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Title: Small Area Estimation for an Informative Sample Design

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Abstract:

Small area predictors are typically derived under explicit model assumptions. If the sample design is informative for the specified model, then predictors that ignore the design can be biased. We study the linear mixed effects model under an informative sampling design. We compare alternative small area procedures that account for the informative design. In simulations, enforcing design consistency for the finite population mean has little impact on the mean squared errors of the small area predictors.