Minimum LM Unit Root Test with Two Structural Breaks

Junsoo Lee
Associate Professor
Department of Economics
University of Central Florida
Orlando, FL 32816-1400

Mark C. Strazicich
Assistant Professor
Department of Economics
University of North Texas
Denton, TX 76203-1457

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Abstract

The endogenous two-break unit root test of Lumsdaine and Papell (1997) is derived assuming no structural breaks under the null. Thus, rejection of the null does not necessarily imply rejection of a unit root per se, but may imply rejection of a unit root without break. Similarly, the alternative need not imply trend-stationarity with breaks, but may indicate a unit root with breaks. In this paper, we propose an endogenous two-break LM unit root test that allows for breaks under both the null and alternative hypotheses. An important feature of our test is that rejection of the null unambiguously implies trend-stationarity.

JEL classification: C12, C15, and C22

Key words: Lagrange Multiplier, Unit Root Test, Structural Break, Endogenous Break