

Improved Estimation of Population Mean in Stratified Random Sampling Using Information on Auxiliary Attribute

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In the survey sampling literature, using auxiliary information increase the efficiency of estimators. Sometimes we can get auxiliary information as qualitative form. In this study, by taking the advantage of correlation between the study variable and auxiliary attribute, we have improved the estimation of population mean in stratified random sampling. Under this sampling scheme, the expressions for bias and mean square error have been obtained. To show the efficiency of proposed estimator over the existing estimator, we have made a comparative study using a real data set.

Key Words: Stratified random sampling, mean square error, attribute, efficiency