Exogeneity tests in dynamic panel data models*

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Abstract

Exogeneity tests are investigated in the context of linear dynamic panel data models, estimated by GMM or CUE. Rather than testing all overidentifying restrictions by the Sargan-Hansen test, the focus is on classifying explanatory variables using either the incremental Sargan-Hansen test or the Durbin-Wu-Hausman test. As misclassification yields either inconsistent or inefficient estimates, testing the exogeneity status of variables is crucial. Although it is known in the literature that the Sargan-Hansen test suffers from using too many instruments, it is unclear in what way the incremental test is affected. Additionally, test statistics are considered in which the number of instruments is restricted. With respect to the Hausman test a version with Windmeijer corrected version is considered. Simulation is used to investigate finite sample performance.