

Whose price is it anyway?

Comparing the spending power of low-to-middle income families in Britain and abroad

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A long-standing finding is that British households on low-to-middle incomes are poorer than their counterparts in many advanced economies. This result comes from comparing the incomes of this group to price levels in their respective countries. But these price measures typically reflect the spending of all families, not just those on low-to-middle incomes.

In this Spotlight, we correct for this by adjusting for the spending habits of poorer households. Doing so suggests that aggregate measures *understate* how expensive Britain really is for low-to-middle income households. Such households spend differently from those on higher incomes, devoting 9 per cent more of their family budget to housing and 4 per cent more to food. Adjusting for this means putting more weight on the UK's sky-high housing costs, which are 44 per cent above the average across advanced economies in the OECD. This more than offsets the relief offered by the UK's low food prices (12 per cent below the OECD average), making Britain a more expensive place for poorer families than aggregate figures suggest.

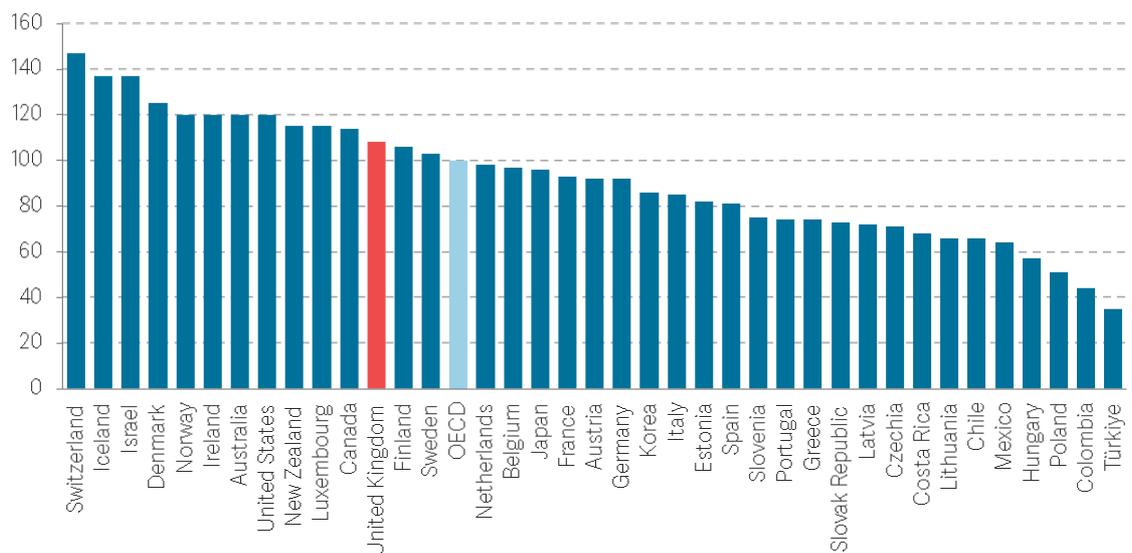
Accounting for this fact widens the existing income gaps between low-to-middle income families in Britain and their EU counterparts. For example, after adjusting incomes based on the local cost of things that lower-income families spend money on, the 10th-percentile German household is £2,300 richer than its British equivalent. That gap is a third (34 per cent) larger than that implied by an aggregate price level adjustment.

International comparisons of incomes need to account for international variations in the cost of living

Understanding how the living standards of UK households compare internationally provides crucial context when assessing our overall economic performance. But fair comparisons require us to carefully account not just for what people earn but also how far their money goes in different places.

Typically, international income comparisons of living standards make use of Purchasing Power Parities (PPPs). PPPs – such as [those calculated by the OECD](#) – measure the cost of the same goods and services across different countries. This measurement of costs and prices is initially done at the granular level of individual products. To arrive at headline PPPs for different countries, these granular PPPs are aggregated up based on each product’s contribution to total consumption. These headline PPPs allow us to calculate the aggregate price level of household consumption across countries, shown here in Figure 1 relative to the OECD average.

