

ABSTRACT

Some existing estimators of simple random sampling are transformed into adaptive cluster sampling and result shows that new technique of adaptive cluster sampling perform better as compared to simple random sampling for finite population variance using an auxiliary information. A new class of exponential type estimators of population variance is also proposed using an auxiliary information under adaptive cluster sampling. The results of bias's and MSE's are calculated up to the first order of approximation and compared the adaptive estimators with existing estimators. According to numerical and theoretical analysis, the proposed estimator in adaptive cluster sampling are more efficient as compared to the estimators in simple random sampling and existing estimators in adaptive cluster sampling.