Ye Sun

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EDUCATION

PhD in Economics, University of Cambridge   2023–Present

 Supervisor: Vasco M. Carvalho
 Professor of Economics, University of Cambridge
 Email: vmpmdc2@cam.ac.uk

MA in Computational Social Sciences, University of Chicago   2019–2021

BA in Economics, University of International Business and Economics   2015–2019

RESEARCH FIELDS

Macroeconomics, Production Networks, Firm Dynamics, International Trade

WORKING PAPERS

Dynamic Endogenous Production Networks, Knowledge Diffusion, and Misallocation

Abstract: I study how knowledge diffusion in supplier-customer relationships influences the structure and dynamics of production networks. I develop an optimal-stopping model that allows heterogeneous firms to endogenize the choice of staying with or switching away from the current supplier, not based solely on cost minimization but on the potential for future gains through knowledge sharing. The model predicts that higher rates of knowledge diffusion lead to a "stickier" production network. Misallocation arises due to search frictions as firms are overly patient in forming long-term relationships, but knowledge diffusion mitigates its negative effects on aggregate productivity. Empirical analysis using data from Compustat's firm-level input-output data and USPTO patent data highlights the overlap between production and citation networks, showing that supplier-customer with citations tend to last longer and have bigger shares. Using an instrumental variable approach that leverages examiner leniency as an exogenous source of variation in patent citations, I find that supplier-customer relationships with knowledge diffusion experience significantly higher performance, indicating the existance of active learning.

Endogenous Plucking Through Networks: The Plucking Paradox (with Hanbaek Lee)

Abstract: We study an *endogenous plucking* mechanism in a parsimonious general equilibrium model where firms choose production linkages (network intensity). In expansions, high productivity encourages denser linkages, raising efficiency and output. Yet greater connectedness amplifies adverse TFP shocks, so downturns are disproportionately severe when recessions begin from a highly connected state. The model implies *network-size* and *duration dependence* of shock propagation. Due to a pecuniary externality, the decentralized equilibrium underinvests in network intensity. We characterize an optimal fiscal policy that decentralizes the constrained efficient allocation and delivers a *Plucking Paradox*: the planner prefers higher output in normal times even though it increases exposure to rare, severe disasters.

Dynamic Trade Imbalances in a Gravity Model under Incomplete Markets

Abstract: TBA

TEACHING

Teaching Assistant, University of Cambridge   2024–Present

 R201 Advanced Macroeconomics II
 PhD21 Computational Methods

RESEARCH EXPERIENCE

Pre-doc, Sciences Po Paris   2021–2023

    under the direction of Johannes Boehm, Thomas Chaney

Research Assistant, University of Chicago   2019–2021

    under the direction of Jonathan Dingel and Felix Tintelnot

SOFTWARE

`Coefplots.jl` — Publication-quality regression visualization in Julia

`GLFixedEffectModels.jl` — High-dimensional fixed effects estimation in Julia

PROGRAMMING SKILLS

Julia, Python, STATA, LaTeX, Git, KNITRO, Groubi, GNU Make, Bash, MATLAB

PRESENTATIONS & WORKSHOPS

Internal seminars at University of Cambridge

    Networks Workshop; Trade and Spatial Economics Workshop; PhD Macro Workshop

PERSONAL INFORMATION

Nationality: Chinese

Languages: Chinese (native), English (fluent), French (intermediate)

FUNDING & SCHOLARSHIPS

Faculty of Economics Trusts

The Janeway Institute Scholarship