Shift-Share IV: A Two-Day Workshop

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Course Description

Shift-Share Instrumental Variables (SSIV) are used to address endogeneity and selection challenges in many economic settings. This two-day workshop will introduce the basics of SSIV and cover the recent literature on its econometric foundations. Special focus will be paid on the different assumptions underlying the "exogenous shares" and "exogenous shocks" approaches to SSIV identification, along with their practical implications. We will also cover a more general class of instrumental variable strategies combining exogenous shocks and non-random exposure. Group programming exercises will be used to illustrate various theoretical concepts in real-world applications.

About the Instructor

Peter Hull is the Groos Family Assistant Professor of Economics at Brown Univeristy and a Faculty Research Fellow at the National Bureau of Economic Research. He has published papers on topics in applied econometrics, education, healthcare, and criminal justice, in outlets such as the *American Economic Review*, the *Quarterly Journal of Economics*, the *Review of Economic Studies*, and the *New England Journal of Medicine*. His research is focused on developing and applying new instrumental variable methods to measure the quality of institutions, such as schools or hospitals, as well as discrimination and bias in human and algorithmic decision-making. Prior to Brown, Professor Hull taught at the Kenneth C. Griffin Department of Economics at the University of Chicago and worked at Microsoft Research and the Federal Reserve Bank of New York. He earned his PhD in economics from MIT in 2017, under 2021 Nobel Laureate Josh Angrist.

Course Objectives

This course is appropriate for students familiar with core econometric methods, particularly linearly regression and instrumental variables. The course will cover recent SSIV methodological advances and illustrate the methods in a coding lab. Students should be familiar with either Stata or R to complete these labs.

Course Structure

This is a two-day (6 hour) intensive workshop, with 4 hours of lectures and one 70-minute coding lab. The remaining time will be given to breaks. The coding labs will involve 40 minutes of self- or group-paced work and 30 minutes of solution live-coding.

Schedule (all times ET)

Wednesday 11/2	6:00-7:00pm	Lecture 1: Linear SSIV – Part 1
	7:00-7:10pm	*Break*
	7:10-8:10pm	Lecture 2: Linear SSIV – Part 2
	8:10-8:20pm	*Break*
	8:20-9:00pm	Coding Lab: Solo/Group Work
Thursday 11/3	6:00-6:30pm	Coding Lab: Solutions Live-Coding
	6:30-6:40pm	*Break*
	6:40-7:40pm	Lecture 3: Recentered IV – Part 1
	7:40-7:50pm	*Break*
	7:50-8:50pm	Lecture 4: Recentered IV – Part 2
	8:50-9:00pm	Closing Remarks