

Title: Study of the dependence structure in economic and financial data

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Abstract: The thesis focuses on the issue of graphical models as a possible method for determining relationships between different variables. The thesis provides a broad theoretical basis for two methods of testing data, the test of zero partial correlation coefficients and the test based on maximum likelihood estimate. The last mentioned approach is a test of a graphical model with a data set on the basis of deviance. The thesis describes the theory of conditional independence and Markov properties as the basis of both tests, which are illustrated by general examples and by an example with real financial data.

Keywords: partial correlation coefficients, conditional independence graph, graphical models