Ren Jie, Teh

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Research interests: labor economics, political economy, applied microeconomics

Education

National University of Singapore (NUS) Aug 2019 – Jun 2024

Double Degree Programme

- **B.Soc.Sci. in Economics (Honours, Highest Distinction)**, GPA 4.79/5.00
- **B.Eng. in Chemical Engineering (Honours, Highest Distinction)**, GPA 4.73/5.00
- **Honours thesis:** "Using Large Language Models to Characterise Discrimination: Evidence from the Singapore Labour Market" (A+; MTI Best Thesis Award)
- **Selected coursework:** Microeconomic Theory (graduate); Policy Impact Evaluation Methods (graduate); Econometrics I & II; Game Theory; Mathematical Analysis I; Linear Algebra; Differential Equations; Calculus; Introduction to Machine Learning; Programming Methodology

Research Experience

Predoctoral Research Assistant Jun 2024 – Present

Department of Economics, National University of Singapore

With Prof. Jessica Pan (part-time May 2023 – May 2024)

- **Gender Differences in Promotion Desire: The Role of Managers** (M. Bertrand, P. Cortés, J. Pan, H. Shigeoka, M. Yagasaki)
  - Derived the estimability conditions and a leave-one-out connected-set algorithm that guarantee manager effects on women's promotion desire are identified in a multi-way fixed-effects model.
  - Developed joint (bivariate) Empirical Bayes shrinkage of the manager-change dose, whose two estimation errors are correlated through shared workers, and corrected reference-manager noise in the variance matrix.
  - Built a continuous-treatment difference-in-differences estimator for quasi-random manager rotations that targets the average causal response on the treated, adapting Callaway, Goodman-Bacon and Sant'Anna to a setting with no untreated units.
  - Studied mechanisms with Gallup engagement surveys and 360-degree manager evaluations.
- **The Labor Market Impacts of Anti-Discrimination Legislation** (D. Lee, J. Pan, S. George)
  - Multi-round resume audit spanning Singapore's 2027 workplace fairness law: coordinated ∼140 undergraduate RAs sending ∼48,000 applications to ∼4,700 jobs at ∼1,750 firms over 7 rounds.
  - Redesigned the audit as an automated pipeline from the third round onward (Selenium applications, automated callback tracking, job sampling from custom scrapers) and built the cleaning pipeline that combines all rounds.
- **Others:** cleaned data and drove analysis for various survey-based projects; built a pipeline tracking the careers of NUS graduate alumni from LinkedIn and public profiles.

With Prof. Ruben Durante

- **Conspiracy Beliefs and Critical Thinking** (D. Acemoglu, C. Aksoy, R. Durante, S. Sequeira)
  - *Measurement:* conducted a large-scale literature review on the determinants and measurement of conspiracy beliefs; led the development of an AI voice interviewer, embedded in a cross-country survey, that measures conspiracy beliefs and the narratives behind them; designed the framework that maps narratives as directed acyclic graphs (extending Andre et al.); worked with the survey company Bilendi to integrate the tool into their platform.
  - *Interventions:* co-designed and managed the development of a game-based intervention and a Socratic AI interviewer against conspiratorial thinking
- **Political Beliefs and Labor Supply Decisions** (N. Ajzenman, R. Durante, E. Teso)
  - Field experiment with ∼5,000 Upwork freelancers in 11 countries on whether ideological alignment with an employer affects job applications and wage requests. Co-designed the experiment, drafted the baseline survey and ran the IRB and sampling; proposed an intensive-margin extension on effort and accuracy.
- **Experience, Narratives, and Climate Change Attitudes: Evidence from Extreme Weather Events** (M. Djourelova, R. Durante, E. Motte, E. Patacchini). R&R, *JEEA*.

- Co-designed the revision's experiment on clashing narratives in politicized disaster coverage: news scripts and video stimuli, power calculations, survey and analysis.

- **Others:** proposed a triple-difference design using Baidu search salience for a project on judicial plagiarism in China, and built its scrapers and analysis; rebuilt the main results for a paper on NRA endorsements; data work on Russian Wikipedia censorship and hate crime on the London Underground.

Research Assistant (part-time) Aug 2022 – Jul 2023
Department of Economics, National University of Singapore *Prof. Jingfeng Lu*

- Checked proofs and ran numerical simulations for game-theoretic models of competition.

Research in Progress

Dodging Discriminators: Can Job Seekers Identify and Avoid Biased Firms?
with Siddharth George and Jessica Pan

- Audit studies measure the average level of discrimination, but the discrimination workers face depends on how they sort. Tests whether job seekers can identify discriminatory employers, benchmarked against keyword rules and machine-learning predictions from job-ad text, and how their search changes realized callback gaps.
- Proposed the project's structure; built the detection and search tasks and the prediction pipeline; replicated Kline, Rose and Walters (2022) on our audit to separate true between-firm variation in callback gaps from noise, and apply Empirical Bayes shrinkage to gaps used as prediction targets.
- Builds on my honours thesis, which predicted discriminating jobs from job-ad text (TF-IDF, Word2Vec, BERT) and outperformed explicitly discriminatory ads in predicting callback gaps.

Awards & Scholarships

- **MTI–Economist Service Best Thesis Award**, Ministry of Trade and Industry, Singapore (2024)
- **Undergraduate Student Teaching Excellence Award**, NUS Department of Economics (2024)
- **Dean's Scholars List** (Top 1%), NUS (2024)
- **ASEAN Undergraduate Merit Scholarship**, NUS (2019–2024); **MOE-ASEAN Pre-University Scholarship** (2017–2018)

Teaching

- **Teaching Assistant, Asia and the Global Economy** (Executive MBA, NUS Business School; Prof. Ruben Durante), AY2025/26 – AY2026/27
- **Undergraduate Teaching Assistant, EC2101 Microeconomic Analysis I**, NUS Economics (4 semesters, AY2022/23 – AY2023/24)

Conferences & Workshops

NBER Japan Project Meeting, ADBI, Tokyo (2026); BREAD Conference, NUS (2024)

Skills & Technical Projects

Programming: Python, Stata, R, SQL, LaTeX, JavaScript, Git; AWS (Lambda, Step Functions, S3, Athena, EC2)
Projects: serverless AWS pipelines collecting job postings from LinkedIn, JobStreet and MyCareersFuture; Qualtrics Generative Survey Tool (open source), which builds and edits Qualtrics surveys, including custom JavaScript, from plain-English prompts
Languages & tests: English (IELTS 8.5), Mandarin Chinese, Malay; GRE 170Q / 167V / 5.0 AWA