REPORT FOR

Manuscript 2381-1:

Policy experiments in an agent-based model with credit networks

The paper analyzes the performance of different kinds of (monetary) policy interventions in the context of an agent-based macroeconomic model. The model employed for the analysis is an extension of a pre-existing framework, and the experiments are carried out by means of Monte Carlo simulations.

The general feeling got by reading this paper is that it is still a work in progress. The relevance of the topic is indisputable, but in the introduction not a single word is spent to motivate it, either from an empirical or from a theoretical perspective. Similarly, there is no reference to the existing literature on the same subject. Indeed, apart from the original papers by Assenza et al. (2015), there is no reference to anything, what leaves the reader quite disoriented.

As far as the model is concerned, the implementation of the labour market appears rather problematic. First, wages change according to the difference between target and actual unemployment: so, what is target unemployment? If it is a policy target, then it is not clear at all why it should affect individual wages. Basically, Equation 2 resembles a Phillips curve and is difficult to motivate in an agent-based setting (in fact, the authors do not motivate it). Second, why is the matching not automatic? On what basis can this choice be motivated? Is it a necessary assumption?

Also the simulations section presents some weaknesses. In particular, there is no attempt to validate the model by confronting its properties with some "stylized fact". This is now standard practice in AB literature, and the authors should make some effort in this sense in order to corroborate the model reliability. As for the policy experiments, they are analyzed superficially with no insight as to the mechanisms that could be driving the results. The model is full of interesting features, like the bond market and the interbank market (credit networks appear even in the paper title), but nothing is said about how they interact with the Policy and how they contribute to shape the results. Finally, the reader is left once again disoriented by the lack of references to some empirical or theoretical literature that could help make sense of the simulation results.

Some minor points:

1) The inclusion of a complete description of the model would be very helpful. Alternatively, the authors could provide a link to the original model of Assenza et al. (2015a).

2) The meaning of all the symbols appearing in Equation 1 should be explained. Moreover, the authors should explain the rationale behind the formula chosen for the MPC out of wealth.

3) Are wages all alike across workers and firms? When a worker changes employer, does he/she "inherit" the previously earned wage?

4) What is public expenditure used for?

5) Are the pictures at pg. 8 Monte Carlo averages? Being very irregular, they actually seem coming from a single simulation.

6) The cash-in-hands policy is not realistic. At most, it is Government to give people money.

7) Prud-E and Prud-L should be better explained, in particular why they are potentially relevant for macroeconomic stability.