SAMIN JALALI

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PLACEMENT STAFF

Professor Quan Wen
Placement Director
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Heidi Hannah
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EDUCATION

University of Washington, Seattle , WA — 2016–2022 (expected)
Ph.D. in Economics
Dissertation title: *Understanding Heterogeneous Impact of Medicaid Expansion Using Generalized Random Forest*

University of Washington, Seattle , WA — 2016–2018
M.Sc. in Economics

Sharif University of Technology, Tehran, IRAN — 2012–2015
M.Sc. in Socio-Economic Systems Engineering

Ferdowsi University of Mashhad, Mashhad, IRAN — 2007–2011
B.Sc. in Electrical Engineering

RESEARCH INTERESTS

Primary fields: Causal Inference, Health Economics, Applied Microeconomics
Secondary Fields: Machine Learning, Behavioral Finance

REFERENCES

Jing Tao (Co-Chair)
Assistant Professor
Department of Economics
University of Washington
Email: jingtao@uw.edu

Anirban Basu (Co-Chair)
Professor of Health Economics
CHOICE Institute, School of Pharmacy
University of Washington
Email: basua@uw.edu

Haideh Salehi-Esfahani (Teaching Reference)
Teaching Professor
Department of Economics
University of Washington
Email: haideh@uw.edu

Stephan Siegel
Professor of Finance
Foster School of Business
University of Washington
Email: ss1110@uw.edu

WORKING PAPERS

- Understanding Heterogeneous Impact of Medicaid Expansion Using Generalized Random Forest (JMP)
- Female CEO and Employee Satisfaction (with Reza Farhadi)
- Google Analytics Customer Revenue Prediction (with Amin Zadkazemi)
- Price Limit Performance: Evidence from Tehran Stock Exchange

PROFESSIONAL ATTENDANCES

Program in Health Economics and Outcomes Research Methodologies (PHEnOM) Seminars
CHOICE Institute at University of Washington, Seattle, WA, March 2021.
Presented the "Understanding Heterogeneous Impact of Medicaid Expansion Using Generalized Random Forest".

The Fourth International Conference on Iran's Economy
Marburg, Germany, June 2016.
Presented the "Price Limit Performance: Evidence from Tehran Stock Exchange" paper.

Annual Health Econometrics Workshop (AHEW)
Knoxville, TN, September 2019
Attended the workshop.

Teaching Experience

Instructor, University of Washington, Seattle, WA

- Intermediate Macroeconomics (Spring 2020, Fall 2020)
- Introduction to Macroeconomics (Spring 2018, Spring 2019)
- Introduction to Microeconomics (Fall 2017, Winter and Fall 2018, Winter and Summer 2019, Winter 2020)

Instructor, Seattle University, Seattle, WA

- Quantitative Methods and Application (Fall 2021, Scheduled for Winter 2022)
- Business Statistics (Scheduled for Winter 2022)

Teaching Assistant, University of Washington, Seattle, WA

- Behavioral Economics (Fall 2021, Professor Salar Jahedi)
- Econometrics Theory and Practice (Spring 2021, Professor Eliot Abrams)
- Causal Inference (Winter 2021, Professor Melissa Tartari)
- Introduction to Microeconomics (Winter 2017, Spring 2017, Fall 2019, Professor Haideh Salehi-Esfahani)

Research Employment

Research Assistant Aug 2020 – Jun 2021
Topic: *Personal Communication in a Digital World: Evidence from Loan Payments*
Principal Investigator: Professor Stephan Siegel

Research Assistant Jun 2021 – Sep 2021
Topic: *Venture Capitalist Decision Making Informed by Machine Learning Methods*
Principal Investigators: Professors Lea Stern and Victor Lyonnet

Computer Skills

Programming: R, Python, STATA, SQL, Microsoft Office, LaTeX

Honors and Awards

James O. York Fellowship, Department of Economics, University of Washington 2016

Travel Grant, American Economic Association, Philadelphia 2018

Travel Grant, American Economic Association, Atlanta 2019

Exempted from the Iranian National Entrance Exam for Graduate Studies in Electrical Eng. 2011

PAPER ABSTRACTS

Understanding Heterogeneous Impact of Medicaid Expansion Using Generalized Random Forest (JMP)

