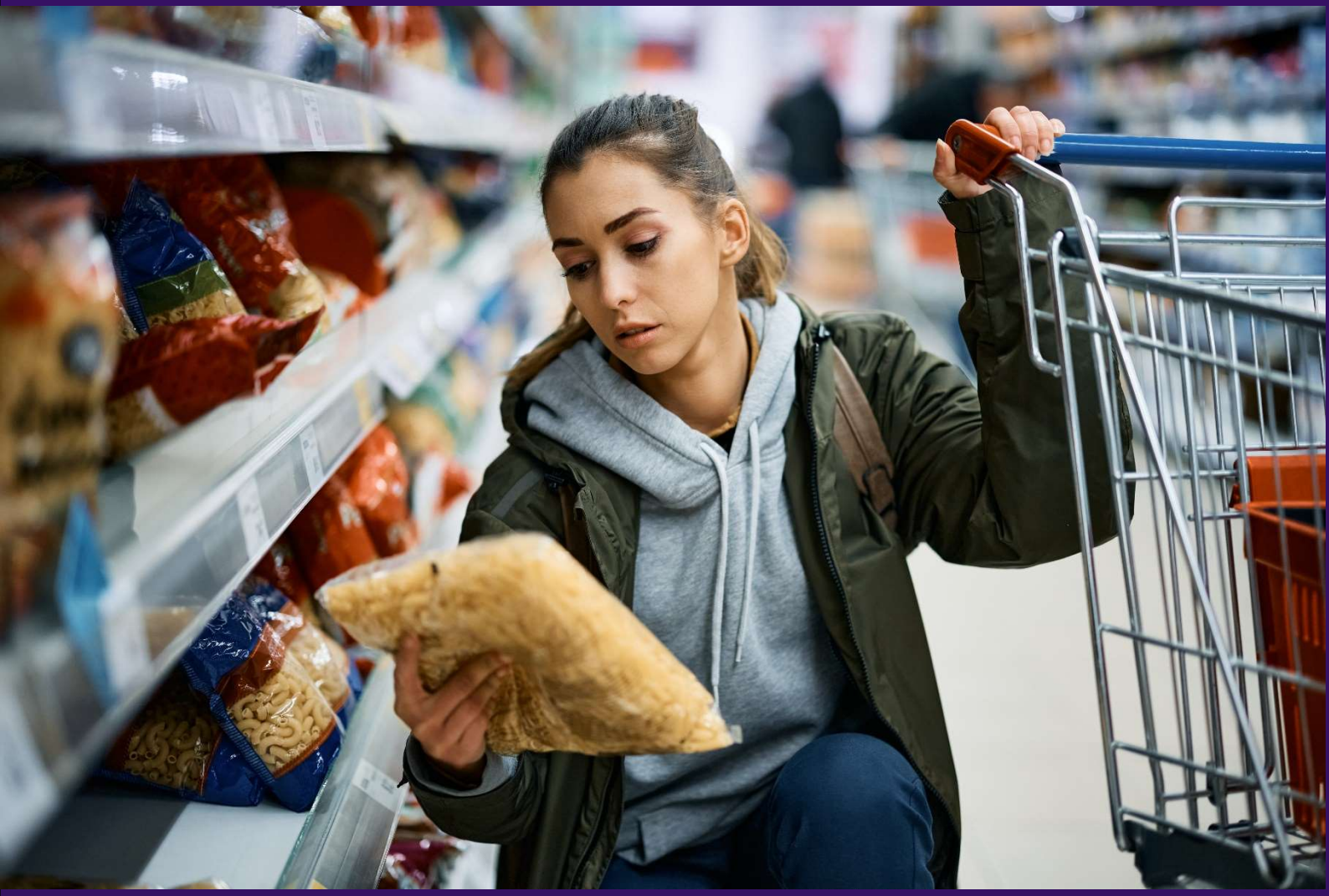

Constructing a Decent Living Index (DLI)

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Executive summary

This report outlines the preliminary development of a new index of inflation – the Decent Living Index (DLI) – that aims to track how the cost of maintaining a socially acceptable standard of living is changing over time.

The DLI is based on household-specific baskets of goods and services that the public agree are necessary to maintain a decent standard of living. This basket provides more than subsistence, and allows people to meet their material needs with modest elements of choice and to participate in society. This income threshold – the Minimum Income Standard (MIS) – reflects social norms and expectations regarding what is needed to live in dignity in the UK today. As such, the index moves beyond the macroeconomic purpose of the Consumer Prices Index (CPI) that is based around expenditure rather than *needs*.

The DLI has initially been calculated for two household types: a single, working-age female (SWAF), and a couple with two children of pre-school and primary school age (PP+2; partnered parents plus two), each of which has a detailed and specific basket of goods and services defined based on public consensus as part of the ongoing MIS research. To track the changes in the cost of these specific items at the agreed price-point, items are matched to the detailed price quotes published by the Office for National Statistics (ONS), which are used in the calculation of their own price indices, including CPI. Where it is not possible to match items exactly, proxies are used where appropriate. This allows tracking of the change in price of items at a specific price range (rather than the overall average change). Prices within 10% either side of the price specified within the MIS basket are included. For example, if a loaf of wholemeal bread is costed at £1 in the MIS basket, price information about loaves of wholemeal bread which are priced at between 90 pence and £1.10 in the CPI basket is extracted. Item-level inflation rates are used only in cases where nuanced price data is unavailable or unsuitable. The indices are weighted based on the cost of each item, with more expensive items contributing more to the final index.

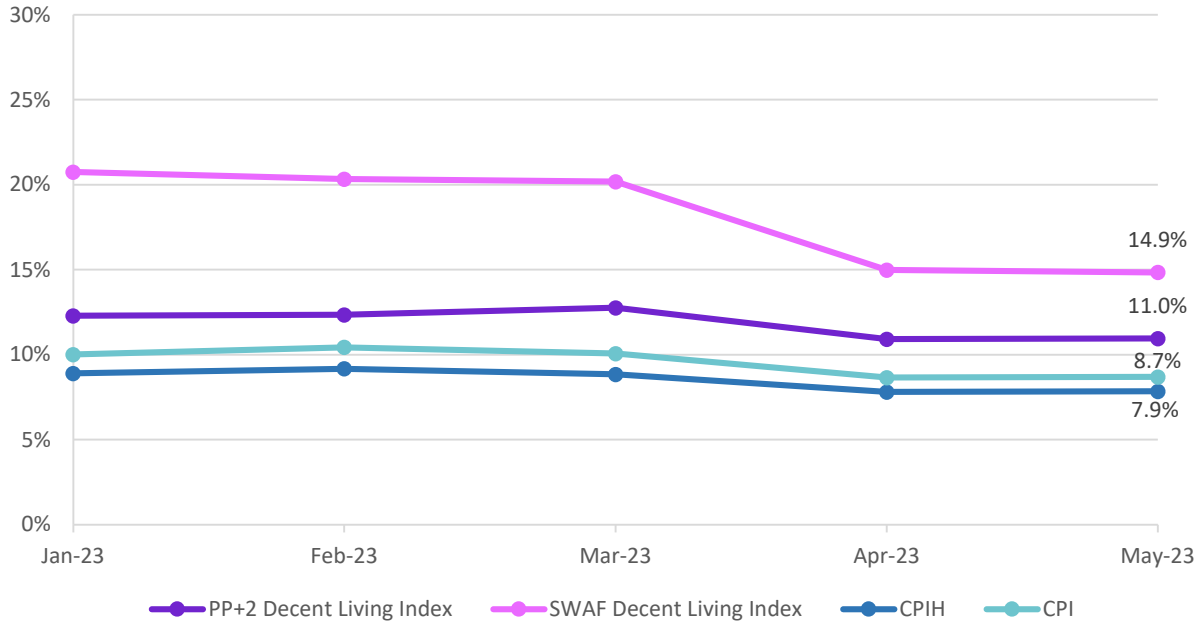
The preliminary results compare the DLI for the two household types with CPI and CPIH over the same period. Figure A shows the annual inflation rates for the different indices from January 2022 to May 2023. For both household types, the DLI is higher than CPI and CPIH, and the difference is particularly stark for the single working-age female. More detailed analysis shows that for the latter, the difference is strongly driven by the greater weight given to food and housing (which have higher than average inflation rates) for this household type, as compared to average consumption. Weighting also plays a role for the household with children, but to a lesser extent as their larger household, leading to both economies of scale and a wider range of needs, means that housing and food represent a smaller proportion of their overall budget. Nevertheless, these households are still experiencing a higher inflation rate than based on the average consumption patterns represented by CPI.

