YOUNGHUN SHIM

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Placement Directors: Professor Ufuk Akcigit, uakcigit@uchicago.edu, (773) 702-0433
Professor Manasi Deshpande, mdeshpande@uchicago.edu, (773) 702-8260

Graduate Student Coordinator: Kathryn Falzareno, kfalzareno@uchicago.edu, (773) 702-3026

Education

The University of Chicago, 2017 to present
Ph.D. Candidate in Economics
Thesis Title:
"From Adoption to Innovation: Stage-Dependent Technology Policy in Developing Countries"
Expected Completion Date: June 2023

Yonsei University, 2017
M.A. in Economics

Yonsei University, 2015
B.A. in Economics and B.B.A. in Business Administration

References

Professor Ufuk Akcigit (Chair)
University of Chicago
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Professor Esteban Rossi-Hansberg
University of Chicago
rossihansberg@uchicago.edu, (650) 714-2093

Professor Chad Syverson
University of Chicago Booth School of Business
chad.syverson@chicagobooth.edu, (773) 702-7815

Professor Felix Tintelnot
University of Chicago
tintelnot@uchicago.edu, (773) 702-3478

Teaching and Research Fields:

Primary fields: Macroeconomics and Economic Growth
Secondary fields: Innovation, International Trade, and Development

Teaching Experience:

The University of Chicago

Winter 2022	Economic Growth, TA for Ufuk Akcigit
Spring 2020	The Elements of Economic Analysis III, TA for Kanit Kuevibulvanich
Winter 2020	International Economics, TA for Felix Tintelnot
Fall 2020	Economic Policy Analysis, TA for Kanit Kuevibulvanich
Fall 2019	Economic Policy Analysis, TA for Kanit Kuevibulvanich
Fall 2018	Econometrics, TA for Christopher Roark

Research Experience and Other Employment:

2022	Federal Reserve Bank of St. Louis, Dissertation Intern
2020 - 2021	University of Chicago, Research Assistant for Ufuk Akcigit
2019	University of Chicago, Research Assistant for Felix Tintelnot

Honors, Scholarships, and Fellowships:

2022 - 2023	Fitz Dissertation Completion Fellowship
2022	CEAS Dissertation Research Grant ($ 5,000)
2022	Structural Transformation and Economic Growth Small Research Grants (£ 14,500)
2020	University of Chicago Economics, Data Acquisition Grant ($ 1,000)
2018	Martin C and Margaret M Lee Prize: Best Performance in Macroeconomics and Econometrics Core Exam
2017 - 2022	Division of Social Science Fellowship

Professional Activities:

Presentations (including scheduled)

2022	University of Chicago, Australasian Meeting of the Econometric Society, Federal Reserve Bank of St. Louis Ph.D. Students Workshop, Asia Meeting of the Econometric Society, Young Economist Symposium, Workshop on International Trade and Intellectual Property Rights, Midwest International Trade Conference, Midwest Macroeconomics Meeting
2021	University of Chicago

Referee:

Quarterly Journal of Economics

Language and Computer Skills:

Computer Skills:
Matlab, Stata, Python

Languages:
English (Fluent), Korean (Native)

Research Papers:

Job market paper

"From Adoption to Innovation: Stage-Dependent Technology Policy in Developing Countries" (with Jaedo Choi)

Abstract: Should governments in developing countries prioritize supporting technology adoption or promoting innovation? We use a newly digitized dataset on technology imports and patents in South Korea to answer this question. Empirically, we find that when the productivity gap between domestic and foreign firms is smaller, 1) the adoption fee is higher, 2) the productivity gain from adoption is smaller compared with innovation, and 3) firms are more likely to innovate than adopt technologies. Motivated by these findings, we build a two-country growth model with endogenous adoption and innovation decisions. Foreign firms sell technology for an endogenous fee, internalizing the future loss of profit due to stronger competition with domestic firms. The endogenous fee makes firms invest less in adoption, motivating governments to subsidize adoption at the early stage of development. As domestic firms catch up with foreign firms, productivity gain from adoption diminishes, making adoption subsidy less effective. After estimating the model on the transition with microdata, we evaluate Korea's technology policy since 1973, which started with an adoption subsidy and switched to an innovation subsidy. Our result suggests that the actual policy increased consumption-equivalent welfare by 4.84%, which is higher than subsidizing only innovation or adoption.

Working papers

"How Task-Biased is Capital-Embodied Innovation?" (with Hyejin Park)

Abstract: This paper develops a measure of Capital-Embodied Innovation (CEI). The measure counts the number of patents applied to different capital goods by matching patent descriptions from the USPTO to capital goods descriptions from Wikipedia. Using occupation-level variations on the sets of capital goods from O*NET, we document that the CEI measure is smaller for routine occupations. Furthermore, we highlight the heterogeneous effects of CEI across the capital good-occupation relationship. When the capital good performs the same function as the occupational task (task-substituting capital), the CEI on the capital good reduces the relative demand for labor. In case the capital good performs a different function than the occupation tasks (task-complementing capital), the CEI raises relative demand for labor. Abstract occupations have disproportionately more CEI on task-complementing capital than non-abstract occupations. A model-based counterfactual implies that the employment growth between the 1980s and the 2010s would be 33% less biased towards abstract task occupations without the CEI. The degree of job polarization and occupational wage inequality would have been lower without the CEI.

"Technology Adoption and Late Industrialization" (with Jaedo Choi)

Abstract: We study how the adoption of foreign technology and local spillovers from such adoption contributed to late industrialization in a developing country during the postwar period. Using novel historical firm-level data for South Korea, we provide three empirical findings: direct productivity gains to adopters, local productivity spillovers of the adoption, and complementarity in firms' adoption decisions. Based on these findings, we develop a dynamic spatial model with firms' technology adoption decisions and local spillovers. The spillovers induce dynamic complementarity in firms' technology

adoption decisions. Because of this complementarity, the model potentially features multiple steady states. Temporary adoption subsidies can have permanent effects by moving an economy to a new transition path that converges to a higher-productivity steady state. We calibrate our model to the microdata and econometric estimates. We evaluate the effects of the South Korean government policy that temporarily provided adoption subsidies to heavy manufacturing firms in the 1970s. Had no adoption subsidies been provided, South Korea would have converged to a less industrialized steady state in which the heavy manufacturing sector's share of GDP would have been 15 percentage points lower and aggregate welfare would have been 10% lower compared to the steady state with successful industrialization. Thus, temporary subsidies for technology adoption had permanent effects.

Pre-doctoral Works:

"Fiscal Sustainability and the Welfare Effects of Balanced-Budget Reforms of the National Pension System in Korea" (with Kyung-woo Lee)
Global Economic Review Vol. 47, Issue 4, December 2018, pp. 367-394.