
Referee's Report of Economics E-Journal

Title: "Implicit Microfoundations for Macroeconomics"

Author: Ian Wright

Comments: This paper emphasizes the importance of implicit microfoundations for macroeconomics. To show the validity of this viewpoint, the author examines a parsimonious, agent-based macroeconomic model with implicit microfoundations of capitalist economies. A 'closed social architecture model' (CSA model) succeeded to replicate many of the reported empirical distributions of capitalist economies. I think the article is suitable for the publication of the special issue of Economic E-Journal, but the author must reconsider some points.

- In Section 2.4, the author defined wage payment and firing rule. In the definition, the author used the words "sufficient funds" and "insufficient funds". I think this description is qualitative and lack of strictness. Is it possible to explain qualitatively? For example, $10\eta_b < m_a$.
- In Section 3.2, the result of simulation showed the over-monopolization of economy. The author stated that "a possible reason for the over-monopolization of economy is the assumption that firms have a single capitalist owner, which conflates capital concentration with firm ownership". However, this explanation is not clear. If we assume that firms have plural capitalist owners, whether the over-monopolization of economy expands or contracts?
- In Section 3.3, the definition of firm demise is given. I think that this definition should be stated in Section 2.
- In Section 3.3, the distribution of the size of demised firm is not investigated. I think the seize of demised firm is defined by the number of employees or the sales revenue. Fujiwara (2003) studied the distribution of total liabilities of bankrupted firms, and showed that the distribution is consistent with a power law distribution. In my opinion, the CSA model con not replicate the power law distribution of demised firms.
- In the end of Section 3.3, the author stated "the rate at which firms are born and die is much higher than in reality". However, the born of firms is not discussed in the article.
- In Section 3.5, the log growth rate is measured by both number of employees and sales revenue. Though the distribution of number of employees are investigated in the article, the distribution of sales revenue is not explained in the article. Can the CSA model replicate empirical distribution of sales revenue?

- In Section 3.8, the CSA model fails to replicate the empirical data. I think that the cause are the definition of the GDP in this article or the definition of the CSA model. Which is necessary to replicate the empirical data?
- In Section 3.10, the article,
Nirei, M. and Souma, W.: 2007, A two factor model of income distribution dynamics, *Review of Income and Wealth* **53**(3), 440-459,
is also reference.
- In Sections 3.10 and 3.11, a complementary cumulative distribution function (ccdf) is considered to investigate the distributions. A cumulative distribution function, $F(x)$, satisfies the conditions:

$$\lim_{x \rightarrow -\infty} F(x) = 0, \quad \lim_{x \rightarrow +\infty} F(x) = 1.$$

Hence, a complementary cumulative distribution function, $F_c(x) := 1 - F(x)$, satisfies the conditions:

$$\lim_{x \rightarrow -\infty} F_c(x) = 1, \quad \lim_{x \rightarrow +\infty} F_c(x) = 0.$$

However, these conditions are not satisfied in Fig. 11 (a) and Fig. 12 (a). I expect that these distributions are rank size distribution of $N = 1000$ agents for 100 years. Thus, I estimate the total number of entity is 10^5 . However, this estimation is not correct in Fig. 11 (a) and Fig. 12 (a). These figures are beyond my comprehension.

- In the caption of Fig. 11 (a),
ccdf \rightarrow complementary cumulative distribution function (ccdf)
- In the caption of Fig. 12 (a),
complementary cumulative distribution function (ccdf) \rightarrow ccdf