Aseev, A. S.

Optimal stationary regimes in Kaldor’s business-cycle controlled model. (Russian. English summary) [Zbl 1439.90040]

Summary: The paper studies optimal stationary regimes in a controlled version of N. Kaldor’s business cycle model. The parameter characterizing stimulation of demand by a central planner is considered as a control. The value of the stimulating policy is modeled via quadratic function, and the instantaneous utility function is defined as the value of the national income minus the cost of the stimulating policy. In the corresponding optimization problem, the existence of an optimal stationary regime is proved and conditions that guarantee its uniqueness are given. It is shown that optimization of the stationary state always leads to greater values of both the instantaneous utility function and the consumption than in stationary states of initial (uncontrolled) model. The results of numerical simulation are considered as well.

MSC:
90B50 Management decision making, including multiple objectives
91B55 Economic dynamics

Keywords:
dynamic models in economics; Kaldor’s business cycle model; optimal control; optimal stationary regime

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References:

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