

Irisa Zhou

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Research interests Macroeconomics, Labor Economics
with a particular focus on impacts of frictions on the labor market

Education **University of Toronto** 2026 (Expected)
Ph.D. in Economics
Committee: Gueorgui Kambourov (Co-supervisor), Ronald Wolthoff (Co-supervisor), Sebastian Dyrda
University of Toronto 2020
M.A in Economics
McGill University 2019
B.A. in Honours Economics & Mathematics Major

Working Papers **Learning the Major-Industry Mismatch (Job Market Paper)**
Awards: Chinese Economists Society 2025 North American Meeting Gregory Chow Rising Star Award, Runner Up
Presentations: CEA 2025 (@Montreal), CES NA 2025 (@Ann Arbor), Macro Seminar (@UofT)
Searching with Non-binding Asking Prices
Presentations: CEA 2024 (@Toronto), Macro Brownbag Seminar (@UofT), Urban BrownBag Seminar (@UofT)
AI and Returns to Experience in Entrepreneurship, with Ziqing Yan
Awards: NSERC CREATE program for Accelerated Discovery
Presentations: Morning BrownBag Seminar (@Yale)

Work in progress **Safety Net or Trap: Informal Sector Employment over the Business Cycle**, with Yanran Guo

Awards and Grants Productivity Partnership Travel Grant 2025
The Chinese Economist Society Travel Grant 2025
Runner Up for Gregory Chow Rising Star Award 2025
University of Toronto Doctoral Fellowship 2020–2025
Ontario Graduate Scholarship 2020, 2022, 2023
Faculty of Arts and Sciences Graduate Admission Award 2019

Professional **Research Assistant**

Sebastian Dyrda, University of Toronto	2023-2024
Lu Han, Wisconsin School of Business	2022-2023
Julietta Caunedo, Rotman School of Management, University of Toronto	2021-2022

Teaching Assistant

Undergraduate Intermediate Microeconomics and Macroeconomics

2024-2025

Undergraduate Advanced Field Courses: Monetary Policy, International Trade, Financial Economics

2021-2024

Skills

Programming

Python, Matlab, Stata, ArcGIS, R, $\LaTeX$

Natural Language Processing via LLMs (e.g. ChatGPT / OpenAI), Cloud Computing

Languages

English (native), Mandarin (native), Cantonese (fluent), French (conversational)

Academic Service

Co-President, Graduate Economics Union

2022-2023

References

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Abstracts

1. **Learning the Major-Industry Mismatch** (Job Market Paper)

How do information frictions distort the choices of college majors and industries? Individuals face uncertainty about their major-industry fit due to information frictions. This paper argues that such uncertainty is a primary driver of mismatch and earnings dispersion among skilled workers. Using Canadian administrative data linking education and employment histories, I establish three key facts from the data. First, I find significant major-industry mismatch. Second, on-the-job learning about major-industry match partially resolves uncertainty. Third, using a natural experiment leveraging LinkedIn's entry into Canada, I confirm that improved information access reduces mismatch. To quantify the aggregate consequences of information frictions, I develop a life-cycle directed search model with Bayesian learning where individuals with multidimensional skills choose majors, industries, and climb the job ladder within an industry. Graduates face information frictions in their major-industry fit and take time to learn about the fit. Calibrated to the Canadian economy, this model replicates key empirical facts. The model reveals that information frictions reduce output by 25% at labor market entry. Counterfactuals show that accelerating the learning process not only raises aggregate output but also triggers a significant reallocation of talent toward high-uncertainty majors as they become more attractive.

2. **Searching with Non-binding Asking Prices**

This paper develops an equilibrium theory of matching between buyers and sellers in the real estate market with a non-binding asking price. Sellers set non-binding asking prices strategically to direct the optimal pool of prospective buyers who vary in financial abilities. I show analytically that sellers optimally post lower asking prices when the targeted market is more competitive to create bidding wars. The model-predicted sale-over-asking ratio is consistent with the empirically observed evidence from the Toronto real estate market. Furthermore, the model reveals that loosening buyers' financial constraints results in the entire surplus being captured by sellers but a reduction in probability of bidding wars.

3. **AI and Returns to Experience in Entrepreneurship**, with Ziqing Yan

This paper studies how advances in Artificial Intelligence (AI) have altered the value of skills accumulated through different types of work experience in entrepreneurship. Using employment histories from public LinkedIn profiles (2007-2019), we exploit industry-level variation in AI exposure following the diffusion of neural networks and ImageNet after 2012. We find that among U.S. LinkedIn users, the share of founders and researchers both increased, but entry gains were concentrated among more-experienced workers, especially those with research backgrounds. To understand the mechanism behind AI's impact on the labor market, we develop a directed search model with occupational choice,

multi-dimensional skills, and stochastic human capital investment. The model shows that AI shocks increase the productivity premium for researchers, shifting entrepreneurship toward more experienced individuals with research expertise.

4. **Safety Net or Trap: Informal Sector Employment over the Business Cycle**, with Yanran Guo

The informal sector is often viewed as a buffer during economic downturns, absorbing workers displaced from the formal sector and mitigating unemployment spikes. Using panel data from Continuous National Household Sample Survey (PNADC) between 2012 to 2018, we examine the short- and long-term consequences of informal employment in Brazil across the business cycle and establish several new empirical facts. We observe that the informal sector expands during recessions, consistent with the literature, indicating that the informal sector acts as a buffer for workers. Our new finding is that a brief spell in the informal sector, lasting at most one quarter, increased the probability of formal re-entry relative to unemployment. However, prolonged informal employment sharply reduced re-entry probabilities into the formal sector, with this scarring effect persisting after controlling for individual characteristics.

To interpret these patterns, we develop a directed search model with human capital depreciation, where depreciation depends on employment type and spell length. The framework captures the observed dual role of the informal sector as both a short-term safety net and a long-term trap. When designing labor market policies, our findings show that “when” to act is as important as “what” to do. Preserving the short-term benefits of the informal sector requires timing as well as targeting, a dimension the literature has largely overlooked.