Chronic Poverty and Poverty Dynamics: Combining Normative and Positive Approaches to Reconcile Persistence and Depth Sensitivity

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This paper combines a positive model of welfare dynamics with normative evaluation of poverty to resolve the conflict between normatively justified but incompatible properties of intertemporal poverty measures. Several authors have recently developed indices which aggregate individual-level indicators of wellbeing over an extended period of time to measure 'chronic' or 'intertemporal' poverty. (Some authors aggregate to give a social measure which is responsive to individuals' profiles, but the main innovation is in the individual-level measurement.) The various measures differ in the way that they would rank alternative trajectories of wellbeing and thus represent different normative judgements of the relative undesirability of the trajectories. For example, the measures suggested by Bossert, Chakravarty and d'Ambrosio (2011) and Foster (2009) are particularly sensitive to persistence or duration of poverty or deprivation, and are thus well described as chronic poverty measures. The measures suggested by Porter and Quinn (2008) are particularly sensitive to extremely severe deprivation, allowing for less substitutability of wellbeing across time, the deeper the degree of poverty. This property is intuitively normatively desirable but was shown to be incompatible with sensitivity to persistence of poverty.

This fundamental conflict between two apparently reasonable and normatively justified properties of intertemporal poverty measures deserves further attention and exploration. This paper suggests that the poverty analyst (who is making the normative judgement) may really be interested in the individual's trajectory of wellbeing or experience of poverty over their whole lifetime, not just the particular time periods in which they are observed. As deprivation and poverty are well understood to persist over time and even over generations, it is possible that the poverty analyst is implicitly using persistence of poverty within an extended period of observation to proxy for future or lifetime experience. This leads to the natural conclusion that, where suitable data is available, a better approach would be to draw on the literature modelling welfare and poverty dynamics to build an explicit model of future or lifetime wellbeing for the individual. A normative measure of intertemporal poverty may then be combined with the prediction of the positive model to measure poverty over time in a way that reconciles the two desirable but conflicting properties.

This method is applied to data from rural Ethiopia. Consumption is used as a proxy for wellbeing, while other indicators are used to build a dynamic model which permits the prediction of a lifetime trajectory, to which the intertemporal poverty measure is applied. This approach has the added benefit that the dynamic model may be used to interpolate as well as predict the future and thus improve the way we deal with irregular observation periods. Issues that are discussed include the role of discounting and the degree of uncertainty inherent in the method, and the extent of their impact on the poverty measure.