

ABSTRACT

Ratio estimates for the population mean or total are often more efficient. Ratio estimation is simple and straightforward with simple random sampling, but this is often not the case when more complicated sampling designs are used, such as adaptive cluster sampling. In this research work, generalized modified ratio and generalized modified exponential ratio estimators under adaptive cluster sampling are proposed. The main object of the study is to propose some ratio and exponential ratio estimators under adaptive cluster sampling which will be more efficient than the existing ratio estimators in adaptive cluster sampling and the conventional ratio estimators. The simulation study is conducted to compare the efficiencies of the proposed estimators to the existing ratio and exponential ratio estimators, for adaptive cluster sampling and the conventional ratio estimation under simple random sampling without replacement. Related result showed that some of the proposed ratio estimators and exponential ratio estimators, mostly the ones in which coefficient of skewness was used, more efficient than the existing ratio estimators in adaptive cluster sampling and the conventional ratio estimators.