

Panel GLS unit root tests and common factors

Josep Lluís Carrion-i-Silvestre Laura Surdeanu

June 2013

Abstract

In this paper we propose GLS-based panel data unit root tests statistics that allow for cross-section dependence and multiple structural breaks in both the level and the slope of the time trend. The analysis covers both the case of (mild) hetero-geneous and homogeneous break points. We evaluate the finite-sample properties of these statistics via a Monte Carlo simulation, considering both the known and unknown structural breaks cases. The paper illustrates the application of the proposed statistics analyzing the a panel of annual data of GDP for 19 developed OECD countries covering the period 1870-2008.