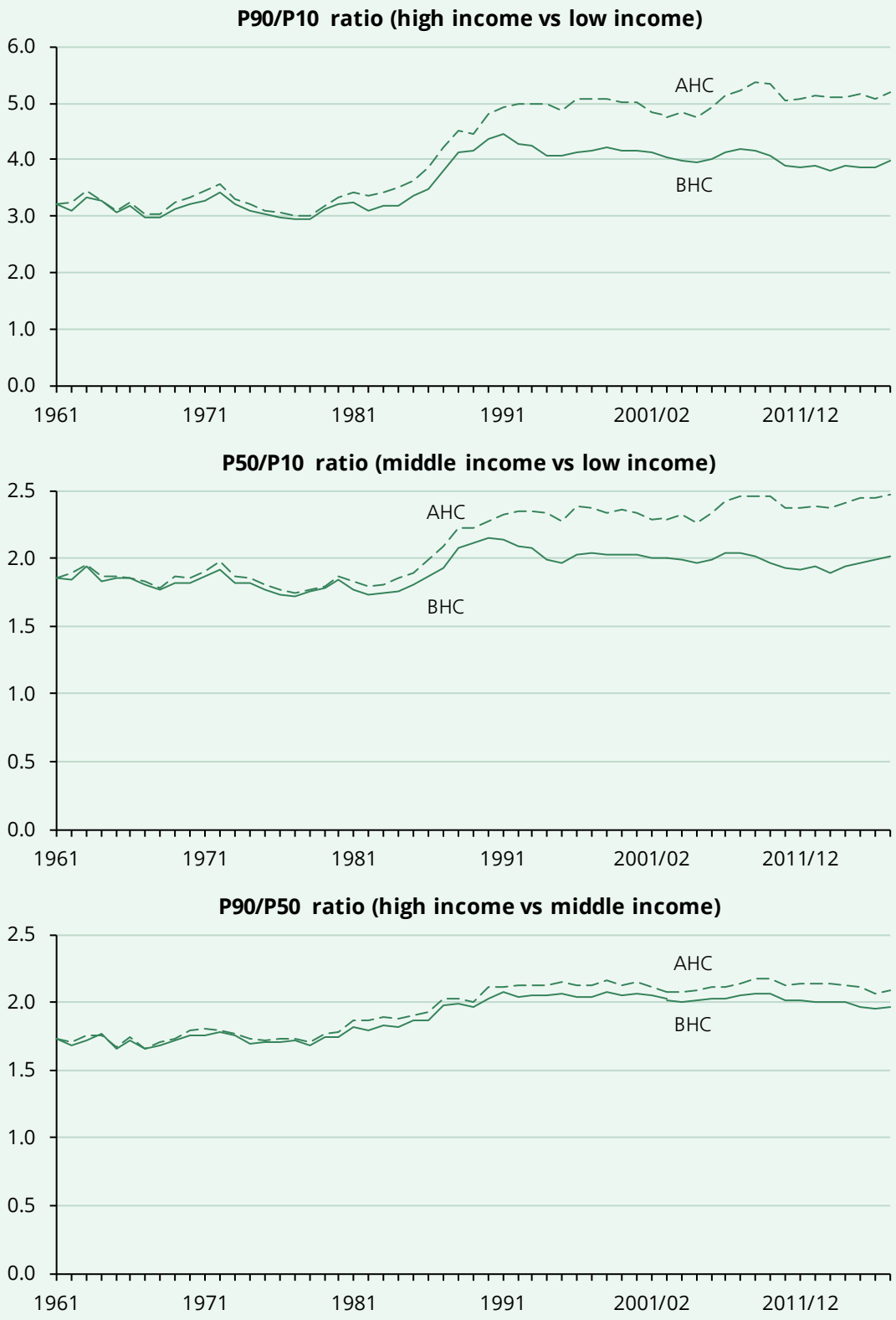
Since the 2008 recession, there has been a substantial fall in housing costs for higher-income households: these households are more likely to own their own home and so have benefited to a greater extent from the low mortgage rates offered in recent years. This has acted to increase incomes at the top of the distribution relative to incomes at the bottom, thus offsetting some of the fall in inequality in BHC income since the recession.[15]

[14] Adam Corlett et al, *The Living Standards Audit 2018*, 24 July 2018

[15] For further discussion, see: C Belfield, J Cribb, A Hood and R Joyce, *Living standards, poverty and inequality in the UK: 2014*, 15 July 2014, IFS Report R96, pp41-44

Income ratios for people at different points on the income distribution

Data for Great Britain, 1961 to 2002/03, and UK, 2002/03 to 2017/18



Source: Institute for Fiscal Studies, using data compiled from Family Expenditure Survey and Family Resources Survey; DWP, *Households below average income, 2017/18*

2.3 Income shares

Income inequality can also be considered in terms of the share of total household income going to different groups.

