

JIE DUAN

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EDUCATION

Ph.D. Economics, National University of Singapore	August 2020 - June 2025 (Expected)
MSc. Economics, London School of Economics and Political Science	August 2018 - May 2019
B.A. Economics, Central University of Finance and Economics	September 2014 - June 2018

RESEARCH FIELDS

Primary: Macro Labor
Secondary: (Applied) International Trade

WORKING PAPERS

The Underemployment Trap (with Paul Jackson), *Accept with Minor Revision at **Journal of Monetary Economics***

Abstract: Many college graduates are underemployed, i.e., work in occupations that do not require a college degree. We document that underemployed workers are less likely to transition to a college occupation the longer they are underemployed and that longer underemployment histories are associated with lower wages in college occupations. To explain these findings, we develop a directed search model with unobserved heterogeneity, occupation-specific human capital, and on the job search. Workers are uncertain about their suitability for college jobs and learn through search. Underemployment is generated by search and information frictions, as workers with a low expected job-finding probability in college occupations self-select into underemployment. Once underemployed, workers' college occupation-specific human capital decays. A quantitative decomposition shows that unobserved heterogeneity explains most of the duration dependence in underemployment, and that information frictions play a significant role in both the existence of underemployment and the resulting duration dependence.

Internet Linkage and International Trade (with Zengxi Hu), *Revise and Resubmit at **The World Economy***

Abstract: Extensive research has studied the effect of the Internet on trade, yet little is known about its role in trade facilitation through risk alleviation. This research investigates the facilitation of Internet linkage on export, particularly through the novel channel of risk alleviation. Theoretically, this paper introduces a gravity model augmented with export risk to establish the stimulus of Internet linkage on exports. Empirically, this paper uses inter-domain hyperlinks as a proxy for Internet linkage in 2009, uncovering a statistically significant positive impact of Internet linkage on exports. Notably, there is a 27.8% increase in exports in reaction to a doubling of the Internet linkage intensity. By employing various techniques, we meticulously address potential endogeneity issues and substantiate the risk-alleviation mechanism at both the country and product levels. Particularly, we find that exports to riskier countries and of riskier products benefit more from the Internet linkage. This study sheds new light on the novel channel through which the Internet promotes exports, enriching the existing literature in this field.

(SELECTED) WORK IN PROGRESS

The Pro-cyclicality of Wage Losses from Skill Mismatch

Abstract: This paper studies the cyclical nature of wage loss due to skill mismatch. Using Mincer-style regression techniques, this study finds that a higher unemployment rate is associated with a lower wage loss of skill mismatch. The study also reveals that firms are less likely to provide training during economic downturns. To explain the mitigation of wage loss during economic slackness,

this paper develops a direct search model with state-contingent training provision. The model uncovers three channels through which economic slackness mitigates wage loss: a decrease in total factor productivity, a reduction in the provision of firm-sponsored training, and a decrease in the worker's outside option. Overall, this paper contributes to the literature by providing innovative evidence on the cyclical nature of wage loss and presenting a novel connection between training provision and wage loss resulting from skill mismatches.

On the Unemployment-Education Gap (with Paul Jackson and Lichen Zhang)

Abstract: College graduates are less likely to be unemployed. While this fact is well known, the reasons for it are not well understood. We document that differences in unemployment by educational attainment, or the unemployment-education gap, narrow over the life-cycle and hypothesize that college graduates enter the labor market with less uncertainty regarding their best occupational fit. A set of supporting facts for this hypothesis are provided, including lower occupational mobility rates and a weaker association between prior experience and the expected duration of a job among college graduates. We then develop a search model with unobserved heterogeneity, learning, and endogenous separations. The model shows that reducing information frictions regarding a worker's ability generates differences in job-finding and separation rates over the life-cycle that are in line with the empirical differences between workers with and without a college degree.

TEACHING AND RESEARCH ASSISTANCE

Teaching Assistant, Department of Economics, National University of Singapore

EC6102 Advanced Macroeconomics Theory (Ph.D. Course)

Spring 2023, Spring 2022

EC5102 Macroeconomics Theory (Graduate Course)

Fall 2022

Exam Grader, Department of Economics, National University of Singapore

EC2303 Foundations for Econometrics (Undergraduate Course)

Fall 2021

EC2101 Microeconomic Analysis I (Undergraduate Course)

Fall 2021

Research Assistance, Department of Economics, National University of Singapore

Research Assistant for Dr. Paul Jackson

January 2023 - April 2023

TALKS AND CONFERENCES

2022: Asian Econometric Society Meeting 2022 (Virtual)

2023: Asian Econometric Society Meeting 2023, Beijing; Asian Econometric Society Meeting 2023, Singapore; Econometric Society Australasian Meeting, Sydney; NUS Macro Brownbag; OzMac, Melbourne

2024: SWUFE (Scheduled); 7th Annual International Conference of China and Development Studies (SJTU, Scheduled); Asian Econometric Society Meeting 2024 (ZJU, Scheduled); CES 2024 (ZJU, Scheduled); China Labor Economists Forum (SUFE, Scheduled); SUFE (Scheduled)

SERVICE

Student Coordinator, NUS Macro Workshop

2024

AWARDS AND SCHOLARSHIPS

Department Scholarship, NUS

2025

Research Incentive Award, NUS Econ Department

2023

Conference Funding, NUS Econ Department

2023

Conference Funding For Graduate Students (SGD2,000), NUS

2023

Research Scholarship, NUS

2020 - 2024

Chinese Government Scholarship (GBP13,200), CSC

2018 - 2019

Outstanding Undergraduate Graduate, CUFE

2018

Overseas Education Scholarship (RMB50,000), CUFÉ
Premier Comprehensive Excellence Scholarship (Top 4%), CUFÉ

2018
2015, 2016, 2017

MISCELLANEOUS

Programming: Stata, Matlab, Mathematica, \LaTeX
Language: Mandarin (native), English (proficient)
Personal: Born in 1996, female, Chinese

Last updated: April 2024