The findings provide some support for the view that households with lower incomes are facing greater financial pressures related to inflation than those with higher levels of income. However, our findings also indicate that it is not just those on the very lowest incomes who will feel a disproportionate impact of high inflation on their disposable income. For example,

prices for food and drink in the MIS basket on average sit at between 25% and 50% of the range of prices collected for CPI, so are low-to-mid range rather than the lowest cost items; the effects are likely to be felt for those further up the income distribution, albeit in the lower range.

While these findings are preliminary, they have the potential to inform debates around, for example, how we think about the adequacy of earnings in the context of high inflation, and how we should determine levels of income that entitle households to additional state support if high rates of inflation are leaving people far short of being able to achieve a minimum, socially acceptable standard of living. Ultimately, we hope that the DLI will be a valuable addition to the currently available suite of inflation indices, providing a unique opportunity to track the ways in which the changing cost of living affects people's ability to live with dignity.

Figure A **Annual inflation rate, DLI for couple with two children and single working-age female, compared with CPI and CPIH**



1 Introduction

Inflation continues to pose a considerable challenge to living standards in the UK. The price of many goods and services has increased dramatically over the last year, and inflation – as measured through the Consumer Prices Index (CPI) – has remained persistently high. Between June 2022 and June 2023, the overall rate of inflation was 7.9%, but within this, certain goods have seen even more dramatic increases: the price of food has increased by 17.3% in the same period, while domestic fuel[1] has increased by 23.3% (Office for National Statistics (ONS), 2023a). Within these broad categories, some products have seen even more substantial increases in prices over the past two years: analysis from Which? suggests that the price of food products such as milk, cheese, bread, and cakes has increased by over 30% since 2021 (Clark, 2023).

The impact of these rising living costs is not necessarily experienced evenly across the income distribution, and the extent to which incomes are keeping pace with increasing costs varies. A given household's experience of inflation will depend on their own unique expenditure patterns and what has happened to the price of the goods and services they are purchasing. CPI tells us what is happening to the general rate of inflation, based on a basket intended to represent average consumption across the population. While this serves as a useful way of tracking what is happening to the cost of living overall, it does not tell us anything about how much more expensive this may be becoming for those, for example, on low to modest incomes, whose consumption patterns may well be different both from the average and from those on higher incomes. The ONS (2022a) have looked at how price changes in this average basket have been experienced across different income deciles. Their analysis shows that in general those with lower incomes have experienced higher rates of inflation than those with higher incomes, based on differing spending patterns across deciles. The Household Costs Indices (ONS, 2022b) aim to measure UK households' experiences of changing prices and costs, broken down by different household characteristics. Included within this is an analysis of the experiences of high- and low-income households and how these might differ. However, while these developments are useful in pointing to variation in how inflation is experienced, the starting point remains a basket of goods and services designed to represent average consumption at a macroeconomic level, rather than a basket rooted in public consensus about needs for specific types of household.

Developments and refinements in how we track what is happening to prices and how this may impact on particular groups are welcome. But critically these will not address an important set of questions about the relationship between prices and living standards: What is happening to the price of the goods and services that a household *needs* for a decent living standard? Is a decent standard of living becoming more expensive over time, meaning that ever fewer households can afford this? How does this differ to trends in more general measures of inflation?

[1] This includes electricity and gas as well as other fuels, such as LPG and domestic heating oil.

The analysis set out here aims to begin to address these questions. The purpose of developing a 'Decent Living Index' (DLI) is to estimate the rate of inflation that would be experienced by households purchasing the goods and services needed for a decent, minimum socially acceptable standard of living, as represented by the Minimum Income Standard (MIS). The ongoing MIS research (Padley and Stone, 2023; Davis et al, 2022) establishes what the public agree different household compositions need in order to meet their material needs and participate in society. Groups of members of the public construct baskets of goods and services, describing in detail what would need to be consumed in order to provide a minimum, socially acceptable standard of living – a standard rooted in public consensus, reflecting social norms and expectations regarding what is needed to live in dignity in the UK today. These MIS baskets are not simply comprised of the cheapest available products,[2] but rather capture what the public agree would adequately meet people's needs, building in a degree of choice and enabling participation in society, and centred on an agreed definition of a minimum living standard:

> *A minimum standard of living in the UK today includes, but is more than just, food, clothes and shelter. It is about having what you need in order to have the opportunities and choices necessary to participate in society*.

MIS is used by a wide range of groups and organisations, from pension providers who are interested in how much people need to save to achieve a decent standard of living in retirement, to charitable organisations who use MIS to help quantify the financial support they provide to those in need. MIS informs the setting of the voluntary Living Wage, which is paid by thousands of employers including Ikea, Nationwide and Barclays bank.

The Decent Living Index is intended to offer a new indicator of inflation, adding to our overall understanding of what is happening to the cost of living, but providing an indicator firmly rooted in a clearly articulated living standard, rather than more nebulous ideas of average consumption. CPI, and the basket on which this is based, is intended to represent average consumption across the population, tracking changes in the prices of goods and services as consumed by households. However, while measuring changes in the price of consumption in this way is important in a macroeconomic context, for example for informing the setting of interest rates, it does not necessarily reflect changes in costs experienced by households. As noted above, partly in recognition of this limitation, the ONS reports inflation rates for different types of households both based on CPI and using the experimental Household Costs Indices (HCIs).

However, these indices are still based on expenditure, and therefore remain conceptually different to the DLI, which is built around MIS budgets. This gives the DLI a more direct connection to how changes in prices affect the cost of meeting defined *needs* at a particular standard of living, across different household types. For example, in the MIS focus groups, participants agreed that a household comprising a couple plus two children should be able to do their grocery shopping in Tesco and should not have to buy the very cheapest 'value' version of every item. Their food basket, put together with input from a nutritionist to

[2] The detailed MIS baskets are available here: https://www.lboro.ac.uk/research/crsp/minimum-income-standard/household-budgets/

ensure that people are able to maintain a healthy diet, includes, for example, a box of 12 eggs every week. Despite the fact that the price of eggs has increased substantially over the past year, in the context of MIS the *need* for this product remains unchanged. So, while in reality, people may no longer be able to afford to purchase the item every week, therefore affecting *expenditure* data, using a basket based on defined needs allows us to track how the cost of maintaining a decent standard of living has changed, irrespective of how able people are to meet this standard based on their income.

Creating such an index is a challenging endeavour. This report outlines the findings from the first phase of work, focussing on two of the thirteen 'core' MIS households:[3] a single working-age female, and a couple with a child aged 2-4 years and a primary school aged child. The remainder of this report provides a brief overview of the approach we have taken in producing the DLI, followed by a discussion of the results. The report ends with reflections on the value of the DLI, implications for measurement of inflation, and potential future refinement and development of the DLI.

[3] The thirteen 'core' MIS households are: single working-age female and male; partnered working-age; single female and male pensioner; partnered pensioner; a lone parent with a toddler; a lone parent with a child aged 2-4 years and a primary school aged child; a lone parent with a child aged 2-4 years, a primary school aged child and a secondary school aged child; a couple with a toddler; a couple with a child aged 2-4 years and a primary school aged child; a couple with a child aged 2-4 years, a primary school aged child and a secondary school aged child; and a couple with a toddler, a child aged 2-4 years, a primary school aged child and a secondary school aged child.

