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

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: State-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: International Trade, Innovation, 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	KAEA Best Job Market Paper Prize
2022	George J. Stigler Fellowship and the Margaret G. Ried Fellowship
2022	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, KAEA Job Market 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: State-Dependent Technology Policy in Developing Countries" (with Jaedo Choi)

Abstract: Should governments subsidize firms' own innovation or adoption of foreign technology? How does the answer change over different stages of development? We answer these questions using a quantitative model of innovation and adoption, disciplined by a novel dataset: the universe of technology transfer contracts between domestic and foreign firms in South Korea during its growth miracle period. We find that, when the productivity gap between domestic and foreign firms is larger, 1) productivity increases more after adoption, 2) the adoption fee is lower, and 3) domestic firms more often choose technology adoption over innovation. In our two-country growth model, foreign firms can sell technologies for an endogenous fee, internalizing the future loss of profit due to stronger competition with domestic firms. By construction, adoption can raise domestic firms at most to the technology level of foreign firms. Therefore, as domestic firms close the productivity gap, the expected productivity gain from adoption decreases, making an adoption subsidy less effective than an innovation subsidy. We evaluate Korea's technology policies since 1973, which started with an adoption subsidy and shifted to an innovation subsidy as the productivity of Korean firms converged with that of foreign competitors. Our result suggests that this state-dependent policy increased consumption-equivalent welfare by 5%, which raises welfare more than time-invariant policies that subsidize only innovation or adoption throughout. Our analysis also shows that the optimal year to switch from an adoption to an innovation subsidy would have been 1985, when Korea's GDP reached 55% of Japan's.

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 capital goods by matching patent documents with Wikipedia articles on capital goods. Using occupation-level variations on the sets of capital goods from O*NET, we document that CEI is biased toward abstract and non-routine occupations. Furthermore, we highlight the heterogeneous effects of CEI across the capital-occupation relationship. When the capital good performs a similar function as the occupational task (task-substituting capital), the CEI 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 37% less biased towards abstract-task occupations without CEI. The degree of job polarization would have also been lower without 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.