

Asymptotic Variance of Sample Vector Variance of Standardized Variables

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Abstract

The stability of the correlation matrices is noteworthy. Usually to testing stability of correlation matrices used to statistics M Box, Jennrich and G. Its statistics However, M Box and G statistics as computation of matrix determinant and J statistic involves matrix inversion. The former needs the condition that all sample correlation matrices are positive definite which is not always satisfied in practice. This condition is not apt for high dimension data sets because its computational efficiency becomes low. To handle this obstacles, we proposed a new statistical test based on what we call vector variance of standardized variables (VVS). The proposed test is constructed based on vector variance (VV). This is evidenced by several papers describing the correlation matrix, Vector variance of standardized variables sample used a statistical formula variance vector. In practice there are difficulties in the calculation to determine variance of Vector Variance of Sample Variance of Standardized Variables. In this paper, by utilizing the vec operator and properties of the matrix will be investigated alternative formulation of asymptotic variance of Vector Variance of Sample Variance of Standardized Variables.

Keywords: vec operator, vector variance, covariance matrix, correlation matrix