

Article

Interpreting changes in UK income estimates during the coronavirus pandemic: financial year ending 2021

Interpreting changes in UK income estimates during the coronavirus pandemic for the financial year ending 2021.

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1 . Other pages in this release

- [Average household income, UK: financial year ending 2021](#)
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2 . Main points

- The coronavirus (COVID-19) pandemic led to a series of operational changes to the Household Financial Survey (HFS), from which the Office for National Statistics (ONS) estimates of household disposable income and inequality are derived.
- A wide range of financial support measures were introduced to alleviate the potential financial pressure of the coronavirus pandemic; as such, income estimates are subject to greater uncertainty this financial year, and we recommend users exercise caution when interpreting rates of growth, particularly at the quintile and decile level.
- Users should be aware that estimates of self-employment income are based on partial returns for the financial year ending (FYE) 2021, with most respondents reporting for previous financial years; estimates are subject to greater uncertainty as a result and may be revised in the FYE 2022 publication.

3 . Impact of coronavirus (COVID-19) on Household Finances Survey collection

Telephone interviewing was rapidly initiated in response to the coronavirus pandemic and national lockdown commencing in March 2020. Several strategies were implemented to account for a potential reduction in response rates because of telephone interviewing. As a result of oversampling, revised incentives, and targeted contact intervention (knock-to-nudge), an overall increase in sample size was achieved for the financial year ending (FYE) 2021, which is outlined in detail in Table 1. Detailed analysis into the full impact of such operational changes on a range of social surveys run across ONS is available in the [Impact of COVID-19 on ONS social survey data collection](#).

Table 1: Selection of sample sizes, achieved interviews and response rates for the Household Finances Survey (HFS) suite

| Survey year | Total cases (Sample size) | Total achieved interviews | Response rate |
|-------------|---------------------------|---------------------------|---------------|
| FYE 2019 | 33,445 | 16,405 | 49.05 |
| FYE 2020 | 33,801 | 15,636 | 46.26 |
| FYE 2021 | 48,144 | 17,659 | 36.68 |

Source: Office for National Statistics - Household Finances Survey

Notes

1. FYE 2021 represents the financial year ending 2021 (April to March) and similarly for all other years expressed in this format.

While the questionnaire length was shortened in response to the move to telephone interviewing, additional harmonised questions on income relating to the coronavirus pandemic were added to both the Survey on Living Conditions (SLC) and Living Costs and Food (LCF) survey. Furthermore, questions regarding subjective experience of household finances were added to the policy-responsive module of the SLC, and they were regularly reviewed in line with economic policy changes. In addition, questions relating to the take up of government support schemes were also added.

The composition of the achieved HFS sample changed during the financial year ending (FYE) 2021 in comparison with previous years. Response analysis showed an increased number of respondents were outright owners of property and a decreased number were renters. This change in tenure status was accounted for through additional weighting to ensure that the survey sample remained an accurate representation of the UK population.

The weighting process was adjusted for a range of socioeconomic and demographic changes during the coronavirus pandemic. For example, in response to national lockdowns, the household composition of longitudinal respondents - people who remain in the survey sample for multiple periods - may have altered. Wherever possible, this has been controlled for in weighting; for example, if a joiner is added to a three-person household, the household weight will be multiplied by a factor of three-quarters. In this way, the sum of the weights across all household members would remain the same before and after adding the joiner. More generally, income estimates are typically produced on an equivalised basis – this allows for comparison of estimates over a long-time frame that are adjusted for the size of the households.

In addition, HFS estimates will have controlled for the change in headline labour market trends during the FYE 2021. This is because employment has been used as a control variable for calibrating at least the HFS weights since 2017. The calibration group totals are taken from LFS data, with the distribution updated every year.

However, there are several factors with regards to the sample design and weighting process that may mean this year's estimates are subject to greater uncertainty. Firstly, the process of weighting - including the production of calibration totals – was undertaken at the annual frequency. Economic circumstances were very different at various points of the financial year and, in addition, achieved sample sizes were lower at the very start of the financial year (as shown in Figure 1).

