Rete della ricerca socio-economica

Ciclo di seminari 2014

Lunedì 3 febbraio 2014
ore 10:00 – 11:30
ISTAT - Piazza dell'Indipendenza, 4 - *Sala Baffi*

Time aggregation and seasonal adjustment of airline models

Anna Ciammola, Claudia Cicconi, Francesca Di Palma

(*ISTAT- Direzione Centrale della Contabilità Nazionale*)

Discussant

Antonio Maria Conti (*Banca d'Italia*)

Nodo di ricerca

Aspettative e analisi macroeconomiche

Abstract

When short-term indicators are available at monthly frequency, quarterly seasonally adjusted data can be obtained performing seasonal adjustment before or after temporal aggregation. In general, using monthly data is expected to provide more accurate estimates because of its richer informational content. Nonetheless, seasonal adjustment is often performed on aggregated data as they are less noisy and easier to treat in practice. While the issue of temporal aggregation of ARIMA models is largely documented in the econometric literature, less are the effects of temporal aggregation on seasonal adjustment.

The paper investigates whether the order in which temporal aggregation and seasonal adjustment are performed has an impact on quarterly seasonally adjusted series and in particular on their revision properties in the ARIMA model based framework. The analysis focuses on the most simple and most widely used ARIMA model, the airline model. In addition to theoretical results, we also provide empirical evidence based on both simulated and observed time series.