Figure 1 **Price levels are important for comparing income between countries**
 Price level for household final consumption (OECD average = 100): OECD countries, 2022



Source: OECD, PPP detailed results.

On this measure, the UK lies towards the more expensive end of OECD countries. Across all spending categories, the things households buy are 8 per cent more expensive here than they are on average across all OECD countries. Adjusting for this fact is key when comparing incomes in Britain to those in other countries.

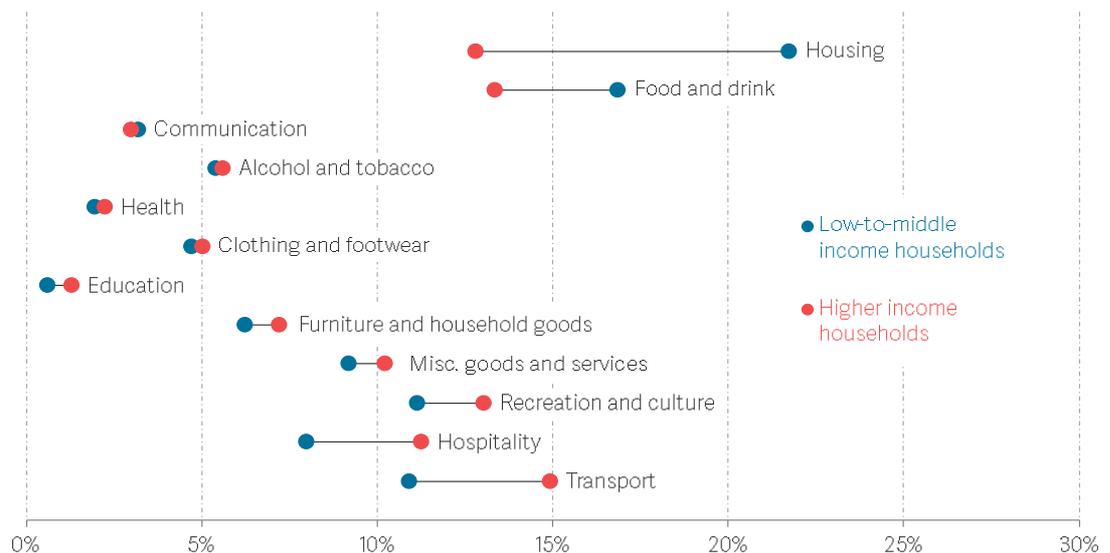
These aggregate price levels provide a useful starting point for comparing living standards between countries. But they do not account for the different spending patterns of specific groups. For instance, if we are interested in comparing the incomes of low-to-middle income households across countries, our PPPs should ideally reflect the fact that low-to-middle income households spend their income differently from the average household – with relatively more focus on necessities and less on luxuries. In this Spotlight we look at how much difference it makes to these income comparisons when we take this fact into account.

Low-to-middle income households spend a larger share of their budget on housing than the average household – and housing is expensive in the UK

The first step in our analysis is identifying how the spending habits of British households vary by income. Figure 2 shows the allocation of spending for low-to-middle income households (that is, those in the bottom half of the income distribution) and those on higher incomes. Low-to-middle income households spend more on housing (here comprising rent, maintenance and utility bills) and food. The biggest difference is in housing: low-to-middle income households allocate more than a fifth (22 per cent) of their budget to housing, in contrast to only 13 per cent for higher-income households.² In fact, higher-income households spend a larger share of their budget on recreation and culture than on housing.

Figure 2 **Low-to-middle income households spend a larger share of their income on housing and food than higher-income households.**

Proportion of household consumption spent on each spending category, for low-to-middle-income households and higher-income households: UK, 2022



Notes: Low-to-middle income households are those in deciles 1 to 5 of the UK household equivalised disposable income distribution. Higher income households are those in deciles 6 to 10. Housing comprises actual rent, maintenance and utility bills, and excludes mortgage payments and imputed rents. Source: RF analysis of ONS, CPI democratic reference tables.