In 2017/18, 42% of total disposable household income (before housing costs) in the UK went to the 20% of individuals with the highest household incomes, while 7% went to the bottom 20%.[16]

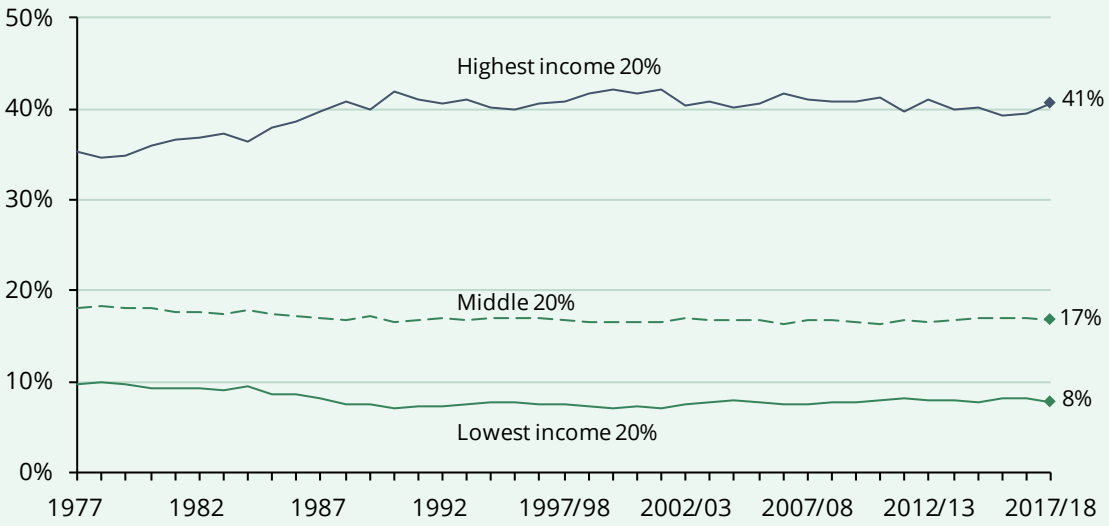
Based on income after housing costs, 44% of total income went to the highest-income 20% and 5% went to the lowest-income 20%.

The share of income going to the top income quintile (i.e. top 20%) increased during the 1980s while the share going to lower-income households decreased. ONS estimates for 1977 onwards are shown in the chart. Note the composition of each quintile group is in flux: households may move in and out of the top 20% (or other 20% bands) from year to year.

The 20% of people with the highest household incomes received 42% of total disposable income before housing costs and 44% of income after housing costs.

Quintile shares of equivalised disposable income

% share of total income (before housing costs) going to each quintile group: UK, 1977-2017/18



Source: ONS, Household income inequality, UK: Financial year ending 2018, 26 Feb 2019, using data from the Living Costs and Food Survey and Family Expenditure Survey

Top 1% income share

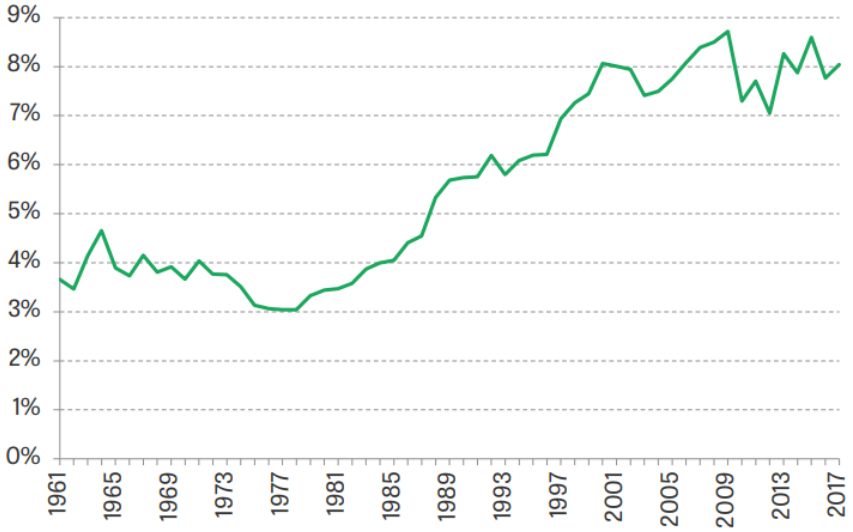
The indicators discussed so far only capture to a very limited extent the inequality between individuals with the very highest incomes and the rest of the population. Although the share of income going to the top 20% levelled off from the start of the 1990s, the share of income going to the top 1% continued to increase into the 2000s.

The Institute of Fiscal Studies (IFS) has calculated the share of household income going to the top 1% of individuals from 1961 up to 2017/18, although it has noted the household surveys used to produce these estimates are not a robust source of information on incomes of the very rich. The chart below is taken from the IFS in its introductory report

[16] Based on data from the Family Resources Survey. By comparison, Living Costs and Food Survey data suggests 41% of disposable income BHC went to the top 20% of individuals and 8% went to the bottom 20%.

launching the Deaton Review of inequality, *Inequalities in the twenty-first century: introducing the IFS Deaton Review* (14 May 2019):[17]

Figure 3. Top 1% share of net household income, 1961–2017



Note: Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.

Source: Authors' analysis of the Family Expenditure Survey and Family Resources Survey, various years.

