Asymptotic distribution of a set of linear restrictions on regression coefficients

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Abstract

Reduced rank regression analysis provides maximum likelihood estimators of a matrix of regression coefficients of a specified rank and of corresponding linear restrictions on such a matrix. These estimators depend on the eigenvectors of an "effect" matrix in the metric of an error covariance matrix. It is shown that the maximum likelihood estimator of the restrictions can be approximated by a function of the effect matrix alone. The procedures are applied to a block of simultaneous equations. The block may be over-identified in the entire model and the individual equations just-identified within the block.