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The Bayes estimation of parameters of spatial autoregressive model. (Chinese. English summary) [Zbl 1463.62074]

Summary: First, the linear Bayes was used to estimate the parameters of spatial autoregressive model, and the superiorities of the linear Bayes estimator over two-step least square estimator were studied in terms of the mean square error matrix criterion. Then, the estimation of spatial autocorrelation coefficient was implemented by Metropolis algorithm. Finally, the superiorities of the linear Bayes estimation and two-step least square estimation were compared by simulation experiments.

MSC:
62F15 Bayesian inference
62F10 Point estimation
62J05 Linear regression; mixed models
62M10 Time series, auto-correlation, regression, etc. in statistics (GARCH)

Keywords:
spatial autoregressive model; linear Bayes estimation; two-step least square estimation

Full Text: DOI