WPI ECONOMICS

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# The costs of hunger and hardship – costs estimation and policy impacts

A WPI Economics analysis, on behalf of Trussell


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# About us

We are an economics, data insights, policy and impact consultancy, but one that is a little different to many others. We draw on backgrounds in government and the private and charitable sectors to produce work designed to make a difference. We do not do research for research's sake. We are committed to ensuring that everything we do has an impact - which is part of the reason why we recently became a verified B Corporation.

# About this report

This report summarises the methodological approach that we have developed and operationalised to support Trussell's work to understand the full costs of hunger and hardship in the UK.

# Introduction

The experience of facing hunger and hardship (H&H) is creating huge costs every year that have ramifications for each and every one of us, holding back our economic potential and adding significant costs to the Exchequer.[1]

First and foremost, the costs are falling on those individuals and families that experience H&H. People living in H&H experience a range of issues that detract from their quality of life: shame from the stigma of low income; mental and physical strains; higher prevalence of crime; poorer health; and overall levels of wellbeing that are below others in society. That makes investment to tackle H&H a fundamentally important part of the Government's and society's policy agenda.

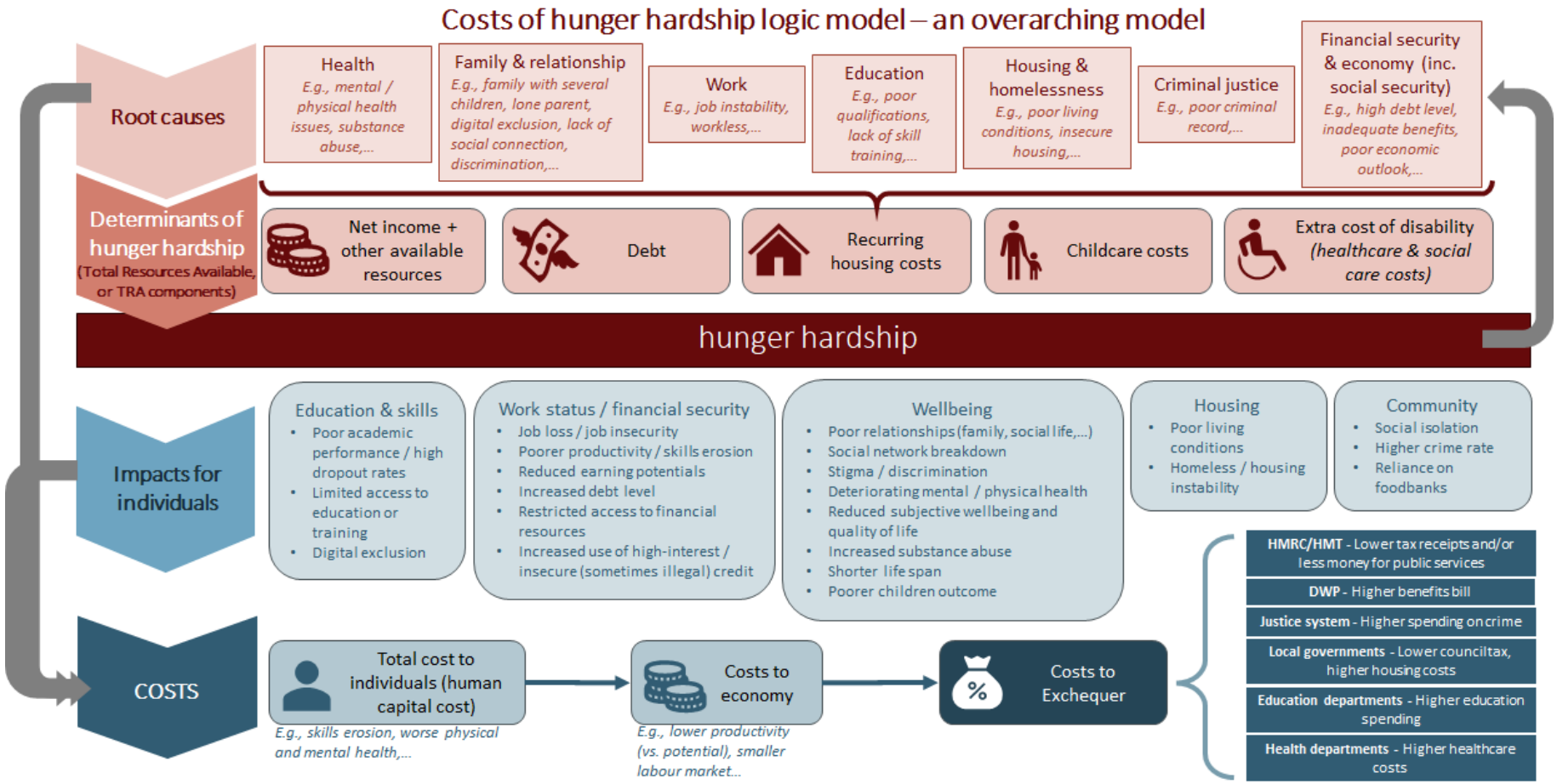
But the costs do not stop at worse lives and lower wellbeing. H&H also comes with a range of costs that create an even greater imperative to act to reduce it. These are felt by society, through labour market and wider economic impacts and, by implication, by the Exchequer, where the impacts of H&H increase spending, reduce tax revenues and divert spending away from areas where it might be more effectively spent in the absence of H&H. This means that where the Government invests to improve lives and wellbeing through tackling H&H, the net costs to Government are lower than they would otherwise be, because these broader costs will be reduced.

To understand the scale and impact of these costs, our work has developed a set of detailed logic models that show how these costs manifest themselves and how they impact on people in H&H, society, the economy and Exchequer. Using these logic models as a guide, where it is possible to robustly quantify the costs of H&H, we provide estimates – spanning wellbeing costs, costs to the economy, costs to the Exchequer from a combination of higher public service spending and knock-on costs in terms of lower tax take and higher social security spending. Finally, we look at how specific policies to tackle H&H could help to reduce these quantified costs.

Informed by our evidence review of how the costs of H&H materialise, we have developed an overarching logic model, as follows:

[1] A family is considered to face H&H if they are more than 25% below the Social Metrics Commission poverty line. The poverty line is defined by the total resources available to the family. This considers the money families have coming in, their housing costs, savings and other inescapable costs such as childcare or debt repayments. By taking all of these into account, it reflects the financial resources people actually have to cover daily living costs.

***Figure 1: Overarching logic model of the costs of hunger and hardship***



# Estimating the costs of hunger and hardship

## Introduction

Informed by the logic model, and our assessment of the costs that can be robustly quantified, our analysis focusses on three separate areas of costs. In each area we estimate the costs associated with people experiencing H&H over and above costs experienced by people who are not in poverty.[2] By doing so we are able to assess how much lower the costs would be if policy interventions and broader support were available to help improve the outcomes of those in H&H so that they were equivalent to those not experiencing poverty at all. The costs considered are:

1. Costs to individuals, in terms of poorer living standards and wellbeing (manifested through a range of issues including poor health, poor quality housing, experiences of crime, as well as lower incomes on their own).
2. The economic costs experienced today, from living in a country where H&H is a consistent challenge facing families over many years. Here, the experience of current and past H&H creates scarring effects that reduce employment and earnings below where they would otherwise be.
3. The costs to the Exchequer through:
    - A range of public service costs incurred from H&H today (driven by worse outcomes for individuals and communities). These are driven by the additional pressures placed on people facing hunger and hardship which causes an increased need for public services
    - The knock-on impacts that the economic costs have on the Exchequer through higher government social security spending and lower tax take.

We first cover – in the section below - our estimation of the costs to individuals. The section after then covers economic and Exchequer costs together.

Throughout the report, cost estimates are based on the number of people in H&H that our previous work with Trussell produced - these figures are detailed in the interim report published by Trussell in 2024.[3] We determined that 9.3 million people including 5.7m working-age adults, 3m children and 0.6m pension-age adults were living in H&H in 2022/23. That report used the latest data at the time of drafting from the Family Resources Survey (FRS) and Households Below Average Income (HBAI) to

[2] Note that we also considered comparing outcomes of the H&H group to the group in poverty, but not H&H (i.e. shallower forms of poverty). In practice, this was limited by data availability and sample size, as well as the fact that analysing outcomes by depth of poverty within survey data like FRS / HBAI can sometimes produce unintuitive results due to data challenges – particularly at very deep levels of measured poverty, where there are known issues with the reporting of incomes and data quality. As such, we felt a more robust approach was to proceed with a comparison to the non-poverty group.

[3] Weekes, T., Rabindrakumar, S., Padgett, S., & Ball, E., (2024). *The Cost of Hunger and Hardship: Interim report.* Trussell. Available here: https://www.trussell.org.uk/news-and-research/publications/report/the-cost-of-hunger-and-hardship. Accessed 09/03/2025.

create headline estimates of H&H for 2022/23. Projections were then made for each of the years to 2026/27.

The analysis within this report follows that same structure, with headline estimates made for the 2022/23 year, year five policy impacts based on results from 2026/27 and cumulative 5-year estimates summing results across each of the five years estimated. For consistency, all results are provided in 2023/24 prices.

# Costs to individuals

## Introduction

There are a wide range of costs experienced by individuals facing H&H, many of which are shown in the logic model above – including negative impacts on health (physical and mental), crime, employment and earnings. Many of these direct costs flow on to create costs to the economy and Exchequer, such as higher public service costs, lower whole-economy employment and earnings, higher social security spending and lower tax take (all of which are covered in the next section). These indirect, or 'follow-on' costs, are areas which are often central focusses of economic or financial analyses – however there is a growing appreciation in economics and public policy of the importance of also considering the direct costs to individuals, for example, impacts on their life satisfaction/wellbeing. It is particularly important to consider these impacts when assessing the costs of H&H, given the many acute and debilitating ways in which H&H affects people's everyday lives.

Measures of life satisfaction/wellbeing can capture a broad range of specific ways (health, financial etc.) in which H&H impacts on people's lives. In estimating costs of H&H to individuals we therefore take a 'top down' approach of assessing the extent to which overall measures of life satisfaction differ between those in H&H and those not. Given the possibility that these measures of life satisfaction are driven by specific underlying factors, such as poorer health and lower incomes, we judge this 'top down' approach to be more prudent given the potential for double counting that could come from a 'bottom up' approach where impacts on life satisfaction from specific causes are added together.

## Wellbeing cost estimate

It is well known, that people experiencing H&H report lower levels of wellbeing than those not in H&H. Our analysis for this report shows, that when people enter H&H, their wellbeing is negatively affected in the future as well.

The analysis uses Understanding Society[4] data to capture the extent to which entry into H&H in one year, has a lasting impact (a scar) on someone's subjective wellbeing in future years (after controlling for other factors). The methodology mirrors the method used for estimating employment- and wage scars. That approach is detailed later in this report.

Based on this approach, we estimate that, compared to those who do not enter H&H, the average **life satisfaction** for people who have entered H&H in one year, is on average around 0.3 points lower on a 1-10 scale, over the next five years. The effects are also seen to persist at a slightly lower level over a ten-year period.

[4] WPI analysis of Understanding Society uses Wave 12 (2022) of the survey and follows the technical definition of facing hunger and hardship. Where otherwise relevant, WPI analysis of the Family Resources Survey uses the 2022/23 version of the survey and follows the technical definition of facing hunger and hardship.

To understand the financial cost of this, we use the approach recommended in HM Treasury's Green Book to translate these impacts on subjective wellbeing into financial numbers, using valuations based on what people would be willing to pay to increase their wellbeing. This suggests that a one point increase in subjective wellbeing score is associated with a financial value of £15,237 in 2023/24 prices. Applying this to our estimates suggests that **the total yearly adult wellbeing costs of entry into H&H amount to some £73.3bn** in 2023/24 prices**.**

Changes in children's subjective wellbeing after entering H&H are excluded from this analysis. While subjective wellbeing is a very well-established measure for adults, empirical evidence suggests much less confidence in it for children aged 12 and under. There are uncertainties regarding how well children understand the research questions, distinguish between different values on a response scale, form opinions about their perceived wellbeing, and communicate their response.[5] Moreover, monetisation of subjective wellbeing is mainly derived from the willingness to pay method. This approach is less relevant to young children's perspectives or experiences as they are generally considered to lack the cognitive abilities to formulate their own preferences.[6]

Whilst we have not included children in our analysis, it is clear that H&H will have an impact on their life satisfaction/wellbeing. As such, estimates below represent a significant underestimate of the total wellbeing costs of H&H. Future analysis would benefit from developing a methodology for capturing the additional costs associated with children.

***Table 1: Cost of H&H – subjective wellbeing***

| Subjective wellbeing | Unit cost estimate | Assumed average impact of entry into H&H on life satisfaction score | | | Cost of H&H (in 2023/24 prices) |
|---|---|---|---|---|---|
| | | Year 1 – Year 5 | Year 6 – year 10 | After year 10 | |
| Life satisfaction | £15,237 | -0.3 | -0.2 | 0 | £73.3 bn |

Sources: Understanding Society,[7] HMT Green Book, WPI Economics
Note that, while we expect impacts to persist after year 10, we do not have data to substantiate this, so we have taken the cautious approach and assumed that impacts are 0 after year 10.

[5] Tomyn AJ et al, 2016, The Validity of Subjective Wellbeing Measurement for Children: Evidence Using the Personal Wellbeing Index—School Children, https://www.researchgate.net/publication/308740923_The_Validity_of_Subjective_Wellbeing_Measurement_for_Children_Evidence_Using_the_Personal_Wellbeing_Index-School_Children

[6] Valentino Dardanoni, Carla Guerriero, 2021, Young people' s willingness to pay for environmental protection, Ecological Economics, Volume 179

[7] University of Essex, Institute for Social and Economic Research. (2023). *Understanding Society: Waves 1-13, 2009-2022 and Harmonised BHPS: Waves 1-18, 1991-2009*. [data collection]. *18th Edition.* UK Data Service. SN: 6614, DOI: http://doi.org/10.5255/UKDA-SN-6614-19

We have broken down this cost to individuals geographically, according to the populations in H&H in each of the three devolved nations and English (NUTS1) regions.

***Table 2: Current cost of H&H by Region[8]***

| | Cost of H&H – subject wellbeing (**in 2023/24 prices**) |
|---|---|
| **North East** | £2.8bn |
| **North West** | £9.9bn |
| **Yorks and the Humber** | £6.5bn |
| **East Midlands** | £5.1bn |
| **West Midlands** | £7.4bn |
| **East of England** | £4.8bn |
| **London** | £12.5bn |
| **South East** | £8.5bn |
| **South West** | £4.5bn |
| **Wales** | £3.7bn |
| **Scotland** | £5.7bn |
| **Northern Ireland** | £1.9bn |
| **United Kingdom (UK)** | **£73.3bn** |

Source: WPI Economics

[8] All current cost estimates relate to 2022/23, as this is the most recent year for which consistent data is available.

## Life expectancy

To assess the impact of poverty on life expectancy, we compared the life expectancy of those in the bottom 10% (the most deprived) of the Index of Multiple Deprivation (IMD) as a proxy for H&H – to the life expectancy of those in the median group of IMD as a proxy for the non-poverty group. Although IMD is not a direct measure of H&H, it was used in the analysis due to data availability issues. We used age-specific life expectancy data and applied population weighting to calculate weighted life expectancies for both the H&H and non-poverty group. Based on these proxies, our analysis finds that the average **healthy life expectancy** for people in H&H is 8.6 and 9.4 years less than the those not in H&H, for men and women respectively.[9]

***Table 3: Differences in life expectancy***

| | Average difference in life expectancy between H&H and non-poverty group | |
|---|---|---|
| | **Men** | **Women** |
| **Healthy life expectancy (HLE)** | 8.6 years less than non-poverty | 9.4 years less than non-poverty |

Sources: ONS: Health state life expectancies[10], HMT Green Book, WPI Economics

We have not translated these differences into equivalent financial numbers (although Green Book methodology does allow for this). This is out of concern that in doing so we would introduce double counting with the life satisfaction costs, reflecting the possibility that individuals report lower life satisfaction as a result of the poorer health that reduces their life expectancy.

