Estimating Poverty in India without Expenditure Data A Survey-to-Survey Imputation Approach

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Abstract

This paper applies an innovative method to estimate poverty in India in the absence of recent expenditure data. The method utilizes expenditure data from 2004-05, 2009-10, and 2011-12 to impute household expenditure into a survey of durable goods expenditure conducted in 2014-15. At the $1.90 per day international poverty line, the preferred model predicts a 2014-15 headcount poverty rate of 10.4 percent in urban areas and 13.8 percent in rural areas, implying a poverty rate of 12.7 percent nationally. The model's predictions are comparable to the World Bank's current adjustment method for the rural areas but imply a slower rate of poverty reduction for urban areas. In two validation tests, three alternative model specifications perform worse than the preferred model. Furthermore, as robustness checks, the implied poverty elasticity with respect to growth in per capita Gross Domestic Product (GDP) is within the range of past experience, states with higher GDP growth saw greater predicted poverty reductions and estimates for higher poverty lines ($3.20 & $5.50) are in accordance with past trends. The analysis indicates that survey-to-survey imputation, when feasible, is a preferable alternative to the current method to adjust survey-based poverty estimates to later years.

Keywords: Poverty, India, Nowcasting, Survey-to-Survey Imputation

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