PUGUANG NIE

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EDUCATION

PhD in Econometrics	Monash University	04/2023
Master of Applied Econometrics	Monash University	12/2017
Bachelor of Economics (Statistics)	Nanjing University of Finance and Economics	06/2013

RESEARCH INTERESTS

Applied Econometrics, Statistics, Bayesian Analysis, Nonparametric modelling,

Financial Econometrics

PUBLICATIONS & WORKING PAPERS

Mahal, A., Ishida, M., Nie, P., & Pan, T. (2020). Implications of Nurse Mentoring Strategies for Delivery-Related Services: Quantitative Evidence from Three Programs in Bihar and Uttar Pradesh. *Available at SSRN 4007725*.

"A Bayesian semiparametric stochastic frontier model for analysing cost efficiency of commercial banks in the US", with Professor Xibin Zhang, Monash University

CONFERENCE

"A Bayesian semiparametric stochastic frontier model for analysing cost efficiency of commercial banks in the US", the Econometric Society Australasian Meeting, Brisbane, Australia, 2022

RESEARCH PROJECTS

Bayesian estimation for semiparametric stochastic frontier models   03/2019-04/2023
- Construct a Bayesian sampling procedure for the estimation of inefficiency terms specified in the stochastic frontier model by approximating a nonparametric conditional density estimator for the inefficiency terms
- Present a nonparametric estimator for the frontier function using a data-driven adaptive bandwidth and estimate the models within a Bayesian framework
- Propose two Bayesian sampling algorithms to model the unobserved grouped heterogeneity of frontier functions with a latent class structure

How is the Australian dollar driven by commodities? 06/2017-11/2017

- Collect hourly data for Australian dollar and iron ore, gold, yield differentials, and apply rolling analysis for a window of fixed observations
- Choose distinct independent variables in each rolling sample given their rank correlation with the Australian dollar
- Employ GJR-GARCH model to reveal the dynamic relationship between the Australian dollar and iron ore, gold, yield differentials and find which one plays a dominant role over different short periods
- Provide suggestions for finance policy makers and strategies of trading Australian dollar for financial companies

RESEARCH EXPERIENCE

Research Assistant Department of Marketing, Monash University

10/2022-current

- Replicate study findings from journal papers using R and MATLAB
- Generate variables using raw data from a large marketing database
- Develop Bayesian sampling algorithms for a switching model to study the relationship between online reviews and purchasing decisions

Research Assistant Nossal Institute for Global Health, University of Melbourne

02/2018-08/2018

- Perform data analysis for three nurse mentoring programs in India using Stata
- Apply the matching statistical method and DID method to evaluate the three programs

TEACHING

Teaching Associate Department of Econometrics and Business Statistics, Monash University

Courses: Introductory econometrics 07/2020-12/2022

Quantitative methods for financial markets

SKILLS

Programming languages and analytical software: MATLAB, R, Stata, EViews