Partial Identification of Average per-unit Treatment Effects Using Instrumental Variables

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Abstruct

This paper provides partial identification of average per-unit treatment effect in nonseparable models with multi-valued endogeneous regressors using instrumental variables.

In econometric analyses, when a researcher wants to make inference on the causal effects of some treatments, it is often the case that the treatments are suspected to be endogenous regressors of the outcome. For example, in the identification of treatment effect of education on earnings, it is generally considered that there exist unobservable individual characteristics that affect both receipt of education and earnings.

Among the existing works that tackle the endogeneity problem, a large part utilizes instrumental variables. Also, since the works by Manski (1990,1997) and Manski and Pepper (2000), bounding the parameters of interest under settings where it cannot be identified point-wise has gained much attention.

Following these works, this paper combines bounding methods and instrumental variables to partially identify average treatment effects.