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Comprison of model selection critaria for multivariate regression model with mixed model
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Abstract
This article considers the analysis of multivariate regression experiment that is used frequently in variety of applications research. We used simulation study to compare five model selection criteria in terms of their ability to identify the right multivariate regression model that has the right covariance structure and in the same time the right multivariate model structure. The comparison of the five model selection criteria was in terms of their percentage of number of times that they identify the right model. The simulation results indicate that overall, the percentages of identifying the right multivariate regression model from both standard and non-standard multivariate model structures were low except for specific models that involve the indicator variable. In the same time the five criterions showed similar performance where CAIC and BIC have the best performance in the case of succeed in selecting the right multivariate regression model that has the right covariance structure and in the same time the right multivariate model structure.

Author Keywords
Information criteria; Multivariate regression; Restricted maximum likelihood (REML)

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