

Child material deprivation

Background

In addition to the low income indicators presented in this publication, there are also two measures of low income and material deprivation which are intended to capture children in families experiencing the material effects of poverty. These are:

Low income and material deprivation. This measure captures children in families who have a material deprivation score of 25 or more and household income below 70 per cent of contemporary median income, Before Housing Costs.

Severe low income and material deprivation (severe poverty). This measure captures children in families who have a material deprivation score of 25 or more and household income below 50 per cent of contemporary median income, Before Housing Costs.

Appendix 2 provides background detail on how these two measures are calculated.

Child material deprivation items

A family's material deprivation score is calculated using a series of 21 questions included in the Family Resources Survey (FRS). Each question asks whether or not the family is able to afford a particular item. The choice of the 21 items was based on analysis by independent researchers and was intended to reflect the kinds of goods and services which people in the UK felt were necessary and which everyone should be able to afford. Items were only chosen if they were considered necessary by a sufficient proportion of people surveyed (see DWP Working Paper 13, Developing Deprivation Questions for the Family Resources Survey by McKay and Collard: <http://research.dwp.gov.uk/asd/asd5/WP13.pdf>).

A family is allocated a score for each item which they lack because they are unable to afford it. The scores are weighted according to the proportion of families in the population at large who own each item (this is known as prevalence weighting). The scores for each family are summed to produce an overall material deprivation score. Families with a score above a certain threshold are identified as experiencing material deprivation.

A family is therefore identified as materially deprived if there are a sufficiently high number of items, which are considered by people to be necessary, that they are unable to afford.

Updating the items

When the low income and material deprivation measure was developed, it was envisaged that the 21 items would need to be updated at regular intervals, to reflect changes in the items and activities that people in the UK believe to be necessary. This would ensure that the measure remained a relative measure of poverty. In 2009, the Child Poverty Unit commissioned an independent analytical review of the items (see DWP Research Report Number 746, *Review of the child material deprivation items in the Family Resources Survey*, by S McKay, available at <http://research.dwp.gov.uk/asd/asd5/rports2011-2012/rrep746.pdf>).

Based on the findings of this review, four new questions about four additional items were introduced into the 2010/11 FRS. It was envisaged that these new items would be used in the future calculation of material deprivation scores, replacing four existing items that were identified by the research as potentially out of date, partly because the proportion of the population considering them necessary had fallen. It is not possible to say whether the large drop in the proportions of people rating items as necessary was mainly a recession 'blip', or instead part of a longer-term trend against certain 'social' measures of deprivation that will persist during an economic recovery.

For the 2011/12 survey year, the questions about the potentially out of date items were dropped from the survey. The questions on the 17 remaining items were common across all relevant survey years. So for 2010/11, the FRS included 25 questions, allowing for comparison of the material deprivation results using both the new list of 21 items and the original list of 21 items.

The new questions included in the 2010/11 FRS were:

- Does your child/do your children attend at least one regular organised activity a week outside school, such as sport or a youth group? (Child question)
- Does your child/do your children eat fresh fruit and/or vegetables every day? (Child question)
- Does your child have/do your children have a warm winter coat? (Child question)
- Do you (and your partner) keep up with bills and any regular debt repayments? (Adult question)

The questions not included in the 2011/12 FRS were:

- Does your child/do your children go swimming at least once a month? (Child question)
- Do you have a hobby or leisure activity? (Adult question)
- Do you (and your family/and your partner) have friends or family around for a drink or meal at least once a month? (Adult question)
- Do you have two pairs of all weather shoes for [all adults in Benefit unit]? (Adult question)

The 17 questions common to both survey years can be found in **Appendix 2**.

Table A3.1 gives key statistics about the new and old material deprivation items, while **Tables 4.7** and **4.8** present quintile distributions of income for children by

whether they or their parents have the material deprivation items, for the four new and four old items, and the 17 items which did not change.

Table A3.1 shows that compared to the four old items, families in the UK are more likely to own the four new items and less likely to lack the four new items due to an inability to afford them. The result of this is that when material deprivation scores are calculated using the updated list of items, the items considered when deciding if a family is materially deprived are more 'essential' (i.e. lacked by a smaller proportion of the population) than when using the old list.

Sensitivity of the headline low income and material deprivation child poverty measure to the items used and the threshold chosen

Using the new items instead of the old items translates into higher prevalence weights. Examination of the effect of increasing the sum of weights suggests that, broadly speaking, the higher the overall sum of weights, the lower the overall level of low income and material deprivation (see **Appendix 2** for details of the material deprivation measure calculation).

