Generalized IV Models for Discrete Outcomes: Identification, Application, Projection, & Inference

Adam M. Rosen*
Duke University and CeMMAP

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Abstract

In this talk I present analysis for single equation instrumental variable models for discrete outcomes. These models are incomplete, and structural parameters are partially identified. A binary outcome IV model is applied to data on female labor force participation, following analysis in Section 8.2 of Chesher and Rosen (2018). In a parametric IV probit version of the model, Fourier-Motzkin elimination enables manipulation of the moment inequalities that characterize the full parameter vector to inequalities that characterize the identified set for each individual parameter component. Inference on these individual parameter components and other quantities such as average treatment effects are conducted using a procedure from Chernozhukov, Lee, and Rosen (2013). A single equation ordered outcome IV model studied by Chesher, Rosen, and Siddique (2018) is then considered, for the purpose of measuring the effect of neighborhood poverty rates on subjective well-being. Structural parameters and functionals of these, such as marginal effects, are partially identified, with characterizations suitable for application of recently developed methods for inference on projections.

References

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*Address: Adam Rosen, Department of Economics, Duke University, adam.rosen@duke.edu.