

# JIE DUAN

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🏛️ Institution: Department of Economics, National University of Singapore

## 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:** International Trade

## JOB MARKET PAPER

**Uncertainty, Learning, and the Unemployment-Education Gap over the Life Cycle**, with Paul Jackson (NUS)

**Abstract:** We document that college graduates form more accurate expectations about their future occupation and provide additional evidence supporting an uncertainty channel, i.e. that college graduates begin their career with less uncertainty regarding their best fit in the labor market. To quantify the uncertainty channel, we develop a life cycle directed search model where workers sample careers to learn about their best fit in the labor market. A quantitative analysis indicates that the uncertainty channel can explain at least 24% of the gap in unemployment rates between college and non-college workers.

## PUBLICATIONS

The Underemployment Trap (with Paul Jackson), *forthcoming at Journal of Monetary Economics*, 2024

**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: From the Perspective of Risk Alleviation (with Zengxi Hu), *The World Economy*, 2024, 47, 3551–3577.

**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

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The Pro-cyclicality of Wage Losses from Skill Mismatch

## TEACHING AND RESEARCH ASSISTANCE

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*Teaching Assistant*, Department of Economics, National University of Singapore

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|--|--------------------------|
| 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

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| 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

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|---|---------------------------|
| Research Assistant for Dr. Paul Jackson | January 2023 - April 2023 |
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## TALKS AND CONFERENCES

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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: Southwest University of Finance and Economics; 7th ICCDS (SJTU); Asian Econometric Society Meeting 2024 (ZJU); China Labor Economists Forum (SUFE); 2024 Search and Matching Workshop in the Asia-Pacific (NUS); Shanghai University of Finance and Economics (Scheduled); Zhejiang University (Scheduled)

## SERVICE

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| <i>Coordinator</i> , NUS Macro Workshop | 2024 |
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## AWARDS AND SCHOLARSHIPS

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| 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), CUFE            | 2018             |
| Premier Comprehensive Excellence Scholarship (Top 4%), CUFE | 2015, 2016, 2017 |

## MISCELLANEOUS

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**Programming:** Stata, Matlab, Mathematica,  $\text{\LaTeX}$

**Language:** Mandarin (native), English (proficient)

**Personal:** Born in 1996, female, Chinese

*Last updated: Sep 2024*