Piotr Kębłowski

Uniwersytet Łódzki
Wydział Ekonomiczno-Socjologiczny

emfpiok@uni.lodz.pl

Canonical Correlation Analysis in Panel Vector Error Correction Model. Performance Comparison

Small sample properties of unrestricted and restricted canonical correlation estimators of cointegrating vectors for panel vector autoregressive process are considered when the cross-sectional dependencies occur in the process generating nonstationary panel data. It is shown that the unrestricted Box-Tiao estimator is slightly outperformed by the unrestricted Johansen estimator if the dynamic properties of the underlying process are correctly specified. The comparison of performance of the restricted canonical correlation estimator of cointegrating vectors for the panel VAR and for the classical VAR applied independently for each cross-section reveals that the latter performs better in small samples when the cross-sectional dependence is limited to the error terms correlations, even though it is inefficient in the limit, but it falls short in comparison to the former when there are cross-sectional dependencies in the short-run dynamics and/or in the long-run adjustments.