

MEASURING POVERTY WHEN INFLATION VARIES ACROSS HOUSEHOLDS

Official measures of changes in poverty assume that households face a common inflation rate. This study looks at trends in relative and absolute poverty measures after accounting for households' differing inflation experiences.

Key points

- Standard measures of changes in poverty assume that inflation affects all households equally. However, if inflation rates differ for high-income and low-income households, conventional analyses may overstate or understate changes in living standards.
- Between 2002–03 and 2013–14, the bottom quintile experienced an annual average inflation rate of 3.4 per cent (based on the Retail Prices Index) compared with 3 per cent for the top quintile, and the official rate of 3.1 per cent. Such differences accumulate over time. The real cost of living went up 50 per cent for low-income households between 2002–03 and 2013–14, compared with 43 per cent for high-income households.
- Taking these differences into account, absolute poverty was 0.5 percentage points higher in 2013–14 than the standard measures suggest, implying 300,000 additional people in absolute poverty.
- Tracking whether relative poverty has increased or decreased faster or slower than the standard measures suggest since 2001–02 shows that the patterns were similar overall. However, standard measures did not record the increase in real relative poverty that occurred with the onset of recession between 2007–08 and 2008–09.
- One policy response to higher inflation for low-income households could be to uprate benefits according to group-specific inflation rates. This would have increased the welfare bill by 1.3 per cent from 2004 to 2013 compared with uprating benefits and tax credits using the Consumer Prices Index. Over the longer term there is no systematic tendency for lower-income households to experience higher inflation, reducing the potential risks of such a policy for public finances.

BACKGROUND

Official measures tracking changes in poverty assume that price changes affect all households equally. If this assumption fails, and inflation differs across income distribution, conventional analyses may overstate or understate changes in living standards among different levels of income distribution. Standard measures would then give an inaccurate impression of trends in the prevalence of poverty. This applies to both 'absolute' poverty measures (which aim to estimate how many people fall beneath a given standard of living) and 'relative' poverty measures (such as those counting how many people live in households with less than 60 per cent of median income in any given year).

This study analysed how price changes have affected low-income and high-income households since the early 2000s. It considered the extent to which official statistics might have understated or overstated changes in poverty and income inequality.

Differences in inflation rates

Low-income and high-income households have experienced significantly different inflation rates since the recession started. In recent years, the prices of goods relatively more important to the budgets of households in poverty (e.g. food and energy) have increased at a faster rate than the average inflation rate in the economy. Meanwhile, the prices of goods relatively more important to higher-income households (e.g. motoring, mortgage interest payments and leisure services) have tended to rise less quickly than average.

These price trends have caused lower-income households to experience higher inflation rates than better-off households. For example, from 2002–03 to 2013–14, the annual inflation rate based on the Retail Prices Index (RPI) for those in the bottom income quintile averaged 3.4 per cent compared with 3 per cent for the top quintile (and the official rate of 3.1 per cent). These differences may seem small, but over time have accumulated to produce quite different experiences of inflation. Over the period, prices for the bottom quintile increased by 50 per cent compared with 43 per cent for the top quintile. The disparity in inflation rates across income distribution was especially large over the recession; since 2008, the average annual inflation rate for the bottom quintile has exceeded that of the top quintile by just over a percentage point.

Impact on poverty measurement

Official measures have understated the rise in absolute poverty since 2002 and the increase in relative poverty that occurred with the onset of the recession because they did not account for differences in inflation rates across income distribution.

The official rate of absolute poverty is measured as those with income below 60 per cent of the 2010–11 median; the threshold is updated each year with a standard measure of inflation that is common across all households. However, when low-income households experience higher rates of inflation, this underestimates the real rate of absolute poverty. Factoring in the higher inflation rate experienced by low-income households in recent years, absolute poverty was 0.5 percentage points higher in 2013–14 than standard measures would suggest. This implies an additional 300,000 people experiencing absolute poverty.

Differential inflation also has implications for measuring real relative poverty. Regarding the relative position of individuals in the distribution of resources, higher inflation for households in poverty compared with those at the median should translate into a bigger increase in real relative poverty. The study calculated the change in the real relative poverty rate over time from a base year (2001–02)

using income data adjusted to include specific household inflation rates rather than a common rate. This enabled assessment of whether relative poverty has increased or decreased faster or slower than standard measures suggest. The results imply similar trends in the prevalence of relative poverty for most of this period. However, a statistically significant divergence occurred between 2007–08 and 2008–09, when real relative poverty increased while the standard measure stayed constant. It arose because households in poverty were hit harder by price changes than those at the middle of income distribution.