Abstract: This study is an attempt to investigate the effects of access to the Medicaid expansion program on mental health, welfare, financial strain, and health care need. Since inception, the optional Medicaid program through the Affordable Care Act, has become subject of debate among various stakeholders. Oregon's 2008 lottery-allocated access to Medicaid for low-income adults provided a randomized trial opportunity to study impacts of public insurance on self-reported health, health care use, and financial strain on low income adults. There has not been consensus on various aspects of Medicaid impact among researchers. These credible researches studied the average treatment effect, missing the heterogeneity of effects on subpopulations with different characteristics. Using Generalized Random Forest, a non-parametric causal Machine Learning method, we estimate the causal heterogeneous effect of Medicaid on self-reported happiness, out-of-pocket medical costs, depression, and the likelihood of getting all needed medical care. We show that there is heterogeneity in Medicaid effects with respect to observable variables, particularly individual's age and number of weekly working hours. We find that Medicaid coverage causes older subpopulation who work more than 30 hours per week to be happier, incur less out-of-pocket medical costs, and be less depressed. Additionally, we show that Medicaid is more successful in decreasing the out-of-pocket medical costs for people who live in rural areas compared to those who live in urban, Metropolitan Statistical Areas (MSA). Policy makers can design more efficient policies regarding the public insurance by considering the heterogeneous effects as discussed in this study.

Female CEO and Employee Satisfaction

Abstract: With the aid of large size Glassdoor employee opinions data, this study attempts to shed light on some underrepresented aspects of gender bias and its consequences on market efficiency. More specifically, in this paper we investigate employee views on female CEOs and propose that there exists gender-based bias against women in top managerial positions. Our preliminary results show that, controlling for the firm-related variables and CEO characteristics, employees show lower esteem for female CEOs and directors compared to their male counterparts. The existing literature on the gender gap issue acknowledges that female executives are different in characteristics and behaviors when compared to male executives. This is considered to be rooted in gender specifications and explained by gender-based behavioral differences between males and females. We argue that this is at least partially stemmed from reasons other than gender characteristics. In particular, we suspect that these so-called "behavioral differences" may be imposed on female executives by the environment. In this study we aim to use two-stage least squares regression, and instrument a firm's likelihood of hiring a female CEO by the female proportion of the state's delegates elected to the House of Representatives and the Senate in each year. Using this IV and the employees quantitative reviews (ratings) we aim to estimate the effect of a female CEO on employees' rating. In the next step, we focus on the employees textual comments and reviews within the same context. Using a new Machine Learning technique for Natural Language Processing (NLP), Bidirectional Encoder Representations from Transformers (BERT), and the textual data, the goal is to first extract similar type of results —lower esteem for female CEOs— and second, to investigate whether employees soft information provided in a textual format carries information which cannot be captured with the quantitative variables, i.e., employees ratings, that we used in the previous step. For the purpose of our study, BERT can be used for classification, e.g., predicting the gender of the CEO from the employees text; sentiment analysis, e.g., predicting the tone of the employees text; or summarizing the information in employees' comments.

Google Analytics Customer Revenue Prediction

Abstract: In this study, we aim at predicting the revenue per user of the Google Merchandise Store. We use the data collected by the Google Analytics service. The data includes user demographic information, as well as user past behavior with information on their interaction with the website. Since the majority of the sessions end up in no transaction and we have a lot of zero transaction revenue in our data, conducting the conventional Machine Learning algorithms could lead to many predictions with zero value and bad performance. In this study, we propose using a two-stage model which first classify the sessions as "with transaction" or "without transaction", then we run a second algorithm on the data by adding the prediction from the first stage as a feature. Next, we compare the results of different Machine Learning algorithms such as Ridge, Lasso, Random Forest, Gradient Boosting methods, and Neural Network to find the best prediction according to the minimum root mean square error. Our results indicate that the one-stage random forest algorithm provides the most accurate predictions.

Price Limit Performance: Evidence from Tehran Stock Exchange

Abstract: We study the impact of price limits by exploiting a unique feature of the stock market in Iran Using the propensity score matching method. Iranian listed firms are traded on one of the two separate, but very similar, exchanges with different price limits. We compare the performance of stocks listed on the Tehran Stock Exchange (TSE) with a 4% price limit, with comparable stocks from the Fara-Stock Exchange(FSE) with a 5% price limit. We find that return and trading volumes are similar for stocks matched across the two markets, whereas volatility and idiosyncratic risk are higher for stocks listed on the FSE with a wider price limit. We also show that the wider the price limit, the lower the number of consecutive days that stocks hit the boundaries. The results are robust to various changes in specification.