

YOUNGHUN SHIM

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Office Contact Information

1126 E. 59th Street – Saieh Hall for Economics
Chicago, IL 60637

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
uakcigit@uchicago.edu

Professor Esteban Rossi-Hansberg
University of Chicago
rossihansberg@uchicago.edu

Professor Chad Syverson
University of Chicago Booth School of Business
chad.syverson@chicagobooth.edu

Professor Felix Tintelnot
University of Chicago
tintelnot@uchicago.edu

Research Fields:

Primary fields: Macroeconomics, Economic Growth

Secondary fields: Innovation, International Trade, 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	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

Research Papers:

Job market paper

“From Adoption to Innovation: State-dependent Technology Policy in Developing Countries”
(with Jaedo Choi)

Abstract: Should governments in developing countries promote technology adoption, or should they support innovation? We use a newly digitized dataset on technology imports and patents in South Korea to answer this question. We find that (1) as firms close the technology gap from foreign firms, productivity growth from adoption decreases compared with innovation, (2) the adoption fee is higher when the gap is smaller, (3) when a firm adopts a technology, other firms increase patent citations to the adopted technology, suggesting knowledge diffusion. Based on these findings, we build a two-country growth model where firms can innovate or adopt technology from foreign firms. Since firms are non-atomistic, firms lose market share when they sell the technology to foreign firms. They internalize the loss by charging an adoption fee. Adoption generates knowledge diffusion, which motivates the government to subsidize adoption, but the size of diffusion decreases as the country grows. Then, we estimate the model by matching the empirical findings. Using the estimated model, we evaluate the technology policy in Korea, which started with an adoption subsidy and switched to an innovation subsidy. Our result suggests that the policy generated 5.21% higher welfare than the case without any policy, which is higher than time-invariant policies.

Working papers

“Innovation on Tools and the Rise of Skill Premium” (with Hyejin Park)

Abstract: This paper measures innovation on tools used by different occupations and studies its impact on the increasing skill premium. First, we match the description of tools from Wikipedia with patent text data using textual analysis to measure the innovation on tools. Then, we study its relation with the labor market variables at the occupation level. We find 1) innovation on tools grew more in skill-intensive occupations, 2) it is positively associated with wage and employment growth across occupations, 3) it is positively correlated with the skill premium and skill intensity growth within each occupation. Motivated by this reduced-form evidence, we build a model where tool innovation increases the demand of occupations, potentially more for skilled workers. Parameters are estimated through the Generalized Method of Moments. We find that tool innovation accounts for 61% of the total demand factor that contributed to the skill premium increase in 1980-2015.

“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.

Language and Computer Skills:

Computer Skills:

Matlab, Stata, Python

Languages:

English (Fluent), Korean (Native)