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ADVANCED ESTIMATOR IN STRATIFIED RANKED SET SAMPLING USING AUXILIARY INFORMATION

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ABSTRACT

In this article, we suggest an advanced estimator in Stratified Ranked Set Sampling (SRSS) based on the Prasad (1989) estimator. Theoretically, we obtain the mean square error (MSE) for this estimator and compare it with the MSE of estimator given by Kadilar and Cingi (2005). By this comparison, theoretically, it is shown that this suggested estimator using Stratified ranked set sampling is more efficient than the estimator given by Kadilar and Cingi(2005). A numerical illustration is also included to demonstrate the merits of the proposed estimator using SRSS over the corresponding estimators in SSRS.

KEYWORDS: Mean Squared Error, Ratio-Type Estimator, Stratified Ranked Set Sampling, Auxiliary Variable, Efficiency