

Monetary and Fiscal Policy Analysis With an Agent-Based Macroeconomic Model

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Summary

Macroeconomic policy analysis is a challenge for agent-based models because these types of model are generally much elaborated on the specific market levels for partial (micro) markets, but have been of limited use for macroeconomic policy issues due to calibration and “model closure” issues. Moreover, macroeconomic policy measures at a high level of aggregation, such as general fiscal policy and monetary policy, tend to include several microeconomic aspects determined by the macroeconomic policy makers (i.e. the specific process of money transmission, budget constraints within/for the public sector, etc.), which are not usually captured by agent-based models with an emphasis on microfoundation. Thus, a fully-specified macroeconomic agent-based model, AS1, is applied in this paper. Specifically, the monetary sector is modeled in detail, and both the central bank and the public sector are set up as separate agents with their own expectations and behavior. The paper has two aims: (a) to show that economic policy may be analyzed in this context with more elaborate expectation formation mechanisms than in traditional models, and (b) to demonstrate that this might change the assessment of policy effectiveness. Two illustrative examples for monetary and fiscal policies are presented with different levels of rationality and differences in the expectation formation process.