

ON THE LIU AND ALMOST UNBIASED LIU
ESTIMATORS IN THE PRESENCE OF
MULTICOLLINEARITY WITH
HETEROSCEDASTIC OR CORRELATED ERRORS

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Abstract. This paper introduces a new biased estimator, namely, almost unbiased Liu estimator (AULE) of β for the multiple linear regression model with heteroscedastics and/or correlated errors and suffers from the problem of multicollinearity. The properties of the proposed estimator is discussed and the performance over the generalized least squares (GLS) estimator, ordinary ridge regression (ORR) estimator (Trenkler [20]), and Liu estimator (LE) (Kaçiranlar [10]) in terms of matrix mean square error criterion are investigated. The optimal values of d for Liu and almost unbiased Liu estimators have been obtained. Finally, a simulation study has been conducted which indicated that under certain conditions on d , the proposed estimator performed well compared to GLS, ORR and LE estimators.

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