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Temporal aggregation of cyclical models with business cycle applications. (English)

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Summary: This paper focuses on temporal aggregation of the cyclical component model as introduced by *A. C. Harvey* [Forecasting, structural time series models, and the Kalman filter. Paperback ed. Cambridge etc.: Cambridge University Press (1990; Zbl 0725.62083)]. More specifically, it provides the properties of the aggregate process for any generic period of aggregation. As a consequence, the exact link between aggregate and disaggregate parameters can be easily derived. The cyclical model is important due to its relevance in the analysis of business cycle. Given this, two empirical applications are presented in order to compare the estimated parameters of the quarterly models for German and US gross domestic products with those of the corresponding models aggregated to annual frequency.

MSC:

62P20 Applications of statistics to economics

62-07 Data analysis (statistics) (MSC2010)

62M10 Time series, auto-correlation, regression, etc. in statistics (GARCH)

Keywords:

aggregation; cyclical models; ARIMA models; business cycle

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