

Report on:
The Nature of Equilibrium in Macroeconomics
— A Critique of Equilibrium Search Theory —

by Masanao Aoki and Hiroshi Yoshikawa

The present paper by Aoki and Yoshikawa focuses on an extremely important aspect of Macroeconomics, which is the concept of equilibrium and its implications for the description of the economic phenomena.

The starting point of their analysis is the empirically identified wide dispersion of marginal value of labor, which is distributed according to a power law distribution. They claim, then, that such empirical evidence is at odds with the neoclassical equilibrium search theory developed by Lucas and Prescott. In this model the “disequilibrium” phenomenon of non-uniform productivity across different competitive markets is explained in terms of exogenous stochastic fluctuations of demand and non-perfect mobility of workers. However, Aoki and Yoshikawa point out that it is important the presence of a dispersion in the outcome of the model, but it is crucial also its behavior as a function of the number of its constituent elements. In this respect they distinguish between two classes of models: self-averaging and non-self-averaging models. The first type exhibits a reduction of dispersion under an enlargement of the system size, according to the Central Limit Theorem. Such systems inevitably show an asymptotic convergence to a Gaussian distribution and therefore are not able to replicate the wide dispersion of empirical distributions. The second type of systems does not exhibit a vanishing dispersion and they are suitable for describing the empirical wide dispersed distributions. The authors suggest that the non-self-averaging concept is very general and it might be applied to many macroeconomic phenomena.

The crucial consequence of the presence of non-self-averaging property is the great limitation of the regression-towards-the-means effect due to the optimizing behavior of economic agents and the dominance of non-self-averaging macroeconomic disturbances.

In the paper the crucial distinction between self-averaging systems and non-self-averaging systems is explained very clearly, with a simple illustrative example of a growth model. Therefore, I would suggest this paper as a reading to every macroeconomist.