

Compare the evaluating methods of variance of estimate on complex two-phase sampling with different sampling units on each phase

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Abstract

The known estimations of complex two-phase sampling is commonly used for the sampling units in the first phase and the units of the second phase are the same. In this study, we considered the sampling scheme where the sampling units in the first phase are clusters and the units of the second phase are not cluster anymore which are the list samples. For example, in first phase, cluster's are selected as sampling units and before selecting sample in second phase frame, make the listing sampling frame using the elements in clusters from the first phase, after that, in second phase, elements are the sampling units. In this paper, estimate on complex two-phase sampling with different sampling units on each phase are presented. Also, the calculating methods of the variance which are exact and jackknife methods are compared. For the simulations, Farm household economy survey (FHES) in 2010 and Agriculture survey (AS) in 2011 are used.

Key Words: Jackknife, agriculture sampling, master sample, two-stage cluster sampling