

# Poverty Imputation in Contexts without Consumption Data: A Revisit with Further Refinements

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A key challenge with poverty measurement is that household consumption data are often unavailable or infrequently collected or may be incomparable over time. In a development project setting, it is seldom feasible to collect full consumption data for estimating the poverty impacts. While survey-to-survey imputation is a cost-effective approach to address these gaps, its effective use calls for a combination of both ex-ante design choices and ex-post modeling efforts that are anchored in validated protocols. This paper refines various aspects of existing poverty imputation models using 14 multi-topic household surveys conducted over the past decade in Ethiopia, Malawi, Nigeria, Tanzania, and Vietnam. The analysis reveals that including an additional predictor that captures household utility consumption expenditures—as part of a basic imputation model with household-level demographic and employment variables—provides poverty estimates that are not statistically significantly different from the true poverty rates. In many cases, these estimates even fall within one standard error of the true poverty rates. Adding geospatial variables to the imputation model improves imputation accuracy on a cross-country basis. Bringing in additional community-level predictors (available from survey and census data in Vietnam) related to educational achievement, poverty, and asset wealth can further enhance accuracy. Yet, there is within-country spatial heterogeneity in model performance, with certain models performing well for either urban areas or rural areas only. The paper provides operationally-relevant and costsaving inputs into the design of future surveys implemented with a poverty imputation objective and suggests directions for future research.