

Optimal Predictors of General Small Area Parameters under an Informative Sample Design

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The empirical best (EB) procedure introduced by Molina and Rao (2010) for small area estimation of general indicators is probably the most popular model-based procedure based on unit-level data. However, under informative sampling or sample selection bias, EB predictors are biased. Pfeiffermann and Sverchkov (2007) proposed a method to adjust the likelihood for the sample selection process, and obtained approximate EB predictors of means in small areas, under informative selection of units and of areas, using a model for the sample weights. This work extends the procedure of Pfeiffermann and Sverchkov (2007) to the estimation of general indicators, including poverty indicators. We study the properties of these predictors in simulation experiments, where the sample is obtained through informative sampling.

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References:

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