

Shift-Share Instrumental Variables: A Short Course

Syllabus
IFAU, Uppsala, September 9-10, 2025

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Course Description

Shift-share instruments are a popular class of instrumental variables that are used to isolate exogenous variation in many economic contexts. This course provides an overview of how these instruments are constructed and applied. After reviewing classic application, we discuss key identifying assumptions (“exogeneity of shocks” and “exogeneity of shares”) and assess their plausibility in different contexts. On the second day, we will discuss implementation strategies and best practices for applying shift-share instruments, with illustrations in Stata/R.

Logistics

Tuesday Sep 9	9:00-10:20	Introduction and classical applications
		<i>Break</i>
	10:40-12:00	Identifying assumptions
		<i>Lunch</i>
	13.00-14.30	(Optional) Student meetings/Coding Lab
Wednesday Sep10	9:00-10:20	Implementation, robustness and illustrations
		<i>Break</i>
	10:40-12:00	Dynamic shocks and other extensions

References

The course is structured around research papers, in particular the main papers listed below.

Main Papers

- Adao, Rodrigo, Michal Kolesár, and Eduardo Morales. 2019. “Shift-share Designs: Theory and Inference.” *The Quarterly Journal of Economics*, 134(4): 1949–2010.
- Borusyak, Kirill, Peter Hull, and Xavier Jaravel. 2022. “Quasi-Experimental Shift-Share Research Designs.” *The Review of Economic Studies*, 89(1): 181–213.
- Borusyak, Kirill, Peter Hull, and Xavier Jaravel. 2025. “A Practical Guide to Shift-Share Instruments.” *Journal of Economic Perspectives*, 39(1): 181–204.
- Goldsmith-Pinkham, Paul, Isaac Sorkin, and Henry Swift. 2020. “Bartik Instruments: What, When, Why, and How.” *American Economic Review*, 110(8): 2586–2624.
- Jaeger, David A., Joakim Ruist, and Jan Stuhler. 2018. “Shift-Share Instruments and the Impact of Immigration.” NBER Working Paper 24285.

Useful References

- Apfel, Nicolas. 2024. “Relaxing the Exclusion Restriction in Shift-Share Instrumental Variable Estimation”. *Journal of the Royal Statistical Society*.
- Autor, David H., David Dorn, and Gordon H. Hanson. 2013. “The China Syndrome: Local Labor Market Effects of Import Competition in the United States.” *American Economic Review*, 103(6): 2121–68.
- Bartik, Timothy J. 1991. “Who Benefits from State and Local Economic Development Policies?” Upjohn Press, W.E. Upjohn Institute for Employment Research.
- Borusyak, Kirill, and Peter Hull. 2023. “Nonrandom Exposure to Exogenous Shocks.” *Econometrica*, 91(6): 2155–2185.
- Card, D. 2001. “Immigrant Inflows, Native Outflows, and the Local Labor Market Impacts of Higher Immigration.” *Journal of Labor Economics*, 19(1): 22–64.
- Helm, Ines. 2020. “National Industry Trade Shocks, Local Labor Markets and Agglomeration Spillovers.” *The Review of Economic Studies*, 87(3): 1399–1431.