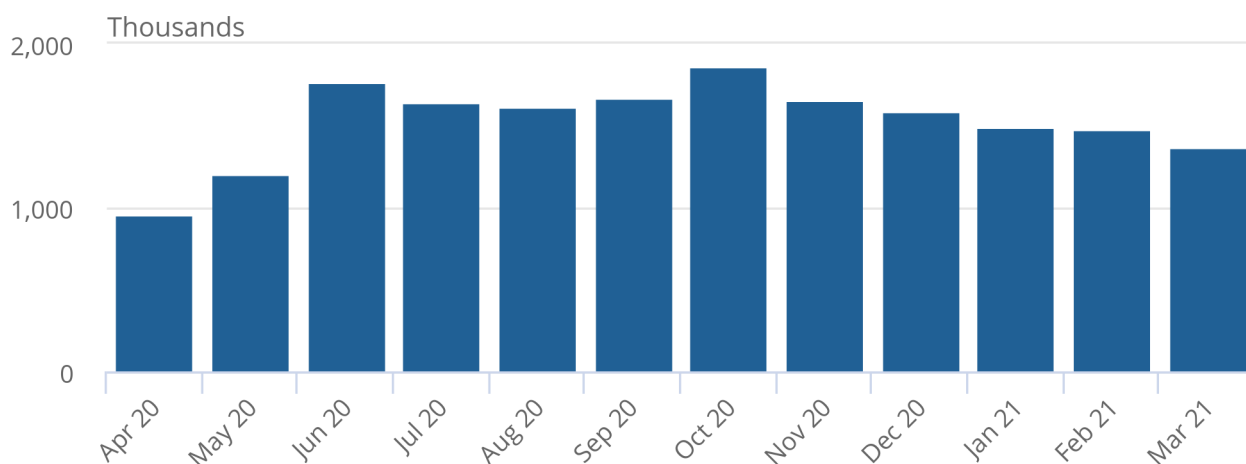
In addition, for the current weighting scheme, the employment distribution used for calibration is fixed across the whole annual sample. This means weighting has not been able to reflect changes in employment patterns within the year. Finally, sample were not stratified by some variables that may have been significant in influencing income change during the coronavirus pandemic (for example, the industry someone has worked in, which previous analysis has shown to exhibit strong variability in furlough rates).

Figure 1: Monthly achieved sample from the Household Finances Survey

Achieved sample size by month of collection, UK, FYE 2021

Figure 1: Monthly achieved sample from the Household Finances Survey

Achieved sample size by month of collection, UK, FYE 2021



Source: Office for National Statistics – Household Finances Survey

Notes:

1. Total response rates include fully cooperating responses, partial responses, and refusals.

4 . Classification of financial support schemes

In response to the coronavirus pandemic, a range of financial support measures were made available during both the financial year ending (FYE) 2020 and (FYE) 2021. For each scheme, there are a range of methodological challenges in accurately estimating their impact.

Coronavirus Job Retention Scheme

The full amount received from any claimant of the [Coronavirus Job Retention Scheme \(CJRS\)](#) scheme during the financial year will be included in wages and salaries. As a result of questionnaire constraints, it was not possible to accurately separate out wages and salaries accrued from working and the furlough scheme.

The treatment of CJRS as wages and salaries is [consistent with the National Accounts](#), which classified the CJRS as a subsidy on production to the employer. It is also consistent with the [Canberra Handbook on Household Income Statistics](#), which states: “Employee income may be received in cash (monetary) or in kind as goods and services...[and] includes: direct wages and salaries for time worked and work done”.

In future publications, we plan to make use of administrative data from the furlough scheme to give more accurate information on how wages and salaries were supported across the income distribution.

Self-employment income support scheme

[Self-Employment Income Support Scheme \(SEISS\)](#) payments during the financial year have not been included in derivation of self-employment income. The National Accounts’ recommendation is to record SEISS payments as a subsidy on production that is payable to those with mixed income and the self-employed. However, there are additional challenges posed by the lag in accounting records for self-employed respondents, as detailed in [Section 5](#).

Future analysis will allow aggregation of self-employment data across reporting years and administrative data to give a more accurate picture on how self-employment income has been impacted by the coronavirus pandemic.

