

Abstract for “The Concept of Relative Multidimensional Poverty: An Illustration using Indian DHS data”

Caroline Dotter (University of Göttingen, Germany)

Stephan Klasen (University of Göttingen, Germany)

Measurement of poverty strongly differs across countries: While absolute poverty lines are typical for poverty measurement in developing countries, the concept of relative poverty is popular especially in richer countries. Relative income poverty lines are prevalent across Europe and the concept of relative poverty is generally accepted as more appropriate for advanced economies. These strongly relative lines are usually set a fixed proportion of the mean or median income and try to account for a certain cost of social inclusion.

The multidimensional nature of poverty is agreed upon by most policy makers and researchers and multidimensional poverty measures have been proposed for several countries in different formats. The most prominent example is certainly the Multidimensional Poverty Index (MPI) introduced by UNDP and Oxford University in the 2010 Human Development Report. Despite the prevalence of multidimensional poverty measures and numerous examples of relative monetary poverty lines, a concept for a relative multidimensional poverty line has – to my knowledge – so far not been proposed. Multidimensional poverty measures do exist for richer countries, though a concept, adapting the poverty line to different living standards across time and countries, appears to be missing.

Sen (1983) postulated the idea that “absolute deprivation in terms of a person’s capabilities relates to relative deprivation in terms of commodities, income and resources” (Sen, 1983, p. 153). A multidimensional approach to poverty measurement should therefore necessarily take the relativity of poverty into account. Ideally a multidimensional approach would directly measure available functionings and capabilities. While it is relatively straightforward to measure functionings in the health dimension (e.g. being well nourished), most indicators used in multidimensional poverty measurement are rather means than ends (sometimes both).

The education and the standard of living dimension are open to a relative appraisal. Achieving education or a certain standard of living is usually not a goal in itself but enables the individual to do certain things, such as taking up a fulfilling and well-paid job, or participating in civil society. This however depends on average levels in the rest of the society. A sufficient standard of living, for example, enables you to have a healthy lifestyle and gives you social acceptance. While the same lifestyle may be healthy across countries (allowing for climatic differences), what is socially acceptable differs vastly and is inherently relative. It thus seems reasonable to realign poverty thresholds for these indicators to levels in the rest of the society.

In this paper I will develop a concept of multidimensional poverty based on the global MPI. I will use Indian DHS data to estimate relative multidimensional poverty across states, urban and rural areas and across time. We observe vast differences in poverty outcomes across different Indian states when the global MPI is applied: In Kerala only 15.9% of the population are multidimensional poor, while 81.4% are poor in Bihar. Due to the sheer size of India living conditions also differ vastly across states. Using

the DHS dataset I can directly compare my outcomes to the global MPI, though the Indian DHS dataset gives information on additional standard of living indicators that are often missing for other countries.

I develop my concept of relative poverty based on the global MPI and therefore follow several of the decisions made there (Alkire and Santos, 2010). The MPI follows a dual cut-off approach to identify the multidimensionally poor (Alkire and Foster, 2011). In a first step, a cut-off is applied to a specific indicator (e.g. BMI below 18.5) to define deprivations in the specific indicator. Deprivations for each person are then aggregated using weights, and a second cut-off is applied to each person's deprivation score. People are identified as multidimensionally poor if they fall below this second poverty threshold – in this case, if they experience deprivations in one-third or more of the weighted indicators. The MPI assesses three dimensions of poverty: health, education, and living standards. Each dimension has an equal weight in determining whether an individual (or household) is poor or not.

Concerns of relativity may enter at different stages of the poverty estimation. The choice of indicators, indicator thresholds, weights and the overall cut-off are all open to a relative assessment. First and foremost, indicators need to be comparable across space and time. While data constraints allow little choice in the health and education dimension, I decided to allow for a multitude of indicators in the standard of living dimension. I can thus accommodate different living conditions and contexts. Following Atkinson et al. (2005), I then determine weights within the standard of living dimension based on the number of people that could afford a specific item. The deprivation is considered more serious, if most people in your neighborhood can afford this item. The indicator is therefore weighted by the percentage of the population not experiencing deprivation in this indicator.

I apply relative thresholds at the indicators where possible. Health outcomes are directly measured and reflect health functionings (you can only be well nourished or not). But relative thresholds are more appropriate in the education and standard of living dimension. Thresholds in the education dimension are determined as share of the median of the distribution, while thresholds in the standard of living dimension (where applicable) are determined by the mode of the distribution. Though many standard of living indicators only distinguish between having an item or not, others are open to a relative assessment. For example, what kind of cooking fuel or flooring is deemed sufficient in a specific society will differ.

I then aggregate deprivations using equal weights across dimensions (following the global MPI) and the weights for the specific indicators. Similar to the global MPI I then apply an overall cut-off of one third. Because of the construction of the global MPI with three equally weighted dimensions, the threshold of one third is equal to being deprived in one dimension. An individual deprived in either health, education, or the living standard (reflected through several indicators) is therefore considered to be absolutely deprived in the capability space.