This series is sensitive to changes in the tax system. Most recently, some of the decrease in the top 1% share between 2015/16 and 2016/17 may reflect individuals bringing income forward into 2015/16 to avoid paying higher taxes on dividends after April 2016.[18]

Likewise, the fall in the top 1% share in 2010/11 may be partly explained by the introduction of the 50% additional rate of income tax in April 2010, as high income individuals brought income forward into 2009/10 in order to pay less tax on it. The reduction in the additional rate of income tax in April 2013 (from 50% to 45%) is similarly likely to explain some of the dip in the top 1% share in 2012/13 and subsequent increase in 2013/14, as individuals shifted income between years in order to benefit from the change.[19]

The increase in the share of income going to the top 1% during the 1990s and 2000s contrasts with the relative stability in the Gini coefficient and the modest decrease in the P90/P10 ratio. This suggests that if we exclude the very top end of the income distribution, then incomes must have become more equal across the rest of the income distribution over this period. Previous IFS research explains:

> To get a sense of the difference the 'racing away' of top incomes over the long run has made to changes in the Gini coefficient, we can calculate the Gini just for the bottom 99%, excluding the effect of increasing inequality between the top 1% and the

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17 There is more detail (up to 2016/17) in the IFS report *Living standards, poverty and inequality in the UK, 2018*, 20 June 2018

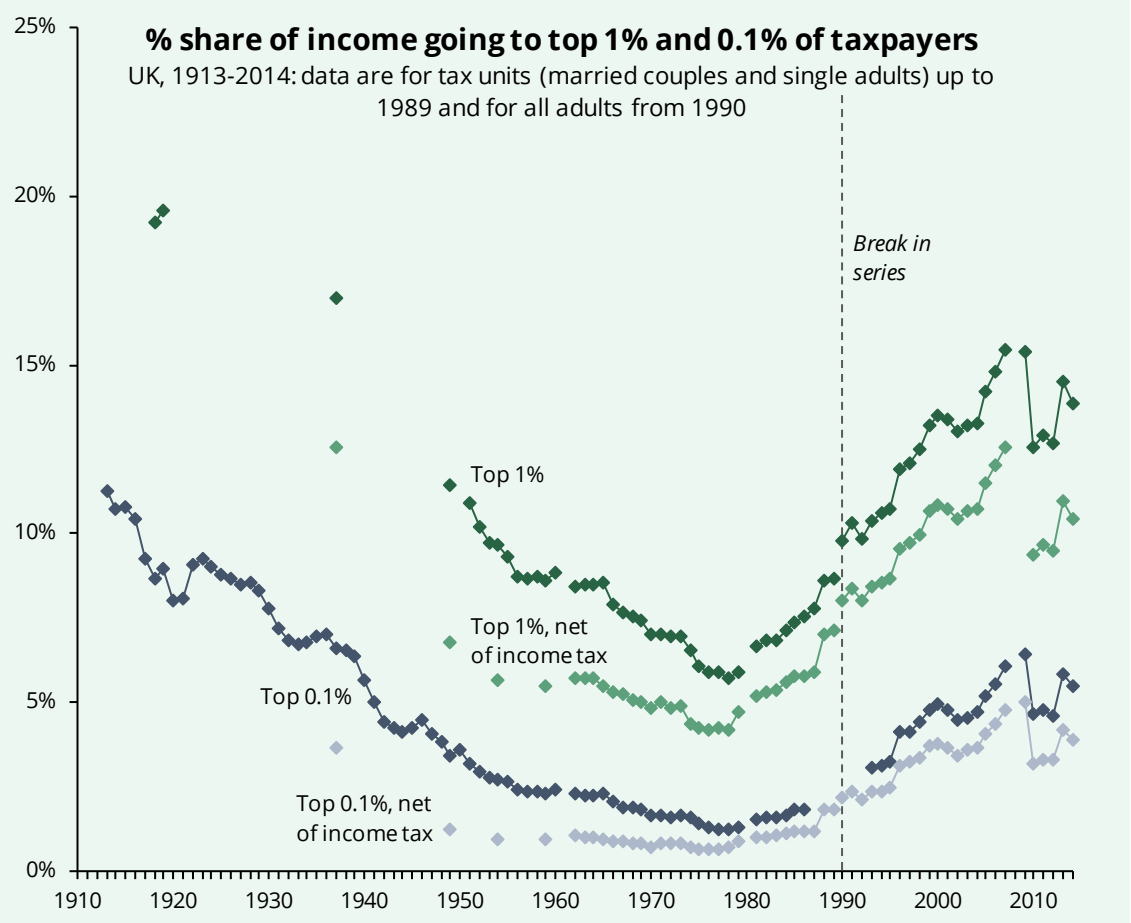
18 See for example H Miller and B Roantree, *Tax revenues: where does the money come from and what are the next government's challenges?*, IFS Briefing Note BN198, 1 May 2017

19 J Cribb, A Hood, R Joyce and D Phillips, *Living Standards, Poverty and Inequality in the UK: 2013*, 14 June 2013, IFS Report R81, pp39-40

bottom 99% (and changes in inequality within the top 1%). Over the past two decades, income inequality among the whole population has remained unchanged: the Gini coefficient in 2011-12 was not statistically significantly different from its 1991 value. However, inequality among the bottom 99% has fallen: the Gini coefficient for the bottom 99% was 5% lower in 2011-12, at 0.30, than in 1991, when it was 0.314 (and the difference was statistically significant).[20]

Top income shares over the century

The extent to which we can look at how inequality has evolved over time based on the above measures is limited according to the availability of survey data. However, researchers at the World Wealth & Income Database have constructed a longer time series using tax returns. The chart below shows the share of income going to the top 1% and 0.1% of taxpayers from the start of the twentieth century, up to 2014. Unlike the data above, figures cover taxpayers only rather than all individuals and only count income reported for tax purposes.