2 Method

The Centre for Research in Social Policy has been researching and updating MIS – which forms the basis of the DLI – since 2008. Following this first publication, new research has been undertaken every two years, based on fresh discussions with members of the public in order to capture changes in social norms and shared expectations as well as changes in costs. The updating of MIS budgets has typically been undertaken across a four-year cycle (Table 1), where the baskets are either fully rebased (researched and priced 'from scratch') or reviewed by focus groups for different sets of household types every two years. In intervening years, currently the minimum budgets are uprated using a combination of CPI and other data.[4] As a result of this cycle of rebasing and reviewing MIS budgets, the single working-age female budget used for this initial DLI analysis originates from April 2022 and the couple with two children budget is from April 2020, so that each is a fully rebased (and repriced) budget. The linking of these budgets to CPI and CPIH data starts with their respective April origin months, before being processed month-by-month through to the latest release of inflation data (May 2023, at the time of writing).

Table 1 The MIS updating cycle

	Year 1	Year 2	Year 3	Year 4
Working-age households with children	Rebase	Inflation uprating	Review	Inflation uprating
Working-age and pensioner households without children	Review	Inflation uprating	Rebase	Inflation uprating

The DLI brings together these data from the detailed, costed MIS baskets of goods and services for specified household types with price data collected by the ONS for use in their own inflation indices (CPI, CPIH and RPI). The ONS price data cover every item in the CPI basket of goods and services, with multiple collected prices published for most items.

Production of the DLI first involves finding CPI items that are qualitatively comparable to those in the MIS basket – essentially matching items in the MIS basket with items in the CPI basket. Wherever possible, within each of these matched CPI item categories we have selected only the products that have a similar cost to the product which features in the MIS basket. For this first iteration of the DLI, we have used a price range for these items of + or – 10%. For example, if a loaf of wholemeal bread is costed at £1 in the MIS basket, we have used the price information about loaves of wholemeal bread which are priced at between 90 pence and £1.10 in the CPI basket for the same month. Adjustments or alternatives to this process are needed in some cases, to enable the closest, most 'like-with-like' comparisons between MIS and CPI data; that is, the matching of items is not an entirely straightforward process and can result in an exact match, a proxy match (with varying degrees of closeness) or no match at all.

[4] For example, increases in lower-quartile rents captured in Valuation Office Agency figures are used for private rents, survey data is used for childcare, and for domestic fuel, the defined level of energy consumption is repriced by a heating expert.

Table 2 shows some examples of each of these match types, from the MIS food and household goods baskets for the 2022 single working-age female adult budget.

Table 2 Examples of different 'match' types

MIS basket product	CPI basket item	Match
Tesco 80 Teabags 250G	Tea bags pkt of 80 (230g-250g)	Exact match
Wilko 28cm Aluminium Frying Pan with Lid	Frying pan 24-30cm	Exact match
Tesco Hash Browns 750G	Frozen chips 900g-1.5kg	Close proxy
Wilko Stacking Mugs 4pk	Dinner plate, approx diameter	Close proxy
Tesco Sage & Onion Stuffing Mix 170G	Herbs dried jar 3 - 20g	Proxy
Cookworks 700W Standard Microwave	Electric kettle - 1.5-1.7l	Proxy
Wilko Ironing Board 115x36cm	-	No match

The use of proxies is inevitable, and necessary, as CPI is made up of a basket of broadly representative items, rather than being based on an exhaustive list of goods and services. The ONS are exploring the use of web-scraped price data within the production of consumer price statistics, but currently acknowledge that it is impractical to measure the price changes of 'every product bought by every household' (ONS, 2023b: 27). Where an exact match with items in the MIS budgets was not possible, proxies have had to be used. As Table 2 shows, these have been chosen because of their similarities to the item in the MIS basket which can be taken to indicate a high likelihood of a similar rate of inflation. Where an item has no match (for example the ironing board in Table 2) or where there are fewer than 10 items in the CPI price quotes within the specified price range, the item is excluded from the DLI calculation.

A proxy item should still be a reasonable match for the original MIS product, conceptually and qualitatively, but they may nevertheless differ noticeably in price. An adjustment of the MIS product's price is therefore sometimes required to account for this, as shown in Table 3.

Table 3 Unit price adjustment primarily due to proxy items

MIS basket product	CPI basket item	Unit price (£)	Adjusted unit price (£)
Tesco Scottish Rough Oatcakes 250G	Cream crackers pack 200g-300g	0.80	0.39
Wilko Stacking Mugs 4pk	Dinner plate, approx. diameter	10.00	2.90
Tesco Garlic Each, avg. 12 cloves	Fresh veg-onions-per kg	0.25	0.85
Tesco Walnut Halves 100G	Packet of peanuts 150-300g	1.50	1.50

For example, the 2022 MIS SWAF food basket contains a packet of oatcakes, but this item is not included in the CPI. Cream crackers are the closest proxy, so we adjust the unit price using the (notably cheaper) cost of a pack of Tesco cream crackers. Many proxy items are also needed for MIS household goods baskets; as shown in Table 2, the CPI uses a dinner plate to represent all crockery items. Therefore, for the four mugs included in the MIS basket, we adjust the unit price to reflect the cost of a comparable dinner plate from the same retailer and brand (Wilko).

There are also some special cases where matches are handled slightly differently. **Desk-based matches** are cases where the ONS only provide one summary figure – a 'desk-based' costing – for a CPI item, instead of a detailed breakdown of prices. Examples of these desk-based costings in the CPI dataset include rent, water rates, insurance, transport fares, dental charges, technology, and women's coats. Due to the absence of price data, for these items we use the overall CPI item index provided by ONS.

Budget-based matches mostly stem from a minority of MIS basket items which are priced as more abstract fixed amounts of money, rather than using the cost of specific products from particular suppliers. The amounts are discussed and agreed by the focus group participants who decide on the contents of each household type's MIS basket. These include budgets for regular leisure activities, home maintenance, additional annual spending on celebration food and drink, and birthday and Christmas presents. For the purposes of the DLI, domestic fuel is also categorised as a budget-based match, primarily because of the need to combine CPI indices for electricity and gas; unlike the other budget-based items here, the MIS domestic fuel budgets are priced by a heating expert. Many of the budget-based MIS items are matched with several different CPI items, where these can provide a suitable range of proxies. For example, the single working-age female adult's budget for regular leisure activities uses an average of the CPI indices for leisure classes, swimming pool admission, cinema tickets and attendance at a 'cultural event'.

CPIH matches are the final category of match types. Currently this only encompasses Council Tax, which is not included in CPI but has its own index within CPIH.

Table 4 summarises the respective numbers of MIS budget items for which an exact match, a proxy match (close or otherwise), no match, a budget-based match, a desk-based match or a CPIH match was identified, for the SWAF and PP+2 household types. This provides a broad indication of how the MIS budget items are represented in CPI baskets, in the senses of conceptual similarity and levels of detail or price specificity.

Table 4 Summary of match types

	Single working-age female adult, April 2022 (412 items, total weekly cost £390.02)	**Partnered parents with two children, April 2020** (697 items, total weekly cost £745.74)
% of MIS budget items		
Exact match	47.6 % (*n* = 196)	43.2 % (*n* = 301)
Proxy	29.4 % (*n* = 121)	30.4 % (*n* = 212)
Desk-based, with match(es)	5.6 % (*n* = 23)	5.0 % (*n* = 35)
Budget-based, with match(es)	4.6 % (*n* = 19)	5.2 % (*n* = 36)
CPIH	0.2 % (*n* = 1)	0.1 % (*n* = 1)
No match	12.6 % (*n* = 52)	16.1% (*n* = 112)
% of weekly cost		
Exact match	21.5 % (£83.81)	21.0 % (£156.93)
Proxy	4.2 % (£16.21)	5.2 % (£38.92)
Desk-based, with match(es)	42.4 % (£165.39)	54.4 % (£405.55)
Budget-based, with match(es)	25.8 % (£100.56)	14.2 % (£105.93)
CPIH	4.2 % (£16.55)	3.8 % (£27.99)
No match	1.9 % (£7.50)	1.4 % (£10.48)

