IEIT WORKING PAPER SERIES

Dynamic Effects of Monetary Policy Shock in China

한광석

WP-2021-003

경제통상연구원
October 2021

이 논문은 2021년도 경제통상연구원의 지원을 받아 수행된 연구임

Dynamic Effects of Monetary Policy Shock in China

Abstract

The debate on the effectiveness of monetary policy has been long-standing. According to the real business cycle theory that assume complete market and completely flexible price, monetary policy is neutral because it has no effects on real economic variables and it can only affect the nominal price. However, the new Keynesian theory that assume incomplete market and nominal rigidities, monetary policy is no longer neutral and can affect many real economic variables and lead to economic fluctuations in the short run.

New Keynesian economics modified real business cycle method and add nominal rigidities, various shocks and frictions etc. to construct the new Keynesian model which is called Dynamic Stochastic General Equilibrium (DSGE) model. In this paper, a closed medium-scale DSGE model was estimated to present the dynamic effects of monetary policy shock on Chinese economy. Some important parameters' values were estimated by the Bayesian approach using the quarterly data of Chinese macroeconomic variables of real output, real consumption and inflation from 1992:1 to 2-18:4.

According to the closed medium-scale DSGE model, a positive monetary policy shock has negative effects on real output, real consumption, investment, labor, inflation, real wage and real government consumption. Their values all go down in the first period but rise since that and revert to the steady state values finally. Conversely, a negative monetary policy shock will have positive effects on real output, real consumption, investment, labor, inflation, real wage and real government consumption in the short run. Our results are consistent with the results of Wouters (2003, 2007), Christiano, Eichenbaum and Evan (2005).

A positive technology shock has positive effects on real output, real consumption, investment, real wage and real government consumption but negative effects on interest rate, labor and inflation in the short run. A positive government spending shock has positive effects on real output, labor, interest rate, inflation and real government consumption but negative effects on real consumption, investment and real wage in the short run. The decline in real consumption and investment while increase in government consumption is the crowding-out effect of the positive government spending shock. A positive investment shock has positive effects on real output, investment, labor, real wage and real government consumption in the short run.

Key Words: Medium-scale DSGE model, Monetary policy shock, Chinese economy