

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: Uniform 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

Beijing, China, 2012-2016

Field of Interest

Econometrics, Applied Econometrics, Agricultural Economics

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"

"Factor-Driven Two-Regime Regression Model of Spatial Market Integration for Lumber Products" with Barry Goodwin

"Uniform Inference in High-dimensional Panel Data Models With Approximate Sparse Two-dimensional Heterogeneity"

Presentations

Midwest Econometrics Group Conference

East Lansing, MI, Oct, 2022

Teaching Experience

Instructor

North Carolina State University

- Principles of Microeconomics (Undergraduate) Spring 2023

Graduate Teaching Assistant

North Carolina State University

- Fundamentals of Microeconomics (Graduate) Fall 2020, 2021, 2022
summer math camp and recitations
- Applied Econometrics I (Graduate) Fall 2018, 2020, 2021
recitations
- 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

Goodnight Doctoral Fellowship

North Carolina State University, 2022-2023

Economics Graduate 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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North Carolina State University

Professor. Barry Goodwin
Department of Agricultural and Resource Economics
North Carolina State University

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