

Testing autoregressive nonnested models estimated by IV

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Abstract

Based on the Gauss-Newton regression, firstly advocated by Davidson and MacKinnon, this study proposes a methodology to test non-nested dynamic regression models, when autocorrelation is present in the corresponding disturbances of both models. The proposed methodology also considers the presence of current endogenous regressors in both models, which implies estimation by nonlinear instrumental variables. In particular, P and PA versions are now developed to autoregressive models of any order. We also show that the well-known results on nonnested spherical models are encompassed by these more general results.

Keywords

Nonnested tests, P and PA tests, Nonlinear regression function, Autocorrelation, Gauss-Newton regression, Nonlinear instrumental variables.