



The Prediction Error Distribution in ARCH Models

Evdokia Xekalaki*

Department of Statistics, Athens University of Economics and Business, Athens, Greece
exek@aueb.gr

A distribution that arises in the framework of a model selection procedure for the selection of the model with the lowest sum of squared standardized one-step-ahead prediction errors is studied. The form of the exact distribution of the criterion is explicitly derived and shown to be the distribution of the minimum of n variables that are multivariate gamma distributed. These variables represent the sums of squared standardized prediction errors of n models. Properties of the distribution are examined, and percentage points of it are explicitly obtained for its tri-variate version.

* Based on joint work on a more general problem on model selection with S. Degiannakis

Keywords: Laguerre polynomials, Multivariate Gamma Distribution, model selection, predictability.