Statutory Sick Pay

New questions were introduced about sickness absence and whether this related to coronavirus or another illness. The amount of statutory sick pay (SSP) received that is refundable by the government to the employer is subtracted from wages and salaries and counted as cash benefit income.

COVID-19 self-isolation support payments

When the [COVID-19 self-isolation support payments](#) of £500 were introduced, the HFS initiated questions to capture these. COVID-19 isolation payments are treated as cash benefit income.

Working-from-home tax relief

The HFS questionnaire asks if a respondent has received an extra allowance or claimed [tax relief for working from home](#). This amount is accrued within wages and salaries.

5 . Challenges of measuring self-employment income

From our annual statistics, median household disposable income for self-employed people appears more variable than for employed people even before the coronavirus (COVID-19) pandemic. Self-employment income can be more challenging to accurately capture through surveys than employment income, in part because of irregular hours or working on a project-by-project basis, which makes accounting for income across a particular period more complex.

While employed people will typically provide income information from a recent payslip supplied on a monthly or weekly basis, self-employed people may need to refer to verified financial accounts from previous financial years. In doing so, income data for self-employed people may be lagged. While this is an inherent limitation of HFS survey design, it would typically only cause significant challenges when interpreting data on a yearly basis in response to an acute economic shock such as the coronavirus pandemic.

Looking at self-employment income in more detail, within the survey data for the financial year ending (FYE) 2021, 30% of self-employed people reported for the FYE 2021, while an equal amount (30%) reported for the FYE 2020. Table 2 demonstrates how the level and change in self-employment income varies by the period that respondents reported for. Those reporting for the latest period had a median self-employment income of £14,075, which was 4.6% lower than the median value for those reporting for the previous financial year.

Table 2: Self-employment income by reporting period
Estimates of self-employment income in each year, and the change across years

| Reporting year | Median self-employment income (£) | Median annual change in self-employment income (£) | Median self-employment income growth (%) |
|----------------|-----------------------------------|--|--|
| Pre-FYE 2018 | 9,171 | | |
| FYE 2019 | 11,967 | 2,796 | 30.49 |
| FYE 2020 | 14,757 | 2,790 | 23.31 |
| FYE 2021 | 14,075 | -682 | -4.62 |

Source: Office for National Statistics - Household Finances Survey

Notes

1. Self-employment income provided at the individual level for those whose main source of income is from self-employment.
2. FYE 2021 represents the financial year ending 2021 (April to March), and similarly for all other years expressed in this format.
3. Pre-FYE 2018 represents all relevant financial years prior to the financial year ending 2018.

In constructing estimates of self-employment income for the financial year ending (FYE) 2021, a range of alternative methods were considered, including analysis of the longitudinal component of the Survey on Living Conditions (SLC) and the use of alternative proxy indicators such as the change in hours worked (which is available for all respondents for the reporting period FYE 2021). However, analysis of longitudinal self-employed income estimates for the subset of households reporting for the FYE 2021 did not reveal any strong correlation between the absolute change in self-employment income and the absolute change in hours worked.

Furthermore, there was no relationship between the reference period (FYE 2021) and the likelihood of reporting a subjective change in household income since the coronavirus pandemic as household perceived income has decreased regardless of the financial year.

Users should treat all estimates of self-employment income with a degree of caution as the estimates are subject to uncertainty. The Office for National Statistics (ONS) will monitor self-employment income returns throughout the FYE 2022, and the ONS intends to produce further analysis of these returns, including potentially a revised set of FYE 2021 estimates in the FYE 2022 income publication.

6 . Challenges in annual comparisons during the coronavirus (COVID-19) pandemic

Analysis of longitudinal records from the Survey on Living Conditions (SLC) shows that compositional changes to the income distribution pose a challenge for annual comparisons at the quintile and decile level before and during the coronavirus pandemic. There was a wide range of outcomes for households; some experienced large decreases in income while others experienced increases, and some households moved down the income distribution into lower quintiles, while other households moved up into higher quintiles. Table 3 shows the proportion of households that moved quintiles in the financial year ending (FYE) 2021. Approximately a quarter (24%) of households in quintile three moved down from higher quintiles, while over a third (37%) of households in quintile four had moved up from lower quintiles.

