

Title:

**Rank Estimation in Reduced-Rank Regression**

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Abstract:

Reduced rank regression assumes that the coefficient matrix in a multivariate regression model is not of full rank. The unknown rank is traditionally estimated under the assumption of normal responses. We derive an asymptotic test for the rank that requires no distributional assumptions on the response vector. The test is extended to the non-constant covariance case. Linear combinations of the components of the predictor vector that are estimated to be significant for modelling the responses are obtained.