Source: Facundo Alvaredo, Anthony B. Atkinson, Lucas Chancel, Thomas Piketty, Emmanuel Saez, and Gabriel Zucman, *The World Wealth and Income Database*, http://www.wid.world, accessed 18/9/2017.

Note: Up to 1920, estimates include what is now the Republic of Ireland. Until 1974, estimates relate to income net of certain deductions; from 1975, estimates relate to total income.

Estimates up to 1989 are based on the top 1% and 0.1% of 'tax units' (the group of married couples or single adults with the highest incomes)

[20] Ibid, p40. See also M Brewer, L Sibieta and L Wren-Lewis, *Racing away? Income inequality and the evolution of high incomes*, 17 January 2008, IFS Briefing Note 76

while those from 1990 are based on the top 1% of all adults with the highest incomes. This reflects a change in the taxation system in 1990, which moved from treating couples as a tax unit to an individual base, and may explain part of the reported increase in the share of income going to the highest income individuals during the 1980s and 1990s.

As noted above, some of the dip in income shares of the top 1% and 0.1% in 2010 and the increase in 2013 is likely to reflect individuals shifting income between years in order to benefit from changes in the top rate of income tax.

2.4 IFS Deaton Review of inequality

In May 2019, the Institute for Fiscal Studies (IFS) launched a new in-depth research project on inequalities in the UK. Chaired by the Nobel Laureate economist Sir Angus Deaton, the review aims to address a multitude of questions over its five-year lifespan. The IFS explains what the review is seeking to do:

> In the most ambitious study of its kind yet attempted, we will aim to understand inequality not just of income, but of health, wealth, political participation, and opportunity; and not just between rich and poor but by gender, ethnicity, geography, age and education. We will cover the full breadth of the population – not just what is happening at the very top and very bottom. We will examine what concerns people about inequality, what aspects of it are perceived to be fair and unfair, and how those concerns relate to the actual levels of inequality and the processes by which they are created. We will examine the big forces that drive inequalities – from technological change, globalisation, labour markets and corporate behaviour to family structures and education systems.
>
> Crucially, we will examine the role of policies, from taxes and benefits through to trade policy, education policies, the labour market, regional development, competition policy and regulation. This will give the UK government, and those in other developed countries, a far clearer and more holistic view of the effectiveness of available policy options, how they can best work alongside each other and the trade-offs between them.
>
> With the Nobel Laureate Professor Sir Angus Deaton in the chair, the panel overseeing the project includes world-leading experts in sociology, epidemiology, political science, philosophy and economics. The project will draw on contributions from dozens more experts with diverse areas of expertise and perspectives.[21]

[21] IFS, About The IFS Deaton Review [accessed 20 May 2019]

3. Redistribution

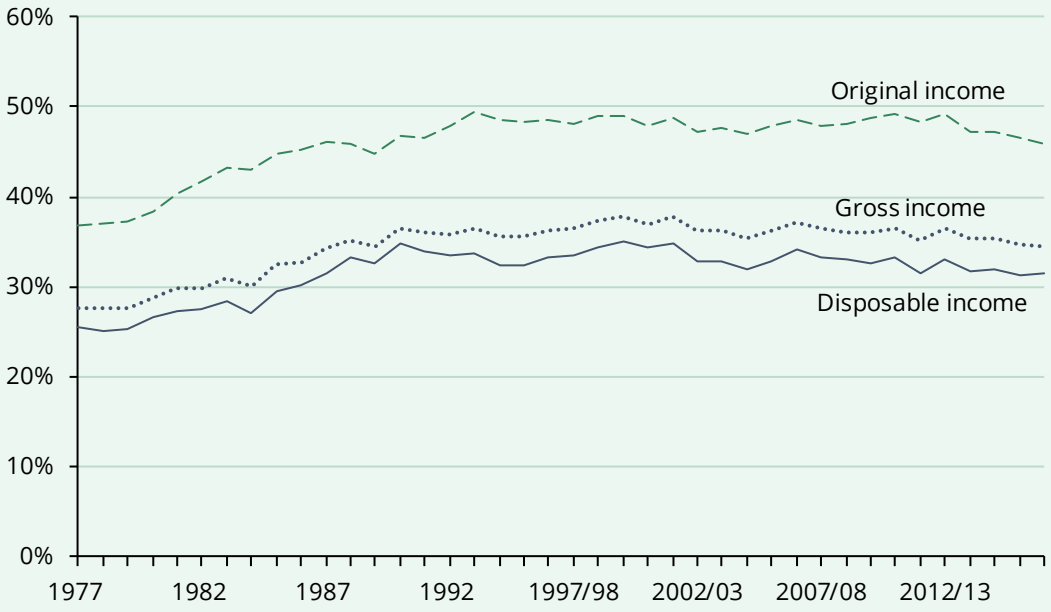
We can examine the extent to which the tax and benefit system reduces inequality by looking at inequality in different types of income. The data in the previous section are based on households' equivalised disposable income; that is, income after direct taxes and benefits, adjusted for family size and composition. Disposable income is distributed more equally than original incomes (before taxes and before benefits) and gross incomes (before taxes but after benefits).

