

Neimark-Sacker bifurcation in a discrete-time Goodwin model

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This paper presents Goodwin's growth cycle model [1] in its discrete version [2] that has been obtained by means of a non-standard Mucken's discretization method. Based on explicit Neimark-Sacker bifurcation, normal form method and center manifold theory [3], the system's existence, stability and direction of Neimark-Sacker bifurcation are studied. Numerical simulations are employed to validate the main results of this work. Some comparison of bifurcation between the discrete-time Goodwin model and its continuous-time system is given.

References

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