



## Estimation of poverty in small areas under skewed distributions

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Poverty maps are aiding governments and international organizations to design more efficient regional development policies. Unfortunately, official surveys used to assess the living conditions of people do not usually have sufficient sample size to cover adequately all the target regions and specific small area estimation techniques are needed. Widely used approaches are based on assuming normality of the log income. However, the log normal is not well suited for modeling income. We develop empirical best (EB) methodology based on the assumption of a distribution with four parameters that is very appropriate for modeling skewed distributions, such as the distribution of income. We perform simulation experiments showing the properties of the new EB method compared to the EB method based on the log-normal distribution.

**Keywords:** empirical Bayes; linear mixed models; poverty indicators; small area estimation.