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Seminario Aleatorio

Sesión 352

Peaks, Gaps, and Time Reversibility of Economic Time Series

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Abstract

Locating the running maxima and minima of a time series, and measuring the current deviation from them, generates processes that are analytically relevant for the analysis of the business cycle and for characterizing bull and bear phases in financial markets. The measurement of the time distance from the running peak originates a first order Markov chain, whose characteristics can be used for testing time reversibility of economic dynamics and specific types of asymmetries in financial markets. The paper derives the time series properties of the gap process and other related processes that arise from the same measurement context, and proposes new nonparametric tests of time reversibility. Empirical examples illustrate their uses for characterizing the depth of a recession and the duration of bull and a bear market.

Keywords: Markov chains; Business cycles; Recession duration.

JEL Codes: C22, C58, E32.

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El Seminario Aleatorio está destinado tanto a profesores como a estudiantes, por lo que el Departamento de Estadística agradece a los profesores que colaboren invitando a sus alumnos a estas sesiones.