[9] This difference is proxied by the Index of Multiple Deprivation (IMD), using Office for National Statistics (ONS) life expectancy data from between 2018 and 2020.

[10] ONS, 2022, Health state life expectancies, UK: 2018 to 2020, https://www.gov.uk/government/statistics/health-state-life-expectancies-uk-2018-to-2020; ONS, 2024, Estimates of the population for the UK, England, Wales, Scotland, and Northern Ireland, https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

# Costs to the economy and public finances

## Introduction

The impact of facing hunger and hardship isn't just felt by individuals, it also flows on to create costs to the economy and Exchequer, such as through higher public service costs, lower whole-economy employment and earnings, higher social security spending and lower tax take. Our estimates of these economic and fiscal costs of H&H are shown below, for the UK as a whole and split by devolved nation. For public service costs, we cover five main areas:

- Education;
- Healthcare;
- Homelessness;
- Rough sleeping; and
- Children's social care.

These areas were chosen based on the summary logic model outlined above, more detailed logic models that underpinned it, existing literature and the extent to which estimates could be credibly calculated. Another central consideration in our choices over the areas to quantify was the extent to which we could have confidence that we were not double-counting impacts.

Our logic models and the subsequent prioritisation of areas to cost were also driven by extensive qualitative research. This included close working with both Trussell and Humankind Research, who conducted qualitative research with people with direct experience of H&H to understand their perspectives of the impacts and costs that H&H presents. This qualitative research was vital for us to both understand the full scope of the costs driven by H&H as well as the linkages between them, and the areas that are most likely to have the biggest impacts.

Key areas that we have chosen not to cost include:

- **Areas that interact with wellbeing:** This category includes issues such as crime, feelings of shame and the personal costs of issues like drug misuse. There is significant evidence that people in poverty and H&H, and those living within the most deprived areas disproportionately experience these issues.[11] However, the impact of experiencing these issues, if estimated, would likely overlap – and risk some double counting – with the costs associated with lower wellbeing as a result of H&H, which are included in our analysis.
- **Financial issues**: There are existing studies which consider the approximate annualised financing cost across unsecured lending to low-income households.[12] However, we did not

[11] For example see: Trust for London, 2024, Crime and income deprivation, https://trustforlondon.org.uk/data/crime-and-income-deprivation/#:~:text=Overall%2C%2040%25%20more%20crimes%20were,the%20least%20income%2Ddeprived%2010%25;

[12] JRF, 2023, The cost of debt for low-income households in the cost of living crisis, https://www.jrf.org.uk/cost-of-living/the-cost-of-debt-for-low-income-households-in-the-cost-of-living-crisis

consider existing data and the evidence base to be robust enough to quantify the use of illegal lending and associated costs due to H&H.

- **Family instability**: there is some evidence that adults who struggle to pay bills and often end up in arrears are significantly more likely to experience family breakdown than those who can pay their bills and save.[13] However, given this evidence only examined correlation between the factors, without controlling for other variables, and the potential for overlap with the wellbeing costs included, we did not consider it a strong enough base for inclusion in the quantified analysis.
- **Productivity**: There are a number of empirical studies examining the relationship between exposure to poverty and labour productivity, some of which focus on the psychological effects. These mechanisms include the impact of poverty on individuals' risk and time preferences, attention, motivations and aspirations.[14] Whilst we have not attempted to directly quantify this impact, we have captured it indirectly through estimates of the wage scarring impacts of H&H covered in the economy section below.
- **Long-term earnings / employment impacts:** We have not directly included estimates of the impact of H&H on future employability for children currently growing up facing H&H, and refer the reader to other current ongoing work focusing on this area.[15]

Current costs are based on estimates of the number of people in H&H in 2022/23 (the most recently available data on H&H in the UK). The projected 5-year costs are calculated by projecting the annual cost forwards from 2022-23 to 2026-27 according to the projected growth in numbers of people in H&H over this period, calculated using the IPPR Tax-Benefit Model and data from the FRS and HBAI. All costs are given in 2023/24 prices for consistency.

Based on this approach, table 4 provides headline figures for across the UK and the following tables provide a breakdown for each UK nation. The devolved nation split has been determined according to the people in H&H located within each nation (rather than these costs being attributable to devolved governments). Further detail is provided as appropriate in each section of the report, but the unit costs we have incorporated in the analysis typically relate to research conducted in England, in the first instance. Where appropriate, for example in the education costings, policy differences in the devolved nations have been given due consideration.

The methodology for the public service, economy and wider fiscal costs are set out below the tables.

[13] The Centre for Social Justice, 2019, WHY FAMILY MATTERS - A comprehensive analysis of the consequences of family breakdown, https://www.centreforsocialjustice.org.uk/wp-content/uploads/2019/04/CSJJ6900-Family-Report-190405-WEB.pdf

[14] Dalton PS, Gonzalez Jimenez VH, Noussair CN, 2017, Exposure to Poverty and Productivity, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5268424/#:~:text=The%20state%20of%20poverty%20influences,which%20in%20turn%20affect%20productivity.

[15] Child Poverty Action Group, 2023, The cost of a child in poverty in 2023, https://cpag.org.uk/news/cost-child-poverty-2023

***Table 4: Costs of H&H (UK)***

| Cost area | | Current annual cost (2022/23) | Cost in year 2 (2023/24) | Cost in year 3 (2024/25) | Cost in year 4 (2025/26) | Cost in year 5 (2026/27) | Cumulative projected 5-year cost |
|---|---|---|---|---|---|---|---|
| **Public service costs** | | **£13.7 billion** | **£13.6 billion** | **£14.3 billion** | **£14.0 billion** | **£14.3 billion** | **£70.0 billion** |
| *of which:* | *Education* | *£1.5 billion* | *£1.5 billion* | *£1.6 billion* | *£1.5 billion* | *£1.6 billion* | *£7.7 billion* |
| | *Healthcare* | *£6.3 billion* | *£6.3 billion* | *£6.6 billion* | *£6.4 billion* | *£6.6 billion* | *£32.2 billion* |
| | *Homelessness* | *£3.0 billion* | *£3.0 billion* | *£3.1 billion* | *£3.1 billion* | *£3.1 billion* | *£15.3 billion* |
| | *Rough sleeping* | *£0.1 billion* | *£0.1 billion* | *£0.1 billion* | *£0.1 billion* | *£0.1 billion* | *£0.5 billion* |
| | *Children's social care* | *£2.9 billion* | *£2.9 billion* | *£3.0 billion* | *£3.0 billion* | *£3.0 billion* | *£14.8 billion* |
| **Economy costs** | | **£38.2 billion** | **£38.0 billion** | **£40.0 billion** | **£38.9 billion** | **£40.0 billion** | **£195.1 billion** |
| *of which:* | *Reduced employment* | *£26.9 billion* | *£26.8 billion* | *£28.2 billion* | *£27.4 billion* | *£28.1 billion* | *£137.4 billion* |
| | *Lower productivity* | *£11.3 billion* | *£11.2 billion* | *£11.8 billion* | *£11.5 billion* | *£11.9 billion* | *£57.7 billion* |
| **Fiscal costs** | | **£23.7 billion** | **£23.6 billion** | **£24.8 billion** | **£24.2 billion** | **£24.8 billion** | **£121.0 billion** |
| *of which:* | *Lower tax revenue* | *£18.4 billion* | *£18.3 billion* | *£19.3 billion* | *£18.8 billion* | *£19.2 billion* | *£94.0 billion* |
| | *Higher social security spending* | *£5.3 billion* | *£5.3 billion* | *£5.5 billion* | *£5.4 billion* | *£5.6 billion* | *£27.1 billion* |
| **TOTAL** | | **£75.6 billion** | **£75.2 billion** | **£79.1 billion** | **£77.1 billion** | **£79.1 billion** | **£386.1 billion** |

Source: WPI Economics

***Table 5: Annual costs of H&H (England) in 2022/23***

| Cost area | | Cost |
|---|---|---|
| **Public service costs** | | **£11.9 billion** |
| *of which:* | *Education* | *£1.4 billion* |
| | *Healthcare* | *£5.4 billion* |
| | *Homelessness* | *£2.6 billion* |
| | *Rough sleeping* | *£0.1 billion* |
| | *Children's social care* | *£2.5 billion* |
| **Economy costs** | | **£32.4 billion** |
| *of which:* | *Reduced employment* | *£22.8 billion* |
| | *Lower productivity* | *£9.6 billion* |
| **Fiscal costs** | | **£20.1 billion** |
| *of which:* | *Lower tax revenue* | *£15.6 billion* |
| | *Higher social security spending* | *£4.5 billion* |
| **TOTAL** | | **£64.4 billion** |

Source: WPI Economics

***Table 6: Annual costs of H&H (Scotland) in 2022/23***

| Cost area | | Cost |
|---|---|---|
| **Public service costs** | | **£860 million** |
| *of which:* | *Education* | *£20 million* |
| | *Healthcare* | *£450 million* |
| | *Homelessness* | *£210 million* |
| | *Rough sleeping* | *£5 million* |
| | *Children's social care* | *£170 million* |
| **Economy costs** | | **£2,920 million** |
| *of which:* | *Reduced employment* | *£2,055 million* |
| | *Lower productivity* | *£860 million* |
| **Fiscal costs** | | **£1,810 million** |
| *of which:* | *Lower tax revenue* | *£1,405 million* |
| | *Higher social security spending* | *£405 million* |
| **TOTAL** | | **£5,585 million** |

Source: WPI Economics

***Table 7: Annual costs of H&H (Wales) in 2022/23***

| Cost area | | Cost |
|---|---|---|
| **Public service costs** | | **£560 million** |
| *of which:* | *Education* | *£20 million* |
| | *Healthcare* | *£290 million* |
| | *Homelessness* | *£140 million* |
| | *Rough sleeping* | *£5 million* |
| | *Children's social care* | *£100 million* |
| **Economy costs** | | **£1,890 million** |
| *of which:* | *Reduced employment* | *£1,330 million* |
| | *Lower productivity* | *£560 million* |
| **Fiscal costs** | | **£1,170 million** |
| *of which:* | *Lower tax revenue* | *£910 million* |
| | *Higher social security spending* | *£260 million* |
| **TOTAL** | | **£3,630 million** |

Source: WPI Economics

***Table 8: Annual costs of H&H (Northern Ireland) in 2022/23***

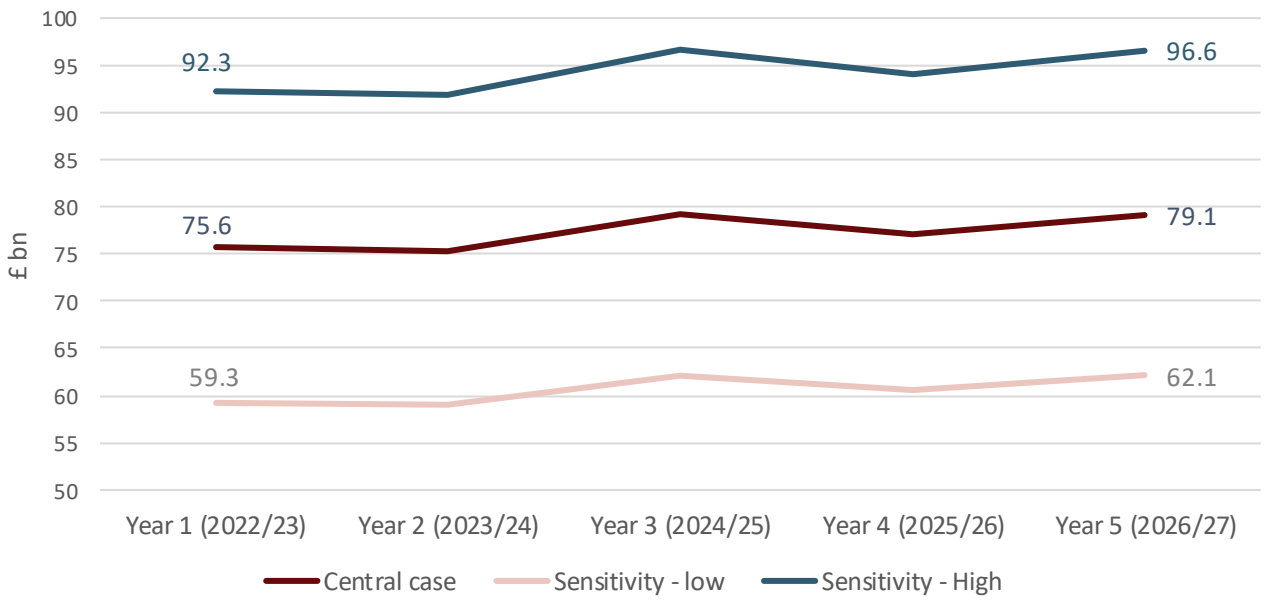
| Cost area | | Cost |
|---|---|---|
| **Public service costs** | | **£360 million** |
| *of which:* | *Education* | *£50 million* |
| | *Healthcare* | *£160 million* |
| | *Homelessness* | *£80 million* |
| | *Rough sleeping* | *£0 million* |
| | *Children's social care* | *£70 million* |
| **Economy costs** | | **£995 million** |
| *of which:* | *Reduced employment* | *£700 million* |
| | *Lower productivity* | *£295 million* |
| **Fiscal costs** | | **£615 million** |
| *of which:* | *Lower tax revenue* | *£480 million* |
| | *Higher social security spending* | *£140 million* |
| **TOTAL** | | **£1,975 million** |

Source: WPI Economics

## Sensitivity analysis

To produce robust estimates of the cost of H&H, we have included high and low cases. For public services, costs are formulated based on: (1) unit costs, where costs are adjusted +/- 10% to reflect uncertainty in service costs and (2) propensity adjustments, where the gap between H&H and non-poverty propensities is varied by +/- 20% to take into account of uncertainties. High and low sensitivity cases for economy and Exchequer (fiscal / benefit) costs are calculated based on a +/- 20% variation in the relevant scarring levels estimated. Our analysis shows that the inflation-adjusted annual costs associated with H&H ranges from £59.3 bn to £92.3 bn in year 1 (2022/23), and from £62.1 bn to £96.6 bn in year 5 (2026/27).

***Graph 1: Projected annual costs of H&H in the UK (inflation-adjusted)***



# Public services costs

## Introduction

The experience of hunger and hardship with often severe and pervasive impacts on individuals, means they need to turn to public services more frequently for support. This leads to higher public service costs. These public service costs span a range of areas, including education, health and social care, homelessness and rough sleeping. In these areas we apply a broadly consistent method to calculate the costs of H&H. First, we calculate the unit cost (cost per individual use) for the public service. We then determine the propensity with which (likelihood that) a person in H&H, a person in the at risk group[16], and a person not in poverty would generate the cost (use the public service). We combine this information[17] to calculate the total cost of H&H across the population, and break these costs down by the regions and nations of the UK. In the following sub-sections we step through each area of public service cost that we have quantified.

## Education

### *Summary*

Our analysis finds that H&H is associated with an annual education-related public service cost of around £1.5 billion to the Exchequer via additional costs to schools and local government spending. This figure is driven by a number of factors – in particular, the increased propensities of those in H&H to: take up free school meals (FSM), have special educational needs and disabilities (SEND), and have poorer records of academic attendance. We found, for example, that English secondary school pupils in H&H are almost three times more likely to take up FSMs than those not in poverty. Our figures are primarily derived from an analysis of the Family Resources Survey (FRS), which provides a large array of UK-wide information relating to children and education; of particular importance to our analyses is the FRS's information on the distribution of FSM take-up, through which we were able to track the relationship between H&H and a variety of education-related outcomes.

