

I would like to thank the authors for this interesting topics. In fact, they started from the model of Assenza et al. (2015) and included several modifications: new specification of the consumption function, new approach of modeling the labor market, and inclusion of the public sector through the government policy. Their main objective is to compare two main policies of the central bank through simulation in an agent-based approach.

The new consumption function specifies well two components: macroeconomics components (tax and interest rate which reflects the inflation), personal component (wealth). However, authors didn't specify the micro level of the consumption based on the product heterogeneity produced by firms. We can imagine that each agent chooses his consumption based on what he wants to consume and not only based on financial and macroeconomics variable. This endogenous modeling can be considered for future works. I appreciate the modeling of labor market dynamic in Eq. (2). In fact, authors model the negative correlation between unemployment and wage inflation which is one of the fundamental principal of supply-demand: this mechanism reflects well the theory of Philips curve. However, the matching process of unemployed workers seems to be uniformly random. A conditional probability based on workers' attributes (talent, sex, age...) should be important to improve the reality of labor market dynamics.

The central bank follows a Taylor Rule for the interest rate. It is expected that the central bank should fix a range of minimum and maximum interest rate, as supposed by the authors. However, a little discussion can be considered in that way. I suppose that  $i_{max}$  cannot exceed some threshold in order to insure some economic activity and a GDP growth. However, for  $i_{min}$  can it be negative in this model. As we know the major four central banks (US, UK, Japan and Euro) adopted the negative interest rate. Can it be considered in this model?

The model produces GDP, consumption and government spending. The GDP and consumption are perfectly correlated, which implies that this artificial economy is driven mainly by the consumption which deviate from the reality. A long term investment of households will change the behavior of the model. A consequence, the crisis observed in  $t = 400$  caused a strong drop of the government spending which is strange. Indeed, during crisis, we expect an increase of government spending mainly by the reduction of revenue which come from tax, due to the bankruptcy of many firms. During this period, many banks bankrupt. Authors explain that by the decrease of credits. In my opinion, decrease of giving credits never cause bankruptcy. In addition, in Figure 2 we cannot conclude about a strong decrease of loans, I think that the economy continued demanding credits. However, the banks default is probably due to a massive decrease of deposits. The decrease of deposit with a quiet maintaining of credits cause an unbalance between assets and liabilities which trigger a liquidity crisis in the inter-bank market.

As conclusion, authors showed the efficiency of the standard TR monetary policy that enhance the economic stability. The analysis of the role of the mechanism of how policies act is weak. Then, we cannot understand why the standard TR is a better policy. This paper is a good way to start analysis about the role of Central Banks during crisis and to continue the analysis of other policies as the QQE policy and the new integrate negative interest rate to fight against deflation in developed economies.