Taylor rule or McCallum rule for the Chinese monetary policy☆

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Abstract:

This paper revises traditional Taylor rule and McCallum rule by adding nominal exchange rate and real estate price to check their applicability in china. Using NLS and VAR the estimations proved that McCallum rule can explain Chinese monetary policy better, and can influence macroeconomic variables more effectively. In order to get more accurate results and to grasp the changes of the economic environment, both quarterly and monthly data are used. To avoid the absence of GDP in monthly data, three output measurements are used.

The NLS estimation proved that the requirements for an active Taylor rule are not satisfied. And as explanatory variables in Taylor rule, neither nominal exchange rate nor real estate price is statistically significant in most cases. Compared with Taylor rule, McCallum rule may explain the real economic situation in China better, because most the requirements are met. The only problem in McCallum rule is that for an increase in output gap, m will increase, which is contrary to the McCallum rule. A possible explanation of McCallum rule is that to stabilize the nominal exchange rate, excess liquidity is issued, which leads to overheating of the economy and real estate bubbles.

The results of VAR are consistent with the NLS estimations of Taylor rule and McCallum rule. With more responsiveness of the macroeconomic variables to money supply than to interest rate, supply must be a better monetary policy for China. Compared with interest rate, money supply is also more effective, because interest rate could neither affect economic growth nor affect nominal exchange rate. Money supply can both control inflation and stimulate economic growth in the short term.

JEL classification: E31, E52

Keyword: Chinese monetary policy, Taylor rule, McCallum rule, nominal exchange rate, real estate price

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