***Table 9: UK Nations and English regions with associated Total Annual Cost of H&H - Education***

| Nation | Total Annual Cost of H&H |
|---|---|
| North East | £70m |
| North West | £230m |
| Yorks and the Humber | £120m |
| East Midlands | £110m |
| West Midlands | £190m |
| East of England | £110m |
| London | £290m |
| South East | £190m |

[16] The at risk group is made up of those in poverty, as defined by the Social Metrics Commission, but not in H&H (see definition above).

[17] We calculate the marginal unit cost of H&H for each cost area by finding the difference between these propensities and multiplying that by the unit cost.

| | |
|---|---|
| South West | £70m |
| Scotland | £20m |
| Wales | £24m |
| Northern Ireland | £47m |
| *Total* | **£1.5bn** |

Source: WPI Economics
Note: Because of the inability to accurately estimate some of the education-related impacts (highlighted below), these figures will be a significant underestimate of the true costs for devolved nations.

## *Breakdown of education-related costs by UK nation*

***Table 10: Education-related costs of H&H: England***

| Cost Type | Average Unit Cost | Difference in Propensities between H&H and non-poverty group (in percentage points) | Weighted Marginal Annual Unit Cost of H&H | Total Annual Cost of H&H |
|---|---|---|---|---|
| FSM (primary school) | £1,310 | 8.0 pp | £178.11 | £470m |
| FSM (secondary school) | £1,690 | 18.3 pp | | |
| Pupil Premium (PP) (primary school) | £1,480 | 8.0 pp | £139.09 | £370m |
| PP (secondary school) | £1,050 | 18.3 pp | | |
| PP (special school) | £1,265 | 6.3 pp | | |
| SEND | £7,710 | 2.0 pp | £151.07 | £380m |
| Persistent Truancy | £2,365 | 2.7 pp | £64.56 | £160m |
| *Total Annual Cost of H&H* | | | | **£1.4bn** |

Sources: WPI Economics. Greater Manchester Combined Authority (GMCA) Unit Cost Database, FRS, Institute for Fiscal Studies (IFS). Numbers have been rounded

In England:

- Primary school children in families facing hunger and hardship were 8 percentage points more likely to be in receipt of FSMs (and thus be eligible for Pupil Premium) than primary school children in families who were not in poverty
- Secondary school children in families facing hunger and hardship were 18.3 percentage points more likely to be in receipt of FSMs (and thus be eligible for Pupil Premium) than secondary school children in families not in poverty
- Children in families facing hunger and hardship were 2 percentage points more likely to have SEND than children in families who were not in poverty.
- Children in families facing hunger and hardship were 2.7 percentage points more likely to persistently not attend school (persistent truancy) than children in families who were not in poverty.

***Table 11: Education-related costs of H&H: Scotland***

| Cost Type | Average Unit Cost | Difference in Propensities between H&H and non-poverty group (in percentage points) | Weighted Marginal Annual Unit Cost of H&H | Total Annual Cost of H&H |
|---|---|---|---|---|
| FSM (secondary school) | £517 | 14.7 pp | £34.09 | £6m |
| Pupil Equity Funding (secondary school) | £1,200 | 14.7 pp | £79.16 | £14m |
| *Total Annual Cost of H&H* | | | | **£20m** |

Sources: WPI Economics. GMCA, FRS, IFS etc. Numbers have been rounded
Note: Because of the inability to accurately estimate some of the education-related impacts (highlighted below in the methodologies section), these figures will be a significant underestimate of the true costs.

In Scotland:

- Secondary school children in families facing hunger and hardship were 14.7 percentage points more likely to be in receipt of FSMs and thus be eligible for Pupil Equity Funding -than secondary school children in families not in poverty.

***Table 12: Education-related costs of H&H: Wales***

| Cost Type | Average Unit Cost | Difference in Propensities between H&H and non-poverty group (in percentage points) | Weighted Marginal Annual Unit Cost of H&H | Total Yearly Cost of H&H |
|---|---|---|---|---|
| FSM (secondary school) | £517 | 25.4 pp | £47.59 | £5m |
| Pupil Development Grant (secondary school) | £1,150 | 25.4 pp | £105.90 | £12m |
| Persistent Truancy | £2,365 | 2.7 pp | £64.56 | £7m |
| *Total Annual Cost of H&H* | | | | **£24m** |

Sources: WPI Economics. GMCA, FRS, IFS etc. Numbers have been rounded
Note: Because of the inability to accurately estimate some of the education-related impacts (highlighted below in the methodologies section), these figures will be a significant underestimate of the true costs.

In Wales:

- Secondary school children in families facing hunger and hardship were 25.4 percentage points more likely to be in receipt of FSMs - and thus be eligible for the Pupil Development Grant - than secondary school children in families not in poverty
- Children in families facing hunger and hardship were 2.7 percentage points more likely to persistently not attend school (persistent truancy) than children in families who were not in poverty.

***Table 13: Education-related costs of H&H: Northern Ireland***

| Cost Type | Average Unit Cost | Difference in Propensities between H&H and non-poverty group (in percentage points) | Weighted Marginal Annual Unit Cost of H&H | Total Annual Cost of H&H |
|---|---|---|---|---|
| FSM (primary school) | £517 | 29.4 pp | £149.87 | £11m |
| FSM (secondary school) | | 31.1 pp | | |
| Social Deprivation Funding (primary school) | £614 | 29.4 pp | £177.96 | £13m |
| Social Deprivation Funding (secondary school) | | 31.1 pp | | |
| SEND | £7,379 | 3.3 pp | £239.89 | £18m |
| Persistent Truancy | £2,365 | 2.7 pp | £65.03 | £5m |
| *Total Annual Cost of H&H* | | | | **£47m** |

Sources: GMCA, FRS, IFS etc. Numbers have been rounded

In Northern Ireland:

- Primary school children in families facing hunger and hardship were 29.4 percentage points more likely to be in receipt of FSMs - and thus be eligible for Social Deprivation Funding - than primary school children in families who were not in poverty [in 22/23]
- Secondary school children in families facing hunger and hardship were 31.1 percentage points more likely to be in receipt of FSMs - and thus be eligible for Social Deprivation Funding - than secondary school children in families not in poverty [in 22/23]
- Children in families facing hunger and hardship were 3.3 percentage points more likely to have SEND than children in families who were not in poverty.

- Children in families facing hunger and hardship were 2.7 percentage points more likely to persistently not attend school (persistent truancy) than children in families who were not in poverty.

As these figures relate to direct (public services) costs to government, these cost estimations do not include other education-related costs, such as lifetime costs for children in H&H – and the economy as a whole – such as negative earnings and employment outcomes as a result of impacts on their educational attainment. Whilst not directly and fully captured in our methodology, these costs are partially captured within the economy section estimates, where we estimate the impacts of entry into H&H (which is driven, to some extent, by previous childhood experiences of H&H) on labour market outcomes.

The costs have been split across different countries to reflect differences in education policy and spending. In some cases – for example, with SEND in Wales and Scotland – changes in policy and a lack of available data mean we have been unable to determine the degree to which an additional cost is incurred due to H&H. Details on these differences can be found in the methodology section below.

## *Methodology*

### *Unit costs*

We derived unit costs for each cost area from a variety of sources – from both government documentation on spending and budgeting as well as other resources such as the Greater Manchester Combined Authority (GMCA) unit cost database.[18]

**SEND**

- **England:** local authorities are allocated funding per student for higher needs students (the "higher needs block"). Schools must then allocate either £3,500 or £6,000 from their regular budgets to all SEND students depending on an assessment of the student's needs. In cases where a student's needs exceed £6,000, an Education Health and Care (EHC) application is made on behalf of the child to the local authority for the purposes of unlocking new spending for the child from the local authority (where this will then draw on the higher needs block).

  The total spend on the higher needs block in 2023/24 was £10.1 billion.[19] To obtain total spend, we also need to account for the money spent by schools on children that don't have higher needs. January 2024 statistics show there are c. 1.7 million students with SEND, 1.2 million students on SEND Support, and of that 1.2 million a further 0.4 million who get EHC support.[20]

[18] GMCA, 2025, Cost Benefit Analysis, https://www.greatermanchester-ca.gov.uk/what-we-do/research/research-cost-benefit-analysis/
[19] Education & Skills Funding Agency, 2024, High need funding: 2023 to 2024 operational guide, https://www.gov.uk/government/publications/high-needs-funding-arrangements-2023-to-2024/high-needs-funding-2023-to-2024-operational-guide
[20] House of Commons Library, 2025, Special Educational Needs: support in England, https://commonslibrary.parliament.uk/research-briefings/sn07020/

The government assumes that the average spend on SEND Support is £3,500[21] (but suggest that local authorities should calculate themselves what the real average spend in their local areas is). Multiplying this £3,500 by 800,000 we estimate another £2.8 billion that goes on SEND spend every year. Combining these totals, we estimate the yearly spend on SEND to be around £12.9bn, and the spend per SEND student is £7,710.

- **Northern Ireland:** we find that the total spending in 2023 was £490m, for 66,404 children, giving an estimate of £7,380 per SEND child.

- **Scotland/Wales**: we have not been able to relate poverty categories and SEND spend in Scotland/Wales. This is due to devolved policies which offer FSMs to a much larger population of children, in many cases irrespective of whether they meet the means-tested conditions for FSMs in England.[22] Given that our method of determining the propensity of those in H&H having SEND relies on there being a robust relationship between poverty and FSMs (as discussed below in the Propensities section), the disconnect between means-testing and FSMs in these regions means that we cannot reliably relate poverty to SEND.

**FSM**

- **England:** in 2024 the government allocated £490 for every pupil eligible for FSM, and another £820 for every primary school student and £1,200 for every secondary school student at the school who has been eligible for FSM at any point in the last six years (this is FSM6). Taking the FSM figures together, this is £1,310 for every primary school pupil and £1,690 for every secondary school pupil.

- **Scotland/Wales/NI:** we calculated (2.65 * 195) (cost * number of school days) to create a lower bound estimate. This is the amount paid per meal to London boroughs to administer free school meals in 2023/24.[23]

**Pupil premium (PP) and devolved nation equivalents**

- **England:** PP is paid to schools for each pupil registered as qualifying for FSMs, though it is not used to fund FSMs but rather to help improve other outcomes for those students. One way of determining the unit cost is by taking the raw government data on how much funding primary and secondary schools receive for pupil premium per child, £1,480 and £1,050 respectively. For England, we have also attributed a PP cost to special schools however, because special schools have quite a lot of variance and are often a cross between primary/secondary, we averaged the £1,480 and £1,050 numbers (to give a unit cost of £1,265).[24]

[21] Education & Skills Funding Agency, 2024, High need funding: 2023 to 2024 operational guide
[22] Scottish Government, 2025, Scotland's FSM policy, https://www.mygov.scot/primary-school-meals; Welsh Government, 2024, Free school meals: information for local authorities and schools, https://www.gov.wales/free-school-meals-information-local-authorities-and-schools
[23] Greater London Authority, 2025, Integrated Impact Assessment Universal Free School Meals, https://www.london.gov.uk/who-we-are/what-mayor-does/priorities-london/free-school-meals/integrated-impact-assessment-universal-free-school-meals
[24] DfE, 2025, Pupil premium: overview, https://www.gov.uk/government/publications/pupil-premium/pupil-premium

- **Scotland:** The Scottish equivalent of PP is split between Strategic Equity Funding (SEF) and Pupil Equity Funding (PEF). As SEF is based on regional SIMD (Scottish Index of Multiple Deprivation) scores, we decided to take only the value of PEF here - £1,200 per year per pupil.[25]

- **Wales:** Wales' equivalent of PP is the Pupil Development Grant (PDG). This is estimated to be £1,150 per child.[26]

- **Northern Ireland:** NI's equivalent of PP is social deprivation funding paid to schools on the basis of the number of pupils who are eligible for free school meals. The system is designed such that schools with a higher percentage of students eligible for free school meals will receive higher payouts per student on average, but for the purpose of caution and simplicity we have assumed that the lower bound payout per student – £613.60 – applies universally.[27]

**Persistent Truancy**

- **England/Wales/NI:** GMCA includes a unit cost of £2,365 per year for persistent truancy, which is defined as "missing at least five weeks of school per year".[28] It is largely derived from the costs of providing alternative education provision and related social services. It also includes the (relatively small) health and crime costs directly attributable to persistent truancy. This holds for England, Wales and NI, all of which have Educational Welfare Services (EWS) or an equivalent stand-in service.

- **Scotland:** does not have EWS or an equivalent stand-in.

## *Propensities*

We initially calculated the propensity of children within each poverty category to be in receipt of FSMs using the data in FRS, and then used this as the basis for calculating most of the other propensities for this section, as many of the available statistics relating deprivation to educational outcomes were calculated with respect to FSM uptake. These latter propensities were calculated by chaining together the conditional probabilities of the costs being incurred by those on FSMs with the probabilities of taking up FSMs for those in H&H and those not in poverty. For example, we used this procedure to calculate the propensity with which children in H&H also have SEND in England.

Due to data availability limitations, our analysis relies on descriptive statistics rather than regression-based method. We are comparing propensity between those in H&H and those not in poverty. While

[25] Scottish Government, 2017, Pupil Equity Funding – Information leaflet for Parents and Carers, https://www.gov.scot/binaries/content/documents/govscot/publications/factsheet/2017/04/pupil-equity-fund-information-for-parents-and-carers/documents/pupil-equity-funding-information-parents-carers-2017-pdf/pupil-equity-funding-information-parents-carers-2017-pdf/govscot%3Adocument/Pupil%2Bequity%2Bfunding%2B-%2Binformation%2Bfor%2Bparents%2Band%2Bcarers%2B2017.pdf

[26] Welsh Government, 2024, Pupil Development Frant (PDG): overview, https://www.gov.wales/pupil-development-grant-pdg-overview-html

[27] DfE (Northern Ireland), 2023, Common Funding Scheme for the Local Management of Schools 2023-24, https://www.education-ni.gov.uk/sites/default/files/publications/education/Common%20funding%20scheme%202023-2024.pdf

[28] GMCA, 2025, Cost Benefit Analysis, https://www.greatermanchester-ca.gov.uk/what-we-do/research/research-cost-benefit-analysis/

we acknowledge that this approach does not allow for control of all confounding factors, it provides insights of public service use patterns between H&H and non-poverty group based on the available data. Future analysis could refine this approach with regression modelling if more comprehensive data becomes available.

We drew on a report from JRF[29] which reported that 28.7% of children on FSM were identified as having SEND. We also drew on a research briefing[30] which calculated the population base rate for SEND as being 18%. We calculate the likelihood with which someone in H&H will be in SEND according to these rates, taking into account both cases where H&H leads to FSM and thus an increased incidence of SEND, and also cases where H&H does not lead to FSM and thus where FSM occurs at the population base rate. The specific equation we used was:

$$(Propensity\ of\ SEND|FSM)\ x\ (Propensity\ of\ FSM|H\&H)\ +\ (Propensity\ of\ SEND|\ not - FSM)\ x\ (Propensity\ of\ not - FSM|H\&H)$$

By summing these we can calculate the total rate at which children in H&H are also receiving SEND funding. This procedure is then repeated with people who are not in poverty, in order to calculate the propensity with which those not in poverty receive SEND, and the difference between the former and latter propensities is then multiplied by the unit cost to calculate the "Weighted Marginal Annual Unit Cost of H&H" in the tables above.

