

Confidence Intervals and Long-Run Trends in Food Prices, the Cost of Basic Needs, and Global Poverty

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Measuring long-run changes and comparing living standards across very different countries can be facilitated by the establishment of absolute poverty lines based on the least-cost ways of attaining a minimum standard of health as well as housing and other requisites. This paper builds upon methods pioneered by Allen (2017) and extended by Moatsos (2021) as well as OECD (2021) to reveal that, in terms of affordability of basic foods, global poverty in the 19th century was lower than the estimates that use all prices in the economy as in the World Bank's dollar-a-day global poverty line. At the same time in recent years, most countries have lower affordability of basic foods than poverty in terms of the dollar-a-day approach. Moreover, in terms of poverty lines that add non-food components on top of the EAT–Lancet reference diet, global poverty estimates are substantially higher than what standard extreme poverty measures provide, and for 2018 global poverty is estimated at about 31% or 2.4 billion people. When partially accounting for uncertainty –using a modeling approach– the level at which the global poverty statistics with a 95% confidence do not exclude individuals that may be poor, the global poverty rises to almost 35% or about 2.7 billion people in 2018.