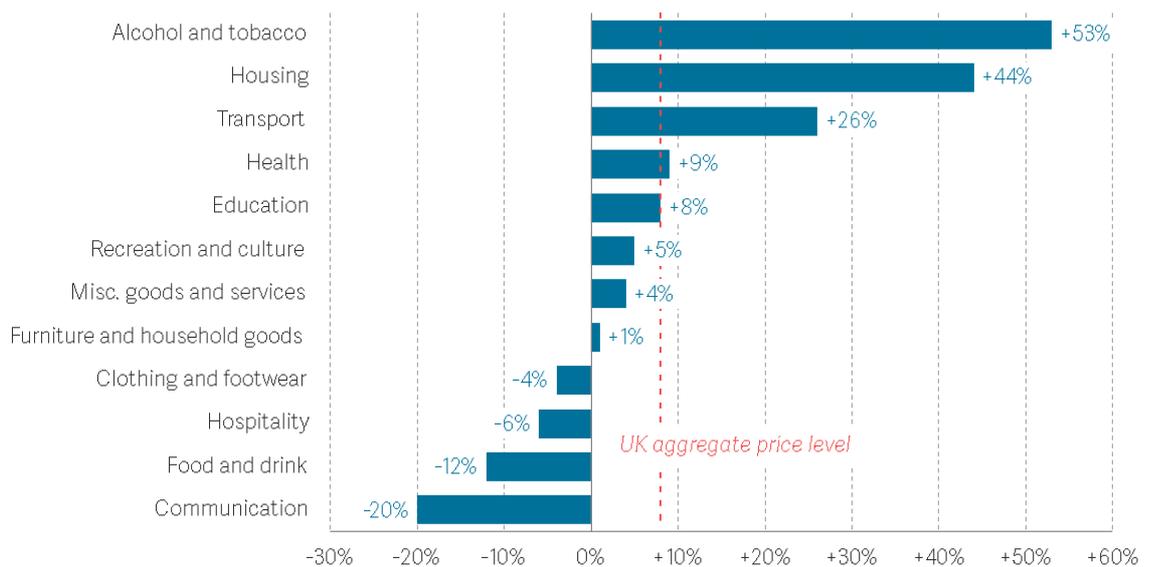
These spending differences matter precisely because, compared to other countries, some goods and services in Britain are more expensive than others. For each spending category in Figure 2, Figure 3 shows its price relative to the OECD average. Among major spending categories, housing is the most expensive relative to other advanced economies, costing 44 per cent more than the OECD average. In fact, as shown in [previous Resolution Foundation research](#), the UK has the largest gap between the cost of housing and the aggregate price level for household consumption out of all OECD members.

Meanwhile, food, communication (including phone and internet services) and clothing are cheaper in the UK than the OECD average. In part, this is due to price competition between retailers, particularly among supermarkets where the rise of discounters like Aldi and Lidl

saw [sector-wide profit margins shrink](#) throughout the 2010s. But it also reflects Britain's broad range of VAT reliefs and exemptions for many essentials like food and children's clothes – [one of the most generous](#) sets of carve-outs in the OECD.

Figure 3 **Housing is especially expensive in the UK compared to other advanced economies**

Percentage difference between each category's price level and OECD average: UK, 2022



Notes: Aggregate price level for household final consumption expenditure.
Source: RF analysis of OECD, PPP detailed results.

Figure 4 brings together the data in Figure 2 and Figure 3 to show how prices and spending patterns are connected – plotting the relationship between how expensive items are in the UK (compared to the OECD average) and how much they are over-represented in the spending baskets of low-to-middle income households (compared to higher-income households).

