



HM Treasury

Impact of COVID-19 on working household incomes: distributional analysis as of May 2020

July 2020

Impact of COVID-19 on working
household incomes:
distributional analysis as of May 2020



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Chapter 1

Impact of COVID-19 on working household incomes

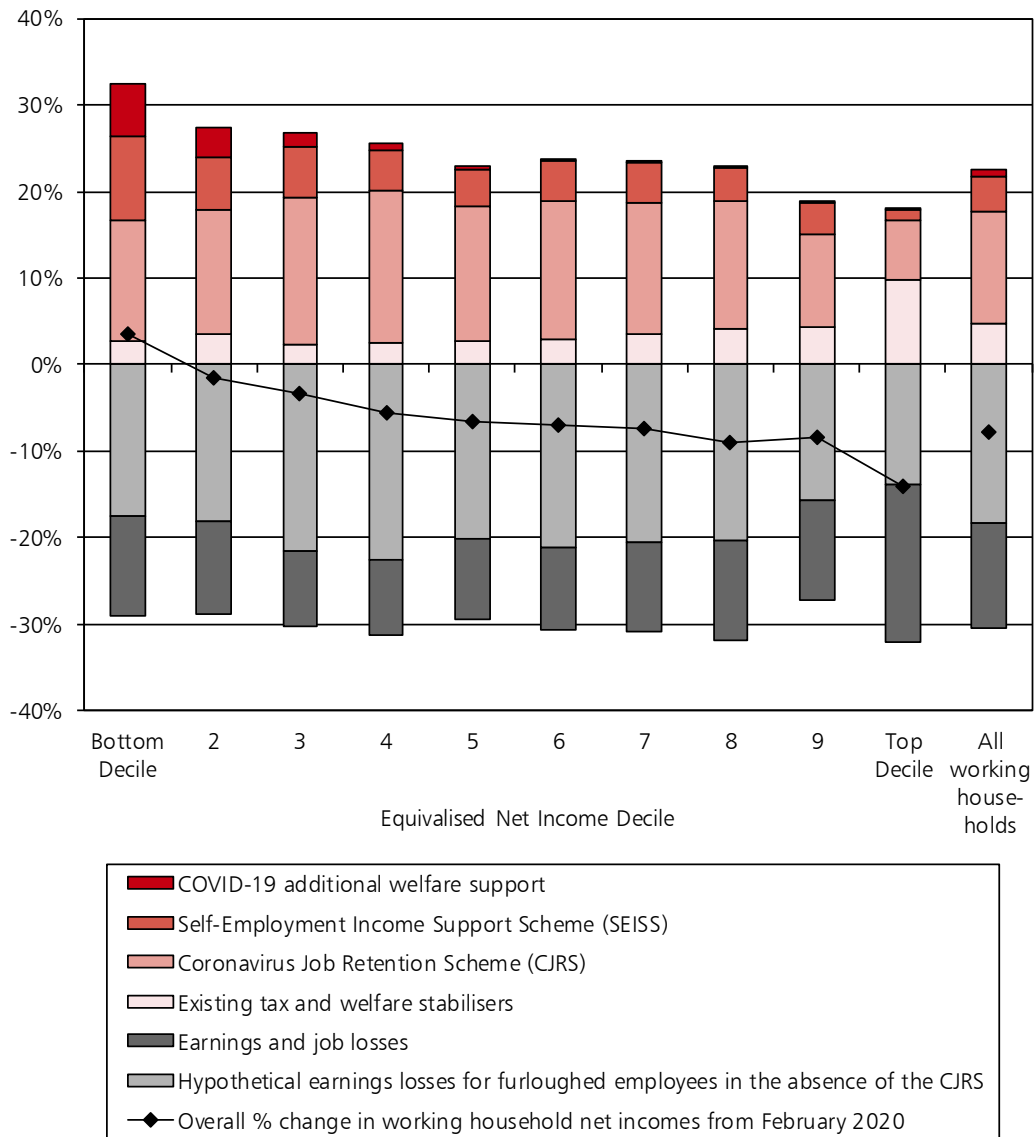
- 1.1 This document sets out the estimated distributional impacts of COVID-19 on working households' incomes, as of the end of May 2020, according to emerging household survey data. Specifically, it sets out the impact of government support against the impact of earnings and job losses, comparing incomes in May 2020 to what they were in February this year. As the economic impacts of the pandemic and the corresponding government support have predominantly affected the incomes of working households, we have shown the impacts across the income distribution of these households only.
- 1.2 This is an ad hoc publication, separate from the distributional analysis normally published alongside fiscal events, which we are presenting here in order to illustrate the full scale of the challenge faced by working households and where government support has helped mitigate these challenges. Only those government interventions implemented up to the end of May 2020, the latest date for which suitable data on household income changes is available, are captured in the analysis (and as such it does not estimate the distributional impact of the package of measures announced as part of the Plan for Jobs).
- 1.3 The analysis presented here shows the estimated short-run change in working households' net incomes between two points in time, as well as those government interventions that have a direct, quantifiable impact on households. It does not capture the potential long-run impacts of the pandemic on households, and does not make any assumptions about what household incomes might have looked like in the absence of the pandemic.
- 1.4 Charts 1.A and 1.B split out the estimated change in net household income for working households only, from February to May 2020, into employment and earnings losses, and additional government support. Chart 1.A shows these impacts as a proportion of net household income in February, while Chart 1.B is expressed in weekly cash terms.
- 1.5 The Coronavirus Job Retention Scheme (CJRS) provides employers with grants to help pay the wages of furloughed employees. The charts illustrate both the increase in earnings paid for through these grants, and the corresponding reduction in earnings paid directly by employers.
- 1.6 Note that the Self-Employment Income Support Scheme (SEISS) has been paid as a single grant from May, equivalent to 80% of quarterly trading profits, capped at £7,500. To present the SEISS in its wider context, and allow for a

