Graphical methods for evaluating some biased estimators in mixture experiments

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Abstract

In most practical applications, mixture data are highly collinear. In some cases, Scheffé models and other special mixture models give poor estimates of the coefficients, due to fact that constraints on the mixture components create collinearity. Effects due to collinearity can be reduced to certain extent by using alternative approaches. One of these approaches is to use biased estimators for the estimation of the coefficients. In this paper, we used a graphical method for evaluating the effect of the Liu estimator with respect to the predicted response value and the prediction variance. The obtained results are compared with the Ridge estimator.

Keywords

Collinearity, Liu estimator, Ridge estimator, Response trace, Prediction variance trace.

References

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