This procedure is also repeated for the Persistent Truancy propensity calculations, where we drew on research[31] by N8 Research Partnership which showed that "for the 2023-24 academic year, persistent non-attendance rates were 20.7%, increasing to […] 35.7% for those receiving FSMs." As in the equation above with SEND, these propensities are then chained together with the propensity with which children in H&H receive FSMs in order to determine the propensity with which all children in H&H are persistently truant.

## *Populations*

In order to calculate the total annual cost of H&H for each cost type, we multiply the unit cost by the increased propensity with which those in H&H are likely to lead to that cost, and then multiply this by the amount of children in H&H in the relevant population. So, for example, when calculating the total annual cost due to H&H for FSMs in secondary schools in England, we use the population of secondary school students in H&H as our multiplier. This approach is replicated elsewhere – each unit cost and propensity is multiplied by the numbers in H&H that they relate to.

[29] JRF, 2016, Special educational needs and their links to poverty, https://cfey.org/wp-content/uploads/2016/02/Special-educational-needs-and-their-links-to-poverty.pdf
[30] House of Commons Library, 2025, Special Educational Needs: Support in England, https://researchbriefings.files.parliament.uk/documents/SN07020/SN07020.pdf
[31] https://www.n8research.org.uk/child-of-the-north-centre-for-young-lives-attendance-crisis-report-warns-thousands-of-children-from-schools-in-disadvantaged-areas-and-children-growing-up-with-sen-are-persistently-missing-school/#:~:text=The%20report%20also%20shows%20how,those%20receiving%20free%20school%20meals.

## Healthcare costs

### *Summary*

Our analysis finds that H&H is associated with an additional annual cost of **£6.3 billion** to UK healthcare services and local authorities as a result of additional healthcare needs. Breaking this down, **hospital inpatient admissions services** represent the largest cost proportion, with an annual extra cost of £3.1 billion, followed by **mental health** services (£1.3 billion), **Accident & Emergency (A&E) and ambulance costs** (£1.3 billion) and **GP visits** (£250 million). The extra cost of **prescriptions** and **dental care** adds a further £100 million and £150 million a year respectively.

Our figures are derived using a bottom-up approach.[32] We started by estimating the number of people in H&H using a particular healthcare service, then assigned unit costs to that service - to estimate the healthcare costs.[33]

An obvious source of data on usage propensities would have been the Understanding Society survey (USOC), which includes data on healthcare services (e.g. number of GP visits and inpatient admissions) and through which we can also capture experiences of H&H. However, there were a number of reasons why we were not comfortable with just using data from USOC to estimate propensities. One key consideration is that they rely on self-reported usage, and these were found to be lower than the actual recorded service use by the NHS. Additionally, the survey only covers a partial range of healthcare services, not all those we are interested in. In many cases, the reported service use between the H&H, at risk and non-poverty groups was also quite similar (again in contrast to recorded service use by the NHS). As such, we have typically relied on alternative sources for propensities and broader proxies for the H&H group, and then used wider evidence (including from USOC) to corroborate the scale and directional impact of healthcare service use between these groups.

Overall, our calculations are based on services cost and propensities (likelihood of health service use) derived from the National Health Service (NHS) Index of Multiple Deprivation (IMD) data, supplemented with unit costs from GMCA and Kent University. However, we acknowledge that IMD does not fully correspond to individuals' experience of H&H, and have made adjustments to account for the propensities of health service use among three groups: H&H, at risk[34] and non-poverty groups. The detailed methodology is outlined in the methodology section below. Due to data availability issues, we have not controlled for other variables beyond IMD.

[32] Our "bottom-up" approach of cost estimation started by multiplying the unit cost of a specific service (e.g. a single GP visit) by the additional number of times that service is used by people in H&H, then summing across services to approximate total healthcare spending associated with H&H.

[33] A "top-down" alternative would have been to of allocate costs based on overall NHS budget or expenditures and proportions.

[34] H&H and at risk groups use the same definition as set out in the sections above.

Propensity estimates for service use are calculated as the number of service uses divided by the population size in the H&H, at risk or non-poverty group. They represent average usage per person or the likelihood of accessing a service. However, in the case of GP visits, the propensities are derived from the Health Survey for England asking whether individuals have consulted a GP in the past 12 months, which yields a binary access measure (yes/no). For cost calculations, we combined this binary access measure with the average number of GP visits per person to derive an estimated total cost.[35] Our analysis shows that people facing H&H are more likely than people not in poverty to have experienced various healthcare events in the previous 12 months. Specifically, they are 10.1 percentage points more likely to have been admitted to hospital for inpatient care, 11.6 percentage points more likely to have suffered from depression, 24.3 percentage points more likely to have visited an A&E department or used ambulance services, 11.5 percentage points more likely to have consulted a GP in the previous 12 months, and 7.2 percentage points more likely to report poor oral health.

***Table 14: Breakdown of physical and mental health direct costs to government***

| Physical and mental health | Unit cost estimate | Difference in Propensities (likelihoods of health service use) between H&H and non-poverty group (in percentage points) | Total Yearly Cost of H&H |
|---|---|---|---|
| Hospital inpatient admissions | £3,325 | 10.1 pp | £3,130m |
| Mental health | £1,237 | 11.6 pp | £1,340m |
| A&E visits | £336 | 24.3 pp | £760m |
| Ambulance use | £253 | 24.3 pp | £570m |
| GP visits | £57 | 11.5 pp | £250m |
| Prescriptions | £34 | 11.5 pp | £150m |
| Dental | £147 | 7.2 pp | £100m |
| Outpatient services | £217 | -10.7pp | / |
| Total Yearly Cost of H&H: | | | **£6.3bn** |

Sources: WPI Economics, GMCA unit cost database, Kent Academic Repository, NHS Digital, Office for National Statistics (ONS), Office for Health Improvement and Disparities (OHID)

As these figures relate to direct (public services) costs to government these cost estimations do not include public health expenditure, such as fundings to local authorities to improve the health and well-being of local populations and provision of health care advice, or other health-related costs, such as costs to individuals in H&H (including through loss of earnings) and the economy as a whole as a

[35] The average number of GP visits per person is extracted from Song, 2019 (Source: Song F, Bachmann M, Howe A. Factors associated with the consultation of GPs among adults aged ≥16 years: an analysis of data from the Health Survey for England 2019. BJGP Open. 2023 Sep 19;7(3):BJGPO.2022.0177. doi: 10.3399/BJGPO.2022.0177. PMID: 37217212; PMCID: PMC10646211.)

result of poorer physical and mental health. These costs are instead implicitly captured within the economy section estimates.

## *Breakdown of physical and mental health-related costs by UK country*

***Table 15: UK Nations and English regions with associated Total Annual Cost of H&H – Physical and mental health***

| Nation | Total Annual Cost of H&H |
|---|---|
| North East | £250m |
| North West | £875m |
| Yorks and the Humber | £530m |
| East Midlands | £400m |
| West Midlands | £690m |
| East of England | £420m |
| London | £1,180m |
| South East | £730m |
| South West | £320m |
| Scotland | £450m |
| Wales | £290m |
| Northern Ireland | £160m |
| *Total* | ***£6.3bn*** |

Source: WPI Economics

## *Methodology*

We adopt a bottom-up approach to estimate the cost of different health service uses and their relationship with individuals in H&H, at risk and non-poverty groups.

*Unit costs*

Unit costs were primarily drawn from the GMCA unit cost database[36] and the Kent University's unit costs of health and social care manual.[37]

[36] GMCA, 2022, Unit Cost Database, https://www.greatermanchester-ca.gov.uk/what-we-do/research/research-cost-benefit-analysis/

[37] Kent Academic Repository, Unit Costs of Health and Social Care 2023, https://kar.kent.ac.uk/105685/1/The%20unit%20costs%20of%20health%20and%20social%20care_Final3.pdf

*Propensities*

Propensities of health service use (including A&E attendance, hospital inpatient admission, GP visits)[38] were mainly drawn from NHS data and existing literature, specifically service usage by IMD.[39] Direct individual-level income data is not available in the NHS records, and we therefore use IMD as an indirect proxy. While the IMD is often used to study healthcare inequalities, it is a place-based measure rather than an individual-level income proxy. As a result, using IMD alone may lead to misclassification of socioeconomic status and potentially underestimate the healthcare use of materially deprived individuals. To address this issue, we estimated the propensities of healthcare service use by dividing the population (including both adults and children) into three socioeconomic groups: people in H&H, those in shallower form of poverty (the at risk group), and non-poverty. We grouped the IMD deciles into three broader categories:

- IMD 1-3 – the most deprived areas
- IMD 4-7 – moderately deprived areas
- IMD 8-10 – the least deprived areas

We used the USOC survey data to estimate the composition of each IMD category in terms of the number of people in H&H, the shallower form of poverty (the at risk group), and non-poverty.

We define the unknown propensities of healthcare service use for each group as:

- X = Average healthcare service use propensity of people in H&H
- Y = Average healthcare service use propensity of people in the at risk group
- Z = Average healthcare service use propensity of people in non-poverty

For each IMD category, the overall observed healthcare use rate is a weighted combination of the service use by IMD. This leads to a system of three simultaneous equations:

$P_1 = a_1X + b_1Y + c_1Z$
$P_2 = a_2X + b_2Y + c_2Z$
$P_3 = a_3X + b_3Y + c_3Z$

Where:

- $P_1$, $P_2$, $P_3$ are the observed healthcare use rates for IMD groups 1-3, 4-7, and 8-10, respectively.
- $a_1$, $a_2$, $a_3$ are the proportions of H&H individuals in each IMD category.

[38] We assumed that the propensities for ambulance use were the same as A&E attendance due to data availability issue.
[39] For inpatient admissions, we used the statistics from NHS England's Hospital Episode Statistics (HES); mental health from Health Survey for England, 2022 Part 2; A&E visit and ambulance use from ONS's estimates of odds ratios for attending an A&E department by socioeconomic measures; GP visits from the paper: Song F, Bachmann M, Howe A. Factors associated with the consultation of GPs among adults aged ≥16 years: an analysis of data from the Health Survey for England 2019.

- $b_1$, $b_2$, $b_3$ are the proportions of shallower form of poverty individuals in each IMD category.
- $c_1$, $c_2$, $c_3$ are the proportions of non-poverty individuals in each IMD category.

Example: Deriving the propensity for hospital admissions

The NHS 2024 data on hospital admissions[40] showed that the number of admissions per 100 people was 31.7 in IMD deciles 1-3, 29.9 in deciles 4-7 and 29.1 in deciles 8-10.

Using the FRS, we determined the distribution of socio-economic groups within each IMD category. For IMD 1-3, 24% of individuals were in H&H, 15.9% in the at risk group and 60.2% in the non-poverty group. In IMD 4-7, 11.5% were in H&H, 9.3% in the at risk condition and 79.1% in non-poverty group. For IMD 8-10, the ratios were 7.3%, 5.1% and 87.6% respectively for H&H, at risk and non-poverty groups.

To estimate the propensity for hospital admission within each socio-economic group, we formulated the following three simultaneous equations, based on the admission rates and group proportions:

$$31.7\% = 24\% X + 15.9\% Y + 60.2\% Z$$
$$29.9\% = 11.5\% X + 9.3\% Y + 79.1\% Z$$
$$29.1\% = 7.3\% X + 5.1\% Y + 87.6\% Z$$

Solving these equations, we found the following propensities for each group:

X (H&H) = 38.0%
Y (at risk group) = 36.3% and
Z (non-poverty) = 27.9%.

Therefore, **the differential in propensity between the H&H and non-poverty group for hospital admission** is 38.0% - 27.9%, or **10.1 percentage points**.

This approach, making use of both the NHS data and USOC data, allows us to derive the propensities for each socioeconomic group for different types of healthcare services. However, we also acknowledge the limitations of this approach (for example, it assumes homogeneity within the IMD categories we defined) and there is a lack of existing evidence to validate the results.

[40] NHS, 2024, Hospital Admitted Patient Care Activity, https://digital.nhs.uk/data-and-information/publications/statistical/hospital-admitted-patient-care-activity

For dental services, estimates relied on self-reported data from individuals with poor oral health by their respective equivalised household income.[41] We assumed that individuals in H&H fall within the lowest equivalised household income quintile, while the non-poverty group corresponds to the median income quintile. The propensity for mental health is derived from the percentages of people having a Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS) score below 18 (as in indicator of probably clinical depression)[42] from the Understanding Society Survey (USoc), with differences in propensity between H&H and at risk groups compared.

The use of outpatient services was excluded from this analysis because it has been shown that lower income groups use fewer services than higher income groups due to barriers that limit their access to these services. We therefore exclude this item as it could misleadingly suggest that greater H&H in society would reduce outpatient costs, which is counterintuitive and ignores the fact that these barriers may ultimately lead to poorer health and higher downstream health costs for society.

### *Comparison with other studies*

Our estimates are different from existing studies due to differences in focus and methodology. For example, JRF estimated the cost of poverty to the NHS at £29 billion,[43] with the majority of the cost derived using IMD and further adjusted using the IMD Low Income Score. Whilst using some of the same inputs, our approach is very different – based on a bottom-up approach, where we estimated costs by multiplying the unit cost of a specific service (e.g. a single GP visit or hospital admission) by the additional number of times that service is used by people in H&H, rather than a top-down approach, where it starts with the total health service cost incurred by the NHS and estimates the proportion of this total cost attributable to the impact of "poverty".

Meanwhile, a 2016 NHS report estimated the cost of poverty-related inpatient admissions at £4.8 billion in 2011/12, by comparing the most deprived and the most affluent groups.[44]

Our analysis differs very significantly in the approach. The most obvious point is that we are estimating the costs associated with a smaller group of people; those in H&H, rather than those in poverty overall. Further, in estimating the poverty costs other studies typically compare costs

[41] Office for Health Improvement and Disparities, 2024, Adult oral health survey 2021, https://www.gov.uk/government/statistics/adult-oral-health-survey-2021

[42] Hei Hang Edmund Yiu, John Buckell, Stavros Petrou, Sarah Stewart-Brown, Jason Madan, 2023, 'Derivation of a UK preference-based value set for the Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS) to allow estimation of Mental Well-being Adjusted Life Years (MWALYs), https://www.sciencedirect.com/science/article/abs/pii/S027795362300285X#:~:text=A%20SWEMWBS%20score%20of%20%3E18,et%20al.%2C%202018).

[43] King's Fund (2022), 'Poverty and the health and care system', https://www.kingsfund.org.uk/insight-and-analysis/long-reads/poverty-health-care-system-data-partnership#:~:text=The%20Centre%20for%20Health%20Economics,%C2%A329%20billion%20per%20year.

[44] Asaria M, Doran T and Cookson R, 2016, The costs of inequality: whole-population modelling study of lifetime inpatient hospital costs in the English National Health Service by level of neighbourhood deprivation, https://www.england.nhs.uk/wp-content/uploads/2016/07/the-cost-of-inequality.pdf

associated with the most deprived groups with costs associated with the most affluent groups. In practical terms this means they are asking the question "what would costs be if people in poverty were as affluent as the most affluent". In contrast, our approach is based on understanding the difference in costs associated with the typical person not in poverty – which is closer to answering the question of "what would costs be if poverty (or H&H) did not exist".

## Homelessness-related services

*Summary*

Our analysis finds that the total annual cost of statutory homelessness services provided by local authorities across the UK is £2.98 billion. Meanwhile, we estimate that rough sleeping incurs fiscal costs of £67.0 million across local authorities, the criminal justice system and healthcare services.[45] We assume all people who are homeless or sleeping on the streets to be in H&H, and therefore treat these costs, in their totality, as the costs of providing publicly-funded support to people who are in H&H. The estimate incorporates our own analysis of the costs local authorities face when delivering their duties under the Homelessness Reduction Act (HRA), alongside separate unit cost estimates for the public costs of supporting people rough sleeping. These costs are combined with statistics produced by each of the devolved nations relating to statutory homelessness and rough sleeping.

