Bayesian Spatial Panel Probit Model with an Application to Business Cycle in Japan

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概 要

This paper considers the panel probit model with spatial dependency from a Bayesian point of view. We consider Markov chain Monte Carlo methods to estimate the parameters of the model. Our approach is illustrated with simulated data set. Furthermore, we explore the spatial interaction of business cycle across 47 prefectures from the period 1991 to 2000 in Japan. Spatial dependency can be found in business cycle in Japan.

Key Words: Business cycle; Markov chain Monte Carlo(MCMC); Panel data; Probit model; Spatial autoregressive.
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