

Estimation of Population Mean under Random Non-Response in Two-Occasion Successive Sampling

Authors : M. Khalid, G. N. Singh

Abstract : In this paper, we have considered the problems of estimation for the population mean on current (second) occasion in two-occasion successive sampling under random non-response situations. Some modified exponential type estimators have been proposed and their properties are studied under the assumptions that the number of sampling unit follows a discrete distribution due to random non-response situations. The performances of the proposed estimators are compared with linear combinations of two estimators, (a) sample mean estimator for fresh sample and (b) ratio estimator for matched sample under the complete response situations. Results are demonstrated through empirical studies which present the effectiveness of the proposed estimators. Suitable recommendations have been made to the survey practitioners.

Keywords : modified exponential estimator, successive sampling, random non-response, auxiliary variable, bias, mean square error

Conference Title : ICABSE 2018 : International Conference on Applied Bayesian Statistics and Estimation

Conference Location : Dublin, Ireland

Conference Dates : January 30-31, 2018