***Table 16: Breakdown of homelessness and rough sleeping-related direct costs to government***

| | |
|---|---|
| ***Local authority statutory homelessness provision*** | |
| No. of homeless households (A) | 383,685 |
| Homelessness services unit cost (per household) (B) | £7,764 |
| **Total annual cost (C = A x B)** | **£2.98bn** |
| ***Rough sleeping services*** | |
| No. of people rough sleeping (D) | 4,836 |
| Rough sleeping unit cost (per individual) (E) | £13,851 |
| **Total annual cost (F = D x E)** | **£67.0m** |

Sources: WPI Economics
England: Ministry of Housing, Communities and Local Government (MHCLG) Statutory Homelessness statistics (2023/24) and Rough Sleeping snapshot (2023)
Scotland: Scottish Government Homelessness Statistics (2023/24) and Public Health Information for Scotland (2022)
Wales: Welsh Government Homelessness Statistics (2023/24) and Stats Wales Rough sleepers by local authority (2024)
NI: NI Housing Statistics (2023/24) and Housing Executive Rough Sleeping Counts/Estimates (2023)
Unit cost estimates are drawn from WPI analysis for Centrepoint and MHCLG's (2020) rough sleeping unit cost estimate
Notes: statutory homelessness calculations refer to financial years (all 2023/24), whilst rough sleeping calculations relate to calendar years (2022, 2023 or 2024 depending on each devolved nations data collection).

As these figures relate to direct (public services) costs to government these cost estimations do not include other homelessness and rough sleeping-related costs, such as costs to individuals, including through impacts on their physical and mental health.

[45] In government records, statutory homelessness statistics relate to 'those who local authorities have a duty to accommodate as they are homeless through no fault of their own, eligible for assistance, and have a 'priority need'', whilst rough sleeping statistics relate to 'people sleeping rough on a single night in autumn each year'. We cannot guarantee these groups are mutually exclusive, and therefore we have presented separate costings and do not aggregate them to avoid double counting. For more information see https://www.gov.uk/government/collections/homelessness-statistics.

## *Breakdown of homelessness-related costs by UK nation and English region*

***Table 17: UK Nations with associated Total Annual Cost of H&H – homelessness***

| Nation | Total Annual Cost of H&H |
|---|---|
| North East | £120m |
| North West | £420m |
| Yorks and the Humber | £260m |
| East Midlands | £190m |
| West Midlands | £330m |
| East of England | £200m |
| London | £570m |
| South East | £355m |
| South West | £150m |
| Scotland | £220m |
| Wales | £140m |
| Northern Ireland | £80m |
| *Total* | ***£3.0bn*** |

Source: WPI Economics

## *Methodology*

*Unit costs*

Under the HRA, local authorities are required to provide funding for temporary accommodation, HRA Administration, Prevention, Relief and Support, and non-HRA Administration and Support. WPI previously modelled this provision and the costs borne by local authorities for Centrepoint, from which we have generated an average unit cost (per household) of £7,764 per annum. This unit cost does not incorporate the health impacts of homelessness and poor housing more generally.

The costs associated with people who are rough sleeping are distinct from this and occur across local authorities, criminal justice and health departments. Several different studies have attempted to quantify the fiscal costs of service utilisation by people sleeping rough. We draw upon an official estimate produced by MHCLG for UK nationals, which compiles costs associated with prison, physical health, criminal justice, substance treatment, rough sleeping services, A&E, ambulance, mental health

and GP services. The reported average annual fiscal cost of an individual that sleeps rough is £13,851 in 2023 prices.[46]

*Propensities*

Both unit costs are multiplied to the latest estimates of homeless households and rough sleeping individuals across the UK. If we assume that all people who are homeless or rough sleeping are in H&H, we can treat these costs, in their totality, as the costs of providing publicly-funded support to people who are in H&H. The derivation of propensities relies on descriptive statistics rather than regression-based methods due to data availability limitations.

## Children's social care (local authority provision)

### *Summary*

We estimate the total annual cost associated with local authority provision of social care for children in H&H to be £2.89 billion across the UK. These estimates are produced using unit costs estimates for case management for **Children in Need** (CIN) (young people who have been assessed as needing support by social services), for **foster-care** processes, and for **local authority** provision of **residential care**.

***Table 18: Breakdown of children social care direct costs to local authorities, UK***

| | |
|---|---|
| *Children in Need (CIN)* | |
| Unit cost for case management processes (gross annual) (A) | £4,073 |
| Difference in probability of being a CIN if in H&H versus if not in poverty (B) | 1.7 pp |
| Number of children in H&H (C) | 3,000,000 |
| Costs resulting from children in H&H (D = A x B x C) | £210m |
| *Foster care* | |
| Unit cost: child into local authority foster care (gross annual) (E) | £38,857 |
| Difference in probability of being in foster care if in H&H versus if not in poverty (F) | 0.3 pp |
| Costs resulting from children in H&H (G = E x F x C) | £310m |
| *Residential care* | |
| Local authority own-provision residential care home for children (gross annual) (H) | £297,394 |
| Difference in probability of being in residential care if in H&H versus if not in poverty (I) | 0.3 pp |
| Costs resulting from children in H&H (J = H x I x C) | £2.37 bn |
| **Total cost** | **£2.89 bn** |

[46] MHCLG (2020) Understanding the Multiple Vulnerabilities, Support Needs and Experiences of People who Sleep Rough in England Initial findings from the Rough Sleeping Questionnaire, Available at: https://assets.publishing.service.gov.uk/media/5fd8e3a18fa8f54d60878af7/Initial_findings_from_the_rough_sleeping_questionnaire_access.pdf

*Breakdown of children's social care-related costs by UK country*

***Table 19: Breakdown of children social care direct costs to local authorities, by nation and English region***

| | |
|---|---|
| **North East** | £130m |
| **North West** | £420m |
| **Yorks and the Humber** | £220m |
| **East Midlands** | £200m |
| **West Midlands** | £350m |
| **East of England** | £200m |
| **London** | £540m |
| **South East** | £350m |
| **South West** | £130m |
| Scotland | £170m |
| Wales | £105m |
| Northern Ireland | £70m |
| **UK** | **£2.89 bn** |

Sources: GMCA Unit Cost database, FRS, Department for Education (DfE) research report
Notes: all unit costs adjusted to 2023/24 prices; costings have been computed on a grossed annualised basis, and we will need to further review the appropriateness of scaling the GMCA unit costs to an annual basis in future iterations.

## *Methodology*

*Unit costs*

Children's social care policy is a devolved issue. Given the lack of available information for how unit costs differ across UK nations, we assume that English unit costs are representative for the other nations. Further detail of the unit costs are as follows:

- The average total cost of CIN case management processes is £2,037, covering a six month period (in 2023/24 prices) – we have doubled this figure to produce an annualised cost. Contained within the GM Unit Cost database, the original study which derives the cost was commissioned by the Department for Children, Schools and Families, and drew upon evidence from local authorities regarding the staffing and related activities associated with social care management and day to day needs of a case (but not including additional services supplied to address specific needs of a case).
- The per week unit cost of local authority foster care is £747 in 2023/24 prices, which we have converted to an annual figure. The constituents of this aggregate include boarding out allowances, administration and the cost of a social worker, and other services costs such as education.
- The per week unit cost of local authority own-provision residential care is £5,719 in 2023/24 prices, which we have converted to an annual figure. The figure consists of buildings and land (capital) costs, workforce costs, and other school-support spending.

*Propensities*

The methodology draws on previous research by DfE which estimates the probability of requiring children social care services provided by local authorities, according to income quintiles.[47] We use descriptive statistics rather than regression-based methods to derive the propensities due to data availability issues. We map these income quintiles to our definitions of those in H&H, those in the at risk group, and those not in poverty, to determine the propensity of these groups to incur the local authority costs. We assume that the lowest income quintile maps directly to the H&H and at risk groups, whilst taking an average of the other income quintiles to generate a probability for the non-poverty group:

- Children facing H&H are 1.7 percentage points more likely to be classified as a CIN, at a particular point in time, compared to those not in poverty.
- Children facing H&H are 0.3 percentage points more likely to be in foster care or residential care considering a year-long period, compared to those not in poverty.

[47] DfE (2022) Drivers of activity in children's social care, Available at: https://webarchive.nationalarchives.gov.uk/ukgwa/20230302083138/https://www.gov.uk/government/publications/drivers-of-activity-in-childrens-social-care

To derive the total costs associated with children social care as a result of H&H, we multiply the unit costs from the GMCA Unit Cost database by the difference in probability to incur that cost between those in H&H and those not in poverty. Where the GMCA unit costs are not on an annual basis we convert them accordingly. This is further multiplied by WPI's estimate of the number of children in H&H across each nation, to derive the costs that are associated with children in this group in total.

# Economy costs

## Summary

Our focus for estimating the economic costs associated with H&H is to understand the lost economic output associated with facing H&H. These are measured through two routes: employment and productivity. These are estimated through analysis of the employment and wage scars associated with people entering H&H.

The costs estimated focus on the economic scarring impacts on adults who experience H&H. Overall, this means that our estimates are likely to be an underestimate of the total economic costs of H&H, as we do not consider the full scarring effects of childhood experiences of H&H and the extent to which these result in poorer labour market outcomes later in life.[48,49]

The methodology for estimating the scarring impacts of adult experiences of H&H is largely similar for both employment and earnings (a proxy for productivity). In broad terms this uses longitudinal data from Understanding Society (USOC) to capture those entering H&H and assess the damaging impacts that it has on their labour market outcomes over the next ten years. We do this using regression analysis, which, as far as possible, takes into account the differences in characteristics between people who experience H&H and those who do not. Summary tables from these regressions (and those for life satisfaction) are provided at the Annex. These estimates from the regression analysis are then smoothed to provide an economically-consistent progression of the impacts over time.[50]

Once we have estimates of the impact on employment chances and wages for those who do remain in work, we then estimate the economic costs of this. We do this by using an estimate of the typical salary that those entering H&H might expect, based on their characteristics (we assume this is, on average, equal to the annual equivalent of the mean hourly pay that people who enter H&H, but remain employed) and multiplying this by the full-time-equivalent value of the employment scar (for employment) and the percentage wage scar. This creates a financial value of lower employment and lower productivity associated with these scars and an estimate of the lost economic output resulting from H&H.

There are a range of routes through which these scars might come about. For example, we know that H&H is associated with people experiencing poorer physical and mental health outcomes and greater relationship instability.[51] In turn, this can lead to those experiencing H&H exiting the labour market because of their health problems, or not being able to work because of changing childcare requirements. Similarly, poorer health and relational stress could also impact on the extent to which people in H&H are able to function effectively at work, thereby negatively impacting on their productivity.

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[48] For example see Hirsch, D., (2021). *The cost of child poverty in 2021.* Available here: https://www.lboro.ac.uk/media/media/research/crsp/downloads/the-cost-of-child-poverty-in-2021--crsp-paper.pdf Accessed 09/03/2025. See also Lesner, R.V., 'The long-term effect of childhood poverty'. *Journal of Population Economics. 31(3):1-36.*

[49] Note that, where childhood experiences of hunger and hardship cause later experiences of hunger and hardship, our approach will capture at least some of these costs. As such, adding childhood scarring would also mean a degree of double counting of the impacts.

[50] For example, this takes account of particular sample size issues in one year, which makes statistical significance fall, or creates

[51] See evidence provided above in health section. See also research from qualitative strand of this programme.

Other routes through which H&H could impact on labour market outcomes include:

- The extent to which those experiencing it have the financial means to engage effectively in the labour market. For example, they may not be able to afford the costs of public transport to get to work, or to engage in jobsearch. Or they may not be able to meet the upfront and sometimes ongoing investment in clothing and / or equipment that might be needed for a particular job.
- We also know that many people in H&H will face digital exclusion because of the prohibitively high costs of accessing the internet (both in terms of the equipment needed and the service charges), meaning that they will face significant constraints in applying for and engaging in many jobs in the labour market.[52]
- Equally, the sections above and qualitative research conducted for this and other projects, highlights the significant cognitive load that H&H places on individuals and families. These significant struggles, for example, to ensure that the family is budgeting to make ends meet reduce the capacity to engage in the labour market (either in work or through jobsearch) and the effectiveness of the time spent engaging.

Overall, our analysis finds that the financial value of the employment and productivity costs associated with entry into H&H amount to £38.2bn a year.

The split between costs associated with employment scars and wage scars is provided below.

***Table 20: Breakdown of employment-based economy costs***

| ***Employment scarring related to people entering* H&H** | |
|---|---|
| Working age people entering H&H over a ten-year period | 15.7m |
| Employment scar in t+1 | 9.5ppt |
| Employment scar in t+5 | 6.5ppt |
| Employment scar in t+10 | 5.7ppt |
| Total estimated impact on yearly labour supply | 2.6% |
| **Total annual cost** | **£26.9bn** |

Source: WPI Economics
Note that, while we expect impacts to persist after year 10, we do not have data to prove this, so we have taken the cautious approach and assumed that impacts are 0 after year 10.

Table 20 shows that, compared to otherwise similar people who did not enter H&H, those who enter H&H have employment probabilities that are 9.5 percentage points lower a year after they enter H&H and 5.7 percentage points lower after 10 years.

[52] For example see WPI Economics (2024) Exploring the relationship between deep poverty and digital exclusion, available at: https://wpieconomics.com/publications/exploring-the-relationship-between-deep-poverty-and-digital-exclusion/

***Table 21: Breakdown of wage-based economy costs***

| ***Wage scarring related to people entering* H&H** | |
|---|---|
| No. of people entering H&H over a ten-year period | 15.7m |
| Employment rate of people who have entered H&H at some point over a 10-year period (i.e. proportion of overall group who may be affected by wage scar) | 57% |
| Wage scar in t+1 | 8% |
| Wage scar in t+5 | 5% |
| Wage scar in t+10 | 4% |
| **Total annual cost** | **£11.3bn** |

Source: WPI Economics

Note that, while we expect impacts to persist after year 10, we do not have data to prove this, so we have taken the cautious approach and assumed that impacts are 0 after year 10.

Table 21 shows that those who enter H&H and are in work, have wages that are 8% lower a year after they enter H&H, than otherwise similar people who did not enter H&H. After 10 years their wages are 4% lower than otherwise similar people who did not enter H&H.

***Table 22: Breakdown of employment and productivity costs by UK nation and English region***

| | Cost of **H&H** – employment and productivity costs |
|---|---|
| **North East** | £1.5bn |
| **North West** | £5.2bn |
| **Yorks and the Humber** | £3.4bn |
| **East Midlands** | £2.6bn |
| **West Midlands** | £3.9bn |
| **East of England** | £2.5bn |
| **London** | £6.7bn |
| **South East** | £4.4bn |
| **South West** | £2.3bn |
| **Wales** | £1.9bn |
| **Scotland** | £2.9bn |
| **Northern Ireland** | £1.0bn |
| **UK** | **£38.2bn** |

Source: WPI Economics

## Methodology

Our focus for estimating the economic costs associated with H&H is to understand the lost economic potential associated with the experiences of H&H. Previous estimates of the impacts of poverty have mainly focussed on the long-term scarring impacts experienced by children who grow up in poverty. [53] However, these focus on the economic value that might be created over relatively long periods of time (once children have reached adulthood). As our focus is on the costs over a 5-10 year window (and how these can be reduced by policy interventions now), our focus on adults is more appropriate, though we do note that costs of children's economic futures is real.

