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**Fields of Concentration:**

Labor Economics, Applied Microeconomics

**Desired Teaching:**

Labor Economics, Applied Econometrics

**Comprehensive Examinations Completed:**

2020 (Oral): Econometrics, Labor Economics (*with distinction*)

2019 (Written): Microeconomics, Macroeconomics

**Dissertation Title:** *Essays on Matching and Sorting in Labor Economics*

**Committee:**

Professor Costas Meghir (Chair)

Professor Ilse Lindenlaub

Professor Cormac O'dea

**Degrees:**

Ph.D., Economics, Yale University, 2024 (expected)

M.Phil., Economics, Yale University, 2021

M.A., Economics, Peking University, 2018

B.A., Economics (*primary*), B.S., Psychology, Peking University, 2015

**Fellowships, Honors and Awards:**

University Dissertation Fellowship, 2023

Cowles Foundation Fellowship, Yale University, 2018 – 2023

Doctoral Fellowship, Yale University, 2018 – 2023

Nathan Hale Associates Fellow, Yale University, 2019, 2022

May 4th Scholarship, Peking University, 2016

Student Merit Award, Peking University, 2016

Academic Excellence Award, Peking University, 2013

**Teaching Experience:**

Fall 2020, Fall 2022, Teaching Assistant to Prof. John Eric Humphries, Introduction to Data Analysis and Econometrics (Undergraduate), Yale College

Spring 2022, Teaching Assistant to Dr. Guillermo Noguera, Introduction to Data Analysis and Econometrics (Undergraduate), Yale College

Spring 2021, Fall 2021, Teaching Assistant to Prof. Edward Vytlačil, Intermediate Data Analysis and Econometrics (Undergraduate), Yale College

Fall 2016, Teaching Assistant to Prof. Zhuo Huang, Econometrics I (Graduate Core Course), Peking University

**Research and Work Experience:**

Research Assistant to Prof. Cormac O’Dea, Yale University, 2020

**Publications:**

“Early-Life Deprivation and Health Outcomes in Adulthood: Evidence from Childhood Hunger Episodes of Middle-Aged and Elderly Chinese,” (2020) with James P. Smith and Yaohui Zhao, *Journal of Development Economics*, 143, 102417.

**Working Papers:**

“Multidimensional Skills in Inventor Teams,” (November 2023), *Job Market Paper*

**Work In Progress:**

“Marriage Market Responses to Childcare Policies,” (November 2023).

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Mandarin (native), English (fluent)

**References:**

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## Dissertation Abstract

### Multidimensional Skills in Inventor Teams [Job Market Paper]

Innovation is increasingly done in teams, yet we know little about whether teams are fully utilizing their potential. Of particular interest is whether teams effectively bring together inventors with complementary skills, as innovation is a multifaceted process that demands the combination of diverse skills. How do inventor teams combine various skills for innovation, and are the benefits of teamwork being fully realized? If not, what barriers hinder the optimal matching of inventors?

I study these questions using a unique dataset that links patent data to administrative records on inventor biography and establishment panels in Germany. I extract inventor teams and their innovation output from patent data, and construct inventors' multidimensional skills from labor market histories. I uncover a novel mismatch pattern: Inventors tend to sort into teams with similar skills, yet teams combining diverse skills have higher productivity. Evidence suggests that labor market search frictions contribute to the observed mismatch: Inventors with different skills are concentrated in separate local labor markets, meaning that assembling diverse teams can incur high search costs. While inventors do form diverse teams when different skill types are available within the same firm, it is common for firms, especially smaller ones, to hire a single skill type only.

Diverse teams may selectively form around ideas that are promising to begin with, or have lower success rates in patenting. To show that the higher productivity of diverse teams and their rarity reflect genuine skill mismatch due to search frictions, I exploit inventor displacement caused by establishment closures in adjacent local labor markets as shocks to inventor composition in a local market. Using a shift-share instrument and a relative-entropy-based cost measure, I find that lowering search costs to assemble a team increases its prevalence and innovation output, and the increases are larger for teams with higher observed productivity. This indicates that the formation of diverse and productive teams is hindered by search costs, rather than predetermined by ideas. Moreover, an event study design shows that diverse teams do not have lower success rates: When two inventors with complementary skills meet in a firm due to an exogenous influx of displaced inventors, their match produces both more and better patents than their homogamous counterparts.

To understand what sustains inventor segregation and search frictions in equilibrium, I build a team formation model in which firms in separate markets assemble inventors of different skill types for innovation, subject to search costs that increase as the chosen team mix deviates from the market composition of inventors. I show that search costs and inventor segregation can compound each other in equilibrium: Firms, facing higher costs to assemble diverse teams due to an uneven distribution of talent across markets, tend to rely on the prevailing type of inventors in their local market, rather than seeking out scarce types to form more productive teams. This reinforces the dominance of the abundant skill type in the market, deepens inventor segregation, and amplifies search frictions. I quantify the aggregate consequences of search costs using the estimated model: Counterfactual simulations show that absent search costs, the share of diverse teams will increase by 28.6pp, boosting total innovation by 2.4%. The benefits accrue mostly to smaller firms, smaller commuting zones, and inventors with highly complementary skill sets.

## **Marriage Market Responses to Childcare Policies**

Children are a public good in marriage that requires significant time investment. Lack of formal childcare incentivizes specialization in marriage and less assortative matching among couples. I study how childcare policy affects marriage market equilibrium exploiting spatial variations in childcare expansions in Canada and difference-in-differences designs. The short-term effects of childcare expansion depend on how sorted couples are: women with education matching that of their husbands exhibit larger increases in maternal employment than women with higher or lower education than their husbands'. In the long run, educational assortative matching increases among newly-wed couples, amplifying the short-term effects. I build a model of marriage market matching, household allocation, and childcare arrangements to quantify the welfare changes. Formal childcare emerges as a market substitute for home care that contributes to child quality, which increases spousal complementarities in marital surplus and assortative matching in equilibrium. The marital surplus is distributed in a way that clears the marriage market, meaning spouses whose relative attractiveness is made higher by formal childcare experience larger welfare gains. The results underscore the importance of considering marriage market equilibrium feedback when analyzing the effects of family policies.