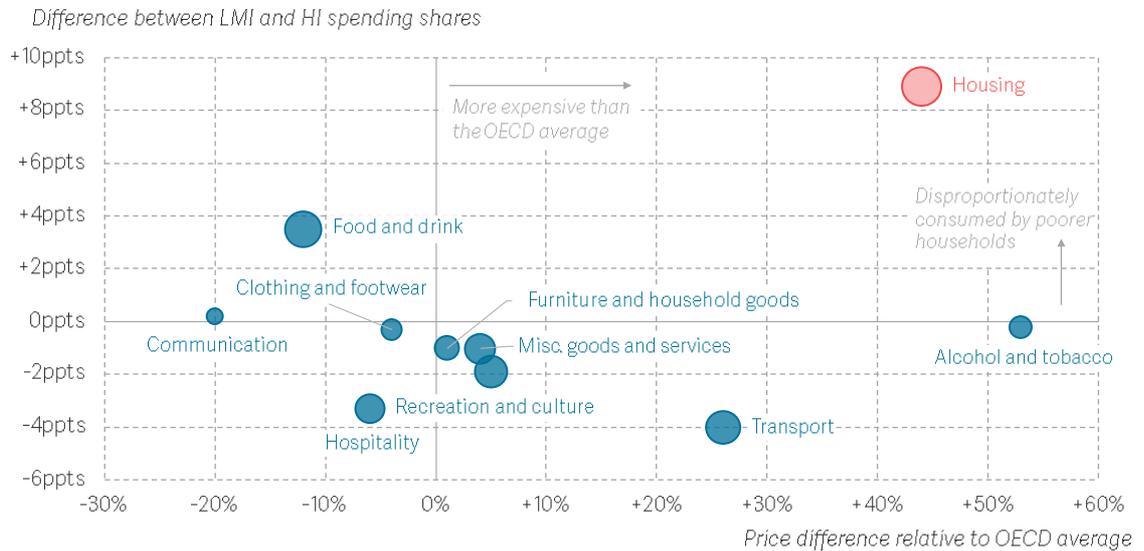
The downward-sloping trend among non-housing spending categories (shown in blue) indicates that items that are relatively more expensive in the UK, such as transport and recreation, form a smaller portion of low-to-middle income households' budgets compared to higher-income households. This means that, outside of housing, prices in Britain are relatively kind to low-to-middle income households – that is, the items such households spend more on tend to be ones that are cheaper relative to other countries.

But Britain's high housing costs stand in stark contrast to this trend. Housing is both much more expensive than the OECD average and a disproportionately large part of low-to-middle income households' spending.

Figure 4

For most goods and services, UK relative prices are favourable for low-to-middle income households – but housing is a major outlier

Difference in spending shares between low-to-middle-income (LMI) and higher-income (HI) households, and relative prices across consumption categories: UK, 2022



Notes: Low-to-middle income households are those in deciles 1 to 5 of the UK household equivalised disposable income distribution. Higher income households are those in deciles 6 to 10. Bubble size is proportional to each category's share of total household spending. Excludes categories that account for less than 2.5 per cent of total spending: health (2.1 per cent) and education (1.0 per cent).

Source: RF analysis of ONS, CPI democratic reference tables; OECD, PPP detailed results.

