

Local and Global Dynamics in a Discrete Time Growth Model with Non-concave Production Function

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Abstract

We study the dynamics shown by the discrete time neoclassical one-sector growth model with differential savings as in Bohm and Kaas (2000) while assuming a nonconcave production function in the form given by Capasso et. al. (2010). We prove that complex features are exhibited related both to the structure of the coexisting attractors and to their basins. We also show that complexity emerges if the elasticity of substitution between production factors is low enough and shareholders save more than workers, confirming the results obtained while considering concave production functions (see, for instance, Brianzoni et al. (2007) (2009) and (2011)).

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