Dufour, Jean-Marie; Taamouti, Mohamed

Further results on projection-based inference in IV regressions with weak, collinear or missing instruments. (English) Zbl 1418.62447 J. Econom. 139, No. 1, 133-153 (2007).

Summary: We study a general family of Anderson-Rubin-type procedures, allowing for arbitrary collinearity among the instruments and endogenous variables. Using finite-sample distributional theory, we show that the proposed procedures, besides being robust to weak instruments, are also robust to the exclusion of relevant instruments and to the distribution of endogenous regressors. A solution to the problem of computing linear projections from general possibly singular quadric surfaces is derived and used to build finite-sample confidence sets for individual structural parameters. The importance of robustness to excluded instruments is studied by simulation. Applications to the trade-growth relationship and to education returns are presented.

MSC:

62P20 Applications of statistics to economics
62J05 Linear regression; mixed models
62F03 Parametric hypothesis testing
91B82 Statistical methods; economic indices and measures

Keywords:
simultaneous equations; weak instrument; collinearity; missing instrument; projection

Software:
Stata

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