Reusable components for seasonal adjustment: a new implementation of Tramo-Seats

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Abstract

Using TRAMO-SEATS as a guideline, we have developed an object-oriented software library in the time series domain, around the problems of ARIMA modeling and unobserved components estimation. The algorithms of Gomez-Maravall-Caporello have been split in small reusable blocks and enriched with related features, like structural models and Kalman filters/smoothers. In that way, the library provides a versatile framework to tackle a large set of time series problems, including seasonal adjustment.

The modules, available in .NET and Java, can be easily plugged in any software or development tool that support one of those standard technologies.

We give in the paper an overview of the contents of the library, with an emphasis on the components related to seasonal adjustment. Our implementation of TRAMO-SEATS, which is the most finished part, is also presented in detail. Finally, some examples that show how to use the library in user defined programs are provided.

The set of modules, including a rich graphical interface for TRAMO-SEATS, will be freely available.