A New Method for Measuring Welfare with Income Effects using Cross-Sectional Data

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We show how to recover the money-metric utility function, which converts income at one point in time into equivalent income at another point in time, using repeated cross-sectional household data. Our procedure allows unrestricted preferences, but requires that households’ preferences be the same in both the cross-section and the time-series. In prior work, Jaravel and Lashkari (2022) provide a solution to this problem. We leverage a different theoretical insight to address this problem. Our idea is to trace out Hicksian (or compensated) demand curves through time by matching households on the same indifference curve at different points in time. Given Hicksian demand curves, we can construct cost-of-living indices and money-metric utility for every matched income level. We apply our method to household consumption survey data from the United Kingdom from 1974 to 2017. We find that the official annual inflation rate understates welfare-relevant inflation for the poorest households by around half a percentage point per year and overstates it for the richest households by around a quarter of a percentage point per year.

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