In 2017/18, the Gini coefficient was (based on data from the Living Costs and Food Survey):

- 46% for equivalised original income
- 36% for equivalised gross income (including benefits)
- 33% for equivalised disposable income (after direct taxes)

The tax and benefit system acts to reduce income inequality

Gini coefficients for different stages of household income: UK, 1977 to 2017/18



Note: Income figures are equivalised and measured before deducting housing costs.

Source: ONS, *Household income inequality, UK: Financial year ending 2018*, 26 Feb 2019, using data from the Living Costs and Food Survey and Family Expenditure Survey

4. Prospects for income inequality

4.1 Income inequality is projected to increase up to the early 2020s

Projections by the Institute for Fiscal Studies (IFS)[22] and, more recently, the Resolution Foundation[23] suggest income inequality in the UK is likely to increase over the next few years, assuming no change in government policy.

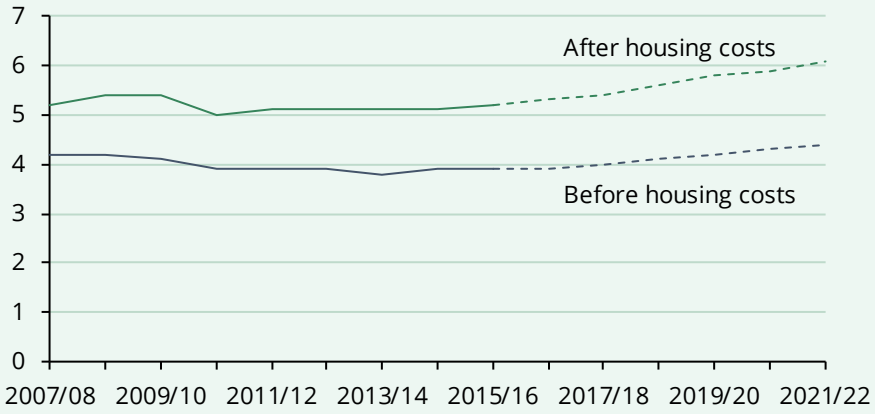
Looking first at income before housing costs, growth in inequality heading to 2021/22 is expected to reverse the fall in inequality observed after the economic recession in 2008. The IFS's projections made in November 2017 were for the P90/P10 ratio (which compares household income at the 90th percentile of the distribution to household income at the 10th percentile) to rise from 3.9 in 2015/16 to 4.4 in 2021/22, similar to its level at the start of the 1990s. (Outturn data from the DWP for 2017/18 show the ratio at 4.0, matching the IFS's forecast.)

Turning to income after housing costs, the projections show a sharper increase in income inequality up to 2021/22 reflecting contrasting trends in housing costs for different groups. The IFS projects that the P90/P10 ratio will rise from 5.1 in 2015/16 to 5.9 by 2021/22. This would be the highest ratio since comparable records began in 1961, the ratio previously having peaked at 5.4 in 2008/09 and 2009/10. (Outturn data from the DWP for 2017/18 show the ratio at 5.2, below the IFS's forecast of 5.4.)

Projections by the Institute for Fiscal Studies and by the Resolution Foundation suggest that income inequality is projected to rise over the next few years, if policy does not change.

Income inequality is projected to increase

P90/P10 ratio for disposable income, IFS projections, 2007/08 to 2021/22



Note: Solid lines based on survey data for period, dashed lines are projections.

Source: A Hood and T Waters, *Living standards, poverty and inequality in the UK: 2017-18 to 2021-22*, IFS Report R136, 2 November 2017, Online appendix

[22] Andrew Hood and Tom Waters, *Living Standards, Poverty and Inequality in the UK: 2017-18 to 2021-22*, IFS Report R136, 2 November 2017

[23] Adam Corlett, George Bangham and David Finch, *The Living Standards Outlook 2018*, Resolution Foundation, 22 February 2018

The Resolution Foundation, in a February 2019 report, also produced projections for inequality. They project the P90/P10 ratio and the Gini coefficient to rise slightly in the next few years.[24]

It is worth noting that the Gini coefficient is sensitive to changes in income at the very top and bottom of the income distribution, so difficulties in recording and projecting incomes for these households make the projections more uncertain than estimates of the P90/P10 ratio (which are themselves highly uncertain).

