Multidimensional Poverty

Development Issues No. 3

The measurement of poverty is composed of two fundamental steps, according to Amartya Sen (1976): determining who is poor (identification) and building an index to reflect the extent of poverty (aggregation). Both steps have been sources of debate over time among academics and practitioners. For a long time, unidimensional measures were used to distinguish poor from non-poor. More recently, new measures have been proposed to enrich the understanding of socio-economic conditions and to better reflect the evolving concept of poverty.

Summary

Measuring poverty with a single income or expenditure measure is an imperfect way to understand the deprivations of the poor since, for example, markets for basic needs and public goods may not exist. Complementing monetary with non-monetary information provides a more complete picture of poverty.

From unidimensional to multi-dimensional poverty

Poverty measurement has primarily used income for the identification of the poor since the early twentieth century. In the 1950s, economic growth and macroeconomic policies dominated the development discourse, which meant little attention was paid to the difficulties faced by poor people (ODI, 1978). Until the 1970s, the poor were statistically identified solely on the basis of household income, adjusted to family size, relative to a specified income poverty line. This threshold meant to give a monetary value to the "minimum necessaries for the maintenance of merely physical efficiency" (i.e. food, rent, clothing, fuel, light, etc.) (Rowntree (1901), cited by Alkire et al. (2015)).

In the mid-1970s the 'basic needs' approach posited that development concerns should be focused on providing people their basic needs[1], as opposed to merely increasing their income. This approach, together with others such as social exclusion[2] and Sen's capability approach[3], called for looking at the *actual* satisfaction of basic needs (Alkire et al. 2015). As such, a list of basic needs should be determined, along with minimum levels of satisfaction, what Sen (1981) called the 'direct method' of poverty identification. Contrasting with the income method, the direct method

assesses human deprivation in terms of shortfalls from minimum levels of basic needs *per se*, instead of using income as an intermediary of basic needs satisfaction. The reasoning for this relies on the argument that, while an increase in purchasing power allows the poor to better achieve their basic needs, markets for all basic needs may not always exist. Indeed, several basic needs are public goods (malaria prevention for example; Tsui, 2002). And, in fact, since the 1980s, studies have shown that income does not correctly proxy non-monetary deprivations for identifying the poor.

Accordingly, empirical analysts have come to introduce various nonmonetary measures of deprivations, supplementing these multidimensional analyses with monetary measures to create a better overall picture of poverty.

Multidimensional poverty measurement

Several techniques to measure poverty from a multidimensional perspective have been developed over the years. A few of the main prevailing approaches, among many others include (Alkire et al. 2015):

i. The dashboard approach: an analysis of different indicators of poverty. A prominent example of which is the Millennium Development Goals;

ii. The composite indices approach: whereby deprivation indices, possibly considered in a dashboard approach, are converted into one single number. Well-known composite indices include the Human Development Index, the Gender Empowerment Index and the Human Poverty Index, all of which have been published by the United Nations Development Programme (UNDP) Human Development Report;

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1 Depending on the interpretation, 'basic needs' can vary from a minimal list of human requirements for simple survival (e.g. food, clothing and shelter) to the belief that "human needs are not just physical but also psychological, not absolute but relative to what is enjoyed by other people in society, not finite but expanding as the satisfaction of one need gives rise to another" (ODI, 1978).

2 Social exclusion relates to individuals "that are not adequately integrated in society". Its main forms are: non-inclusion in systems of social protection, poverty and disability that preclude from participation in ordinary activities, and stigma or discrimination (Spicker et al. 2006). The definition of poverty in most EU countries involves being socially excluded.

3 Sen's capability approach conceives poverty as 'capability deprivation' (Sen 1992, cited by Alkire et al. 2015: 5).

iii. Multivariate statistical methods: techniques to identify the poor, set indicator weights, build individual deprivation scores, and aggregate the information into societal poverty indices;

iv. Fuzzy sets: mathematical technique employed to identify mathematically the poor (using fewer normative judgements);

Many criteria can be used to decide on a particular methodology. Empirical researchers might prefer measures that can accommodate data from different sources. Policymakers might be inclined to choose a measure that produces one single easily comparable figure. They might also prefer measures that can reveal which people are suffering which deprivations simultaneously (a joint distribution of disadvantages) and thus effectively identify the poor.

In the context of the direct method of poverty measurement, counting the number of deprivations a poor individual suffers appeared intuitively as a way to identify the poor and observe progress. This 'counting approach' is currently witnessing fast-emerging research. While in the unidimensional framework the task of identifying the poor is usually performed by means of poverty lines, in a multidimensional counting framework "deprivation cutoffs" pinpoint who is deprived in what dimensions, and an overall "poverty cutoff" across dimensions identifies who is poor. An example of this method follows in the next section.

Multidimensional Poverty Index

One recently developed counting method, the Alkire-Foster counting approach, was adopted by the UNDP in 2010. Assisted by the Oxford Poverty and Human Development Initiative, UNDP used the approach to develop the global Multidimensional Poverty Index (MPI), which substituted its Human Poverty Index (in use since 1997). The index complements monetary measures of poverty with information on overlapping deprivations experienced simultaneously by individuals. It identifies deprivations in the same three dimensions as the Human Development Index (health, education and standard of living), and presents the number of people who are multi-dimensionally poor (i.e. deprived in at least one third of the dimensions) as well as the number of deprivations faced by the poor – thus revealing the incidence and intensity of poverty in a given region in a given time. It can be decomposed by dimension or by groupings (such as region, ethnicity and other), with useful implications for policy.

According to the 2014 Human Development Report, 1.2 billion people have an income of $1.25 or less a day and 2.7 billion live on less than $2.50 a day, in 104 developing countries. The MPI estimates 1.5 billion people are multi-dimensionally poor in 91 developing countries, and, in total, 2.2 billion people are estimated to live in multidimensional poverty or near-poverty.

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