

Measuring the Effects of Monetary Policy: A DSGE-DFM Approach

Hirokuni IIBOSHI *

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概要

Instead of FAVAR approach proposed by Bernanke, Boivin and Elias (2005) based on a backward-looking model, we propose new method of measuring the effect of monetary policy on large number of macroeconomic series using dynamic stochastic general equilibrium-dynamic factor model (DSGE-DFM) based on forward-looking framework in data-rich environment, developed by Boivin and Giannoni (2006) and Shorfheide, Sill and Kryshko(2010). However, our models adopt simulation smoother developed by De Jong and Shephard (1995) unlike earlier studies, because of estimating it stably and efficiently. By identifying structural shocks including monetary policy shock from the point of view of DSGE model, we obtain historical decomposition as well as impulse response functions, variance decompositions for panel data series. As an application of this approach, we estimate a Smets-Wouter (2003) type medium size DSGE model in a data-rich environment with fifty-five macroeconomic series during the late 1980s and the 1990s in Japan.

*Tokyo Metropolitan University