Finite sample effects of pure seasonal mean shifts on Dickey-Fuller tests

Artur C. B. da Silva Lopes
Finite sample effects of pure seasonal mean shifts on Dickey-Fuller tests *

Artur C. B. da Silva Lopes †
Instituto Superior de Economia e Gestão (ISEG–UTL) and CEMAPRE
October 15, 2005

Abstract

In this paper, it is demonstrated by simulation that, contrary to a widely held belief, pure seasonal mean shifts – i.e., seasonal structural breaks which affect only the seasonal cycle –, really do matter for Dickey-Fuller long-run unit root tests.

Keywords: unit roots; seasonality; Dickey-Fuller tests; structural breaks.

JEL Classification: C22, C52

---

*I am grateful to Ann Henshall for helpful comments and suggestions. Financial support from Fundação para a Ciência e Tecnologia (FCT) through Programa POCTI, partially funded by FEDER, is also gratefully acknowledged.

†Address: ISEG-UTL, Rua do Quelhas 6, Gab. 315, 1200 Lisboa, Portugal. E-mail:asl@iseg.utl.pt. Fax: +351-21-3922781. Phone: +351-21-3922796.