Simultanuous Estimation of the Structural Parameters and the Latent Instrument in the Endogenous Regressors Models in a Data Rich Environment

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ABSTRACT

This paper considers the problem of estimating model parameters in the case of endogenous regressors when the problem involves a large number of potential instruments. A Latent GMM estimator in a data rich environment (LGMMRE) is presented in the broader context of the class of a GMM estimators (GMM), and a nonlinear simultanuous latent-factors GMM estimation routine is described that provides GMM estimates in the context of data rich environment. We show consistency and asymptotic normality of the estimator under weak assumptions. A simulation exercise show the best performace of our estimator compared with some commonly used estimators in the literature.

Keywords: Factor models; Principal components; GMM Estimator.

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