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THE MEMORY CONCEPTS OF HYSTERETIC SYSTEMS IN POST-KEYNESIAN ECONOMICS

Abstract:

The subject of is paper is a concept of memory in hysteretic systems. The authors take a critical stand on the analysis of this term in Setterfield (2008) and they suggest amendments to the existing approach. This paper detects two deficiencies in Setterfield's approach. The first deficiency is a complete absence of reflection of a distinction between direct shocks and indirect shocks, an idea inspired by Amable (1993, 1994), which results in the misleading practice of ordering the memory types of unit-root systems and "true" hysteretic systems on one classificatory scale. The second deficiency of Setterfield's treatment consists in missing distinguishing of the cases when shocks are applied in only one direction from the cases when the direction of shocks gets reversed exogenously. The presented paper combines both aspects (shock typology, direction of shocks) to analyze the notion of memory in separate groups. The authors apply a two-criterion approach resulting in detection of three groups of Katzner-type memory, based on Katzner (1993), and three groups of Cross-type memory, drawing upon Cross (1994). The authors point out that in spite of a common ground of the Cross-type memory phenomenon and (ir)reversibility phenomenon, both analytical groups are based on fundamentally different criteria: (non-)identity of the path before and after the un-shock in the former case, (non-)identity of the initial and final short-run and long-run equilibrium value of the output variable in the latter case.

Keywords:

system memory, hysteresis, unit/zero root, (ir)reversibility, (in)direct shock, static systems, dynamic systems

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