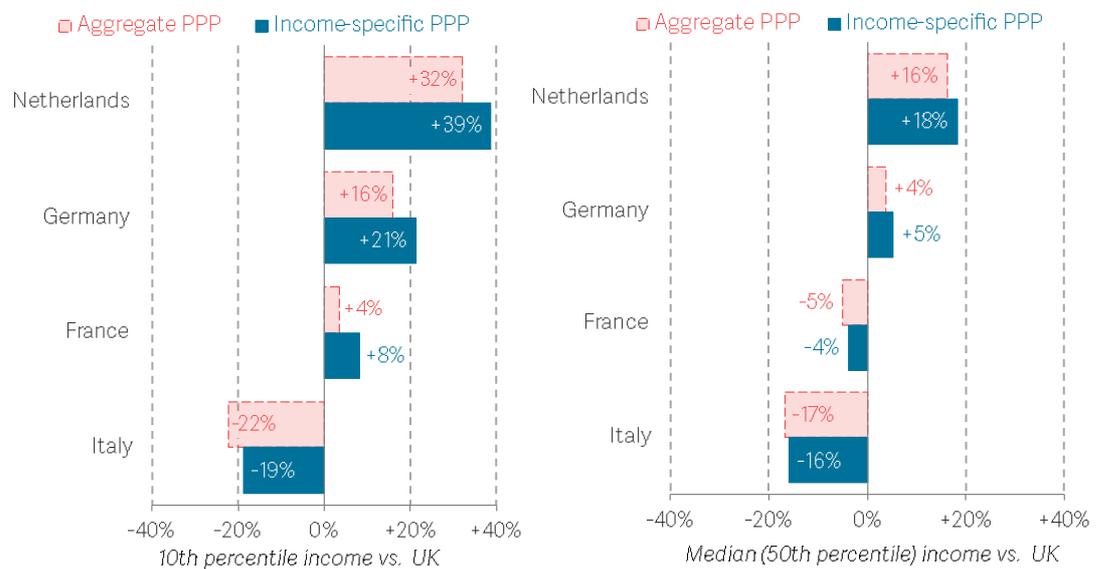
Adjusting for the spending patterns of low-to-middle income households widens the gap between the UK and other countries

What, then, does all this mean when comparing low and middle incomes across countries? Britain's relatively cheap food does offer some help to low-to-middle income households. But it turns out that this benefit is more than offset by our uniquely expensive housing – perhaps no surprise given that housing is the biggest line item in poorer households' budgets. Indeed, the housing effect is so large that, looking across the full range of goods and services, Britain is a relatively more expensive country for poorer families than for it is for the population as a whole.

That means aggregate PPPs understate the true gap in living standards between low-to-middle income households in the UK and their counterparts in similar countries. This can be seen in Figure 5, which compares low (10th percentile) and middle (50th percentile) [incomes in major EU economies](#) to those in the UK. In the pink bars, we adjust incomes using UK-focused aggregate PPPs. These measure, in each country, the cost of purchasing a basket of goods and services representative of all UK households. In blue, we use income-specific PPPs instead, which reflect the cost of things that British low-to-middle income households typically spend their money on (see Box 1 for more detail).

Figure 5 **Adjusting PPPs for spending patterns widens the income gap between low-to-middle income households in the UK and elsewhere**

10th percentile (left panel) and median (right panel) equivalised household net income relative to the UK, at actual and income-adjusted PPPs: selected EU countries, 2022



Notes: Aggregate and income-specific PPPs are calculated using the methodology set out in Box 1. Incomes for EU countries are taken from the EU-SILC database. To ensure a comparable measure of UK incomes, we take the most recent data points for the UK in EU-SILC (2018) and update them based on subsequent outturns of 10th and 50th percentile incomes in the DWP's Households Below Average Income dataset.

Source: RF analysis of OECD, PPP detailed results; Eurostat, EU-SILC Distribution of income by quantiles; DWP, Households Below Average Income; ONS, CPI democratic reference tables.

As [previous Resolution Foundation work](#) has highlighted, even when using aggregate PPPs, there are wide gaps between British low-to-middle income households and many of their counterparts in other advanced economies.³ For example, the median Dutch household has a high enough income that they can buy 16 per cent more of the aggregate UK basket than the median British household. But this basket isn't representative of the spending patterns of middle-income households: it's based on aggregate spending across all households, and so puts a disproportionate weight on the spending habits of high-spending, high-income households. If we compare incomes based on the price of a representative UK middle-income basket instead, the gap between the median Dutch and British household widens a little to 18 per cent.

But moving to income-specific PPPs matters more when comparing to countries with much lower housing costs than the UK and when looking at the bottom of the income distribution, where housing costs take up the largest share of household budgets. For example, the income gap between British and German households at the 10th percentile widens by a third (34 per cent) – from £1,700 to £2,300 in 2022 prices – when moving from an aggregate to an income-specific PPP adjustment.