reasonable comparison with the CJRS, the SEISS is treated in this analysis as a monthly payment, capped at £2,500. Further detail on the approach taken is set out in paragraph 1.17.

1.7 The charts show that government interventions since March have:

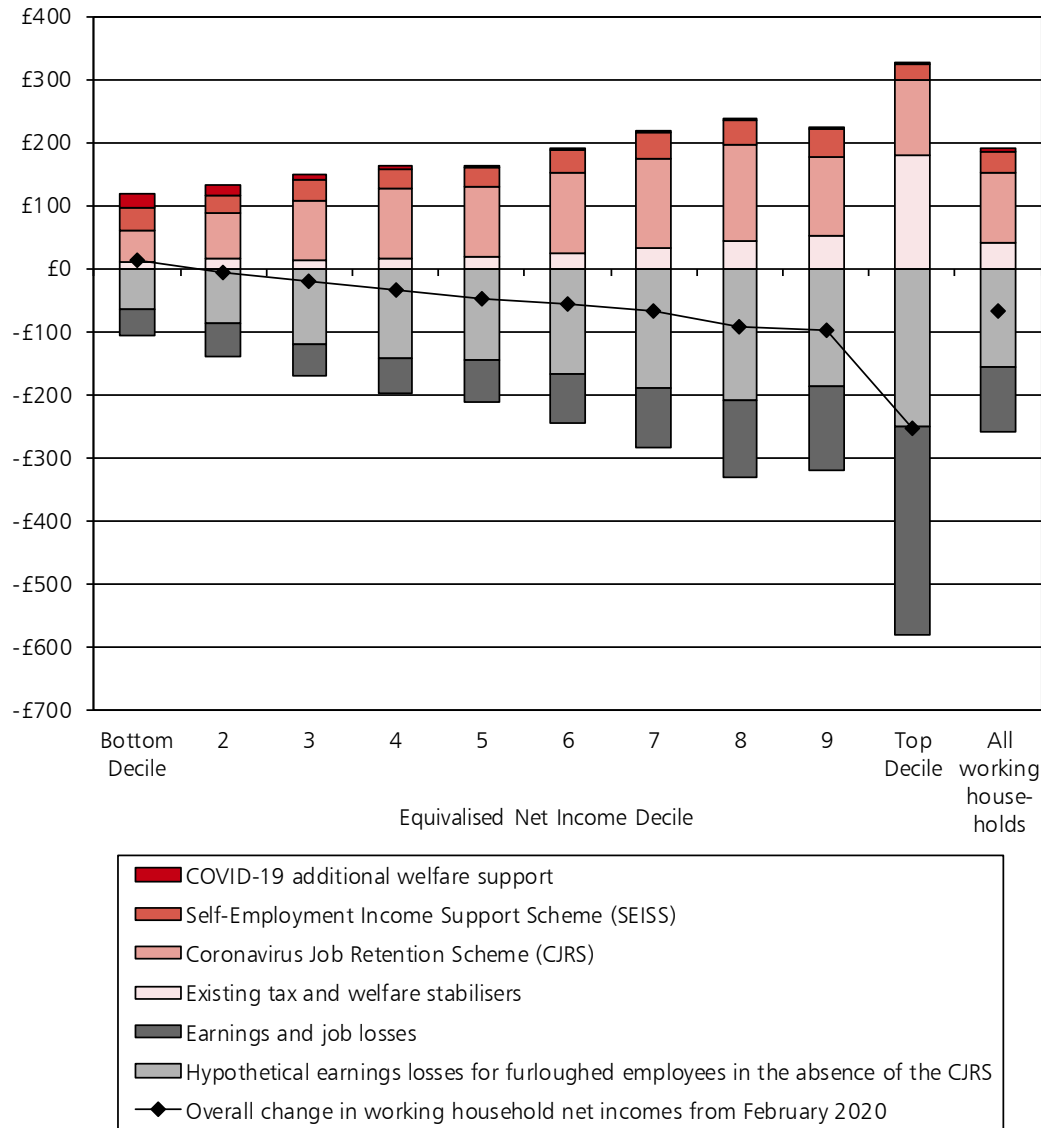
- supported the poorest working households the most (as a proportion of February income)
- been worth around a fifth of incomes for working households (on average)
- reduced the scale of losses for working households by up to two-thirds

