Likelihood ratio test for the model with block covariance structure

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Abstract

In this talk we present the study about the association between two sets of characteristics. We assume that the observations have the multivariate normal distribution with the block-structure of the covariance matrix. We verify the separability of top left block of the covariance matrix and test independence of two groups of characteristics. Moreover, we consider how the distribution of test statistic depends on the sample size and the number of analyzed characteristics. We perform the simulations studies.

Keywords

Block covariance structure, Separable covariance structure, Maximum likelihood estimation, Likelihood ratio test.