The high cost of housing means Britain is a particularly pricey country for poorer households

In the wake of the cost-of-living crisis, there is a widely shared sense that Britain is expensive. But, compared to other countries, we have shown that Britain's sky-high housing costs means this is particularly true for poorer households. It's welcome, then, that housing has emerged as one of the Government's key priorities. Its aim to [build 1.5 million homes](#) over the Parliament is laudable and, if achieved, should exert downward pressure on average housing costs. But underneath this aggregate picture is a wide range of experiences. Housing needs vary substantially across families, as do rents across the country. So in addition to bringing down housing costs overall, we must also ensure that families with particularly high housing costs are adequately supported, including by [permanently indexing Local Housing Allowance to local rents](#).

Box 1: Methodology for calculating income-specific PPPs

In Figure 5, we compare low (10th percentile) and middle (50th percentile) incomes between the UK and selected EU countries. In doing so, we calculate aggregate and income-specific PPPs based average annual exchange rates, prices in each country and spending shares of UK households. Our decision to use UK spending shares is an important one, as it differs from the way headline PPPs are calculated. When comparing price levels between two countries, [headline PPPs weight prices](#) based on an average of both countries' spending shares. Our approach is a simplification and makes our analysis explicitly UK-focused. Specifically, we don't allow for the fact that households elsewhere will adjust their spending patterns in response to their own country's relative prices.

Our UK spending shares are derived from weights used by the ONS to calculate CPI inflation. For aggregate PPPs, we use headline CPI weights; for income-specific PPPs, we use CPI weights for the relevant part of the income distribution, published in the ONS's [CPI democratic reference tables](#). Concretely, income-specific PPPs for 10th-percentile incomes are based on weights for the first and second deciles of the household income distribution, and PPPs for the 50th percentile are based weights from the fifth and sixth deciles. CPI weights for housing cover spending on (actual) rent, home maintenance and utility bills. Importantly, and unlike the weights used to calculate headline PPPs, they exclude spending on [imputed rent](#). Because our income measure in Figure 5 does not include imputed rental income, we view the omission of imputed rent from our PPPs as an improvement on headline measures in this context.

1 The authors would like to thank Mike Brewer, Adam Corlett, James Smith and Greg Thwaites for their help in preparing this Spotlight.

2 Housing consumption, as measured here, comprises rent, utility bills (water, electricity gas and other fuels) and maintenance. It importantly excludes mortgage interest, which is often included when measuring housing costs. Including mortgage interest slightly reduces the gap in housing expenditure between low-to-middle income households and those on higher incomes, but the gap remains wide. According to the ONS's [Living Costs and Food Survey](#), if we include mortgage interest, British households in the bottom half of the income distribution allocated 27 per cent of their budget to housing in 2019 – 9 percentage points more than households in the top of half the income distribution. Excluding mortgage interest, the gap in 2019 was 12 percentage points. This number is not directly comparable to the gap derived from CPI weights.

3 The income comparisons shown in Figure 5 differ from those shown in those in previous Resolution Foundation work, specifically Figure 10 in Resolution Foundation & Centre for Economic Performance, LSE, [Ending Stagnation: A New Economic Strategy for Britain](#), Resolution Foundation, December 2023. These differences are due to three factors. First, Figure 5 uses actual data for UK incomes in 2022, where previous work used a nowcast. Second, Figure 5 uses 2022 PPPs published by the OECD, whereas previous work estimated 2022 PPPs based on published PPPs for 2017 and subsequent inflation outturns. Third, the aggregate PPPs in Figure 5 are based on UK CPI weights, which differ from the weights used in the headline OECD PPPs used in previous work (Box 1 discusses this difference in more detail). To give a sense of scale, previous work estimated that the median French household was 3 per cent richer than the median British household. Based on actual UK incomes and OECD PPPs in 2022, the median French household is 1 per cent *poorer* than the median British household. Using our own UK CPI-based aggregate PPPs widens that gap to 6 per cent, as shown in Figure 5.