The Cross-Sectional Distribution of Price Stickiness and Inflation Stability

Jae Won Lee* Woong Yong Park†

Abstract

This paper shows that the condition for monetary policy to generate equilibrium determinacy is significantly loosened when the cross-sectional distribution of the price change frequency is taken into account. Monetary policy can achieve determinate equilibrium with weaker responses to inflation in a heterogeneous-frequency economy than in the corresponding homogeneous-frequency economy where the representative frequency is the weighted average of the heterogeneous frequencies. The result holds both in a proto-typical New Keynesian model with the constant elasticity of substitution (CES) aggregator and no trend inflation and in a model with a non-CES aggregator that permits trend inflation observed in the historical data. We then take our result to re-evaluate the role of monetary policy in the transition from the Great Inflation to the Great Moderation in the postwar US economy. It is found that, in an economy parameterized with an empirical cross-sectional distribution of the frequency, i) monetary policy can achieve equilibrium determinacy with much weaker responses to inflation than previously known in the literature and ii) it is unlikely that the US economy has ever been subject to self-fulfilling expectations-driven fluctuations. The systematic shift in the monetary policy rule observed in the data is unlikely to have played a decisive role in stabilizing inflation.

*Department of Economics, University of Virginia.
†Department of Economics and Institute of Economic Research, Seoul National University.