Common Trends and Common Cycles – Bayesian Approach

Justyna Wróblewska

Department of Econometrics and Operations Research

Abstract

In 1993 Engle and Kozicki proposed the notion of common features of which one example is a serial correlation common feature. We say that stationary processes exhibit common serial correlation when there exists at list one linear combination of them which is an innovation. Later on Vahid and Engle (1993) combined the notions of cointegration among I(1) processes with common serial correlation among their first differences. It is commonly known that cointegrated time series have Vector Error Correction (VEC) representation. The existence of common serial correlation leads to an additional reduced rank restriction imposed on the VEC model parameters. This type of restriction was later termed a strong form (SF) reduced rank structure, in the opposition to a weak one (Hecq, Palm, Urbain, 2006).

Our main aim is the construction of the Bayesian Vector Error Correction model with this additional strong form restrictions (Bayesian VEC-SF model).

The empirical validity of investigating both the short- and long-run co-movement between macroeconomic time series will be illustrated by the analysis of the price-wage nexus in the Polish economy.

References

1. Engle R.F., Kozicki S. (1993), Testing for common features (with comments), *Journal of Business and Economic Statistics* 11, 369-395.
2. Hecq A., Palm F.C., Urbain J.P. (2006), Common cyclical features analysis in VAR model with cointegration, *Journal of Econometrics* 132, 117-141.
3. Vahid F., Engle R.F. (1993), Common trends and common cycles, *Journal of Applied Econometrics* 8, 341-360.