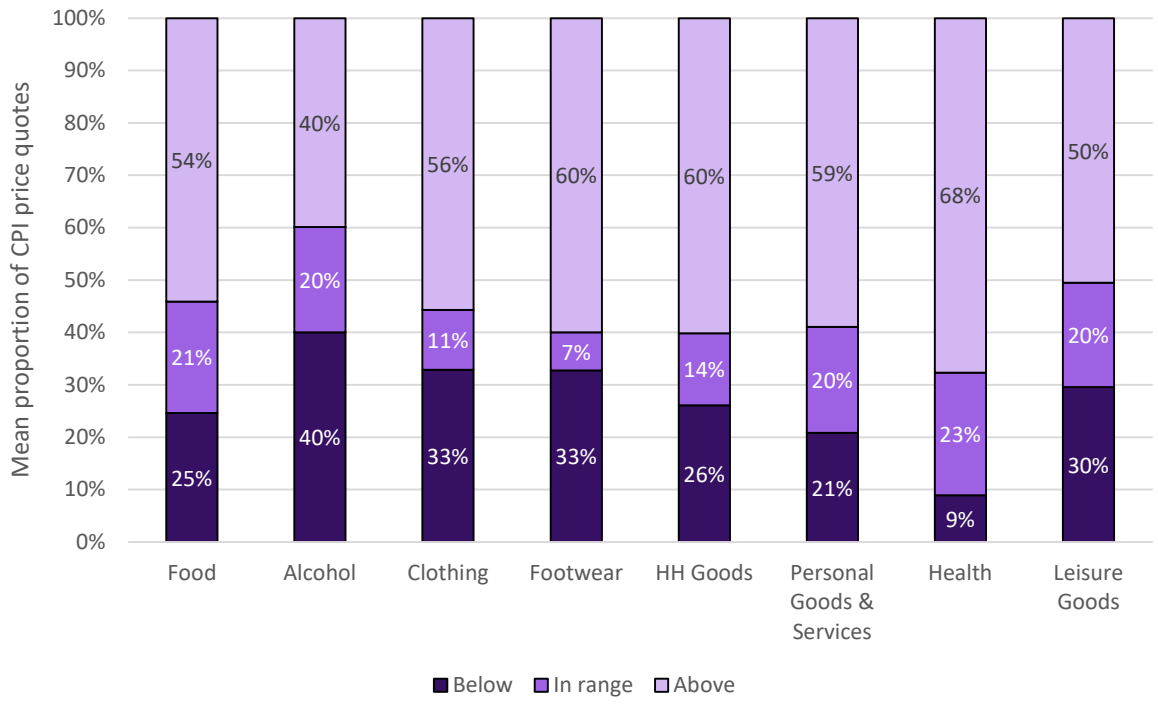
It was possible to find an exact, single-item and non-desk-based CPI match for almost half of the MIS items in both the SWAF (47.6%) and PP+2 (43.2%) budgets, although their proportions of the weekly costs were only slightly above 20%. Relatively few of these MIS items had no match at all in the CPI dataset, and just 1.9% and 1.4% of the weekly costs for each of the two family types are excluded for this reason. Single-item proxies were used for just under a third of the matches, but again account for very low proportions of the weekly costs, 4.2% and 5.2%. The majority of costs from each budget – just under 69% in each case – involve budget- or desk-based matches, desk-based matches in particular because these encompass the major expenses of rent and (for the PP+2 budget) childcare.

Figure 1 shows how the products in the CPI price lists compare to the thresholds of + or – 10% of the MIS basket price, on average, for the single working-age female budget.[5] There is some variation across budget areas, but in general, items in the MIS basket are falling in the

[5] This is a mean average for the items where price thresholds could be used, and it excludes items with fewer than 10 CPI products in the price range. The MIS basket prices have been adjusted where necessary for comparison with the CPI item categories.

bottom half of the distribution, although not in the lowest quartile. This reflects the fact that conceptually, MIS does not aim to represent a budget required to simply survive, but intends to allow individuals and households to live a decent life and participate in society, with an element of choice, albeit relatively limited.

Figure 1 **Distribution of CPI price quotes relative to ±10% of MIS item price, for single working-age female**



Having matched MIS and CPI items – and made any necessary adjustments to, for example, unit prices or to account for differences in quantities of items in MIS and CPI – we can track the month-to-month changes in prices for matched items. As the ONS does not provide an identifier for specific products within the price data, we do this by tracking forward product prices according to their 'base price' (the price in January), against which changes in prices are compared in each month. To return to the example of a loaf of bread costing £1 in the MIS basket, we would identify all those loaves of bread costing between 90p and £1.10 in April 2022. We would then record the January base price for those items, which might be between 85p and £1.05. In each month, we would then identify all loaves of bread with a January base price within that range and look at the rate of inflation for that subset of loaves. Finally, we weight the items in proportion to their share of all included items' weekly costs in the MIS budget, and then combine these figures to form the DLI for each household type. We produce both an overall DLI for each household type and calculations of its underlying inflation rates for comparison with the 12 main categories used in the CPI.

3 Results

Figure 2 shows the annual inflation rate based on the DLI for a single working-age female, comparing this to the overall values for CPI and CPIH. In the 12 months to January 2023, inflation was substantially higher based on the DLI than for either CPI or CPIH, with CPI at 10.1%, CPIH at 8.9% and DLI at 20.8%. The annual rates remained similar in the 12 months to February and March 2023, but in the 12 months to April there is a notable drop in the value of DLI, to 15.0%, and a relatively smaller decrease in CPI and CPIH, falling to 8.7% and 7.8%, respectively. Nevertheless, the rate based on DLI remains consistently higher than both CPI and CPIH in the year to May 2023.

Figure 2 Annual inflation rate, DLI for single working-age female, compared with CPI and CPIH

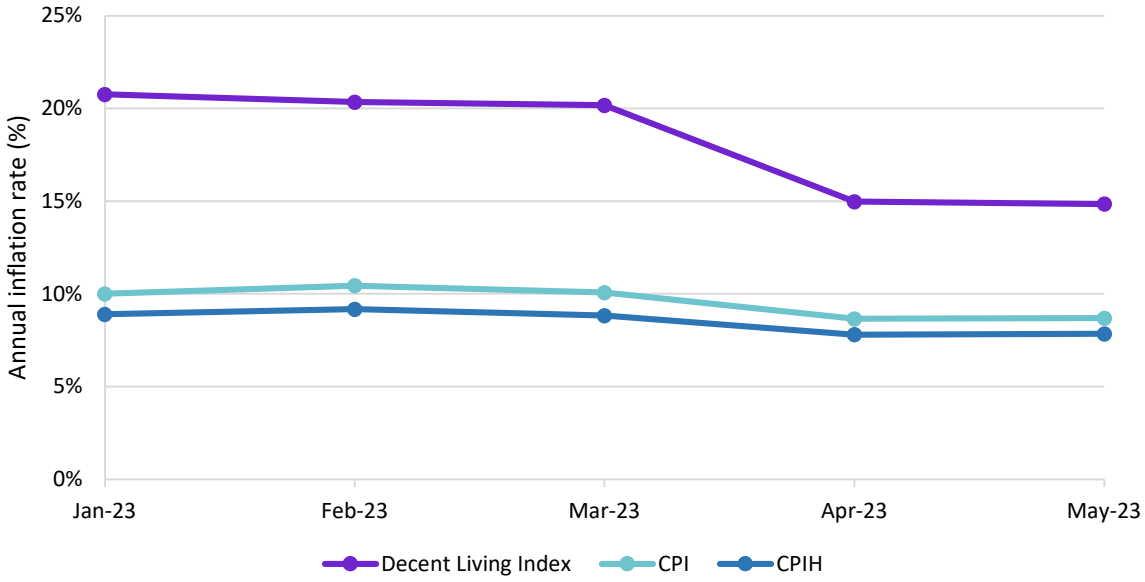


Figure 3 shows the annual inflation rate for the second household type included in this report – a couple with two children aged 2-4 years and of primary school age. As explained in the previous section, for this household type we have a longer time series as their MIS baskets were determined through new research in 2019-2020, and costed in April 2020, rather than in April 2022. Until January 2023, all three inflation indices are similar in magnitude and direction of travel, with the DLI tending to be closer to CPIH than to CPI. However, in January 2023, the DLI shows a sharp increase, moving above CPI for the first time since mid-2021.

