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Estimation in threshold autoregressive models with correlated innovations

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Abstract Large sample statistical analysis of threshold autoregressive models is usually based on the assumption that the underlying driving noise is uncorrelated. In this paper, we consider a model, driven by Gaussian noise with geometric correlation tail and derive a complete characterization of the asymptotic distribution for the Bayes estimator of the threshold parameter.

Keywords Asymptotic statistics · Bayes estimator · Threshold autoregression · Hidden Markov models