Table 3: There was significant movement of households across quintiles, with some moving up and others moving down
Proportion of households that either stayed within, or moved across, income quintiles between the FYE 2020 and FYE 2021

| Quintile | Moved down from a higher quintile | Stayed in the same quintile | Moved up from a lower quintile |
|----------|-----------------------------------|-----------------------------|--------------------------------|
| 1 | 42% | 58% | 0% |
| 2 | 32% | 45% | 23% |
| 3 | 24% | 44% | 32% |
| 4 | 15% | 48% | 37% |
| 5 | 0% | 65% | 35% |

Source: Office for National Statistics – Survey on Living Conditions

Notes

1. Respondents included were from the longitudinal component of the Survey on Living Conditions (SLC).

7 . Glossary

Disposable income

Disposable income is arguably the most widely used household income measure. Disposable income is the amount of money that households have available for spending and saving after direct taxes (such as Income Tax, National Insurance and Council Tax) have been accounted for. It includes earnings from employment, private pensions, and investments as well as cash benefits provided by the state.

Equivalisation

Comparisons across different types of individuals and households (such as retired and non-retired, or rich and poor) or over time is done after income has been equivalised. Equivalisation is the process of accounting for the fact that households with many members are likely to need a higher income to achieve the same standard of living as households with fewer members. Equivalisation considers the number of people living in the household and their ages, acknowledging that while a household with two people in it will need more money to sustain the same living standards as one with a single person, the two-person household is unlikely to need double the income.

This analysis uses the [modified Organisation for Economic Co-operation and Development \(OECD\) equivalisation scale \(PDF, 165KB\)](#).

Mean and median income

The mean measure of income divides the total income of individuals by the number of individuals. A limitation of using the mean is that it can be influenced by just a few individuals with very high incomes and therefore does not necessarily reflect the standard of living of the “typical” person. However, when considering changes in income and direct taxes by income decile or types of households, the mean allows for these changes to be analysed in an additive way.

Many researchers argue that growth in median household incomes provides a better measure of how people's well-being has changed over time. The median household income is the income of what would be the middle person if all individuals in the UK were sorted from poorest to richest. Median income provides a good indication of the standard of living of the “typical” individual in terms of income.

Knock to nudge

This is a survey contact intervention that was introduced by the Office for National Statistics (ONS) following the move to telephone surveys in response to the coronavirus (COVID-19) pandemic and national lockdown, with the aim of accounting for a potential decrease in response rate. The knock-to-nudge intervention was implemented for the Household Finances Survey (HFS) from October 2020. It involved interviewers visiting households to nudge those selected to participate in surveys conducted by the ONS while following stringent COVID-19 health and safety protocols. Full details on the knock-to-nudge intervention, and the impact on data collection, are due to be published in Spring 2022.

8 . Relevant Links

[Income estimates for small areas, England and Wales: financial year ending 2018](#)

Bulletin | Released 5 March 2020

Small area model-based income estimates covering local areas called Middle layer Super Output Areas (MSOAs) in England and Wales.

[Effects of taxes and benefits on UK household income: financial year ending 2020](#)

Bulletin | Released 28 May 2021

The redistribution effects on individuals and households of direct and indirect taxation and benefits received in cash or kind analysed by household type.

[Income and earnings statistics guide](#)

Methodology | Released 2 March 2022

Explains the relationship between income and earnings data and outlines the statistics produced by the Office for National Statistics, Department for Work and Pensions and HM Revenue and Customs.

[Employee earnings in the UK: 2021](#)

Bulletin | Released 26 October 2021

Measures of employee earnings, using data from the Annual Survey for Hours and Earnings (ASHE).

[Households below average income: for financial years ending 1995 to 2020](#)

Report | Released 25 March 2021

Statistics from the Department for Work and Pensions (DWP) on the number and percentage of people living in low-income households for the financial years ending 1995 to 2020.

[The effects of taxes and benefits on household income, technical report: financial year ending 2020](#)

Article | 8 June 2021

The redistribution effects on households of direct and indirect taxation and benefits received in cash or kind analysed by household type, and the changing levels of income inequality over time.