Chart 1.A: Percentage change in household income, by working household net income decile, as of May 2020



Source: HM Treasury distributional analysis model

Chart 1.B: Change in household income, £ per week, by working household net income decile, as of May 2020



Source: HM Treasury distributional analysis model

Methodology

1.8 The ad hoc analysis presented here is based on HM Treasury modelling, using data from the COVID-19 survey modules conducted by the long-running UK Household Longitudinal Study (UKHLS) in April and May.¹ UKHLS is a broadly representative household survey of the same individuals in the UK each year (starting in 2009) and contains detailed information on individual and household characteristics. The COVID-19 modules are short web-based surveys, covering the impact of the pandemic on the welfare of UK individuals and families, varying across areas such as health and wellbeing, to employment and financial outcomes.

¹ <https://www.understandingsociety.ac.uk/2020/07/03/second-wave-of-covid-19-data-released>

- 1.9 The probability of individuals of different earnings levels losing their job, being furloughed, or seeing an earnings/profit drop is first calculated from the UKHLS data, comparing employment status (and average change in take-home pay) in May with February.²
- 1.10 Using these individual-level probabilities, we then simulate a similarly sized employment and earnings shock using HM Treasury’s distributional analysis model (the Intra-Governmental Tax and Benefit Microsimulation model (IGOTM)), accounting for the offsetting impact of higher benefit receipt and lower tax payments. Baseline earnings and employment levels are taken from the Office for National Statistics’ Living Costs and Food Survey, the dataset underlying the IGOTM model. We have also assumed the proportion of welfare claimants in February on Universal Credit and legacy benefits respectively is as set out in the Office for Budget Responsibility’s March 2020 Economic and Fiscal Outlook, alongside DWP estimates of total steady-state welfare claimants. New welfare claimants since February are assumed to have claimed Universal Credit.
- 1.11 We then model the impact of additional government support provided to mitigate these shocks, specifically:
- the Coronavirus Job Retention Scheme (CJRS)
 - the Self-Employment Income Support Scheme (SEISS)
 - temporary increase in the Universal Credit standard allowance by £20 a week
 - temporary increase in the basic element of Working Tax Credit by £20 a week
 - temporary suspension of the Minimum Income Floor in Universal Credit
 - increase in the Local Housing Allowance to the 30th percentile of market rents in 2020-21
- 1.12 The ‘Existing tax and welfare stabilisers’ bars in Charts 1.A and 1.B reflect the net impact of lower taxes and increased benefit entitlement from job and earnings losses, offset by higher taxes received from CJRS and SEISS payments (as these grants are subject to Income Tax and National Insurance).
- 1.13 Only those interventions that have a direct, quantifiable impact on household incomes have been included in the analysis. We have therefore excluded measures that have mainly been targeted at business (such as the Coronavirus Business Interruption Loan Scheme (CBILS)), as well as any additional public service spending. A few relatively smaller measures, such as the removal of the seven-day wait in Employment and Support Allowance (ESA), have also been excluded from the analysis.
- 1.14 Households are ranked by equivalised net income decile, as they were before the pandemic hit, and average gains and losses within each decile are

² Individuals are asked, in the UKHLS, about their employment status and earnings in January or February 2020, which is used as their ‘baseline’ economic status before the COVID-19 pandemic hit. We have referred to the baseline as ‘February’ throughout this document for simplicity.

calculated. Chart 1.A presents these average changes as a proportion of net income in February, while Chart 1.B illustrates the impacts in cash terms (per week).

