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Productive Consumption and Population Dynamics in an Endogenous Growth Model:

The Demographic Trend and Human Development Aid in Developing Economies

Ichiroh Daitoh*
Tohoku University

Abstract

This paper shows that by *endogenizing* population growth rate, a model of economic growth under the productive consumption hypothesis (PCH) can be more tractable than has been considered so far, and finds that the PCH may have interesting implications for population dynamics. In the zero-saving phase, there may exist *multiple* saddle point stable balanced growth paths (BGPs), and the population growth rate may rise or decline monotonically along a transition path as per capita income increases. In the positive-saving phase, there exists a unique saddle point stable BGP, and the population growth rate will decline along a transition path. If an economy switches from the zero-saving into the positive-saving phase, the population growth rate may exhibit an inverted U-shaped curve. Otherwise, it declines monotonically. These results are consistent with the demographic trend in modern developing countries. Finally, aid for the accumulation of health knowledge can improve per capita GDP and welfare in the zero-saving phase and may create an incentive for physical capital accumulation.

JEL Classification: J11,O11,O41

Keywords: endogenous growth, population dynamics, productive consumption

* Correspondence: Graduate School of International Cultural Studies, Tohoku University; 41 Kawauchi, Aoba-ku, Sendai-city, Miyagi, 980-8576, Japan; Tel&Fax:+81-22-795-7595, Email: idaito@intcul.tohoku.ac.jp