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Log-Periodogram Regression in Asymmetric Long Memory.

Josu Arteche

Abstract: The long memory property of a time series has long been studied and several estimates of the memory or persistence parameter at zero frequency, where the spectral density function is symmetric, are now available. Perhaps the most popular is the log periodogram regression introduced by [J. Geweke and S. Porter–Hudak: The estimation and application of long-memory time series models. J. Time Ser. Anal. 4 (1983), 221–238.]. In this paper we analyse the asymptotic properties of this estimate in the seasonal or cyclical long memory case allowing for asymmetric spectral poles or zeros. Consistency and asymptotic normality are obtained. Finite sample behaviour is evaluated via a Monte Carlo analysis.

Keywords:

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