

## **Comment**

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Referring to Hicks's *Value and Capital*, Plosser asserts that "it is logically impossible to attribute an important portion of fluctuations to market failure without an understanding of all the sorts of fluctuations that would be observed in the absence of the hypothesized market failure" (C. Plosser 1989, p. 53). The view adopted by Heymann, Kaufman and Sanguinetti (HKS) in their paper is, clearly, at the opposite of this one. In fact, they consider that it exists two distinct lines of reasoning: a standard line which is adapted to the analysis of smooth changes that do not lead the economy far away the steady state; and another one which is better suited to the analysis of specific episodes characterized by strong changes in fundamentals. In the later case misperceptions about the future outcomes of current plans are considered as the real source of business fluctuations.

The contribution of this work to a new analytical approach to business cycles and its limitations will make it possible to stress the analytical issues that economists interested in understanding business cycles should tackle in the future.

R. Day (1993) contrasted two kinds of dynamics: the adapted equilibrium dynamics and the adaptive evolutionary dynamics. The equilibrium approach focuses on the way economies work when agents are optimally adapted to their environment and optimally react to any shock. At the opposite, the adaptive evolutionary approach focuses on "the characterization of the way economies work when they work out of equilibrium" (ibid. p. 21).

The HKS approach does not belong to the first class of models. But it does not really belong to the second either. It is only a step in

the direction of building an adaptive approach. We intend to discuss this point so as to bring to light what should be such an approach. The so-called adaptive evolutionary dynamics should be an analysis which does not consist in adding restrictions (rigidities) to an equilibrium framework (Lucas 1980). It calls for building up of a completely new framework suited to take into account all the elements of out of equilibrium processes.

The depart from equilibrium dynamics leads to "algorithmic representation of both decision rules and learning procedures (including expectations formation)" (Leijonhufvud 1993 p. 5). This is the kind of representation of decision processes that HKS propose to substitute for the standard optimizing behaviour. Misperceptions, expectations and learning mechanism determine the profile of the evolution.

The first implication of focusing on sequentially articulated strategies should be that markets can no longer be represented as auction or bidding games in the sense that instantaneous price adjustments allow the markets themselves to clear systematically. Yet in the HKS model, misperceptions do not prevent the market from clearing. The transitional increase in consumption spending causes a trade deficit which is associated with an increasing external debt. The only information that individuals process is the gap between the unknown steady state output and the current output. Now, because the individuals' perceptions are not accurate, prices should fail to clear markets. Disequilibria should come to the surface through the appearance of stocks which should be the relevant information to be processed by the agents.

An adaptive approach has a financial aspect. This point comes clearly to light in the HKS analysis. Changes in the perception of the future income by lenders and borrowers are shown to be the significant channel through which spending is (over)stimulated. However, the main effect of misperceptions and changes in credit conditions is that the structure of production is no longer in line with the intertemporal plans of consumers. Analysing such a situation requires to build a theory of production which, in Hicks's very words, is really 'in time'. As a matter of fact, the effective evolution of the

economy does not depend only on the cognitive abilities of decision makers but also on the complexity of the phenomenon of production. Misperceptions lead to wrong decisions. And wrong decisions result in new constraints which determine the range for the future decisions. HKS's modelling does not consider such a sequence. Adjustment costs cannot stand for the real irreversible effects of wrong decisions. As a consequence the only effect of misperceptions is to delay the adjustment to a steady state which is exogenously determined. Indeed mistakes are embodied in the level of foreign debt but no feedback effects of an increasing foreign debt are brought to light. Therefore the introduction of misperceptions turns out to be a simple way of replicating some stylised facts with a model the stationary point of which is an intertemporal equilibrium. A better understanding of the role of misperceptions would require to bring to the surface that the time to build a new productive capacity essentially matters if the length of the construction phase not only involves additional costs but also has an effect on the final configuration of the productive capacity, that is, on the fundamentals which define the new steady state. Within this perspective the analytical issues become substantially more complicated; but it is possible to deal with them by making use of a Neo-Austrian type of model ( Hicks 1973, Amendola and Gaffard 1998).

Finally, an adaptive approach has some implications for economic policy. The HKS's paper sets the debate Discretion versus Rules in economic policy in a particular perspective. On the one hand it implicitly leads to consider that economic policy must not consist of interventions which result in further shocks that aggravate misperceptions. On the other hand, it underlines the necessity for policy makers to carry out appropriate actions. What is true is that policy interventions must be consistent with the behaviour of individual agents. This had led Heymann and Leijonhufvud (1995) to talk of 'Rules and Discretion' instead of 'Rules versus Discretion'. Yet that would be necessary to go deeply into the foundations of economic policy. First of all, by definition, out of equilibrium there is no given configuration of the economy to be used as a benchmark for intervention. This makes the difference between an out-of-equilibrium approach and the so-called neo-classical synthesis. Moreover, out of equilibrium authorities do not possess a complete information, and

they do not possess it at the right moment. As a consequence a policy of fine tuning is not possible. And a policy which would result in adding new shocks to the other ones must be rejected. The economic policy should be aimed at solving co-ordination problems. This implies that policy interventions must be consistent with the expectations of individual agents. Any surprise must be avoided and graduality is required for any intervention

By and large the task assigned by Plosser to the economists has been carried out. We now have to put on our research agenda the task of going back to the disequilibrium analysis of business cycles. This is one of the messages implicitly delivered in the HKS's paper. Indeed it must be clear that the task of building up a complete out of equilibrium framework is a very difficult one. When pursued very far it will lead to models of great complexity and variety. As Hicks has put it, "the 'equilibrium' forces are (relatively) dependable; the 'disequilibrium' forces are much less dependable" and he added: "we can invent rules for their working, and calculate the behaviour of the resulting model; but such calculations are of illustrative value only" (Hicks 1985, p. 87).

## References

- Amendola M. and J-L Gaffard (1998) *Out of Equilibrium*, forthcoming, Oxford, Clarendon Press.
- Day R.H. (1993) "Non linear Dynamics and Evolutionary Economics", in Day R. and Peng Chen eds., *Non linear Dynamics and Evolutionary Economics*, Oxford, Oxford University Press.
- Heymann D., and A. Leijonhufvud (1995) *High Inflation*, Oxford: Oxford University Press.
- Hicks J. R. (1973) *Capital and Time*, Oxford, Clarendon Press.
- Hicks J.R. (1985) *Methods of Dynamic Economics*, Oxford, Clarendon Press.
- Leijonhufvud A., (1993) 'Towards Not Too Rational Macroeconomics' *Southern Economic Journal*, 60, 1-13.

- Lucas R.E. (1980) 'Methods and Problems in Business Cycle Theory' *Journal of Money, Credit, and Banking*, 12-4, 696-715.
- Plosser C. (1989) "Understanding Business Cycles" *Journal of Economic Perspectives*, 3, 51-77.