Hanbat Jeong

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Citizenship and Visa Status
Republic of Korea (F-1 visa)

Education
Ph.D. Economics, The Ohio State University, 2019 (expected)
Dissertation: "Spatial dynamic models with intertemporal optimization"
Committee: Lung-fei Lee (chair), Jason Blevins, Robert de Jong, Bruce Weinberg
M.A. Economics, The Ohio State University, 2014
M.A. Economics, Sogang University, 2013
B.A. Korean Language & Literature, Sogang University, 2010

Teaching and Research Fields
Primary fields: Econometrics
Secondary fields: Applied Econometrics

Publications
Choi, I. and H. Jeong (2018). "Model selection criteria for factor analysis: some new criteria and performance comparison." *Econometric Reviews*, forthcoming.

Research Papers
"Spatial dynamic models with intertemporal optimization II: coevolution of economic activities and networks" **(Job Market Paper)**
In this paper, we introduce an econometric model describing agents' intertemporal spatial-economic interactions with network evolution. To realize an interrelationship between agents' choices and network evolution, we establish a network outcome model with a differential network game for forward-looking agents. Since an agent's payoff is characterized by parameters, a corresponding parametric econometric model can be established. To estimate the model's parameters, we consider a GMM estimation method based on first-order conditions of agents' lifetime problems. Asymptotic properties of the GMM estimator are studied for statistical inferences. Some simulations are conducted for finite sample properties of the GMM estimator. Using our model, we study the strategic interactions of states' expenditure decisions on education and health.

"Spatial dynamic models with intertemporal optimization: specification and estimation" (with Lung-fei Lee), submitted to *Journal of Econometrics*, August 13, 2018
In this paper, we introduce a dynamic spatial interaction econometric model. There are n forward-looking agents of them each has a parametric linear-quadratic payoff, and interacting with neighbors through a spatial network. Considering a Markov perfect equilibrium (MPE), we derive a unique equilibrium equation and construct a new spatial dynamic panel data (SDPD) model. For estimation, we suggest mainly the quasi-maximum likelihood (QML) method. Asymptotic properties of the QML estimator are investigated. In a Monte Carlo study, we estimate the model's parameters and compare the results with those from traditional SDPD models. The model is applied to an empirical study on counties' public safety spending in North Carolina. We conduct impulse response and welfare analyses corresponding to changing exogenous characteristics in a region.

"Differencing and non-differencing in factor-based forecasting" (with In Choi), R&R at *Journal of Applied Econometrics*

This paper studies performance of factor-based forecasts using differenced and non-differenced data. Approximate variances of forecasting errors from the two forecasts are derived and compared. It is reported that the forecast using non-differenced data tends to be more accurate than that using differenced data. This paper conducts simulations to compare root mean squared forecasting errors of the two competing forecasts. Simulation results indicate that forecasting using non-differenced data performs better in terms of mean squared forecasting errors. The advantage of using non-differenced data is more pronounced when the forecasting horizon is long and the number of factors is large. This paper applies the two competing forecasts to U.S. inflation and finds that forecasts using non-differenced data outperform those using differenced data except for one-month forecasting horizon.

Seminars and Conference Presentations

2019 (scheduled)	Multi-dimensional Spatio-temporal and Network Modelling (2019 ASSA Annual Meeting)
2018	Asian Meeting of the Econometric Society
2016, 2018 (scheduled)	OSU Econometric Seminar
2013	The International Symposium on Econometric Theory and Applications
2012	Hitotsubashi-Sogang Conference on Econometrics

Professional Activities

Referee for: *Empirical Economics.*

Honors, Scholarships, and Fellowships

2018	G.S. Maddala Prize in Econometrics
2018	Departmental Citation for Excellence in Teaching
2013-2014	The Ohio State University Fellowship

Teaching Experience

2017 Fall, 2018 Spring	Analysis and Display of Data, OSU (full responsibility)
2016 Fall, 2018 Fall	Graduate Econometrics I, OSU, teaching assistant for Lung-fei Lee
2015 Fall, 2016 Spring	Principles of Microeconomics, OSU, teaching assistant for Lucia Dunn and Ida Mirzaie

References

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