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Institut für Ökonometrie und Statistik

Forschungsseminar

Dr. Sebastian Kripfganz
20.06.2017, 16:00 (s.t.)

Seminargebäude - S12

Unconditional Transformed Likelihood Estimation of Time-Space Dynamic Panel Data Models

Abstract

I derive the unconditional transformed likelihood function for a fixed-effects panel data model with time lags, spatial lags, and spatial time lags that encompasses the pure time dynamic and pure space dynamic models as special cases. I demonstrate that the model-consistent representation of the initial-period distribution involves higher-order spatial lag polynomials. Their order is linked to the minimal polynomial of the spatial weights matrix. The finite sample evidence from Monte Carlo simulations shows that the proposed estimator performs well in comparison to a bias-corrected conditional likelihood estimator if parameter proliferation is kept under control. As an application, I use data from the Panel Study of Income Dynamics to estimate a time-space dynamic wage equation that I derive from a bargaining model. I find significant spillover effects among household members that give rise to a positive cohabitation premium.