4.2 What explains the projected rise in inequality?

The projected increase in inequality in incomes before housing costs is attributable to two main factors. Firstly, forecast growth in real earnings is expected to mostly benefit higher-income households, since earnings make up a larger share of total income for these households. Secondly, cuts in the real value of working-age benefits are expected to reduce the real incomes of poorer households.

The projected increase in inequality before housing costs arises from stronger earnings growth benefiting higher income households, while benefit cuts are expected to reduce the incomes of poorer households.

Including housing costs has the effect of further depressing real income growth for the lowest-income households. Housing costs are expected to increase for these households as a consequence of rising rents. The IFS observes that rising rents can be expected to have a greater impact on these households than has previously been the case because of the cash terms freeze in local housing allowances until 2020. The freeze means that for more low-income households in the private rented sector, housing benefit awards will not full cover the cost of their rent.[25] Combining these effects with planned benefit cuts, the IFS estimates that the income of a household at the 10th percentile of the distribution will decrease by 7% between 2015/16 and 2021/22, after adjusting for inflation.[26]

Mortgage interest payments are also expected to increase above inflation over this period, albeit from a low base. This will lead to an increase in housing costs for some households further up the income scale, although income growth after housing costs is still projected to be weakest for households at the bottom.

The Resolution Foundation estimates that overall income growth is set to be "disappointing" across much of the income distribution. However, it expects the point at which 10% of households have disposable income lower than (the 10th percentile, or P10) to fall by 5% in real terms over the period between 2016/17 and 2023/24. The level of disposable income at P20 is projected to fall by 2%. At the top of the distribution income is expected to grow: P90 is projected to be 4% higher in 2023/24 compared with 2016/17. However, while stronger growth is projected for households near the top of the income

[24] Adam Corlett, *The Living Standards Outlook 2019*, Resolution Foundation, 20 February 2019, p50 and Appendix 3

[25] Andrew Hood and Tom Waters, *Living Standards, Poverty and Inequality in the UK: 2016-17 to 2021-22*, IFS Report R127, 2 March 2017, pp21-6.

[26] Andrew Hood and Tom Waters, *Living Standards, Poverty and Inequality in the UK: 2017-18 to 2021-22*, IFS Report R136, 2 November 2017, p12

distribution, their projected rate of income growth of is still not "close to previous [historical] norms".[27] This makes the outlook for the coming years unusual, in that rising inequality occurs alongside weak growth in real incomes. By contrast, the rise in inequality during the 1980s occurred alongside very strong income growth for households in the top half of the income distribution and moderate income growth for households in the bottom half.[28]

4.3 Effect of tax and benefit reforms and the National Living Wage

Previous IFS research estimated that as a result of tax and benefit reforms announced or expected to be implemented between 2015 and 2020, the increase in income inequality over the next few years will be larger than it would be otherwise. However, income inequality would still be expected to increase in the absence of these reforms.

> Broadly, the higher-income two-thirds of households gain on average from government reforms, while the lowest-income third lose on average. The losses, however, are much bigger as a percentage of income than the gains: direct tax and benefit reforms increase projected income growth by 0.9ppts at the 90th percentile, but reduce it by 3.3ppts at the 10th percentile.[29]

The "National Living Wage" (NLW) was introduced in April 2016 and is effectively a higher minimum wage for people aged 25 and over. Although the NLW is expected to significantly increase the earnings of some low-paid individuals, it is expected to have very little impact on inequality in household incomes. Part of the explanation for this is that some of those benefiting from the policy live in higher-income households. An IFS report explains:

> …the NLW is projected to have a very small impact on incomes right across the household income distribution, with incomes being affected by less than 1% at almost all percentile points. This is partly because household incomes are larger than individual earnings in most cases, partly because some of the gains from the NLW are captured by the exchequer in higher tax payments and lower benefit entitlements, and partly because gains from the NLW are much more widely spread across the income distribution than across the individual earnings distribution, with similar gains between the 20th and 60th percentiles. This reflects that those who benefit from the NLW have low hourly pay, but not necessarily low household incomes. For example, those paid less than the NLW who have a higher-earning partner may benefit from the NLW but have a household income sufficient to be in the top half of the income distribution.[30]

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27 Adam Corlett, *The Living Standards Outlook 2019*, Resolution Foundation, 20 February 2019, pp36-37

28 Adam Corlett and Stephen Clarke, *Living Standards 2017: The past, present and possible future of UK incomes*, Resolution Foundation, 31 January 2017, pp73-7

29 Andrew Hood and Tom Waters, *Living Standards, Poverty and Inequality in the UK: 2016-17 to 2021-22*, IFS Report R127, 2 March 2017, p31

30 James Browne and Andrew Hood, *Living Standards, Poverty and Inequality in the UK: 2015-16 to 2020-21*, IFS Report R114, 2 March 2016, p35

4.4 Limitations

These estimates do not attempt to show the changes in income that are likely to be experienced by individual households. People will move up and down the income distribution from year to year: a household which finds itself at a particular percentile of the distribution in one year may not be there in the next.

The IFS and Resolution Foundation projections are of course highly uncertain. They build on macroeconomic forecasts produced by the Office for Budget Responsibility (OBR) and demographic projections from the Office for National Statistics (ONS), which are themselves subject to much uncertainty.