Figure 3 **Annual inflation rate, DLI for coupled parents with 2-4 year old and primary school aged child, compared with CPI and CPIH**

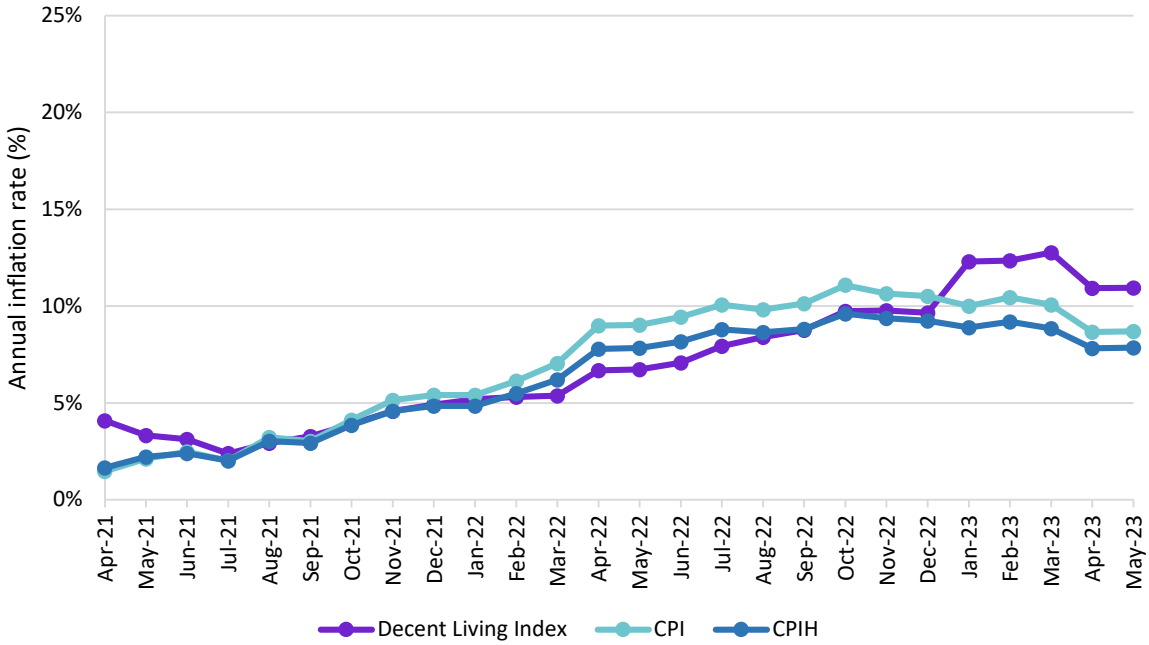
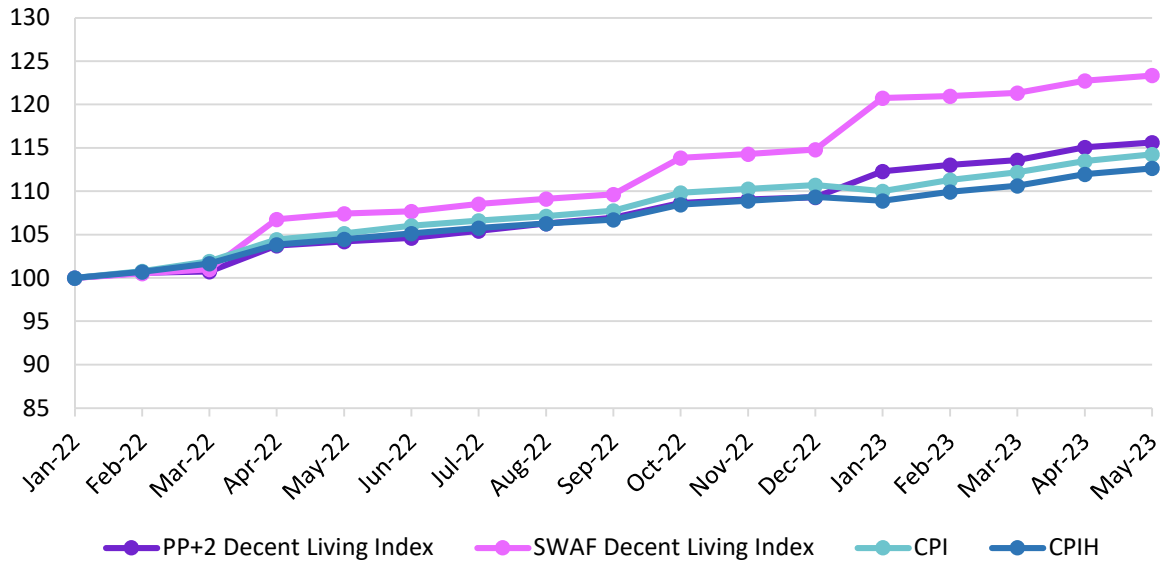


Figure 4 shows how the two household types compare, using the month-on-month change in indices for the single working-age female and the couple with two children, in comparison with CPI and CPIH. By May 2023, prices were 23% higher than in January 2022 for a single working-age female, compared with 16% for partnered parents with two children, 14% based on CPI, and 13% based on CPIH. This highlights that inflation based on the DLI remains substantially higher for the single working-age household than for the household with children, and that the gap between them has increased since the start of 2023. In January 2022, the total weekly MIS budget for a single working-age adult was £367;[6] by May 2023, the DLI indicates that they would need £453 to achieve the same standard of living – an additional £86 per week. For the household with children, the weekly cost would increase from £903 to £1,044 per week, including rent and childcare costs – an additional £141. Using CPI, a single working-age adult would be assumed to need only £48 additional income per week, and the household with children £114 per week.

[6] Deflated from April 2022, when pricing took place.

Figure 4 Monthly inflation rates (Jan 2022=100)



