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On the Dynamic Properties of Okishio's Monetarist Model

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Abstract

In this paper, we reconsider the Monetarist model that was formulated by Okishio(1979, 1980) from analytical point of view. The basic model is formulated by a three-dimensional system of nonlinear differential equations, and the long run equilibrium of this system satisfies the typical Monetarist properties, namely, the 'natural rate of employment' is attained, and the rate of price inflation and nominal growth rate are determined by the growth rate of nominal money supply that is set by the central bank at the long run equilibrium point. However, as Okishio(1979, 1980) correctly pointed out, the dynamic stability of the long run equilibrium point is ensured only if particular conditions for crucial parameter values are satisfied. We further prove by means of Hopf bifurcation theorem that the business cycles which entail cyclical fluctuations of the main variables occur at some range of parameter values. We also investigate the dynamic behavior of the extended model that consists of four-dimensional nonlinear differential equations. Finally, we briefly argue that the Keynesian coordinated active fiscal and monetary stabilization policies are necessary if the inactive Monetarist fiscal and monetary policies cannot ensure the dynamic stability of the macroeconomic system.

Keywords Okishio's Monetarist model • Long run equilibrium • Stability • Instability • Hopf bifurcation • Cyclical fluctuations

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