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## **Poverty in the Developing World Through the Looking Glass: the Global Multidimensional Poverty Index 2018**

Poverty manifests itself in several forms. This statement enjoys a large consensus in the academic and policy-making spheres by virtue of A. Sen's deeply influential "capability approach" (Sen, 1999). One of the most widely known operationalizations of this idea is the global Multidimensional Poverty Index (MPI), which features as a key statistic in the UNDP's Human Development Reports since 2010.

In 2018, the global MPI was revised in order to be better aligned with the 2030 Development Agenda (Alkire and Jahan, 2018). This "new" version of the global MPI yields a detailed picture of poverty for 105 countries housing 75% of the world's population, and disaggregated to 1127 subnational regions as well as by age cohort, and by rural-urban areas. Among some key findings, it shows that 1.3 billion people (23% of the population) live in multidimensional poverty. This situation is most acute in Sub-Saharan Africa and South Asia - home to 83% of the world's poor. Strikingly, two-thirds of poor people live in middle-income countries.

These results are cornerstone to understand current challenges in the world's battle against poverty. However, there is no study about what these figures would be in absence of the aforementioned revisions. Moreover, it is important to stress that the new global MPI results are not exact figures.

These results are sample-based estimations using an impressive array of micro-data surveys - corresponding to a sample of close to 9 million individuals living in the developing world. The degree of variation due to sampling issues also remains unstudied. More importantly, sampling is hardly the most relevant source of variation for these results. As every other poverty measure based on a counting method (Alkire and Foster, 2011), a host of inescapable normative decisions are behind the construction of the global MPI, including the relative importance of the chosen indicators, as well as the overall poverty cut-off. Again, the extent to which changes in these elements have an effect on the "new" global MPI estimates and how they should be interpreted is unknown.

This Paper

We offer a rigorous analysis of the global MPI findings that are important for international policy making and the statistical assessment of poverty. Thus, the aim of this paper is twofold.

First, we assess how i) the MPI, its sub-indices and partial indices of the incidence and intensity of poverty, the censored headcount ratios for each indicator, and the weighted contributions of each indicator to MPI and ii) the country poverty orderings differ between the “original” global MPI (2010) and its “new” version (2018). For this, we first perform statistical significance tests for each country on the differences between both sets of MPI estimates. Then, we go on to perform pairwise country comparisons to test for robustness of poverty orderings based on the global MPI values.

Second, we discuss the value-added of having the global MPI, which reflects the joint distribution of a set of indicators rather than viewing one at a time. In particular, we seek to ascertain whether our lives might be simplified by observing a ‘proxy’ for the global MPI. In fact, we find that the pattern of deprivations is variegated and context-specific – no one proxy will do. In the course of this exploration our analysis focuses on: i) the magnitude of overlapping deprivations, ii) the number of poor people by different methodologies, iii) the contribution of each indicator across countries and subnational regions, and iv) the existence of sub-national regions facing particularly high poverty with respect to their countries' average situation - which may be termed pockets of poverty.

#### Preliminary Results

Among some salient results, we find that aggregate multidimensional poverty figures are robust to the revision of the global MPI. Nonetheless, a deeper analysis of the component indices and dimensions show that the 2018 revision is a step forward to better grasp the state of poverty. The revision allows to uncover, on the one hand, deprivations that would otherwise be overlooked, and on the other hand, account for better livelihoods that would be missed out.

As an example of the overall robustness of the new poverty figures to the revision of the global MPI, we confirm that both the “original” and the “new” versions of the MPI indicate that around 30% of the population is deprived in more than 1/3 of the considered weighted deprivations. As an example of the results that allow us to state that the “new” version better grasps the state of poverty, we find that by revising the child mortality indicator to account only for deaths occurred in the last 5 years preceding the survey, the raw deprivation ratio goes down from 19.6% to 6.3%. The latter figure does not include deaths suffered a long time ago, and thus reflects better the current status of people’s lives. We discuss these and other results in detail, as they clearly inform policy direction.

Regarding the stability of the “new” global MPI to some of its underlying normative decisions, we find that the country poverty orderings are stable in the 20%-40% poverty cut-off range for the Arab States and Sub-Saharan Africa. We find a relatively less stable country ordering in East Asia & the Pacific, and in South Asia. These results are linked with the varying intensity of

multidimensional poverty in each region and the number of countries that are compared, among others. In another robustness analysis, we find that assigning a distinct relative importance to each dimension in turn, the country poverty orderings within regions are reconfigured in a way that usefully points to regional policy priorities.