Table A3.2 shows that the low income and material deprivation statistics are quite sensitive to the combination of the threshold and items chosen. For a given threshold, using the 17 common items and the four new items gives low income and material deprivation levels of approximately 2 percentage points or 200-300,000 thousand children lower than using the 21 original items. The difference in terms of severe low income and material deprivation is approximately 0.5 percentage points or 50,000 children. This means that changing the items will effectively create a break in the data series.

Approach used for this report

For the 2010/11 Households Below Average Income report, we have chosen to present results based on the 17 items common across all survey years and the four old items. This is because more analysis is required to decide the most appropriate way to manage the introduction of the new items.

Next steps

For the 2011/12 FRS, only the new and common items are included in the survey. This means that in the 2011/12 HBAI report, the low income and material deprivation and the severe low income and material deprivation statistics will be based on the four new and 17 common items. We therefore need to take forward further analysis to decide how to present results based on this updated list of items.

One potential solution is to change the material deprivation threshold score from 2011/12 onwards.

The new threshold score would be chosen such that for the 2010/11 data (which includes all 25 items), there is approximately the same number of children captured when using the new items and the new threshold as when using the old items and the current threshold of 25.

This would mean that any change in the published time series between 2010/11 (using the old list and old threshold) and 2011/12 (using the new list and new threshold) would be due to changes in the circumstances of families rather than due to the changes to the items,

The best match is achieved if the threshold score is reduced by three. This is the case for both the low income and material deprivation measure and the severe low income and material deprivation measure. Minimising the difference would therefore mean that a threshold of 22 instead of the current 25 would be used in combination with the low income threshold, for 2011/12 onwards.

Over the next year, we will be working with stakeholders to decide the most appropriate basis for the series. The key alternatives are to continue to use the current threshold of 25, which will result in an obvious break in the series, reflecting the introduction of more 'essential' items (i.e. those lacked by a smaller proportion of the population), or to reduce the threshold so there is approximately the same number of children for 2010/11 using the new items and a lower threshold as using the old items and a threshold of 25.

Table A3.1: Ownership of the new and old material deprivation items and services, United Kingdom

Material deprivation questions	Have this	Want but can't afford this	Percentage of children	
			Don't want or need; doesn't apply	Weights
New material deprivation items				
For Children				
Attends regular organised activity outside school each week	66	9	26	0.625
Eat fresh fruit or vegetables every day	89	4	7	0.880
Have a warm winter coat	96	2	1	0.963
For Adults				
Keep up with bills and regular debt repayments	88	12	0	0.887

Material deprivation questions	Have this	Want but can't afford this	Percentage of children	
			Don't want or need; doesn't apply	Weights
Old material deprivation items				
For Children				
Swimming at least once a month	55	11	34	0.527
For Adults				
A hobby or leisure activity	57	20	22	0.584
Have friends or family around for a drink or meal at least once a month	61	18	21	0.617
Two pairs of all weather shoes for each adult	89	10	1	0.890

Notes:

1. Material deprivation weights are calculated based on responses in the survey year in question.

Appendix 3

Table A3.2: Percentage and number of children falling below thresholds of low income and material deprivation based on different items and thresholds, United Kingdom, 2010/11

Source: FRS						
Common items plus	Threshold	Low income and material deprivation		Severe low income and material deprivation		All children
		Percentage	Number (millions)	Percentage	Number (millions)	
Old items	20	17	2.2	5	0.7	13.0
	21	17	2.2	5	0.6	13.0
	22	16	2.1	5	0.6	13.0
	23	16	2.1	5	0.6	13.0
	24	15	2.0	5	0.6	13.0
	25	14	1.9	4	0.6	13.0
	26	14	1.8	4	0.6	13.0
	27	14	1.8	4	0.5	13.0
	28	13	1.7	4	0.5	13.0
	29	13	1.6	4	0.5	13.0
30	12	1.6	4	0.5	13.0	
New items	20	16	2.1	5	0.6	13.0
	21	15	2.0	5	0.6	13.0
	22	15	1.9	5	0.6	13.0
	23	14	1.8	4	0.6	13.0
	24	13	1.7	4	0.5	13.0
	25	13	1.7	4	0.5	13.0
	26	12	1.6	4	0.5	13.0
	27	12	1.5	4	0.5	13.0
	28	11	1.4	3	0.4	13.0
	29	10	1.3	3	0.4	13.0
30	10	1.3	3	0.4	13.0	

Notes:

1. The income threshold used in the low income and material deprivation calculation is 70 per cent of median, Before Housing Costs.
2. The income threshold used in the severe low income and material deprivation calculation is 50 per cent of median, Before Housing Costs.