

ABSTRACT

Thompson initially developed the idea about adaptive cluster sampling for rare and scattered population. In this study, some existing estimators of population variance have been studied both in simple random sampling as well as in adaptive cluster sampling design. An improved family of estimators for the population variance using two auxiliary variables in adaptive cluster sampling assuming transformed population is proposed. The relative bias and Mean Square Error of the proposed estimators is derived and the distribution of the proposed class of estimator is also assessed.