Population Declining Rates in Solow and Semi-Endogenous Growth Models: Empirical Relevance and Roles of Child Rearing Cost

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Abstract

It has been found that population decline may change properties of growth paths from those in a population increasing economy in the Solow and semi-endogenous growth models. However, the population declining rates needed to generate richer dynamics seem too large given empirical data and population prospects available. This paper first shows that in a semi-endogenous growth model, positive externalities from knowledge accumulation can make such population declining rates sufficiently small to be consistent with the United Nations population estimates. In the Solow growth model without such externalities, an introduction of child rearing cost could reduce the critical population declining rate below which richer dynamics emerge. Finally, economic implications of child rearing cost are discussed in the Solow growth model with population decline.

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