Artículo Científico

Multivariate Cointegration and Temporal Aggregation: Some Further Simulation Results

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Multivariate Cointegration and Temporal Aggregation: Some Further Simulation Results

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Abstract

We perform Monte Carlo simulations to study the effect of increasing the frequency of observations and data span on the Johansen (J Econ Dyn Control 12(2–3):231–254, 1988; Likelihood-based inference in cointegrated vector autoregressive models, Oxford University Press, Oxford, 1995) maximum likelihood cointegration testing approach, as well as on the bootstrap and wild bootstrap implementations of the method developed by Cavaliere et al. (Econometrica 80(4):1721–1740, 2012; Econ Rev 33(5–6):606– 650, 2014). Considering systems with three and four variables, we find that when both the data span and the frequency vary, the power of the tests depend more on the sample length. We illustrate our findings by investigating th existence of long-run equilibrium relationships among four indicators prices of coffee.

Keywords Monte Carlo · Span · Power · Cointegration · Coffee prices

1 Introduction

Progress in information technology for collecting, organising, storing and retrieving data is leading to the availability of such a vast amount of economic and financial variables, that practitioners need to decide carefully the type of data (annual, quarterly, monthly, weekly, daily or even higher frequency) that they will use in their empirical work. This choice is important because tests of time series properties

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