The IFS projections from November 2017 were produced before the publication of official statistics on the income distribution for 2016/17 and 2017/18, in DWP's *Households below average income* release. The Resolution Foundation's projections of February 2019 were produced before the 2017/18 release. The projections do not take account of more recent economic or demographic forecasts (including those made by the OBR, e.g. at the time of the March 2019 Spring Statement) or subsequent policy announcements.

Instead, the projections offer an estimate of the future path for inequality in a scenario where policy remains unchanged. They do not account of possible behavioural responses to forthcoming tax and benefit changes, which could alter the shape of the income distribution.

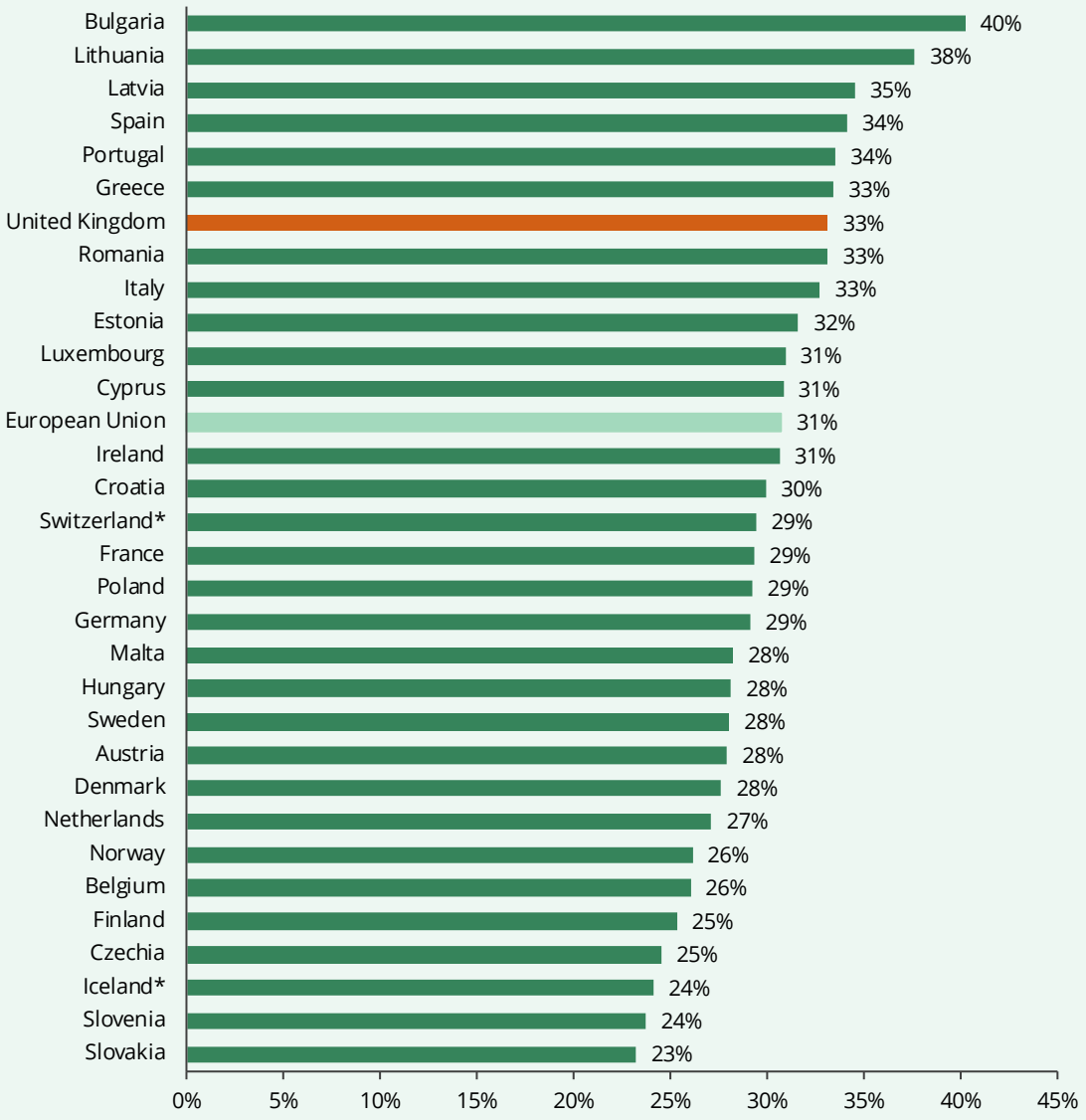
5. International comparisons

Comparable data on income inequality in different countries is published by Eurostat and OECD. The two sources give different estimates and the UK compares less favourably based on the OECD data than using the Eurostat data. Figures are also published by the World Bank, with a particular focus on developing economies.

5.1 Eurostat data

In 2017, the Gini coefficient for equivalised disposable income in the UK was slightly higher than that for the whole of the European Union (28 countries). On this measure, income inequality was highest in Bulgaria followed by Lithuania and Latvia. Slovakia and Slovenia had the lowest levels of income inequality in the EU in 2017.

