Lecture 4

Unit root tests & convergence

Topics in applied macroeconomics

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Reading list

1. Chapters to read:
    - Enders ch. 4 can be useful for the background on unit root tests
2. Papers to read
    - Pesaran 2007 (read sections 1 to 4), explains unit root testing in convergence analysis
    - Unit root tests with breaks
        - Enders and Lee 2012 - uses Fourier function, very good paper
        - Lee and Strazicich 2003 - uses dummy variables
    - Applied papers
        - Meng, Payne, Lee 2012
        - Raguž Krištić, Rogić Dumančić, Arčabić 2019
3. Codes and data files
    - average and adjusted average.rpf
    - pair-wise_analysis_ADF.rpf
    - unitroot.rpf
    - unitrootbreak.rpf
    - Lee and Strazicich plus RALS-LM.rpf
    - Enders and Lee example.prg
4. RATS procedures
    - lsunit2.src
    - ralslm_uroot2.src

Overview of the lecture

Motivational example

Introduction

The choice of benchmark country

- One country
- Average
- Adjusted average
- Pair-wise approach

Unit root test without breaks

- Augmented Dickey Fuller test
- KPSS test (Kwiatowski, Phillips, Schmidt & Shin 1992)
- ERS test

Unit root tests with breaks

- Lee and Strazicich (2003) test (two sharp breaks)
- RALS-LM test
- Enders and Lee Fourier Function test