Guiding the Economy Toward the Targeted Inflation Rate: An Evolutionary Game Theory Approach*

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Preliminary

Abstract

The established view in the macroeconomics literature is that even when nominal interest rates hit the zero lower bound, central banks can still achieve an equilibrium at the targeted inflation rate by raising inflation expectations. This study examines the conditions under which the policy of raising inflation expectations can attain the equilibrium in an economy where entrepreneurs and workers make investment decisions on innovation activities that determine price movements. By using the evolutionary game theory approach, this study finds two necessary conditions for successfully guiding the economy toward the equilibrium at the targeted inflation rate. First, entrepreneurs choose demand-creating innovation rather than cost-reducing innovation; otherwise, policy measures stimulating the former are called for. Second, the proportions of entrepreneurs and workers currently investing in demand-creating innovation must be sufficiently large.

JEL Classification: C72, C73, E31, E52

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