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Title : Design of samples for small-area estimation

Abstract:

Sample surveys are generally designed to produce reasonably accurate direct estimates of characteristics for the whole population and specific large domains of the population and are not meant to produce reliable estimates for small subsets of the population. But with the increasing interest on small-area statistics, survey organizations are then faced with producing accurate estimates for sample surveys for subsets of the population. Unfortunately, sample sizes in small domains tend to be too small, sometimes non-existent, to provide reliable direct estimates for these specific domains.

In this paper we describe the design of samples for small-area estimation using a composite estimator to find the area-level sampling design that minimizes the weighted sum of the sampling variances taking into account the efficiency of national estimation.