

The Effects of Negative Population Growth: An Analysis Using a Semi-Endogenous R&D Growth Model*

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Abstract

This study investigates the rates of technological progress, total output growth, and per capita output growth when population growth is negative by using a semi-endogenous R&D growth model. The analysis shows that within a finite time horizon, the employment share of the final goods sector reaches unity and that of the R&D sector reaches zero; accordingly, the rate of technological progress tends toward zero. In this case, the growth rate of per capita output asymptotically approaches a positive value.

Keywords: technological progress; semi-endogenous growth model; negative population growth

JEL Classification: O11; O41; O31

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