
A Competitive Idea-Based Growth Model with Shrinking Workers' Income Share

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Abstract

In this paper we present a model in which endogenous growth arises in competitive markets. Knowledge is described as a labor-augmenting factor used directly in the final goods' production. Firms demand both basic nonrival knowledge contents, which are supplied jointly and inelastically with raw labor, and further contents supplied by patent holders. This fact, together with Lindahl prices for knowledge, allows competition to work, while it also implies that workers' income share declines overtime. In a first version of the model with constant cost of knowledge production the first best is attained. In further versions of the model, in which the cost of knowledge production is allowed to change over time and externalities arise, in a decentralized economy a second best equilibrium occurs in the transitional period, while in the long run there is convergence to efficiency. As the asymptotic equilibrium exhibits strong scale effects, we propose a final version of the model with only weak scale effects under the assumption that combining labor and knowledge becomes increasingly difficult.

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