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Skewness and kurtosis of multivariate Markov-switching processes*

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Abstract

Exact formulae are provided for the calculation of multivariate skewness and kurtosis of Markov-switching Vector Auto-Regressive (MS VAR) processes as well as for the general class of MS state space (MS SS) models. The use of the higher-order moments in non-linear modelling is illustrated with two examples. A Matlab code that implements the results is available from the authors.

KEYWORDS: Markov-switching; VAR models; Higher-order moments; State space models.

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