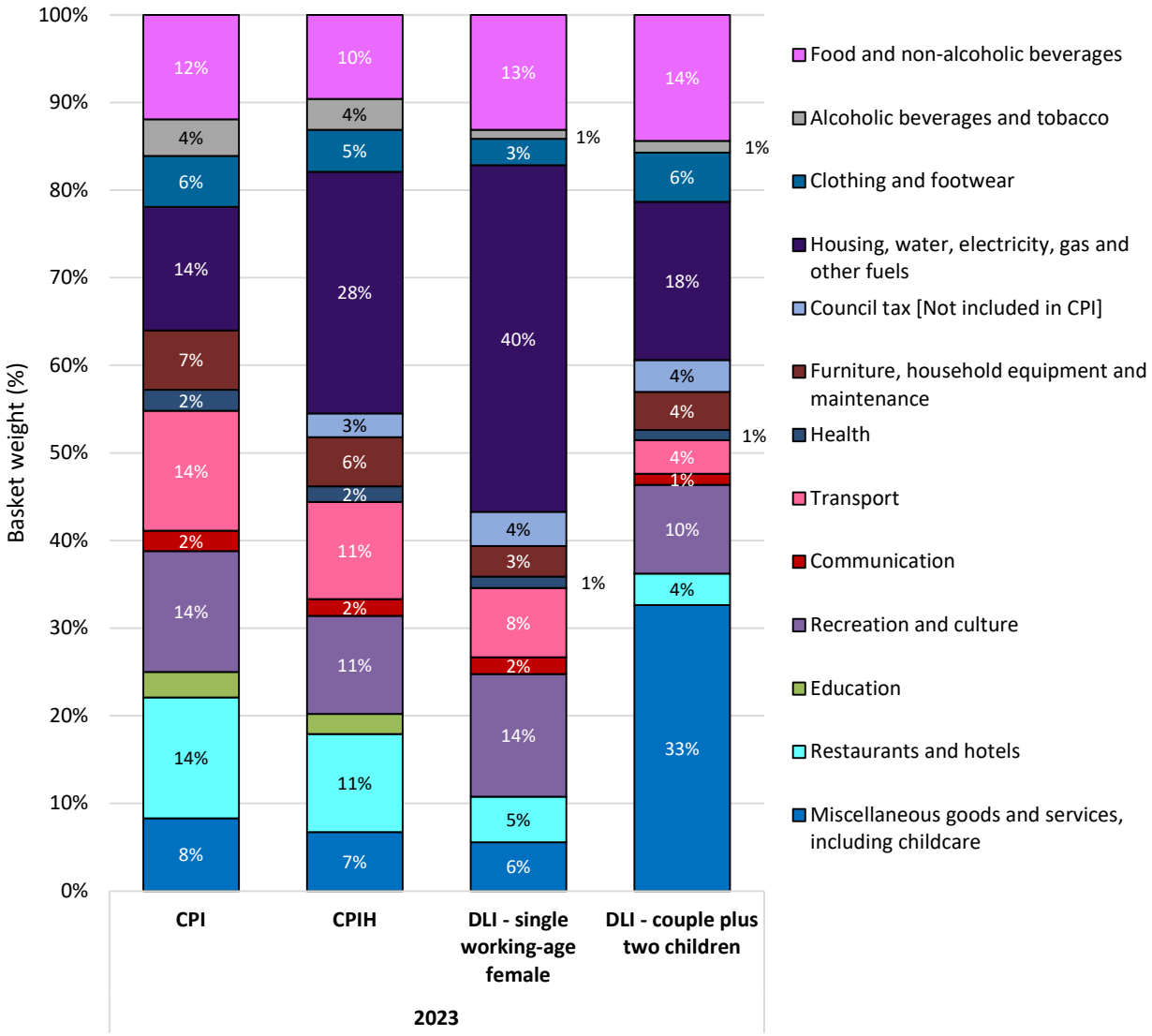
3.1 Weighting and composition of indices

Having looked at the different indices produced through the DLI and CPI/CPIH approaches, it is important to look at the key drivers of these trends. These relate both to the inflation rates in specific budget areas for the different indices, and also to the differential weight given to each of these budget areas within the calculation of the indices.

Figure 5 shows the extent to which different budget areas contribute to the overall calculation of each inflation index in 2023. For the single working-age female basket, the clearest difference with the other indices is the contribution made by housing. In 2023, housing accounted for 40% of the budget for this household, compared with just 14% of the CPI basket, 28% of the CPIH basket, and 18% of the DLI for the household with children. The particularly high contribution of housing for the single working-age household as compared to the household with children relates in part to the more extensive basket of goods required for the larger household (with housing – including domestic fuel costs – therefore contributing a smaller proportion to costs). In January 2022, the weekly cost attributed to housing for a single working-age female was £139, compared with £164 for a couple with two children – a difference of 17%. In both cases, the weekly cost had increased by around £50 per week by May 2023, but because this represents a higher proportion of the single working-age budget, the impact was more pronounced.

The other striking difference is the contribution of 'Miscellaneous goods and services' in the basket for the couple with two children. This is largely accounted for by the inclusion of childcare costs in this category. These costs are especially high for this household as it includes a pre-school age child, and therefore the costs of full-time nursery. However, inflation in this budget area was much lower than for housing, with the weekly cost increasing by less than £20 per week for the couple with children, and remaining relatively stable for the single working-age adult.

Figure 5 Basket weight values for broad budget areas: CPI, CPIH and DLI, 2023



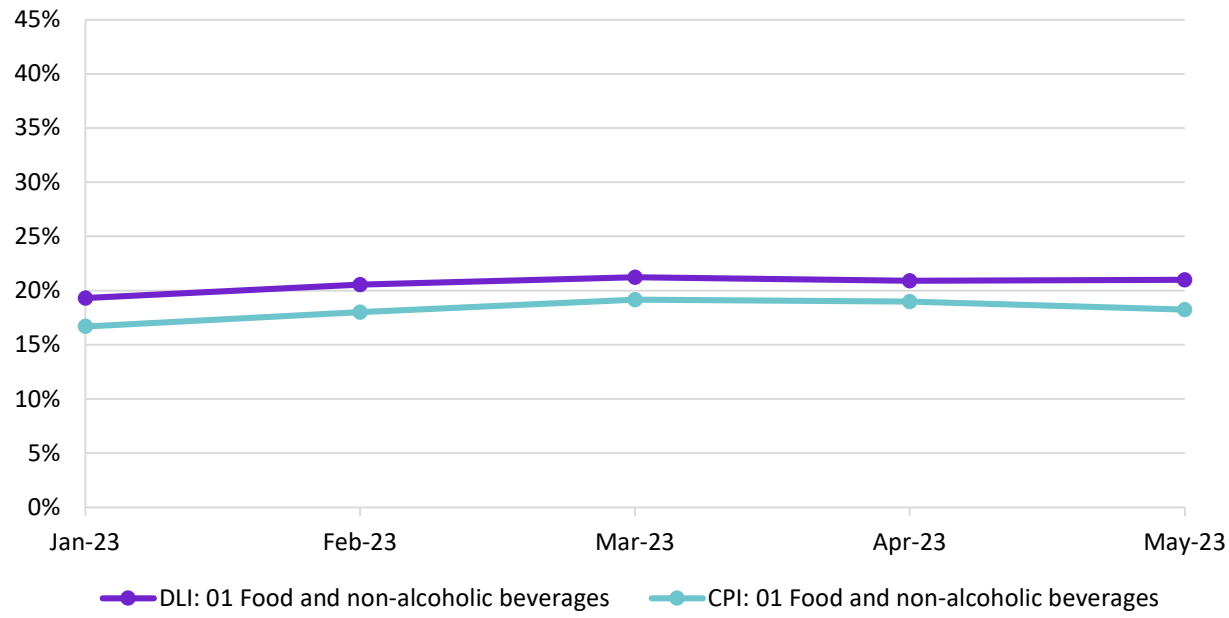
The substantial contribution of childcare costs to the household budget in this context highlights how the composition of a particular household can have an important impact on the nature and distribution of costs. For families who only have older, school-age children, and for whom childcare requirements are minimal, the additional costs associated with having children will be related to day-to-day expenses such as food, travel, social and cultural participation, and domestic energy consumption, as well as more infrequent expenditure on goods and services such as clothing and technology. These costs are all likely to increase as children get older (Hirsch and Stone, 2022). This emphasises the importance of acknowledging how the DLI can vary considerably across different household compositions. This can be seen as both a strength and limitation of the approach – this is a strength because it captures the ways in which different households face different pressures due to how their living costs are composed, but could be seen as a weakness when constructing a more generally useful inflation index because of the 'specificity' of the results.

We now focus in on those budget areas that, for the two household types presented here, appear to be the main drivers of the observed differences between CPI/CPIH and the DLI: food and drink, and housing (including domestic fuel).

DLI for a single working-age female

Figure 6 shows the annual inflation rate for food and drink (excluding alcohol), comparing CPI with the DLI for a single working-age female. The DLI remains moderately, but consistently, higher than CPI from January 2023 onwards. This shows that the increase in the cost of maintaining a diet that meets the requirements for a minimum, socially acceptable living standard is, for this household type, higher than would be expected based on CPI, with an inflation index of 21% in the 12 months to May 2023, compared with 18% based on CPI. This gives some credence to the view that food, at the lower end of the price spectrum, is rising in price at a slightly higher rate than average. The ONS have produced experimental statistics tracking the price of the lowest-cost grocery items, with the most recent estimates for the 12 months to September 2022 (ONS, 2023c) showing that inflation on these items is slightly higher than the overall CPI for food and non-alcoholic drinks, at 17% versus 15%.[7] However, our findings suggest that this effect is not just about the very lowest priced items – as shown in Figure 1 (section 3), prices for food and drink in the MIS basket, on average, sit at between 25% and 50% of the range of prices collected for CPI, so are low-to-mid range rather than the lowest cost items.

