

SIWON RYU

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Research Fields

Econometrics, Program Evaluation, Network Economics, Health Economics.

Education

Ph.D. Economics, Rice University	May 2025 (expected)
M.A. Economics, Seoul National University	2020
B.A. Economics, Kyung Hee University	2017

Honors

John R. Kelly Graduate Student Teaching Prize in Economics, Rice University	2023
Robin C. Sickles Award for Best Performance in Qualifying Exams, Rice University	2022
Maria Esther and Carlos Linares Award for Best Performance in First-Year Courses, Rice University	2021
Graduate Fellowship, Rice University	2020-Present

Working Papers

“Decomposition of Causal Effect with Interference Accounting for Network Change” (Job market paper)

Abstract: Recent empirical studies emphasize the importance of indirect, or spillover, effects of a program or policy. These studies usually assume that the underlying network is fixed or unaffected by the program. However, there has been some empirical evidence suggesting the treatment can also have significant affect on network. This paper analyzes the identification and estimation of causal treatment effects while explicitly considering possible network changes resulting from a program. The main finding of this study is the decomposition of the causal effect into two distinct parts: the effect of treatment when the network remains unchanged and the effect when only the network structure is changed by the treatment. This contributes to the literature by enhancing our understanding of the mechanisms of a policy or program through the consideration of counterfactual scenarios in which the network is either changed or unchanged due to treatment. The proposed method is applicable in quasi-experimental situations using a Difference-in-Differences approach, as well as in randomized experiments. A straightforward multi-step estimation procedure for the causal effects and their decompositions is introduced, and its performance is evaluated through a Monte Carlo study, and an empirical illustration.

“Local Average Treatment Effects with Imperfect Compliance and Interference” (Submitted, *Journal of Econometrics*)

“Direct and Indirect Treatment Effects with Social Interaction”

Work in Progress

“Heterogeneous Parental Labor Supply Responses to Children’s Severe Health Shocks: Evidence from Administrative Data from South Korea” with Jungmin Lee and Hyuncheol Bryant Kim

Teaching and Research Experience

Teaching Assistant, Rice University — Econometrics I (G), Econometrics II (G)	2021-Present
Teaching Assistant, Seoul National University — Econometrics (G), Topics in Econometrics (G)	2018-2019
Teaching Assistant at Kyung-Hee University — Macroeconomics I (UG), Macroeconomics II (UG)	2015
Research Assistant with Professor Yoon-Jae Whang, Seoul National University	2018-2020
Research Assistant with Professor Jungmin Lee, Seoul National University — “Establishment The Database for The Socio-Economic Level of Korea” using Database of Korea National Insurance Service (NHIS)	2018-2019
Research Assistant with Professor Jungmin Lee, Hyuncheol Bryant Kim, Jisoo Hwang, Seoul National University — “Job Displacement and The Economic, Health Outcomes” using Database of Korea National Insurance Service (NHIS)	2019-2020
Science Korea Research Assistantship, Korea Research Foundation	2019-2020
Brain Korea 21 Plus Research, Seoul National University	2018

Professional Experience

Research Assistant, Korea Institute for Industrial Economics and Trade (KIET)	2014
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Conferences and Seminars

Brown-Bag seminar, Rice University	2022, 2023, 2024
Texas Econometrics Camp Conference	2024

Skills

Programming Skills:	Matlab, Stata, Mata, SAS, SAS-IML, R, Python, Julia, SQL, Git, HTML&CSS
Languages:	English (Fluent), Korean (Native)

References

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