

# SHUO TIAN

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## EDUCATION

**Ph.D. candidate**, Economics, Texas A&M University, 2022 (Expected)

**M.A.**, Management, Fudan University, 2016

**B.A.**, Physics, University of Science and Technology of China, 2012

## RESEARCH INTEREST

Microeconometrics, Empirical Industrial Organization, Applied Microeconomics

## WORKING PAPER

### **Inference on Number of Potential Bidders in Selective Entry (Job Market Paper)**

This paper studies inference on number of potential bidders in selective entry for first-price sealed-bid auctions. Information of potential bidders set is of great empirical importance in auctions. However, such a set is often constructed by ad hoc methods. I develop a method to test whether these methods are plausible. The test is based on the comparison of bidders' value distributions in two models. The first one is a selective entry model given information of potential bidders. The second one is another selective entry model with the number of potential bidders unknown and random. I apply the methods to procurement auctions from the Californian Department of Transportation (Caltrans). I find that recovered private value distributions fluctuate significantly when different construction methods are employed. I examine the widely used construction method that relies on the time length of a bidder's previous participation. The results show that the time length criterion for Caltrans data should be selected from 120 to 180 days.

### **Selective Entry in Incomplete Procurement Auctions**

This paper studies entry behaviors in procurement auctions with incomplete contracts held by Caltrans. I first provide some reduced-form evidence that contractual incompleteness affects bidders' entry negatively. Motivated by the evidence, I propose a structural model that incorporates both selective entry and contractual incompleteness. I show the model is nonparametrically identified. Applying the model to Caltrans data, I find that, on one hand, expected contractual incompleteness decreases bidders' entry probability. On the other hand, expected holdup from incomplete contracts will cause bidders more likely to enter. From a counterfactual analysis among different models, I show that the estimation of bidders' cost distribution will be biased when neglecting either entry behaviors or incompleteness in procurement auctions.

## WORK IN PROGRESS

### **Signaling in Land Market Auctions and Housing Prices in China (with Yonghong An, Jing Li, and Junfu Zhang)**

This paper investigates an important factor of China's high housing prices: local governmental signaling in land market auctions. We first identify that the winning price of a land auction affects the nearby housing prices

positively and such effect could be temporary. We propose a structural model to explain the phenomena. In the model, a local government strategically sends a signal to bidders on possible factors that may increase the value of the auctioned land. The signal affects bidders valuations and the winning prices. Using the model and data on land auctions and housing prices, we structurally estimate the contribution of governmental signaling on high housing prices in China.

## **TEACHING EXPERIENCE**

### **Instructor**

ECON 202 - Principles of Economics, Summer 2020

### **Teaching Assistant**

ECON 611 - Foundations of Macroeconomic Theory (with recitations), Spring 2021

ECMT 463 - Introduction to Economics (with recitations), Spring 2021

ECMT 675 - Econometrics I (with recitations), Fall 2020

ECMT 680 - Financial Econometrics (with recitations), Spring 2020,

ECON 460 - Intro Math Economics (with recitations), Fall 2019

ECON 660 - Math Economics (with recitations), Fall 2019

ECMT 680 - Financial Econometrics (with recitations), Spring 2019,

ECON 460 - Intro Math Economics (with recitations), Fall 2018

ECON 660 - Math Economics (with recitations), Fall 2018

ECON 630 - Microeconomic Theory II (with recitations), Spring 2018

ECON 636 - Macroeconomic Theory I (with recitations), Fall 2017

ECON 330 - Economic Development, Spring 2017

## **CONFERENCE**

25th Texas Econometrics Camp, 2020

24th Texas Econometrics Camp, 2019

91st Southern Economic Association Annual Meeting, 2021

## **AWARD**

Texas A&M University Department of Economics Assistantship, 2016-2022

## **SOFTWARE**

**Proficient** R, Matlab, Stata, C, Java

**Basic** Python, L<sup>A</sup>T<sub>E</sub>X, Mathematica, ArcGIS