# Explicit estimators under $m$-dependence for a multivariate normal distribution

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## Abstract

The problem of estimating parameters of a multivariate normal $p$-dimensional random vector is considered for a banded covariance structure under $m$-dependence. A simple non-iterative estimation procedure is suggested which gives explicit, unbiased and consistent estimator of the mean and explicit and consistent estimator of the covariance matrix for arbitrary $p$ and $m$.

Furthermore, this estimation procedure and a discussion about the residuals are used for estimation of the mean and the covariance matrix in a Growth Curve model again when the covariance matrix is banded of order $m$.

## Keywords

Multivariate normal distribution, Banded covariance matrices, Covariance matrix estimation, Explicit estimators, Growth curve model, Residuals.

## References

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