The costs estimated focus on the economic scarring impacts on adults who experience H&H, looking at both the employment and earnings scars for adults. The methodology is largely similar for both approaches.

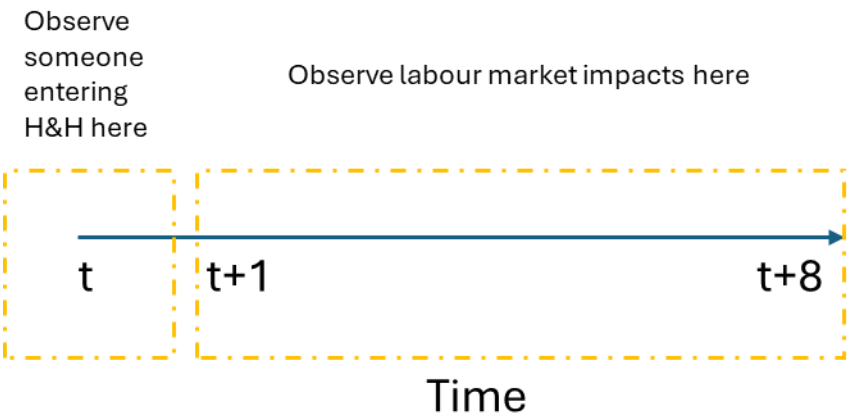
Across both employment and earnings, there are a number of ways in which we might consider this.

A. One way is to assess the extent to which labour market outcomes vary between those in H&H and people who are not in H&H. For example, by comparing overall employment rates between those in H&H and those not in H&H. This fails to take account of the fact that people in H&H will have fundamentally different characteristics to those not in H&H, which make them less likely to be employed. It also does not account for the fact that it might be non-employment that is the cause of H&H, rather than the other way around ("reverse causality").
B. To account for some of these issues, we use regression techniques to compare the labour market experience of those in H&H with otherwise comparable people not in H&H. Estimates like this provide a sense of the additional economic output that might be achieved if people in H&H were supported to have employment rates as high as those otherwise comparable people who are not in H&H. In this sense, they provide us with an estimate of the "scale of the prize" of tackling H&H.
C. The approach in B controls for some of the most obvious factors that might be driving differences in labour market outcomes for those in H&H (e.g. lower qualifications). In doing so, it provides us with a good estimate of the "scale of the prize". However, it will still significantly overestimate the overall impacts of H&H on economic activity. This is because there will be a range of unobservable characteristics of those in H&H that have caused them to be in that situation, which we cannot fully control for. This means that we are not accurately comparing them with "otherwise comparable people". We also still have the challenge of the issue of reverse causality – i.e. that it might be non-employment that is causing them to be in H&H in the first place. To address this, we have used an approach to get us closer to the causal impact of H&H on labour market experiences.

   In broad terms this uses longitudinal data from Understanding Society (USOC) to capture those who enter H&H in one year (time "t") and then assess the potential impacts on their

[53] For example see Hirsch, D., (2021). *The cost of child poverty in 2021.* Available here: https://www.lboro.ac.uk/media/media/research/crsp/downloads/the-cost-of-child-poverty-in-2021--crsp-paper.pdf Accessed 09/03/2025. See also Lesner, R.V., 'The long-term effect of childhood poverty'. *Journal of Population Economics. 31(3):1-36.*

employment and earnings up to eight years later ("t+1" to "t+8"), based on the 10 latest waves of available data in USOC.[54] We then extrapolate these results up to ten years.




This relies on three steps:

1) Conduct longitudinal regression analysis:
   i. Create flag for whether individuals are in H&H in each wave of the data (based on the same definition as used in the main FRS / HBAI analysis). Create flags to determine flows between H&H and non-H&H (i.e. whether people enter or leave H&H in a particular wave). These give a set of four mutually exclusive, collectively exhaustive variables for each individual in each wave: a) entering H&H this year, not in H&H last year; b) exiting H&H this year, in H&H last year; c) in H&H both this year and last year; d) not in H&H in this year or last year.
   ii. Conduct eight separate regression analyses (one each for time t+1 to t+8) on labour market status – with the variables capturing experiences of H&H as defined above, using d) not in H&H in this year or last year as the base (excluded) variable. A logit regression was used for employment status, and linear log-linear (Mincer) regression used for wages.
   iii. In each of these, control for observable characteristics that drive labour market outcomes (e.g. qualifications, region, age, experience etc).
   iv. Account for unobservable characteristics that drive labour market outcomes by undertaking a regression of labour market status in time t-1, (before entry into H&H) and using the error term (residuals) from this regression in each of the subsequent regressions.

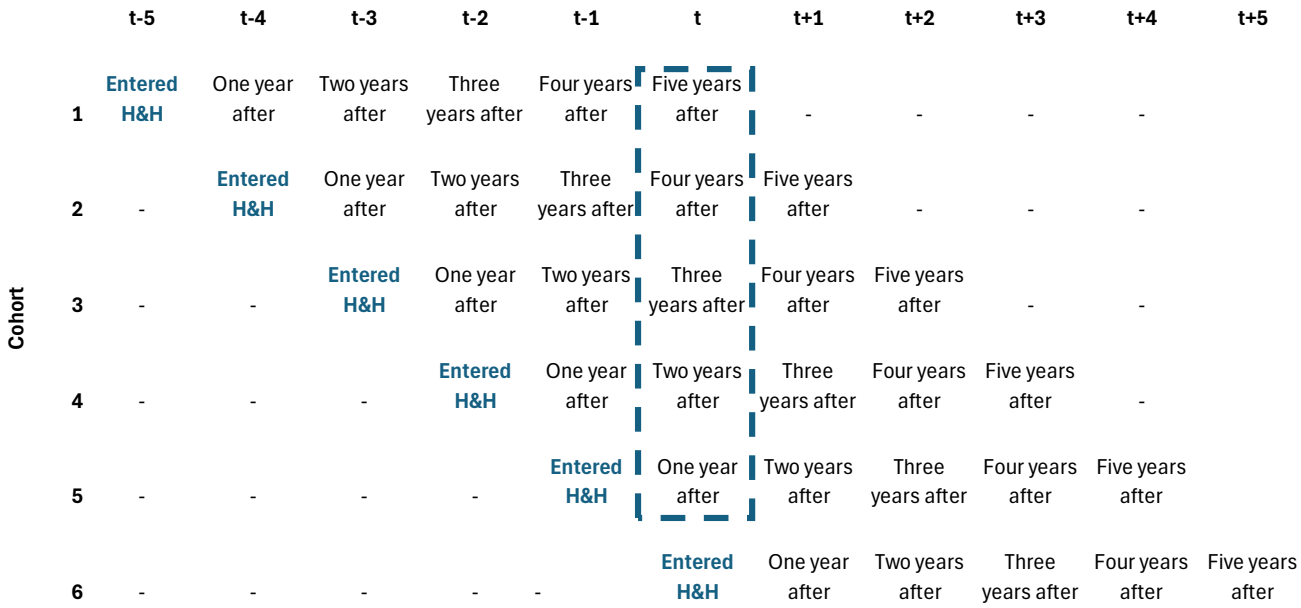
This stage provides us with an estimate of the labour market scar associated with entry into H&H in each of the following eight years. This means we are capturing the impacts of events in time "t" that cause entry into H&H and the impact of H&H itself. Given the inherent variability in econometric estimates from repeated regressions across different samples in each of the

[54] University of Essex, Institute for Social and Economic Research. (2023). *Understanding Society: Waves 1-13, 2009-2022 and Harmonised BHPS: Waves 1-18, 1991-2009*. [data collection]. *18th Edition.* UK Data Service. SN: 6614, DOI: http://doi.org/10.5255/UKDA-SN-6614-19.

years, these estimates are smoothed to ensure a consistent series of impacts are created across the 10-year period.

2) Create steady-state estimates of the overall impact of entry into H&H. In each year, we know that some people (a "cohort") will enter H&H. The above approach allows us to understand the future impacts on this cohort. But it does not give us the total in-year economic costs, as these will be the sum of the impacts of those who have entered H&H at various points in the past. It is important to note that the economic effects of H&H can impact individuals in the future even if they are no longer in H&H.

   As such, we need to estimate the total labour market impacts across those who have entered at different times in the past. The figure below provides an example of this intuition where entry into H&H has impacts over the subsequent five years. To understand total impacts in time t, we need to calculate the sum of impacts across those cohorts who have entered H&H between t-5 and t-1.




   In practical terms, this requires us to estimate the number of people entering H&H each year in steady state[55] and then tracking the economic impacts on them through using the estimates from the regressions in step 1. This provides an overall estimate of the number of people in time t who are impacted by previous spells of H&H.

3) Calculate the value of the impacts. We can then turn the estimates above into estimates of economic value. In the final version of the work, we will use an approach used by the OBR to estimate the GDP impacts of changes to labour supply and productivity (under the assumption wage scars are driven by reduced productivity). In this version, for employment scars, we have used a relatively crude approximation that lost output is equal to the value of wages that these individuals would likely receive if they were to be employed. We assume this is, on average, equal to the annual equivalent of the mean

[55] This is derived by calculating the number of people who enter H&H over a 10-year period (16.3m) and assuming that these entries are evenly spread over that period, so that 1.63m people enter H&H each year.

hourly pay that people who enter H&H, but remain employed, receive (£13.41 per hour). We also account for the overall average hours worked.

# Fiscal costs

Our analysis finds that Exchequer costs in the form of lower tax revenues and higher social security spending – from the economy impacts above – are estimated to total £23.7 billion a year as a result of H&H. These costs are in addition to the public services costs also affecting the Exchequer, set out above. While these costs impact the Exchequer at a UK-level, Table 23 provides an illustrative breakdown across UK regions and nations by apportioning the total fiscal costs according to the numbers of people in H&H in each region and nation.

***Table 23: Breakdown of fiscal costs by UK nation and English region***

| Fiscal costs | | Cost |
|---|---|---|
| **North East** | | **£0.9 billion** |
| *of which:* | *Lower tax revenue* | *£0.7 billion* |
| | *Higher social security spending* | *£0.2 billion* |
| **North West** | | **£3.2 billion** |
| *of which:* | *Lower tax revenue* | *£2.5 billion* |
| | *Higher social security spending* | *£0.7 billion* |
| **Yorks and the Humber** | | **£2.1 billion** |
| *of which:* | *Lower tax revenue* | *£1.6 billion* |
| | *Higher social security spending* | *£0.5 billion* |
| **East Midlands** | | **£1.6 billion** |
| *of which:* | *Lower tax revenue* | *£1.2 billion* |
| | *Higher social security spending* | *£0.4 billion* |
| **West Midlands** | | **£2.3 billion** |
| *of which:* | *Lower tax revenue* | *£1.8 billion* |
| | *Higher social security spending* | *£0.5 billion* |
| **East of England** | | **£1.5 billion** |
| *of which:* | *Lower tax revenue* | *£1.2 billion* |
| | *Higher social security spending* | *£0.3 billion* |
| **London** | | **£4.1 billion** |
| *of which:* | *Lower tax revenue* | *£3.2 billion* |
| | *Higher social security spending* | *£0.9 billion* |
| **South East** | | **£2.7 billion** |

| | | |
|---|---|---|
| *of which:* | *Lower tax revenue* | *£2.1 billion* |
| | *Higher social security spending* | *£0.6 billion* |
| **South West** | | **£1.5 billion** |
| *of which:* | *Lower tax revenue* | *£1.2 billion* |
| | *Higher social security spending* | *£0.3 billion* |
| **Scotland** | | **£1.8 billion** |
| *of which:* | *Lower tax revenue* | *£1.4 billion* |
| | *Higher social security spending* | *£0.4 billion* |
| **Wales** | | **£1.2 billion** |
| *of which:* | *Lower tax revenue* | *£0.9 billion* |
| | *Higher social security spending* | *£0.3 billion* |
| **Northern Ireland** | | **£0.6 billion** |
| *of which:* | *Lower tax revenue* | *£0.5 billion* |
| | *Higher social security spending* | *£0.1 billion* |
| **UK TOTAL** | | **£23.7 billion** |

We describe how the total UK-wide fiscal cost breaks down between lower tax revenues and higher social security spending below, and the methodology used.

## Lower tax revenues

### *Summary*

A smaller economy as a result of H&H means lower tax revenues flowing into the Exchequer. **We have estimated £18.4 billion of lost tax revenues each year as a result of these economy costs from H&H.** This is calculated by inputting the economic costs in terms of lower employment/higher unemployment and lower earnings into the Office for Budget Responsibility (OBR) 'ready reckoner', which calculates approximate Exchequer impacts from macro-economic changes.

### *Methodology*

We use the OBR's *March 2024 Economic and fiscal outlook – ready reckoner*[56] to estimate the impact of lower employment and earnings on tax revenues, specifically Pay As Your Earn (PAYE) income tax and National Insurance Contributions (NICs). We input the change in employment and earnings levels into the ready reckoner – applied in every year across the OBR forecast period. This provides annual estimates for the change in tax revenue across each year of the forecast period, which we take an average of.

[56] https://obr.uk/download/march-2024-economic-and-fiscal-outlook-ready-reckoner/?tmstv=1734110580

## Higher social security spending

### *Summary*

Higher unemployment as a result of H&H means higher government spending on social security. **This is estimated to be £5.3 billion higher each year as a result of the higher unemployment from H&H.** This is calculated by using the OBR's 'ready reckoners' which reflect the relationship between unemployment and social security spending, in this case Universal Credit spending specifically. In reality, this is likely to be an underestimate of the impact of H&H on social security spending, for a number of reasons. For example, our method only considers impacts on social security spending from changes in unemployment and wages (calculated in the economy section) – we do not take account of wider impacts of H&H on social security spending, such as the impact on health-related social security benefits from H&H leading to worsening health conditions.

### *Methodology*

We use the OBR's *March 2024 Economic and fiscal outlook – ready reckoner*[57] to estimate the impact of higher unemployment on government spending, specifically social security spending. We input the change in unemployment and earnings into the ready reckoner – applied in every year across the OBR forecast period. This provides annual estimates for the change in universal credit spending across each year of the forecast period, which we take an average of.

[57] https://obr.uk/download/march-2024-economic-and-fiscal-outlook-ready-reckoner/?tmstv=1734110580

# Policy impacts

## Summary

We have previously undertaken analysis to show the impacts of various policy measures in reducing the scale of H&H. Overall, the case for taking these policies forward is clear, based on the harm that H&H has on individuals and families, but also the wider social and economic costs of H&H.

Given the scale and severity of H&H, many of the most effective policy interventions come with significant financial costs. These can easily be justified by the positive impact that tackling H&H would have on the lives of those affected. Our modelling shows that these costs (e.g. in terms of increased spending on certain aspects of social security) are also offset by reductions in public spending, economic benefits and improvements in outcomes that lead to increased tax revenue and lower social security spending for those with improved outcomes.[58] The table below provides headline estimates of the total reductions in costs, and increases in benefits associated with each policy in the fifth year of the protection period. The fifth year is used to provide an estimate of the steady-state impacts, once the effects have run through the smoothing in the SMC poverty measure. Costings for social security are provided using the IPPR Tax and Benefit Model. Other policies do not come with specific costs and instead reduce costs and / or increase earnings. In these cases, we have not estimated the potential cost of the policies to drive the change (e.g. changing in the function of Jobcentre Plus, or attempts to increase housing supply) as there are a range of ways in which this could be delivered, with very significant variations in the costs associated with them.

