

Productivity Growth and Dynamic Inefficiency*

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Abstract

We examine how real interest rates are affected by the rise of leading companies of this age, which require less investment relative to their great value-added. We construct analytic and quantitative overlapping generations (OLG) models in which such “superstar” firms replace other firms. We show that the productivity growth that advantages superstar firms with less investment relative to their value-added causes the decline of the equilibrium interest rate, which can lead the economy to “dynamic inefficiency.” This result is fundamentally different from those in the standard representative agent models and the standard OLG models, in which any factor augmenting technological progress does not decrease the equilibrium interest rate and cause dynamic inefficiency. Moreover, in our framework, the consequences of the productivity growth that advantages superstar firms are consistent with other stylized facts such as the rise of market concentration, the change of factor shares, and the increase in inequality in households.

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