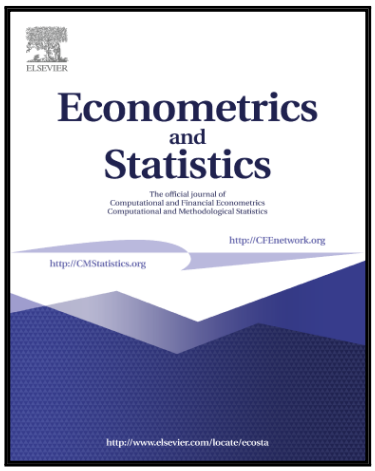

Model comparison for generalized linear models with dependent observations

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Model comparison for generalized linear models with dependent observations

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Abstract

The stochastic expansion of the marginal quasi-likelihood function associated with a class of generalized linear models is shown. Based on the expansion, a quasi-Bayesian information criterion is proposed that is able to deal with misspecified models and dependent data, resulting in a theoretical extension of the classical Schwarz's Bayesian information criterion. It is also proved that the proposed criterion has model selection consistency with respect to the optimal model. Some illustrative numerical examples and a real data example are presented.

Keywords: Asymptotic Bayesian model comparison, quasi-likelihood, dependent data, model misspecification, generalized linear model.