Figure 6 **Annual inflation rate, DLI (single working-age female) and CPI: Food and drink**

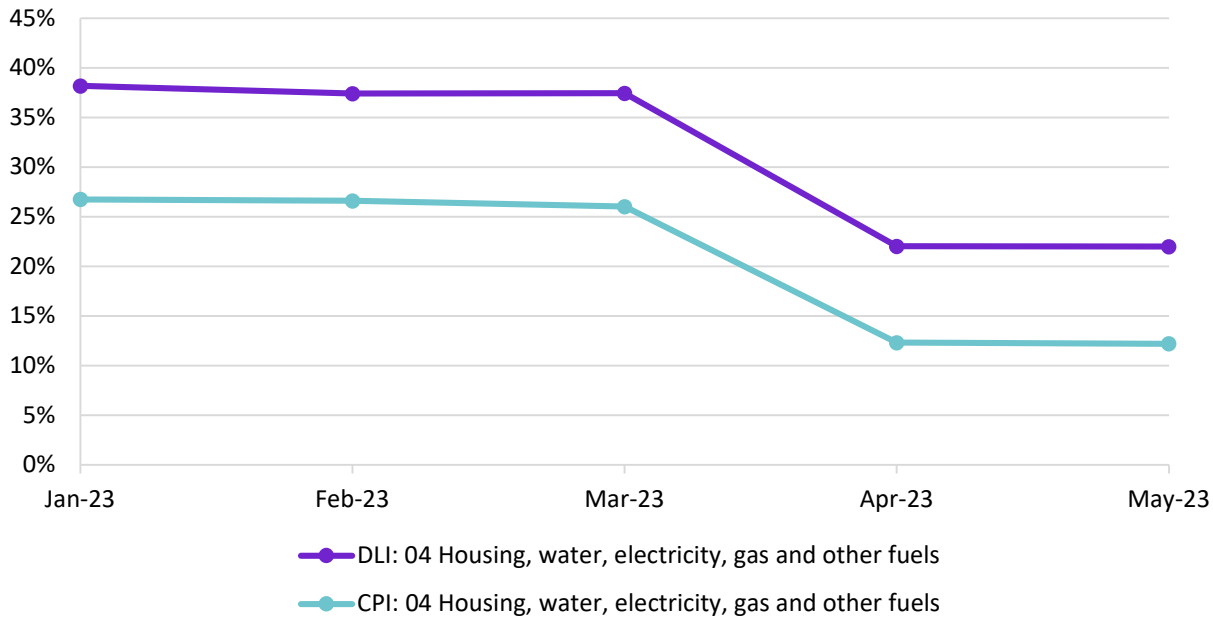


[7] Note that these statistics are highly experimental, and are based on a subset of just 30 grocery items.

Figure 7 shows the annual inflation rates for housing. This budget area includes the costs of renting a property, domestic fuel bills, home maintenance and water rates. The annual inflation rate based on DLI follows an almost identical trend to CPI. Largely driven by the substantial increases in the cost of domestic fuel in 2022, inflation in this budget area is extremely high until the 12 months to April 2023, at which point there is a large drop in both inflation indices (although each remains high). This is because April 2022 saw the first dramatic jump in the cost of domestic energy, when the energy price cap increased by 54%. Therefore, although prices remained high in April 2023, the difference compared with 12 months previously was much less pronounced than in earlier months.

Across the period from January to May 2023, the annual inflation attributed to housing for DLI remained consistently higher than for CPI. This is in part because the composition of the housing category for the two baskets of goods and services (CPI and DLI) is not identical; for example, in relation to domestic fuel the DLI includes only the cost of gas and electricity, while CPI also includes the prices for oil and solid fuels. Fuel (which has by far the highest rate of inflation within the housing category) also has a higher weight within the DLI basket as compared to CPI.

Figure 7 Annual inflation rate, DLI (single working-age female) and CPI: Housing



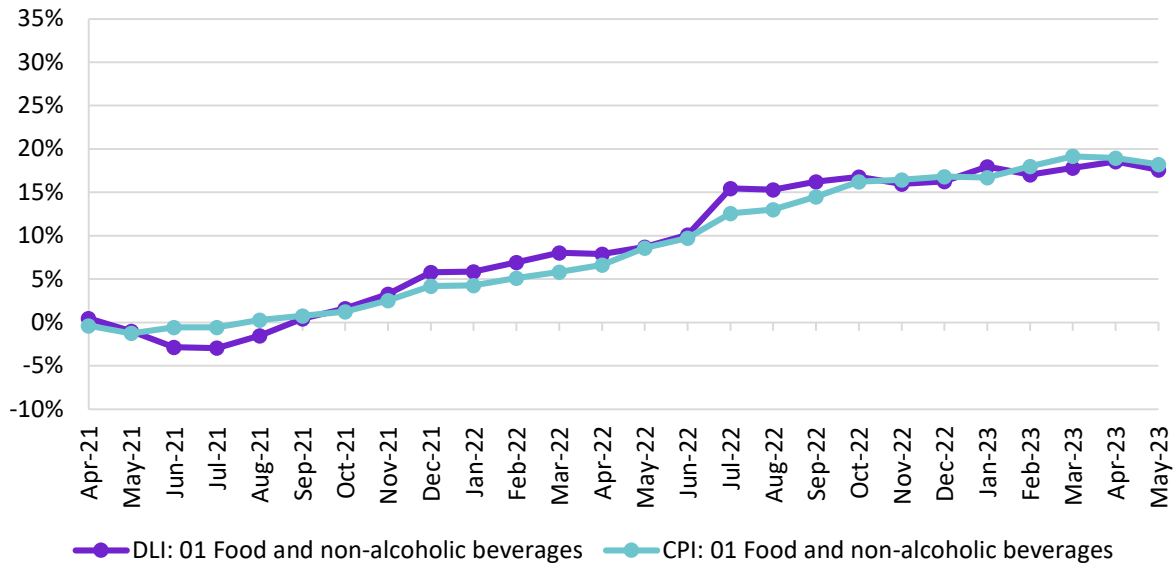
The overall higher inflation rate for the DLI for a single working-age female as compared to CPI, as shown in Figure 1, is being largely driven by the much higher weight attributed to housing (which has a high inflation rate) in the DLI (40% versus 14% for CPI), as shown in Figure 5. In particular, inflation on fuel and 'light' (electricity) – which is included in the housing category – was 24% in the 12 months to May 2023, and contributed nearly three times the weight in inflation based on DLI as compared to CPI (14% versus 5%). This reflects the reality that those on lower incomes will tend to spend a larger proportion of their income on inescapable and everyday costs such as housing and food (ONS, 2022b). For example, two households might have an identical fuel bill of £200 per month, but very

different overall monthly spending of £1,000 in a lower-income household versus £5,000 per month in a higher-income household, with fuel representing 20% and 4% of their overall monthly spend, respectively. If this bill went up by 24% to £248 per month (based on inflation for the 12 months to May 2023), this would be an increase of nearly 5% in monthly expenditure for the lower-income household, but less than 1% for the higher-income household.

