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Research Paper

## Variance estimation using linear combination of Hodges-Lehmann and Quartiles

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**ABSTRACT** : In this paper, we have proposed a class of modified ratio type variance estimator for estimation of population variance of the study variable, when Hodges-Lehmann and Quartiles of the auxiliary variable are known. The bias and mean square error (MSE) of the proposed estimator are obtained. From the numerical study it is observed that the proposed estimator performs better than the existing estimators in the literature.

**KEY WORDS** : Simple random sampling, Bias, Mean square error, Hodges-Lehmann, Quartiles, Auxiliary variable.

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