

JUN (BEAN) ZHAO

November 2020

Department of Economics
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Education

- Vanderbilt University, Department of Economics
Ph.D. in Economics, *expected* May 2021
Dissertation Title: Essays on the Econometrics and Empirics of Bayesian Games
Dissertation Committee: Tong Li (**advisor**), Joshua D. Clinton, Atsushi Inoue, Mattias Polborn, Pedro H.C. Sant'Anna
- Renmin University of China, School of Economics
M.A. in Economics, 2015
B.A. in Economics and B.S. in Mathematics, 2013

Research and Teaching Fields

- Microeconometrics, Empirical Industrial Organization, Political Economy

Honors and Fellowships

- CEGS Grant Funding, Vanderbilt University, Spring 2020
- Teaching Assistantship, Vanderbilt University, 2016, 2017; Fall 2018, Fall 2019, Fall 2020
- University Graduate Fellowship, Vanderbilt University, 2015 - 2020

Research Assistant Experience

- Research Assistant for Professor Tong Li: Summer 2017; Summer 2018; Spring 2019; Spring 2020, Summer 2020, Fall 2020; *expected* Spring 2021

Teaching Experience

- Vanderbilt University, Instructor
Economic Statistics (Undergraduate): Summer 2019
- Vanderbilt University, Teaching Assistant
Statistical Analysis (Ph.D.): Fall 2019
Econometrics II (Ph.D.): Fall 2018, Fall 2019
Intermediate Microeconomic Theory (Undergraduate): Fall 2016, Fall 2018
Econometrics I (Ph.D.): Spring 2017, Spring 2018
Microeconometrics (Ph.D.): Spring 2018
Microeconomic Theory III (Ph.D.): Fall 2017

Selected Topics in Mathematics for Economists (Ph.D.): Fall 2017

Econometrics (M.A.): Spring 2017

Microeconomic Theory (M.A.): Fall 2016

Research Papers

1. “Campaign Spending in Senate Elections: A Structural Analysis of a Two-Stage Election with Endogenous Candidate Entry,” *Job Market Paper*

This paper quantifies the effect of campaign spending on electoral outcomes in the U.S. Senate elections. To this end, I develop a two-stage contest model where in the first stage potential candidates decide whether to enter, and in the second stage those that decide to enter participate in an election consisting of within-party primaries and a general election where they make campaign spending decisions to influence the probability of winning. I also specify voters’ decisions through a latent utility model. I estimate this game-theoretic model using data on the vote shares of Senate candidates in primary and general elections, data on candidates’ campaign spending, and state-year level covariates for Senate elections between 1994 and 2018. Taking account of endogenous entry, I find that incumbents spend more and run more relative to potential challengers, and that campaign spending is more effective in increasing votes in the primary compared to the general election. Moreover, I show that the primary election in the incumbent’s party is important in the sense that it can increase the electoral competition. I also show in a counterfactual analysis that moving to a top-two primary results in a slightly less competitive election and lower spending relative to the commonly used primary system.

2. “Doubly Robust Difference-in-Difference Estimators,” with Pedro H. C. Sant’Anna, *Journal of Econometrics*, vol. 219 (1), p. 101-122, 2020. [SSRN] [arXiv] [Supplementary Appendix] [R package: DRDID]

This article proposes doubly robust estimators for the average treatment effect on the treated (ATT) in difference-in-differences (DID) research designs. In contrast to alternative DID estimators, the proposed estimators are consistent if either (but not necessarily both) a propensity score or outcome regression working models are correctly specified. We also derive the semiparametric efficiency bound for the ATT in DID designs when either panel or repeated cross-section data are available, and show that our proposed estimators attain the semiparametric efficiency bound when the working models are correctly specified. Furthermore, we quantify the potential efficiency gains of having access to panel data instead of repeated cross-section data. Finally, by paying particular attention to the estimation method used to estimate the nuisance parameters, we show that one can sometimes construct doubly robust DID estimators for the ATT that are also doubly robust for inference. Simulation studies and an empirical application illustrate the desirable finite-sample performance of the proposed estimators. Open-source software for implementing the proposed policy evaluation tools is available.

Working Papers

1. “Nonparametric Identification of Bayesian Games Under Exclusion Restrictions,” with Tong Li and Jun Zhang, *under review*

2. “Testing for Collusion in Procurement Auctions,” with Tong Li and Jun Nakabayashi

Work in Progress

1. “Efficacy of a Bidder Training Program in Procurement Auctions with Selection and Entry,” with Dakshina G. De Silva and Tong Li

Publications in Chinese

1. “Poverty in China: Re-Analysis Adjusted by the Equivalence Scale,” *Management World*, 2015, 10:65-77 (with Yang Song)

Presentations and Conferences

• Presentations of Research

The 2020 European Winter Meeting of the Econometric Society (Virtual), December 2020 (scheduled)

SEA 90th Annual Meeting (Virtual), November 2020 (scheduled)

The 15th Annual Economics Graduate Student Conference (Virtual), November 2020 (scheduled)

The Econometric Society and Bocconi University Virtual World Congress, Milan, Italy, August 2020

7th Annual Conference on Auctions, Competition, Regulation and Public Policy, Lancaster, UK, May 2020 (cancelled)

2020 MPSA Conference, Chicago, IL, April 2020 (cancelled)

Conference on Advances in Econometrics, Nashville, TN, October 2019

Vanderbilt Work in Progress Seminar, Nashville, TN, September 2019

Vanderbilt Graduate Student Research Day, Nashville, TN, April 2019

• Conference Attended

Conference on Identification in Econometrics, Nashville, TN, April 2018

Conference on Econometrics and Models of Strategic Interactions, Nashville, TN, April 2017

Computer Skills

R, Python, Matlab, Stata, and \LaTeX

Personal

Citizenship: China (F-1 visa)

Language: English (Fluent), Chinese (Native)

Professional References

Professor Tong Li (Advisor)

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