Rising Longevity, Human Capital and Fertility in Overlapping Generations Version of an R&D-based Growth Model

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Abstract

This paper constructs a simple, overlapping generations version of an R&D-based growth model à la Diamond (1965) and Jones (1995), and examines how an increase in old-age survival probability impacts purposeful R&D investment and long-run growth by affecting fertility and education decisions. We demonstrate that under certain conditions, old-age survival probability, when relatively low (high), positively (negatively) affect economic growth. This study also compares the growth implications of child education subsidies and child rearing subsidies and demonstrates that although child education subsidies always foster economic growth, child rearing subsidies may negatively impact economic growth in particular situations. Finally, we briefly consider the effects of a child education subsidy on welfare levels.

Keywords: R&D, Fertility, Human Capital, Child Education Subsidy, Child Rearing Subsidy.

JEL classification: J13, J24, O10, O30, O40

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