

Yi-Wun Chen

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EDUCATION

(updated: 11/16/2022)

Ph.D., Economics, Binghamton University, SUNY 2023 (expected)

Dissertation: “The Stochastic Frontier Model with Selectivity, Heterogeneity, and Endogeneity”

Committee: Subal C. Kumbhakar (Advisor), Solomon W. Polachek, Hung-Pin Lai, and Ivan Korolev

M.A., Economics, Washington University in St. Louis 2017

Passed Macroeconomics and Econometrics Ph.D. preliminary exams; left with an M.A. degree

M.A., Economics, Soochow University, Taiwan 2011

Concentration: Econometrics; thesis-based

B.A., Economics, Tamkang University, Taiwan 2008

FIELDS of SPECIALIZATION

Econometrics, Applied Econometrics, Productivity and Efficiency Analysis

JOB MARKET PAPER

The Stochastic Frontier Model with Ordered Multiple Choices (*R&R at Journal of Productivity Analysis*)

- Developed a stochastic frontier (SF) model with multiple endogenous regimes to solve biased and inconsistent estimates due to sample selection bias.
- Derived the closed form of the likelihood function and the estimator of the technical efficiency (TE) index based on the sample selection information for the proposed model.
- In this empirical study, I analyzed the cost efficiency of doctoral-granting universities in the United States by maximum likelihood estimation and applied this to the proposed model.

WORKING PAPER

The Heckman Selection Model with Stochastic Frontier Analysis and Endogeneity

- Developed the Heckman selection model with endogeneity and included the SF model as its main equation, which allowed us to solve the problems of selectivity and endogeneity bias simultaneously in the SF analysis, otherwise the estimated parameters would be biased and inconsistent.
- The proposed model can be applied to three cases of endogeneity; the endogeneity that exists only in the SF model (main equation), only in the selection equation, or in both.
- Derived the closed form of the likelihood function and the estimator of the TE index based on the information of selectivity and endogeneity for the proposed model.
- In the empirical study, I analyzed the operating efficiency of air carriers in the United States.

The Double Hurdle Stochastic Frontier Model with Ordered Multiple Choices

- Combined the double hurdle model and SF model with ordered multiple choices and extended the two outcomes in the second selection stage to multiple possible outcomes as well as taking heterogeneous observations into account.

- Derived the closed form of the likelihood function and the estimator of the TE index based on the sample selection information for the proposed model.

The Panel Stochastic Frontier Model with Endogenous Switching, with Hung-Pin Lai and Subal C. Kumbhakar

- Extended the cross-sectional SF model with sample selection discussed in Lai (2015) to a panel version.
- Conducted a Monte Carlo simulation to study the performance of the proposed estimator with a finite sample.

Overeducation: Effect on Wages and Deadweight Loss, with Yu-Hsia Chen

- Estimated the effect of overeducation (undereducation) on wages by the maximum likelihood estimation to consider the sample selection bias problem caused by excluding the nonworkers' sample. Also, considering the wage equation should be different between full-time workers and part-time workers.
- Analyzed graphically the deadweight loss of overeducation of an individual and the entire society.

TEACHING EXPERIENCE

Instructor, Binghamton University, SUNY

Statistical Methods Summer 2021 & Summer 2022

Teaching Assistant, Binghamton University, SUNY (*: with Discussion Session)

Econometric Methods (Master Level)* Fall 2022

Econometrics (Ph.D. core course) Spring 2022

Panel Data and Stochastic Frontier Model (Ph.D. level) Spring 2022

Macroeconomic Theory II (Ph.D. core course)* Spring 2020 & Spring 2021

Economic Forecasting (Time Series Analysis)* Fall 2020 & Fall 2021

Economic Forecasting (Time Series Analysis) Fall 2019

Economics of Developing Countries Spring 2019

Microeconomic Theory* Fall 2018

Teaching Assistant, Washington University in St. Louis

Introduction to Microeconomics Spring 2017

Health Economics Fall 2016

Full-Time Teaching Assistant, Soochow University, Taiwan

Game Theory Fall 2013 - Spring 2015

Econometrics*, International Economics Fall 2012 - Spring 2013

Advanced Statistics*, Macroeconomics, Microeconomics Fall 2011 - Spring 2013

Principles of Economics* Fall 2011 - Spring 2012

Teaching Assistant, Soochow University, Taiwan

Econometrics*, Microeconomics Fall 2010 - Spring 2011

RESEARCH EXPERIENCE

Research Assistant for Prof. Chinn-Ping Fan, Soochow University, Taiwan 2013-2015

Project Title:

- (1) "Telecommunication Management Policy and Experimental Study of Spectrum Auction Design"
- (2) "An Experimental Study of Hierarchical Package Bidding Auction and Ausubel Auction"

Project Title:

- (1) “The Effects of Overeducation: The Case of Taiwan”
- (2) “Theoretical Models of Limited Dependent Variables and Applications” (Typing and Editing a Book)

CONFERENCE and SEMINAR PRESENTATION

92nd Annual Meeting of the Southern Economic Association (SEA), 2022 (scheduled)
 Midwest Econometrics Group Conference (MEG), 2022
 Asia-Pacific Productivity Conference (APPC), 2022
 Asian Meeting of the Econometric Society (AMES) in East and South-East Asia, 2022
 The 16th International Symposium on Econometric Theory and Applications (SETA), 2022
 Econometric Society Australasia Meeting (ESAM), 2022
 Asian Meeting of the Econometric Society in China (AMES), 2022
 5th International Conference on Econometrics and Statistics (EcoSta), 2022
 New York Camp Econometrics XVI, 2022 (poster session)

FELLOWSHIPS and SCHOLARSHIPS

Binghamton University, SUNY

GSEU Professional Development Award	Spring 2022
Economics Department Graduate Student Research Fund	Spring 2022
Tuition Scholarship and Teaching Assistantship	Fall 2018 - present

Washington University in St. Louis

Tuition Scholarship and Teaching Assistantship	Fall 2016 - Spring 2017
Tuition Scholarship and University Fellowship	Fall 2015 - Spring 2016

SKILL

Statistical Software:	R, MATLAB, Python, STATA, EViews, LIMDEP, SQL, GNU Octave
Licenses & Certifications:	Advanced SQL for Data Scientists on LinkedIn Python Data Analysis on LinkedIn SQL Essential Training on LinkedIn Machine Learning by Stanford University on Coursera Data Science Course 2020: Complete Data Science Bootcamp on Udemy Bank Internal Control and Audit, Taiwan Common Knowledge and Professional Ethics of Financial Market, Taiwan

PERSONAL

Citizenship: Taiwan
 Languages: Mandarin (native), English (fluent)

REFERENCE

Subal C. Kumbhakar (Advisor)

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Solomon W. Polachek

Distinguished Professor

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Christopher L. Hanes (Teaching Reference)

Professor

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Hung-Pin Lai

Distinguished Professor

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University, Taiwan

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