

A PREDICTIVE MODEL EVALUATION AND SELECTION APPROACH - THE CORRELATED GAMMA RATIO DISTRIBUTION

E. Xekalaki, J. Panaretos and S. Psarakis

Department of Statistics
Athens University of Economics & Business
76 Patision St. 104 34
Athens, GREECE

Keywords and Phrases: model selection; bivariate gamma distribution; F distribution; correlated gamma-ratio distribution; predictive ability

Abstract

In this paper, an evaluation method is suggested for selecting one of two competing models based on certain predictive ability ratings. The main focus is on the case of linear models that are not necessarily nested. In the context of such models, the test procedure is based on a sample statistic whose distribution is shown to arise as the distribution of the ratio of two correlated gamma variables termed as the Correlated Gamma Ratio Distribution. Percentage points of this distribution are obtained. The procedure is illustrated on real data.