DLI for couples with two children aged 2-4 and primary school age

Figure 8 shows the annual inflation rates for food and drink using the DLI for a couple with two children, and CPI. For this household type, there is very little difference between the two indices; food inflation has been high and rising since late 2021 based both on the DLI and CPI.[8]

Figure 8 Annual inflation rate, DLI (couples with two children) and CPI: Food and drink



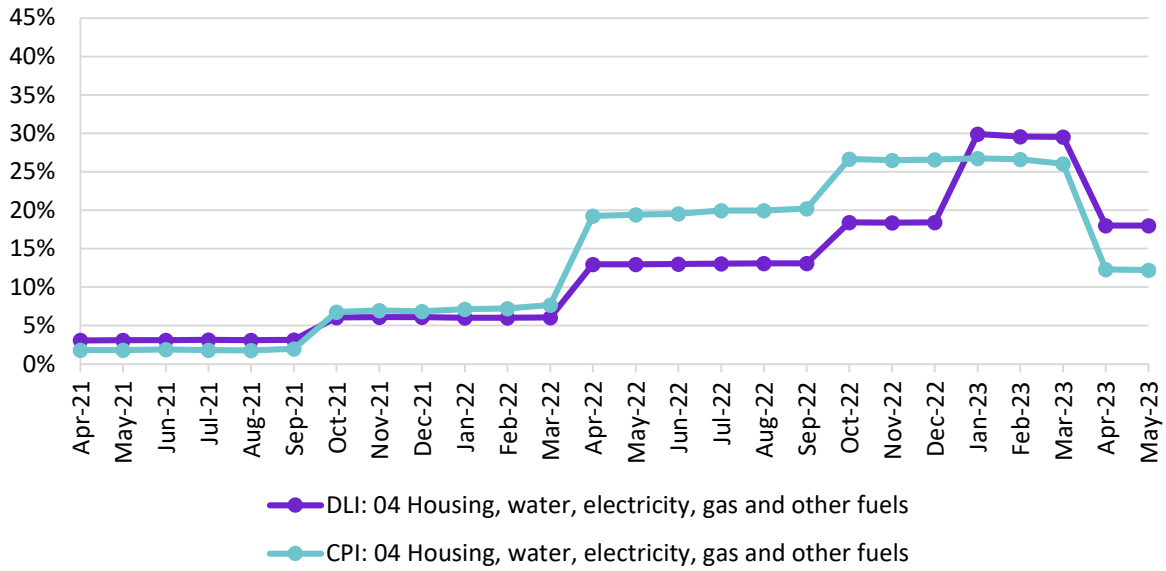
For housing (Figure 9), the DLI moves below CPI towards the end of 2021, and a more pronounced increase for CPI in April 2022 further widens this gap. However, in January 2023, the DLI moves above CPI for the first time since September 2021. This reflects the reweighting of the basket at the start of each year;[9] at this point, the increase in DLI is driven by a substantial rise in the weight attributed to domestic fuel within the housing category – in 2022, fuel accounted for 16% of the overall housing basket, but in 2023 this increased to 27%. However, because housing carries much less weight in the DLI basket for the household

[8] Note that in 2022, there was a change in the method used to produce the food basket for MIS research; as part of this the requirements were updated to reflect changes in height and weight in the general population, resulting in an increase in the overall cost of the food basket. As baskets were rebased only for households without children in 2022, this change is not yet apparent for households with children, which may, in part, explain the lack of any substantial difference here in comparison to CPI. All household types will undergo the rebase process in 2024, which will remove the difference between household types.

[9] This reweighting of DLI baskets is consistent with similar reweighting of CPI baskets, which also takes place at the start of each year.

with children than for the single working-age household, we see less difference with CPI for the overall household with children DLI (Figure 3).

Figure 9 Annual inflation rate, DLI (couple parents with two children) and CPI: Housing



4 Discussion

This report has provided a first account of the feasibility of, and value in producing, an index of inflation that is rooted in the concept of decent living standards. We have shown that measuring inflation linked to meeting a specified living standard over time, versus what has happened to an average consumption basket, can give us valuable insights into how particular households are experiencing rises in the cost of living.

As explained earlier, MIS is not designed to measure poverty or to quantify a 'subsistence' level household budget; it represents what the general public agree is required for people to live with dignity, including participation in society. However, MIS household budgets are still based around *needs* rather than *wants*. While not including the lowest-cost options for basket items by default (which allows for an element of choice), the basket will nevertheless tend to include items that are at the lower end of the price distribution. Looking at the CPI items to which MIS basket items are matched to produce the DLI, these generally fall within the lower half of the CPI price quote distribution.

In this context, the findings presented here give support to the view that households with lower incomes are facing greater financial pressures related to inflation than those with higher levels of disposable income. Some of this is about the costs of essentials – particularly food and housing (with fuel a key element of this). For the single working-age female household in particular, the cost of food priced at the level specified in the MIS basket has risen faster than the 'average' cost of food in the CPI basket. However, our findings also indicate that it is not just those on the very lowest incomes who will feel a disproportionate impact of high inflation on their disposable income; the effects are likely to be felt by those further up the income distribution too, albeit in the lower range.

Variation in the proportion of spending on particular budget areas also contributes to the difference between the DLI and CPI. If, for example, housing costs comprise 40% of what is needed for a minimum budget (as for the single working-age female MIS budget included in this report), a rapid increase in the cost of renting privately will have direct and substantial implications for the 'experienced inflation rate' for this household. This impact would be much less severe for the 'average' basket used to calculate CPI, where housing represents just 14% of the overall basket value.

These initial results have also emphasised that the budget areas that are most important in driving the rate of inflation vary according to household composition. For the couple with two children, food and housing were less strongly associated with a high rate of inflation than for the single working-age female. This in part reflects that the former basket contains a higher number of items than the latter; a household containing four people with a wider range of needs inevitably requires more goods and services than a single-person household. So, the impact of any food items with a particularly high inflation rate would be diluted in the larger household.

Weighting also matters. For the single working-age female, domestic fuel (which has a very high inflation rate) accounted for 35% of the housing budget in 2023, compared with 27% for the couple with two children. We argue that there is value in looking at this kind of

variation across different household compositions, as it helps highlight the specific ways in which particular types of households are vulnerable to falling below the threshold for a decent living standard. For example, the inflation rate linked to a minimum socially acceptable standard of living for a couple with two secondary school age children is going to be different to that for a couple with two younger children in need of full-time nursery provision. Standard inflation measures are insensitive to these kinds of differences, and the nuance provided by the DLI therefore gives a distinctive perspective.

Having established the feasibility of producing a DLI for two specific household types, the next step will be to build upon this work to include a wider range of household compositions. In particular, lone parent households and pensioners are not represented in the work to date, and priority will be given to extending the index to include these key demographic groups. We will further explore the possibility of producing a composite DLI, bringing together the core MIS household types to produce a single index that can be compared with the standard indicators of inflation. Ongoing development by ONS will also potentially help improve the process of producing the index, in particular their work to substantially increase the number and range of price quotes that are used to calculate CPI and CPIH, including the collection of data from web-scraping and the use of scanner data.

We know that people on working-age benefits and with the lowest earnings fall far short of being able to meet a minimum socially acceptable standard of living (Padley and Stone, 2023), and that this has become increasingly difficult coming out of the Covid-19 pandemic and into the cost-of-living crisis, including the impact of very high inflation (Hill and Webber, 2022). However, the preliminary findings presented here indicate that the disproportionate impact of the rising cost of living is not confined to those on the very lowest incomes, but is potentially moving higher up the income distribution to prevent even more households from being able to afford a decent standard of living. In this context, the findings have the potential to inform debates around, for example, how we think about the adequacy of earnings in the context of high inflation, and how we should determine levels of income that entitle households to additional state support if high rates of inflation are leaving people far short of being able to achieve a minimum, socially acceptable standard of living.

Ultimately, we hope that the DLI will be a valuable addition to the currently available suite of inflation indices, providing a unique opportunity to track the ways in which the changing cost of living affects people's ability to live with dignity.

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About the authors

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Dr Wolf Ellis is a Research Associate at CRSP, working on both quantitative and qualitative research that includes the collection and analysis of Minimum Income Standard (MIS) data. Wolf has worked on living standards, livelihoods and food security in a wide range of contexts, encompassing rural and urban areas and refugee camps in the Global South as well as fieldwork in the UK. His research focuses on the intricacies of people's experiences and on bringing the data available for research and policy-making closer to real life circumstances, aiming to contribute towards a better understanding of issues of welfare, poverty and inequality.

Professor Matt Padley is Co-Director of the Centre for Research in Social Policy (CRSP), where he has pioneered work on, as well as leading research on living standards in London. He works across the established MIS programme, leading on data analysis, and the application and development of MIS in the UK and globally. His research focuses on public conceptions and understanding of living standards, and how these can be used within public policy. He has worked with colleagues in Mexico, Singapore, Portugal, Thailand and South Africa, supporting the development and application of MIS in these countries.