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Abstract

Title: Testing for Cointegration with SETAR Adjustment in the Presence of Structural Breaks

In this paper, we develop a new cointegration test with SETAR adjustment allowing for the presence of a structural break in the cointegrating vector. Since the timing of a structural break in the cointegrating vector is usually unknown, we propose a simple procedure to simultaneously estimate the breakpoint and test the null hypothesis of no cointegration. Thereby, we extend the well-known residual-based cointegration test with regime shift introduced by Gregory and Hansen (1996a) to include SETAR adjustment. We derive the asymptotic distribution of the test statistic and demonstrate its finite-sample performance in a series of Monte Carlo experiments. We find a substantial decrease of power of the conventional cointegration tests with SETAR adjustment caused by a shift in the slope coefficient of the equilibrium equation. The proposed test performs superior in these situations. An application to the “rockets and feathers” hypothesis provides empirical support for this methodology.