Gini coefficient for equivalised disposable income (Eurostat)
2017 or latest year



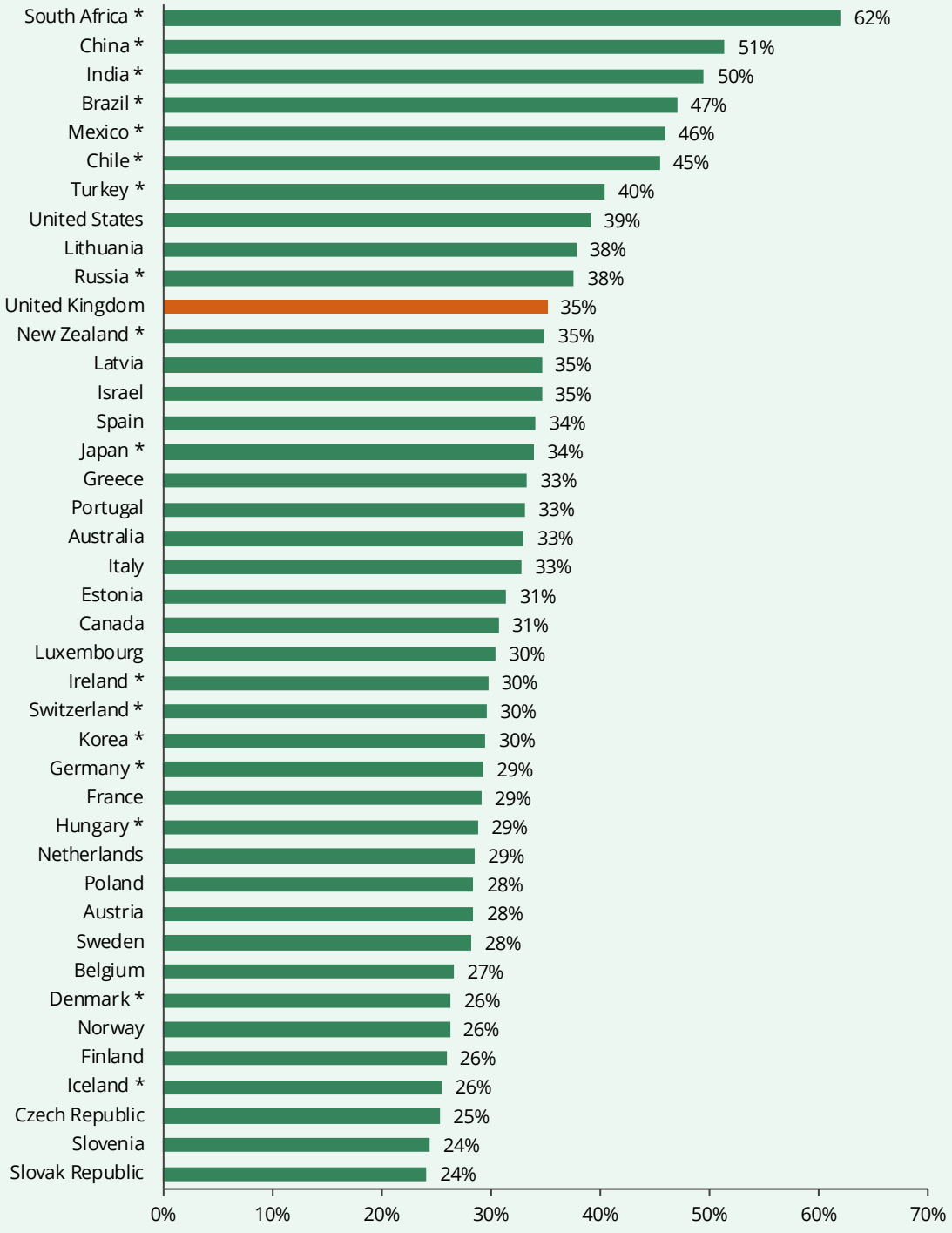
* Data are for 2016

Source: *EU statistics on income and living conditions* (EU-SILC), via Eurostat

5.2 OECD data

OECD data indicates the UK had a higher level of income inequality than most European OECD members in 2016 based on the Gini coefficient for disposable income, but a lower level than the US.

Gini coefficient for equivalised disposable income (OECD)
2016 or latest year



* Estimates for Chile, Denmark, Germany, Iceland, Ireland, Japan, South Africa, South Korea, Switzerland and Turkey estimate are for 2015; Hungary,Mexico and New Zealand are for 2014; Brazil estimate is for 2013; estimates for China, India and Russia are for 2011. Source: OECD

By comparing inequality in original incomes (before the effect of taxes and benefits) with inequality in disposable incomes (after taxes and benefits), we can get some indication of the extent to which different countries' tax and benefit systems redistribute income between households. The UK has a similar level of inequality in original income to Germany and France. However, in these countries there is less inequality in disposable incomes indicating a greater degree of redistribution:

The UK tax and benefit system redistributes income to a lesser extent than countries with similar inequality in original incomes

Gini coefficients for inequality in "original income" (before taxes and benefits) and "disposable income" (after taxes and benefits): higher values indicate greater inequality. 2016 or latest year

Source: OECD

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