XIAOYU MENG

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Contact Information

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Personal Information:

Date of birth: 1992/08/05 Sex: Male Citizenship: Chinese

Undergraduate Studies:

Bachelor, Economics, Southwestern University of Finance and Economics, 2010-2014

Masters Level Work:

Master, Economics, Southwestern University of Finance and Economics, 2014-2017

Graduate Studies:

Singapore Management University, 2017 to present
Thesis Title: Spatial Panel Data Models: Unbalance Panel, Threshold Effect and Network Structure
Expected Completion Date: June 2022

Thesis Committee and References:

Zhenlin Yang (advisor)
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Assistant Professor of Economics
School of Economics
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Teaching and Research Fields:

Primary fields: Spatial Econometrics, Panel Data Models, Econometric Theory
Secondary fields: Applied Econometrics

Teaching Experience:

Instructor:
2020-2021, PhD Math Camp: Theory of Dynamic Programming, SMU

Teaching Assistant:
2021-2022, Macroeconomic Analysis (*master core course*), SMU
2018-2020, Intermediate Macroeconomics (*undergraduate core course*), SMU
2017-2018, Introductory Statistics (*undergraduate core course*), SMU

Research Experience:

2020-2021, Research Assistant for Professor Zhenlin Yang, SMU
2014-2017, Research Assistant for Professor Shuang Ma, SWUFE

Conference and Seminar Presentations:

2021, Asian Meeting of the Econometric Society, Miri, Malaysia
2021, China Meeting of the Econometric Society, Shanghai, China
2021, XV World Conference of Spatial Econometrics Association, Tokyo, Japan

Honors, Scholarships, and Fellowships:

2021-2022, Presidential Doctoral Fellowship, SMU, Singapore
2017-2021, Graduate Full Scholarship (Ph.D. Program), MOE, Singapore
2014-2017, First Class Academic Scholarship, SWUFE, China
2014, National Scholarship (Top 1%), MOE, China
2012, Second Prize in China Mathematical Contest in Modeling, MOE, China

Publications:

[1] "Liquidity Constraints, Social Capital and Entrepreneurship" with Dongliang Cai, Liyuan Qiu and Shuang Ma, *Management World*, (In Chinese, 管理世界, CSSCI), 2018.
[2] "Labor Cost and Household Entrepreneurship" with Shuang Ma, *China Journal of Economics*, (In Chinese, 经济学报, CSSCI), 2016.
[3] "Family Background and the Gender Inequality of Education" with Dongliang Cai and Shuang Ma, *Finance and Economics*, (In Chinese, 财经科学, CSSCI), 2016.

Working Papers:

"Threshold Spatial Panel Data Models with Fixed Effects" *with Zhenlin Yang.* (Job Market Paper)

Abstract: We introduce general estimation and inference methods for threshold spatial panel data models with two-way fixed effects (2FE) in a diminishing-threshold-effects framework. A valid objective function is first obtained by a simple adjustment on the concentrated quasi loglikelihood with 2FE being concentrated out, which leads to consistent estimation of all common parameters including the threshold parameter. We then show that the estimation of threshold parameter has an asymptotically negligible effect on the asymptotic distribution of the other estimators, and thereby lead to valid inference methods for other common parameters after a bias correction. A likelihood ratio test is proposed for statistical inference on the threshold parameter. We also propose a sup-Wald test for the presence of threshold effects, based on an M-estimation method with the estimating functions being obtained by simply adjusting the concentrated quasi-score functions. Monte Carlo results show that the proposed methods perform well in finite samples. An empirical application is presented on age-of-leader effects on political competitions across Chinese cities.

"Unbalanced Spatial Panel Data Models with Fixed Effects" *with Zhenlin Yang.* (Submitted to ***Journal of Econometrics***)

Abstract: We consider estimation and inferences for fixed effects spatial panel data models based on unbalanced panels that result from randomly missing spatial units. The unbalanced nature of the panel data renders the standard method of estimation inapplicable. In this paper, we proposed an M-estimation method where the estimating functions are obtained by adjusting the concentrated quasi scores to account for the estimation of fixed effects and/or the presence of unknown spatiotemporal heteroskedasticity. The method allows for general time-varying spatial weight matrices without row-normalization, and is able to give full control of the individual and time-specific effects for all the spatial units involved in the data. Consistency and asymptotic normality of the proposed estimators are established. Inference methods are introduced and their consistency is proved. Monte Carlo results show excellent finite sample performance of the proposed methods.

"Spatial Panel Data Models with Time-Varying Network Structure" *with Zhenlin Yang.*

Abstract: This paper proposes to study spatial panel data (SPD) models with time-varying network structures. The SPD model can be reformulated as a social interaction model to allow for possible endogenous interaction, exogenous interactions, correlation of unobservables, and most importantly unobserved group effects which can appear either additively or interactively with individual and time fixed effects. The direct quasi maximum likelihood (QML) estimation will give rise to the incidental parameters problem, coming from the estimation of the fixed effects, in that some common parameter estimates are not consistent or asymptotically biased. The popular transformation-based QML method cannot be applied as the group-specific effects may be time-varying and the row sums of sociomatrix (spatial weight matrix) may not be constant. In this paper, we propose an *adjusted quasi score* method where the estimating functions are obtained by adjusting the concentrated quasi scores (with fixed effects being concentrated out) to account for the effects of concentration. Consistency and asymptotic normality of the proposed estimators are established. Monte Carlo results show excellent finite sample performance of the proposed methods.

Working In Progress:

"Dynamic Spatial Panel Models with Threshold and Endogeneity" *with Yubo Tao.*

Computer Skills:

Matlab, Stata, LaTex

Languages:

Chinese (native), English (fluent)