

ON SOME BIASING ESTIMATORS FOR THE LOGIT MODEL

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THE explanatory variables are correlated in most of the statistical analysis. This problem is called multicollinearity. Since the logistic regression is a widely used statistical method, one can face this problem in logit models. The variance of maximum likelihood estimator (MLE) is affected negatively when there is multicollinearity. It is not possible to make trustful inferences because of the instable regression coefficients. This study introduces some new shrinkage estimators used in the Liu-type estimators for the logit model. A Monte Carlo simulation is designed to evaluate the performances of the estimators. The mean squared error (MSE) is used as a judgement criteria in the simulation. New estimators have better performance than MLE in the sense of MSE.

Keywords: Logistic regression, Biasing estimators, Liu-type estimators, Maximum likelihood estimator, MSE.

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