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Fields of Concentration:

Primary Field: Industrial Organization
Secondary Field: Labor Economics

Qualifying Examinations Completed:

2022 (Oral): Industrial Organization, International Trade

Dissertation Title: *Essays on Digital and International Labor Markets*

Committee:

Professor Philip Haile (Chair)
Professor Joseph Altonji
Professor Steve Berry
Professor Charles Hodgson

Education:

Ph.D., Economics, Yale University, 2026 (expected)
M.Phil., Economics, Yale University, 2024
M.A., Economics, Yale University, 2023
B.A., Economics and Mathematics, *magna cum laude*, Yale University, 2020

Fellowships, Honors and Awards:

Carl Arvid Anderson Prize Fellowship, Yale University, 2024-2025
Slyff Fellowship, Yale University, 2022-2023
Doctoral Fellowship and Cowles Foundation Fellowship, Yale University, 2020-2026

Research Grants:

Slyff Research Award, Yale Economic Growth Center
Research Grant, Cowles Foundation at Yale University

Teaching Experience:

Spring 2026 (anticipated), Class TBD

Spring 2024, Teaching Assistant to Prof. Philip Haile, Firms, Markets, and Competition (Undergraduate), Yale University

Fall 2023, Teaching Assistant to Evangelia Chalioti, Intermediate Microeconomics (Undergraduate), Yale University

Research Experience:

Research Assistant to Prof. Costas Arkolakis, Yale University, 2021-2023

Research Assistant to Prof. Johannes Hörner, Yale University, 2018

Working Papers:

“Bidding for Reputation” (October 2025), *Job Market Paper*

“Signaling in the Age of AI: Evidence from Cover Letters” with Gabriel Dias and Justin Ye (September 2025)

“The Global Market for White-Collar Jobs” with Samuel Solomon (January 2025)

Seminar and Conference Presentations:

2025: MPWZ-CEPR Text-as-Data Workshop

2024: Stanford Remote Work Conference

Referee Service:

American Economic Review, Journal of International Economics

Languages:

Mandarin (native), English (fluent), Latin (intermediate)

References:

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Dissertation Abstract

I study digital and international labor markets using novel data and empirical tools from industrial organization and labor economics.

Bidding for Reputation [Job Market Paper]

In markets of experience goods, sellers often offer early discounts or other incentives to invest in reputation. Such investment creates information externalities for future buyers (favoring underinvestment) but steals business from rivals (favoring overinvestment). These opposing forces raise important questions about the efficiency of reputation building.

I study the efficiency of reputation investment by workers on Freelancer.com, a large online labor platform. On Freelancer, international workers submit bids for short-term jobs from software development to design. Worker reputation is publicly observable through employer ratings. In addition to reputation, experience may raise productivity via human capital accumulation.

Analyzing three million wage bids, I show that employers value reputation and experience, and that new workers initially bid low and raise their bids after receiving reviews. To measure the effects and efficiency of workers' wage responses, I develop and estimate a dynamic equilibrium auction model. The model includes symmetric Bayesian learning about worker quality and human capital accumulation. Employers make discrete choices that trade off wages and expected quality, while workers bid to maximize the sum of current and future payoffs. Methodologically, I extend expectation-maximization techniques for two-step estimation of dynamic games to include an instrumental variable and to accommodate other complexities that arise in my model.

I find that forward-looking bidding increases the equilibrium number of reviewed workers by more than sevenfold, dramatically expanding and improving the choice sets for employers and leading to 20 times more matches. However, workers' investments in reputation are insufficient. Platform-funded subsidies for hiring new workers can generate over 20% increase in total surplus. The subsidy level that maximizes the platform's revenue is smaller than the socially desirable one, but can achieve 93% of the latter's gains. Policy simulations highlight the exploration-exploitation tradeoff in information design: subsidizing new workers generates useful information; but by shifting hiring away from well-reviewed incumbents, it reduces employers' ability to exploit existing information.

Signaling in the Age of AI: Evidence from Cover Letters, with Gabriel Dias and Justin Ye

We study how generative AI affects labor market signaling using the introduction of an AI-powered cover letter writing tool on Freelancer.com. Our data track both access to the tool and usage at the application level. Difference-in-differences estimates show that access to the AI tool increased textual alignment between cover letters and job posts—which we refer to as cover letter tailoring—and raised callback likelihoods. Workers with weaker pre-AI writing skills saw larger improvements in cover letters, indicating that AI substitutes for workers' own skills. Although

only a minority of applications used the tool, cover letter tailoring became less predictive of callbacks in the age of AI: the overall correlation between cover letter tailoring and callbacks fell by 51%. Employers correspondingly shifted toward alternative signals, such as workers' past reviews, which became more predictive of hiring. Finally, within the treated group, greater time spent editing AI drafts was associated with higher hiring success.

The Global Market for White-Collar Jobs, with Samuel Solomon

We study cross-country remote work using data on 200,000 white-collar workers from 195 countries employed by 20,000 firms through a global human resources company. Three main facts emerge. First, countries specialize in occupations consistent with their comparative advantages in math and language skills. Second, international remote hiring features narrower cross-country wage disparities than traditional domestic hiring, with sorting of international workers across firms accounting for a larger share of the wage gap than within-firm pay differences. Third, by linking workers and firms across borders, global remote work generates a median annual surplus of \$52,480 per contract compared to domestic hiring. Workers from wealthier countries capture a larger share of this surplus, though their proportional gains are smaller.