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Empirical Likelihood in Survey Sampling

We provide an overview of the recent developments of empirical likelihood (EL) methods in survey sampling. We start with the basic formulation of EL functions for non-stratified and stratified sampling designs, and then discuss a few extensions, including EL for multiple frame surveys and EL-based Bayesian approach for complex survey data. Computational algorithms will be described, and some related topics, such as EL-based calibration and ranking methods, bootstrap procedures, EL and estimating equations, EL-based model selection using survey data, and EL for small area estimation, will also be briefly discussed.