Standard measures also did not reflect a rise in real income inequality at the onset of the recession. The measures use a 90–10 ratio to show how many times larger the equivalised income of the 90th percentile of income distribution is compared with the 10th percentile. According to measures assuming a common inflation rate, this figure fell more or less consistently between 2006–07 and 2011–12. However, after taking into account varying inflation across income distribution, real income inequality rose with the onset of the recession. These trends imply that although income growth was relatively protected at the bottom of income distribution over the recession, these households were hit harder by changes in the cost of living than those at the top and middle of income distribution.

These tendencies are, however, specific to this time period. In the years before the recession there was, if anything, a tendency for households living in poverty to face slightly lower inflation than average. Therefore, changes in poverty rates were marginally more favourable than suggested by official statistics.

Policy implications

Policy responses have already been proposed to reduce the impact of higher inflation on low-income households. One approach could be to introduce price caps or subsidies for certain goods. This is likely to be inefficient if the market otherwise functions well, though could be beneficial where competition is limited, to protect consumers from abuses of market power.

Reducing consumption taxes like VAT could be another approach, although also probably less efficient than direct income transfers. For example, it has been estimated that removing zero and reduced VAT rates on food, children's clothes and energy would give the government enough revenue to increase benefits and tax credits so that the lowest-income third of households would be better off despite the increased VAT, and still have £11 billion left over.

Another method would be to uprate state benefits and tax credits using the inflation rates for specific groups (e.g. pensioners or benefit-dependent households), as a means of reducing the inflation risk that low-income households face. This would have raised the welfare bill by 1.3 per cent in 2013 relative to uprating all benefits using the Consumer Prices Index (CPI), or 0.7 per cent with the RPI. This would be the inevitable consequence of those on low incomes experiencing higher inflation rates in recent years. However, this policy could be revenue-neutral in the longer term, as there is no systematic tendency for low-income households to experience higher-than-average inflation for extended periods. This revenue neutrality would come about because benefits would increase by more than headline inflation in some years, and by less in others. The political economy of sometimes increasing benefits by less than economy-wide inflation might complicate this kind of uprating policy.

Conclusion

Allowing for variation in households' experiences of inflation affects impressions of changes in poverty over time. Since the recession, standard measures have understated the rise in absolute poverty. Taking varying inflation rates into account, the absolute poverty rate is 0.5 percentage points higher than that given by standard measures; this would imply a further 300,000 individuals in absolute poverty in 2013–14. Relative poverty is also likely to have increased more with the onset of the recession than standard methods suggest. However, these trends are specific to this time period. Before the recession, the tendency was for households living in poverty to face slightly lower-than-average inflation. Therefore, changes in poverty rates were marginally more favourable than official statistics suggested.

Recent inflationary trends have disproportionately affected those in poverty. Measures to improve low-income households' purchasing power through direct income transfers are generally preferable to holding down the cost of certain goods. The use of group-specific inflation rates to uprate state benefits would be one way to achieve this. Such a policy would have raised the welfare bill by 1.3 per cent in 2013 relative to uprating all benefits by the CPI (or 0.7 per cent with the RPI). However, this policy could be revenue-neutral in the longer term as there is no systematic tendency for low-income households to experience higher-than-average inflation for extended periods.

About the project

The project was undertaken by Abi Adams of the Institute for Fiscal Studies and the University of Oxford, and Peter Levell of the Institute for Fiscal Studies. It examined trends in absolute and relative poverty over the period 2002–03 to 2013–14, taking households' differing inflation experiences into account and comparing them with official statistics using standard measures.

FOR FURTHER INFORMATION

This summary is part of JRF's research and development programme. The views are those of the authors and not necessarily those of JRF.

The full report, **Measuring poverty when inflation varies across households** by Abi Adams and Peter Levell, is published by the Joseph Rowntree Foundation.

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Joseph Rowntree Foundation
The Homestead
40 Water End
York YO30 6WP
Tel: 01904 615905

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