

THE EFFICIENCY OF MODIFIED JACKKNIFE AND RIDGE TYPE REGRESSION ESTIMATORS : A COMPARISON

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Abstract . A common problem in multiple regression models is multicollinearity , which produces undesirable effects on the least squares estimator . To circumvent this problem , two well known estimation procedures are often suggested in the literature . They are Generalized Ridge Regression (GRR) and Jackknife Ridge Regression (JRR) . In this paper , we propose a new estimator namely , Modified Jackknife Ridge Regression Estimator (MJR) . It is based on the criterion that combines the ideas underlying both the GRR and JRR estimators . We have investigated standard properties of this new estimator . From a simulation study , we find that the new estimator often outperforms the LASSO , and it is superior to both GRR and JRR estimators , using the mean squared error criterion . The conditions under which the MJR estimator is better than the other two competing estimators have been investigated .

Full text

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