Note that in some cases, certain policies may lead to small increases in estimates of H&H and / or for specific nations or regions. This is due to the nature of the policies and how they interact with the distribution of those who gain from them, compared to the median. For example, a policy that increases incomes for those slightly below / at median income, could lead to an increase in measured H&H despite providing significant benefits to those on low incomes (since, it increases the median and therefore raises the H&H threshold, dragging more people into measured H&H). Equally, some policies may benefit large numbers of people across the UK, but not in one particular nation, meaning that overall H&H and median resources may increase across the UK – but the number of people in H&H in that nation / region could increase.

[58] Note this is without taking into account any multiplier impacts of these policies.

# Methodology

Our approach uses the same methodology as outlined in each of the public spending, wellbeing, economy and fiscal impact sections above. To understand the impacts of each policy on these costs, we use estimates of the net number of people (1) flowing from H&H to non-poverty, (2) from H&H to shallower forms of poverty (the at risk group) and (3) from shallower forms of poverty (the at risk group) to non-poverty. This will have different implications to changes in the propensities for services use. Some cost buckets are relevant only to children – e.g. education and children's social care – while others affect both adults and children. By combining the net flow of people between different groups, the propensities of service use and the relevant unit costs, we then calculate the change in costs that would be associated with this policy approach.

The tables below provide summary impacts for each of the policies that we have modelled. Showing, (where feasible) the cost of the policy, impacts on H&H and the subsequent impacts on costs. Results are shown for the fifth year after policy implementation to provide an estimate of a "steady state" impact. This is particularly important for the impacts on H&H (and therefore resulting cost reductions) as the smoothing mechanism in the SMC measure of poverty means that H&H estimates change over time as the poverty line responds to any changes in median incomes resulting from the policy. The first table is for the UK, and subsequent tables provide results for the each of the UK's four nations.

As an example of the interpretation of the results, we can see that the Income Maximisation policy is estimated to increase social security expenditure in the fifth year of the costing. This is associated with:

- A reduction in H&H of 565,000.
- Total benefits of £5.0bn, comprised of
    - £775m lower public spending;
    - £2.9bn from increases in employment and earnings; and
    - £1.4bn resulting from increased tax take and lower social security spending from those who enter employment and increase earnings.
- Individual wellbeing benefits for adults, that are valued at £4.7bn.

*Table 24a: Policy impacts in Year 5*

| Policy | Total change in resources | Reduction in the number of people at risk of H&H | Total benefits (public spending, economy, fiscal) | Reduced public spending | Increased employment and productivity | Increased tax revenue and lower social security payments | Value of increased subjective wellbeing (adults) |
|---|---|---|---|---|---|---|---|
| **Income maximisation** | £12.8bn increase in social security spend | -565,000 | £5.0bn | £775m | £2.9bn | £1.4bn | £4.7bn |
| **Remove two child limit and benefit cap** | £4.4bn increase in social security spend | -875,000 | £4.0bn | £1.4bn | £1.8bn | £710m | £2.0bn |
| **Remove two child limit** | £3.3bn increase in social security spend | -670,000 | £3.1bn | £1.1bn | £1.4bn | £540m | £1.5bn |
| **Remove benefit cap** | £0.8bn increase in social security spend | -120,000 | £570m | £154m | £310m | £120m | £335m |
| **Extend Scottish Child Payment** | £13.1bn increase in social security spend | -1,700,000 | £9.7bn | £3.2bn | £4.6bn | £1.8bn | £5.1bn |
| **Essentials Guarantee** | £20.6bn increase in social security spend | -2,000,000 | £16.8bn | £2.6bn | £10.0bn | £4.2bn | £11.4bn |
| **Essentials Guarantee (Removal of Benefit Cap)** | £21.8bn increase in social security spend | -2,200,000 | £17.6bn | £2.8bn | £10.5bn | £4.4bn | £11.9bn |

*Table 24b: Policy impacts in Year 5 - continued*

| Policy | Total change in resources | Reduction in the number of people at risk of H&H | Total benefits (public spending, economy, fiscal) | Reduced public spending | Increased employment and productivity | Increased tax revenue and lower social security payments | Value of increased subjective wellbeing (adults) |
|---|---|---|---|---|---|---|---|
| **Extend Free School meals (Primary & UC only)** | £0.5bn increase in social security spend | -70,000 | £535m | £210m | £230m | £96m | £255m |
| **Extend Free School meals (All in primary)** | £1.3bn increase in social security spend | -55,000 | £515m | £185m | £215m | £110m | £260m |
| **Extend Free School meals (All on UC)** | £1.4bn increase in social security spend | -240,000 | £1.4bn | £470m | £670m | £280m | £740m |
| **Extend Free School meals (All)** | £3.6bn increase in social security spend | -180,000 | £1.4bn | £480m | £620m | £310m | £725m |
| **Real Living Wage** | Increases earnings | -20,000 | £815m | £80 | £485m | £250m | £510m |
| **Guarantee Living Hours** | Increases earnings | 0 | 0 | 0 | 0 | 0 | 0 |
| **Extend HSF (1)** | £0.6bn increase spend | -80,000 | £555m | £40m | £345m | £135 | £400m |
| **Extend HSF (2)** | £0.6bn increase spend | | £485m | | | | |

*Table 24c: Policy impacts in Year 5 - continued*

| Policy | Total change in resources | Reduction in the number of people at risk of H&H | Total benefits (public spending, economy, fiscal) | Reduced public spending | Increased employment and productivity | Increased tax revenue and lower social security payments | Value of increased subjective wellbeing (adults) |
|---|---|---|---|---|---|---|---|
| **Increase in Social Housing** | Reduces housing costs | -95,000 | £585m | £95m | £365m | £125m | £380m |
| **Improved JCP** | Increases earnings | -30,000 | £860m | £290m | £435m | £140m | £300m |
| **Extend Scottish Carer's Allowance** | £0.4bn increase in social security spend | -35,000 | £395m | £5m | £265m | £125m | £335m |
| **Uprate LHAs** | £3.1bn increase in social security spend | -265,000 | £1.5bn | £420m | £835m | £251m | £865m |
| **Create grant for UC advance** | £0.8bn increase in social security spend | -140,000 | £895m | £155m | £540m | £200m | £605m |
| **Reduce disability employment gap** | Increases earnings | -320,000 | £2.2bn | £405m | £1.3bn | £450m | £1.4bn |
| **Reduce UC taper** | £3.6bn increase in social security spend | -380,000 | £2.8bn | £585m | £1.6bn | £625m | 1.7bn |

*Table 25a: Policy impacts in Year 5 – England – headlines*

| Policy | Reduction in the number of people at risk of H&H | Total benefits (public spending, economy, fiscal) | Reduced public spending | Increased employment and productivity | Increased tax revenue and lower social security payments |
|---|---|---|---|---|---|
| Income maximisation | -488,000 | £4,190 m | £605 m | £2,455m | £1,130 m |
| Remove two child limit and benefit cap | -776,000 | £3,520 m | £1,265 m | £1,625m | £630 m |
| Remove two child limit | -596,000 | £2,705 m | £985 m | £1,240m | £480 m |
| Remove benefit cap | -113,000 | £535 m | £125 m | £290 m | £115 m |
| Extend Scottish Child Payment | -1,512,000 | £8,560 m | £2,830 m | £4,105m | £1,625 m |
| Essentials Guarantee | -1,631,000 | £13,505 m | £2,360 m | £8,020m | £3,345 m |
| Essentials Guarantee (Removal of Benefit Cap) | -1,777,000 | £14,210 m | £2,140 m | £8,370m | £3,485 m |
| Extend Free School meals (Primary & UC only) | -64,000 | / | / | / | £85 m |
| Extend Free School meals (All in primary) | -57,000 | / | / | / | £115 m |
| Extend Free School meals (All on UC) | -214,000 | £1,340 m | £450 m | £625 m | £260 m |
| Extend Free School meals (All) | -176,000 | £1,385 m | £455 m | £620 m | £310 m |
| Real Living Wage | -46,000 | / | / | / | £285 m |
| Guarantee Living Hours | 3,000 | / | / | / | £0 m |
| Extend HSF (1) | -98,000 | / | / | / | £145 m |
| Extend HSF (2) | -74,000 | / | / | / | £125 m |
| Increase in Social Housing | -83,000 | £520 m | £85 m | £325 m | £115 m |
| Improved JCP | -73,000 | / | / | / | £155 m |
| Extend Scottish Carer's Allowance | -31,000 | / | / | / | £110 m |
| Uprate LHAs | -249,000 | £1,415 m | £395 m | £785 m | £235 m |
| Create grant for UC advance | -132,000 | £800 m | £135 m | £480 m | £180 m |
| Reduce disability employment gap | -260,000 | £1,700 m | £325 m | £1,030 m | £345 m |
| Reduce UC taper | -354,000 | £2,585 m | £525 m | £1,480 m | £580 m |

*Table 25b: Policy impacts in Year 5 – England – public spending detail*

| Policy | Reduction in the number of people at risk of H&H | Reduced public spending total | Education | Healthcare | Homelessnes s | Rough sleeping | Children's social care |
|---|---|---|---|---|---|---|---|
| Income maximisation | -488,000 | £605 m | £45 m | £325 m | £155 m | £5 m | £80 m |
| Remove two child limit and benefit cap | -776,000 | £1,265 m | £210 m | £405 m | £250 m | £5 m | £390 m |
| Remove two child limit | -596,000 | £985 m | £165 m | £315 m | £190 m | £5 m | £305 m |
| Remove benefit cap | -113,000 | £125 m | £20 m | £40 m | £35 m | £0 m | £35 m |
| Extend Scottish Child Payment | -1,512,000 | £2,830 m | £475 m | £985 m | £485 m | £10 m | £875 m |
| Essentials Guarantee | -1,631,000 | £2,360 m | £275 m | £995 m | £570 m | £15 m | £510 m |
| Essentials Guarantee (Removal of Benefit Cap) | -1,777,000 | £2,140 m | £240 m | £920 m | £520 m | £10 m | £445 m |
| Extend Free School meals (Primary & UC only) | -64,000 | / | / | / | / | / | / |
| Extend Free School meals (All in primary) | -57,000 | / | / | / | / | / | / |
| Extend Free School meals (All on UC) | -214,000 | £450 m | £80 m | £155 m | £70 m | £0 m | £145 m |
| Extend Free School meals (All) | -176,000 | £455 m | £90 m | £150 m | £55 m | £0 m | £165 m |
| Real Living Wage | -46,000 | / | / | / | / | / | / |
| Guarantee Living Hours | 3,000 | / | / | / | / | / | / |
| Extend HSF (1) | -98,000 | / | / | / | / | / | / |
| Extend HSF (2) | -74,000 | / | / | / | / | / | / |
| Increase in Social Housing | -83,000 | £85 m | £10 m | £35 m | £25 m | £0 m | £15 m |
| Improved JCP | -73,000 | / | / | / | / | / | / |
| Extend Scottish Carer's Allowance | -31,000 | / | / | / | / | / | / |
| Uprate LHAs | -249,000 | £395 m | £50 m | £165 m | £80 m | £0 m | £95 m |
| Create grant for UC advance | -132,000 | £135 m | £10 m | £55 m | £40 m | £0 m | £25 m |
| Reduce disability employment gap | -260,000 | £325 m | £25 m | £180 m | £85 m | £0 m | £40 m |
| Reduce UC taper | -354,000 | £525 m | £65 m | £215 m | £115 m | £5 m | £125 m |

*Table 26a: Policy impacts in Year 5 – Scotland – headlines*

| Policy | Reduction in the number of people at risk of H&H | Total benefits (public spending, economy, fiscal) | Reduced public spending | Increased employment and productivity | Increased tax revenue and lower social security payments |
|---|---|---|---|---|---|
| Income maximisation | **-99,800** | **£795 m** | **£154 m** | **£505 m** | **£130 m** |
| Remove two child limit and benefit cap | **-40,300** | **£170 m** | **£31 m** | **£110 m** | **£30 m** |
| Remove two child limit | **-26,800** | **£115 m** | **£13 m** | **£80 m** | **£20 m** |
| Remove benefit cap | **-4,700** | **£20 m** | **£8 m** | **£10 m** | **£5 m** |
| Extend Scottish Child Payment | **-84,100** | **£435 m** | **£24 m** | **£305 m** | **£110 m** |
| Essentials Guarantee | **-190,100** | **£1,455 m** | **£216 m** | **£1,045m** | **£200 m** |
| **Essentials Guarantee (Removal of Benefit Cap)** | **-203,600** | **£1,520 m** | **£227 m** | **£1,090m** | **£205 m** |
| Extend Free School meals (Primary & UC only) | **0** | **/** | **/** | **/** | **/** |
| Extend Free School meals (All in primary) | **6,500** | **/** | **/** | **/** | **/** |
| Extend Free School meals (All on UC) | **5,800** | **-£10 m** | **-£6 m** | **-£15 m** | **£10 m** |
| Extend Free School meals (All) | **6,500** | **-£25 m** | **-£15 m** | **-£25 m** | **£15 m** |
| Real Living Wage | **21,600** | **/** | **/** | **/** | **/** |
| Guarantee Living Hours | **1,900** | **/** | **/** | **/** | **/** |
| Extend HSF (1) | **6,500** | **/** | **/** | **/** | **/** |
| Extend HSF (2) | **5,800** | **/** | **/** | **/** | **/** |
| Increase in Social Housing | **-14,000** | **£45 m** | **£5 m** | **£40 m** | **-£5 m** |
| Improved JCP | **15,700** | **/** | **/** | **/** | **/** |
| Extend Scottish Carer's Allowance | **0** | **/** | **/** | **/** | **/** |
| Uprate LHAs | **-3,000** | **£20 m** | **£14 m** | **£5 m** | **£5 m** |
| Create grant for UC advance | **-5,800** | **£30 m** | **£1 m** | **£15 m** | **£10 m** |
| Reduce disability employment gap | **-35,800** | **£230 m** | **£31 m** | **£170 m** | **£30 m** |
| Reduce UC taper | **-9,300** | **£100 m** | **£26 m** | **£45 m** | **£30 m** |

*Table 26b: Policy impacts in Year 5 – Scotland – public spending detail*

| Policy | Reduction in the number of people at risk of H&H | Reduced public spending - total | Education | Healthcare | Homelessness | Rough sleeping | Children's social care |
|---|---|---|---|---|---|---|---|
| Income maximisation | -99,800 | £154 m | £4 m | £84 m | £32 m | £1 m | £33 m |
| Remove two child limit and benefit cap | -40,300 | £31 m | £1 m | £8 m | £13 m | £0 m | £9 m |
| Remove two child limit | -26,800 | £13 m | £0 m | £1 m | £9 m | £0 m | £3 m |
| Remove benefit cap | -4,700 | £8 m | £0 m | £3 m | £2 m | £0 m | £3 m |
| Extend Scottish Child Payment | -84,100 | £24 m | £0 m | -£3 m | £27 m | £1 m | -£1 m |
| Essentials Guarantee | -190,100 | £216 m | £5 m | £106 m | £61 m | £1 m | £42 m |
| **Essentials Guarantee (Removal of Benefit Cap)** | -203,600 | £227 m | £5 m | £110 m | £65 m | £1 m | £45 m |
| Extend Free School meals (Primary & UC only) | 0 | / | / | / | / | / | / |
| Extend Free School meals (All in primary) | 6,500 | / | / | / | / | / | / |
| Extend Free School meals (All on UC) | 5,800 | -£6 m | £0 m | -£4 m | -£2 m | £0 m | £0 m |
| Extend Free School meals (All) | 6,500 | -£15 m | £0 m | -£9 m | -£2 m | £0 m | -£4 m |
| Real Living Wage | 21,600 | / | / | / | / | / | / |
| Guarantee Living Hours | 1,900 | / | / | / | / | / | / |
| Extend HSF (1) | 6,500 | / | / | / | / | / | / |
| Extend HSF (2) | 5,800 | / | / | / | / | / | / |
| Increase in Social Housing | -14,000 | £5 m | £0 m | £0 m | £4 m | £0 m | £1 m |
| Improved JCP | 15,700 | / | / | / | / | / | / |
| Extend Scottish Carer's Allowance | 0 | / | / | / | / | / | / |
| Uprate LHAs | -3,000 | £14 m | £1 m | £8 m | £1 m | £0 m | £5 m |
| Create grant for UC advance | -5,800 | £1 m | £0 m | £3 m | £2 m | £0 m | -£3 m |
| Reduce disability employment gap | -35,800 | £31 m | £0 m | £22 m | £11 m | £0 m | -£3 m |
| Reduce UC taper | -9,300 | £26 m | £1 m | £16 m | £3 m | £0 m | £6 m |

