Monetary Policy Rules - Some Notes

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1 Overview

This is a document detailing some of the small things I learnt from Clarida et al. (2000). Specifically what I learnt from the model at the end depicting sunspot shocks. This is a very small part of the paper which mainly serves to elucidate why the empirical results might be important. But while going through what should've been a simple model, I found somethings a bit puzzling in the IRFs.

The model is a simple New Keynesian model characterized by 4 equations in equilibrium:

$$\pi_t = \delta \mathbb{E}\{\pi_t + 1 | \Omega_t\} + \lambda(y_t - z_t) \tag{1}$$

$$y_t = \mathbb{E}[y_{t+1} | \Omega_t] - \frac{1}{\sigma}(r_t - \mathbb{E}[\pi_{t+1} | \Omega_t]) + g_t \tag{2}$$

$$r_t^* = \beta \mathbb{E}[\pi_{t+1} | \Omega_t] + \gamma x_t \tag{3}$$

$$r_t = \rho r_t + (1 - \rho) r_t^* \tag{4}$$

Where π_t is the inflation rate at time t, y_t is the output at t. z_t is the natural rate of output at t, $x_t \coloneqq y_t - z_t$. g_t is some exogenous demand factor. We assume g_t and z_t both follow a stationary AR(1) process.

References

Richard Clarida, Jordi Gali, and Mark Gertler. Monetary policy rules and macroeconomic stability: evidence and some theory. *The Quarterly journal of economics*, 115(1):147–180, 2000.