1.15 Table 1.A, which shows median gross incomes (pre-tax private income including earnings, savings and investments, plus benefit income) for working households within each decile, can be used to approximate where working households are found in the income distribution shown in Charts 1.A and 1.B. This gives a less precise estimate of a household’s position in the income distribution than net income, but is conceptually easier to understand as many people think about their incomes or salaries in gross rather than net terms.

Table 1.A: Median gross income for working households, by working household income decile, for different household compositions (£ per year, 2020-21)³

	1 adult	1 adult and 1 child	2 adults	2 adults and 1 child	2 adults and 2 children
Top decile	80,200	-	111,200	150,000	179,500
Ninth decile	52,500	-	75,200	97,800	119,200
Eighth decile	43,400	-	61,500	77,000	97,500
Seventh decile	37,200	43,900	52,300	67,900	83,600
Sixth decile	32,600	42,200	45,500	57,700	71,200
Fifth decile	27,700	34,900	39,600	52,400	61,100
Fourth decile	23,900	29,600	34,300	43,700	52,000
Third decile	19,800	23,600	29,700	36,100	45,100
Second decile	16,800	21,200	23,800	30,100	35,000
Bottom decile	11,500	16,200	17,500	23,200	26,600

Source: HM Treasury distributional analysis model

1.16 For a more detailed overview of the HM Treasury distributional analysis model, and the underlying data and definitions used, please see Chapter 3 of ‘Impact on households: distributional analysis to accompany Budget 2020’ (HM Treasury, March 2020).⁴

Assumptions

1.17 The impact of the COVID-19 pandemic on household incomes is complex and evolving, and not captured comprehensively in any one dataset. Therefore, to illustrate the distributional impacts we have had to make several simplifying assumptions on the government interventions modelled. These assumptions do not represent an assessment about policy intent and may not fully capture the true impact of these schemes. Instead, they are designed to simplify the

³ Categories with insufficient underlying sample sizes have been left blank.

⁴ <https://www.gov.uk/government/publications/budget-2020-documents>

modelling to allow us to present as informative and complete a picture as possible (as of the end of May 2020):

- The CJRS pays 80% of employee earnings (up to a cap of £2,500), but many employers will have chosen to 'top up' earnings beyond this. We have not made any assumptions in this modelling on the extent to which this 'topping up' occurs, as we do not have robust enough data on which to base this.
- The analysis makes some simplifications in order to show the SEISS on a comparable basis with other schemes. Specifically, the chart presents SEISS grants as if they are made on a monthly basis (rather than the actual policy design, which is a single payment, equivalent to three months of trading profits). We have also applied a uniform rate of take-up to all self-employed individuals in our data (subject to meeting the eligibility requirements), based on official HM Revenue and Customs (HMRC) statistics as of the end of May.⁵

1.18 A small number of individuals in the underlying UKHLS data have reported net increases in earnings since February (either because earnings in their existing job have increased, or because they were previously out of work but are now in work). In order to simplify the modelling we have ignored this group, though their inclusion would not significantly affect the distributional picture presented in the charts above.

1.19 The underlying levels of unemployment, furloughed employees, and earnings losses in this analysis are based on UKHLS COVID-19 survey modules, which took place in April and May. UKHLS is designed (via its weighting system) to be broadly representative of the UK household population. Nonetheless, it would be possible to produce a slightly different set of results to what is presented here by drawing on alternative data sources, or by making an alternative set of assumptions. Whilst the estimated overall rates of income change will be sensitive to these issues, the broad distributional picture outlined here is consistent with several similar studies.⁶

⁵ <https://www.gov.uk/government/statistics/self-employment-income-support-scheme-statistics-june-2020>

⁶ See, for example, Brewer M. and Tasseva I. (2020) 'Did the UK policy response to Covid-19 protect household incomes?', and Institute for Fiscal Studies (2020) 'The effects of coronavirus on household finances and financial distress'

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