Hongqiang Yan

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Education

Ph.D. in Economics, North Carolina State University, Raleigh NC   2018-present
  Dissertation Committee: Mehmet Caner (chair), Barry Goodwin, Zheng Li, Ilze Kalnina
  Dissertation Title: Inference in High-dimensional Threshold Regression Models with Applications
M.S. in Economics, Texas A&M University, College Station TX   2016-2018
B.S. in Finance, Beijing Jiaotong University, China   2012-2016

Field of Interest

Econometric Theory, Applied Econometrics

Working Papers

"Uniform Inference for High-dimensional Threshold Regression"
    In this paper, we study the scaled Lasso estimator of Lee et al. (2016) for high-dimensional threshold regression models and show how it may be desparsified in the sense of van de Geer et al. (2014) in order to construct asymptotically honest (uniform) confidence intervals. We establish oracle inequalities for the scaled Lasso only assuming non-subgaussian error terms and covariates. Next, we desparsify the scaled Lasso estimator and show how one can conduct uniformly valid inference on the slope parameters of the model and construct a uniformly valid estimator of the asymptotic covariance matrix. We illustrate the usefulness of our proposed estimation procedure via Monte Carlo simulations

Working in progress

"High-dimensional Threshold Regression Models of Spatial Market Integration for Building Materials" with Barry Goodwin
    We develop threshold regression models of price linkages in spatially distinct regional US markets for plywood and lumber products. The models are developed within the framework of high-dimensional threshold regression which is estimated using Lasso methods. The estimates of price changes exhibit substantial nonlinearities. The results are largely consistent with efficiently linked regional markets for lumber and plywood products.

"Non-parametric Estimation of Risk Preferences" with Xiaoyong Zheng and Zheng Li
    This paper proposes a nonparametric approach for the estimation of individual producers' risk preferences and risk premiums when they face uncertainty in both production and price. We allow for the endogenous production inputs within the production function. The framework is proposed for deriving the risk premium function under the expected utility of profit maximization. The econometric model accommodates production risk, price risk, and producer heterogeneity simultaneously. This is done by the series method in the presence of instrumental variables. We illustrate the usefulness of our proposed non-parametric procedure via Monte Carlo simulations.

"Uniform Inference in High-dimensional Dynamic Panel Data Models with Threshold Effect"

Presentations

Midwest Econometrics Group Conference East Lansing, MI, Oct, 2022

Teaching Experience

Graduate Teaching Assistant North Carolina State University

- Fundamentals of Microeconomics (Graduate) Fall 2020, 2021, 2022
  with mathematics camp and review session

- Applied Econometrics I (Graduate) Fall 2018, 2020, 2021
  with review session

- Introduction to Commodity Futures Markets (Undergraduate & Graduate) Fall 2022

- Microeconomic II (Doctoral) Spring 2020

- Introduction to Econometric Methods (Graduate) Spring 2020

- Principles of Microeconomics (Undergraduate) Spring 2022, Fall 2019

- Public Finance (Undergraduate) Spring 2019

Software Skills

R, Python, C++, Matlab, SAS, Stata, LaTeX

Honors and Awards

Graduate Economics Conference Travel Grant North Carolina State University, 2022
Toussaint Scholarship North Carolina State University, 2021-2022
Owens Graduate Fellowship North Carolina State University, 2019-2020
Economics Graduate PCOM Scholarship North Carolina State University, 2018-2019
Economics Graduate General Scholarship Texas A&M University, 2016-2018
First Class Scholarship Beijing Jiaotong University, 2015-2016

Dissertation Committee

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