*Table 27a: Policy impacts in Year 5 – Wales – headlines*

| Policy | Reduction in the number of people at risk of H&H | Total benefits (public spending, economy, fiscal) | Reduced public spending | Increased employment and productivity | Increased tax revenue and lower social security payments |
|---|---|---|---|---|---|
| Income maximisation | **28,600** | **£50 m** | **-£3 m** | **-£100 m** | **£150 m** |
| Remove two child limit and benefit cap | **-38,500** | **£300 m** | **£115 m** | **£65 m** | **£120 m** |
| Remove two child limit | **-28,900** | **£255 m** | **£111 m** | **£50 m** | **£100 m** |
| Remove benefit cap | **-2,700** | **£30 m** | **£1 m** | **£5 m** | **£20 m** |
| Extend Scottish Child Payment | **-57,100** | **£605 m** | **£203 m** | **£105 m** | **£300 m** |
| Essentials Guarantee | **-125,600** | **£1,395 m** | **£111 m** | **£695 m** | **£585 m** |
| **Essentials Guarantee (Removal of Benefit Cap)** | **-138,500** | **£1,455 m** | **£116 m** | **£725 m** | **£610 m** |
| Extend Free School meals (Primary & UC only) | **-4,800** | **/** | **/** | **/** | **/** |
| Extend Free School meals (All in primary) | **-4,800** | **/** | **/** | **/** | **/** |
| Extend Free School meals (All on UC) | **-27,300** | **£140 m** | **£11 m** | **£55 m** | **£75 m** |
| Extend Free School meals (All) | **-10,000** | **£140 m** | **£21 m** | **£25 m** | **£100 m** |
| Real Living Wage | **3,300** | **/** | **/** | **/** | **/** |
| Guarantee Living Hours | **0** | **/** | **/** | **/** | **/** |
| Extend HSF (1) | **-1,100** | **/** | **/** | **/** | **/** |
| Extend HSF (2) | **-1,100** | **/** | **/** | **/** | **/** |
| Increase in Social Housing | **0** | **£5 m** | **£3 m** | **£0 m** | **£5 m** |
| Improved JCP | **28,600** | **/** | **/** | **/** | **/** |
| Extend Scottish Carer's Allowance | **-600** | **/** | **/** | **/** | **/** |
| Uprate LHAs | **-3,900** | **£45 m** | **£1 m** | **£20 m** | **£25 m** |
| Create grant for UC advance | **-1,800** | **£65 m** | **£18 m** | **£35 m** | **£10 m** |
| Reduce disability employment gap | **-4,900** | **£170 m** | **£31 m** | **£70 m** | **£65 m** |
| Reduce UC taper | **-10,500** | **£125 m** | **£20 m** | **£55 m** | **£50 m** |

*Table 27b: Policy impacts in Year 5 – Wales – public spending detail*

| Policy | Reduction in the number of people at risk of H&H | Reduced public spending - total | Education | Healthcare | Homelessness | Rough sleeping | Children's social care |
|---|---|---|---|---|---|---|---|
| Income maximisation | **28,600** | **-£3 m** | **£0 m** | **£9 m** | **-£9 m** | **£0 m** | **-£2 m** |
| Remove two child limit and benefit cap | **-38,500** | **£115 m** | **£10 m** | **£45 m** | **£12 m** | **£0 m** | **£47 m** |
| Remove two child limit | **-28,900** | **£111 m** | **£10 m** | **£44 m** | **£9 m** | **£0 m** | **£47 m** |
| Remove benefit cap | **-2,700** | **£1 m** | **£0 m** | **£0 m** | **£1 m** | **£0 m** | **£0 m** |
| Extend Scottish Child Payment | **-57,100** | **£203 m** | **£19 m** | **£80 m** | **£18 m** | **£0 m** | **£85 m** |
| Essentials Guarantee | **-125,600** | **£111 m** | **£4 m** | **£47 m** | **£40 m** | **£1 m** | **£19 m** |
| **Essentials Guarantee (Removal of Benefit Cap)** | **-138,500** | **£116 m** | **£4 m** | **£48 m** | **£44 m** | **£1 m** | **£19 m** |
| Extend Free School meals (Primary & UC only) | **-4,800** | **/** | **/** | **/** | **/** | **/** | **/** |
| Extend Free School meals (All in primary) | **-4,800** | **/** | **/** | **/** | **/** | **/** | **/** |
| Extend Free School meals (All on UC) | **-27,300** | **£11 m** | **£0 m** | **£2 m** | **£9 m** | **£0 m** | **£0 m** |
| Extend Free School meals (All) | **-10,000** | **£21 m** | **£2 m** | **£8 m** | **£3 m** | **£0 m** | **£8 m** |
| Real Living Wage | **3,300** | **/** | **/** | **/** | **/** | **/** | **/** |
| Guarantee Living Hours | **0** | **/** | **/** | **/** | **/** | **/** | **/** |
| Extend HSF (1) | **-1,100** | **/** | **/** | **/** | **/** | **/** | **/** |
| Extend HSF (2) | **-1,100** | **/** | **/** | **/** | **/** | **/** | **/** |
| Increase in Social Housing | **0** | **£3 m** | **£0 m** | **£2 m** | **£0 m** | **£0 m** | **£1 m** |
| Improved JCP | **28,600** | **/** | **/** | **/** | **/** | **/** | **/** |
| Extend Scottish Carer's Allowance | **-600** | **/** | **/** | **/** | **/** | **/** | **/** |
| Uprate LHAs | **-3,900** | **£1 m** | **£0 m** | **-£1 m** | **£1 m** | **£0 m** | **£0 m** |
| Create grant for UC advance | **-1,800** | **£18 m** | **£1 m** | **£11 m** | **£1 m** | **£0 m** | **£5 m** |
| Reduce disability employment gap | **-4,900** | **£31 m** | **£1 m** | **£23 m** | **£2 m** | **£0 m** | **£6 m** |
| Reduce UC taper | **-10,500** | **£20 m** | **£2 m** | **£7 m** | **£3 m** | **£0 m** | **£8 m** |

*Table 28a: Policy impacts in Year 5 – Northern Ireland – headlines*

| Policy | Reduction in the number of people at risk of H&H | Total benefits (public spending, economy, fiscal) | Reduced public spending | Increased employment and productivity | Increased tax revenue and lower social security payments |
|---|---|---|---|---|---|
| Income maximisation | -7,100 | £110 m | £16 m | £40 m | £55 m |
| Remove two child limit and benefit cap | -18,500 | £180 m | £40 m | £30 m | £110 m |
| Remove two child limit | -18,500 | £155 m | £40 m | £30 m | £85 m |
| Remove benefit cap | 0 | £25 m | £0 m | £ 0 m | £25 m |
| Extend Scottish Child Payment | -54,900 | £485 m | £127 m | £125 m | £235 m |
| Essentials Guarantee | -57,300 | £770 m | £93 m | £270 m | £405 m |
| **Essentials Guarantee (Removal of Benefit Cap)** | -57,300 | £795 m | £93 m | £280 m | £420 m |
| Extend Free School meals (Primary & UC only) | -1,500 | / | / | / | / |
| Extend Free School meals (All in primary) | 0 | / | / | / | / |
| Extend Free School meals (All on UC) | -3,000 | £70 m | £12 m | £5 m | £50 m |
| Extend Free School meals (All) | -1,300 | £90 m | £14 m | £25 m | £75 m |
| Real Living Wage | 600 | / | / | / | / |
| Guarantee Living Hours | -500 | / | / | / | / |
| Extend HSF (1) | -1,400 | / | / | / | / |
| Extend HSF (2) | -1,400 | / | / | / | / |
| Increase in Social Housing | 500 | £0 m | £0 m | £0 m | £5 m |
| Improved JCP | 600 | / | / | / | / |
| Extend Scottish Carer's Allowance | -2,100 | / | / | / | / |
| Uprate LHAs | -11,200 | £65 m | £9 m | £25 m | £30 m |
| Create grant for UC advance | -2,800 | £25 m | £3 m | £5 m | £20 m |
| Reduce disability employment gap | -16,900 | £130 m | £14 m | £65 m | £50 m |
| Reduce UC taper | -7,400 | £90 m | £13 m | £20 m | £55 m |

*Table 28b: Policy impacts in Year 5 – Northern Ireland – public spending detail*

| Policy | Reduction in the number of people at risk of H&H | Reduced public spending - total | Education | Healthcare | Homelessness | Rough sleeping | Children's social care |
|---|---|---|---|---|---|---|---|
| Income maximisation | -7,100 | £16 m | £1 m | £12 m | £2 m | £0 m | £1 m |
| Remove two child limit and benefit cap | -18,500 | £40 m | £8 m | £13 m | £6 m | £0 m | £12 m |
| Remove two child limit | -18,500 | £40 m | £8 m | £13 m | £6 m | £0 m | £12 m |
| Remove benefit cap | 0 | £0 m | £0 m | £0 m | £0 m | £0 m | £0 m |
| Extend Scottish Child Payment | -54,900 | £127 m | £26 m | £44 m | £18 m | £0 m | £39 m |
| Essentials Guarantee | -57,300 | £93 m | £12 m | £43 m | £18 m | £0 m | £19 m |
| **Essentials Guarantee (Removal of Benefit Cap)** | -57,300 | £93 m | £12 m | £43 m | £18 m | £0 m | £19 m |
| Extend Free School meals (Primary & UC only) | -1,500 | / | / | / | / | / | / |
| Extend Free School meals (All in primary) | 0 | / | / | / | / | / | / |
| Extend Free School meals (All on UC) | -3,000 | £12 m | £3 m | £5 m | £1 m | £0 m | £4 m |
| Extend Free School meals (All) | -1,300 | £14 m | £3 m | £6 m | £0 m | £0 m | £5 m |
| Real Living Wage | 600 | / | / | / | / | / | / |
| Guarantee Living Hours | -500 | / | / | / | / | / | / |
| Extend HSF (1) | -1,400 | / | / | / | / | / | / |
| Extend HSF (2) | -1,400 | / | / | / | / | / | / |
| Increase in Social Housing | 500 | £0 m | £0 m | £0 m | £0 m | £0 m | £0 m |
| Improved JCP | 600 | / | / | / | / | / | / |
| Extend Scottish Carer's Allowance | -2,100 | / | / | / | / | / | / |
| Uprate LHAs | -11,200 | £9 m | £1 m | £4 m | £4 m | £0 m | £1 m |
| Create grant for UC advance | -2,800 | £3 m | £0 m | £2 m | £1 m | £0 m | £0 m |
| Reduce disability employment gap | -16,900 | £14 m | £0 m | £7 m | £5 m | £0 m | £1 m |
| Reduce UC taper | -7,400 | £13 m | £2 m | £5 m | £2 m | £0 m | £3 m |

Notes for Tables 25-28: Figures that are too small to be reliably reported are indicated with "/". For the scenario of "increase in social housing", the numbers are displayed but fall slightly below the suggested threshold for reporting. Totals may not sum due to rounding.

# ANNEX: Regression outputs for wage, employment and life satisfaction scarring

The following tables provide summary outputs for each of the scarring regression analyses. They show impacts of experiences of H&H on wages, employment and life satisfaction over an eight-year period (each is conducted as a separate regression). Detail of control variables included are also shown, however for ease of presentation we have not included full coefficient details of these variables. Across each of the regressions, results for these controls conformed directionally and in terms of scale and significance to that we would expect from the existing literature. The authors would be happy to discuss these results further with any interested parties.

Annex Table 1: Employment scarring regression results summary

| Regression | Impact (percentage point difference in employment likelihood) | Significance |
|---|---|---|
| **Impact variables** | | |
| Year 1 | | |
| Entering H&H this year | -0.09 | *** |
| Exiting H&H this year | -0.02 | *** |
| In H&H in last year and this year | -0.09 | *** |
| Not in H&H either this year or last | Base category | |
| Year 5 | | |
| Entering H&H this year | -0.07 | *** |
| Exiting H&H this year | -0.03 | *** |
| In H&H in last year and this year | -0.07 | *** |
| Not in H&H either this year or last | Base category | |
| Year 8 | | |
| Entering H&H this year | -0.06 | *** |
| Exiting H&H this year | -0.01 | |
| In H&H in last year and this year | -0.09 | *** |
| Not in H&H either this year or last | Base category | |
| **Control variables** | | |
| Age | Yes | |
| Age squared | Yes | |
| Sex | Yes | |
| Ethnicity | Yes | |
| Family type | Yes | |
| Region | Yes | |
| Health | Yes | |
| Years since finishing full-time education | Yes | |
| Residuals from regression in t-1 | Yes | |
| Interview year | Yes | |

Annex Table 2: Wage scarring regression results summary

| Regression | Impact (percentage difference in wages) | Significance |
|---|---|---|
| **Impact variables** | | |
| Year 1 | | |
| Entering H&H this year | -0.08 | *** |
| Exiting H&H this year | -0.02 | *** |
| In H&H in last year and this year | -0.06 | *** |
| Not in H&H either this year or last | Base category | |
| Year 5 | | |
| Entering H&H this year | -0.05 | *** |
| Exiting H&H this year | -0.03 | * |
| In H&H in last year and this year | -0.03 | |
| Not in H&H either this year or last | Base category | |
| Year 8 | | |
| Entering H&H this year | -0.04 | |
| Exiting H&H this year | -0.06 | * |
| In H&H in last year and this year | -0.08 | |
| Not in H&H either this year or last | Base category | |
| **Control variables** | | |
| Age | Yes | |
| Age squared | Yes | |
| Sex | Yes | |
| Ethnicity | Yes | |
| Family type | Yes | |
| Region | Yes | |
| Health | Yes | |
| Years since finishing full-time education | Yes | |
| Residuals from regression in t-1 | Yes | |
| Interview year | Yes | |

Annex Table 3: Living standards scarring regression results summary

| Regression | Impact (points difference on wellbeing scale) | Significance |
|---|---|---|
| **Impact variables** | | |
| Year 1 | | |
| Entering H&H this year | -0.33 | *** |
| Exiting H&H this year | -0.29 | *** |
| In H&H in last year and this year | -0.37 | *** |
| Not in H&H either this year or last | Base category | |
| Year 5 | | |
| Entering H&H this year | -0.30 | *** |
| Exiting H&H this year | -0.26 | *** |
| In H&H in last year and this year | -0.38 | *** |
| Not in H&H either this year or last | Base category | |
| Year 8 | | |
| Entering H&H this year | -0.15 | *** |
| Exiting H&H this year | -0.16 | * |
| In H&H in last year and this year | -0.38 | *** |
| Not in H&H either this year or last | Base category | |
| **Control variables** | | |
| Age | Yes | |
| Age squared | Yes | |
| Sex | Yes | |
| Ethnicity | Yes | |
| Family type | Yes | |
| Region | Yes | |
| Health | Yes | |
| Years since finishing full-time education | | |
| Residuals from regression in t-1 | Yes | |
| Interview year | Yes | |