China's Regional Convergence in Panels with Multiple Breaks

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Abstract

This study investigates the existence of regional convergence of per capita outputs in China from 1952–2004, particularly focusing on considering the presence of multiple structural breaks in the provincial-level panel data. First, the panel-based unit root test that allows for occurrence of multiple breaks at various break dates across provinces is developed; this test is based on the p-value combination approach suggested by Fisher (1932). Next, the test is applied to China's provincial real per capita outputs to examine the regional convergence in China. To obtain the p-values of unit root tests for each province, which are combined to construct the panel unit root test, this study assumes three data generating processes: a driftless random walk process, an ARMA process, and an AR process with cross-sectionally dependent errors in Monte Carlo simulation. The results obtained from this study reveal that the convergence of the provincial per capita outputs exists in each of the three geographically classified regions—the Eastern, Central, and Western regions—of China.

Keywords: China; convergence; unit root; structural break, nonstationary panels
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