Dynamic analysis of an endogenous growth model with investment-specific technological change

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Abstract

This paper examines dynamic characters of the model constructed by Krusell(1998). In the model, technological progress occurs endogenously due to R&D activities in monopolistic firms. It is shown that, given constant returns to labor inputs in R&D, a unique trajectory converging to the balanced growth path exists. Furthermore, I provide an optimal subsidy policy which enables the allocation of the market equilibrium to replicate the socially optimal allocation. The optimal subsidy policy requires a combination of time-invariant subsidies to capital production and time-variant subsidies to R&D activities, on the transition path to the steady state.

Keywords : investment, R&D, Transitional dynamics

JEL classification: D92, O32, O41

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