Macroeconomic Dynamics of Human Development and the Creation of a Market Economy

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This paper investigates macroeconomic dynamics of a poor society under Human Development using a framework of the one-sector RBC model with factor-generated externalities by Benhabib and Farmer (1994). We introduce into it the "productive consumption hypothesis (PCH)" whose idea is essentially the same as the efficiency wage hypothesis. First, we find that this model can apply to poor economies because even in the absence of capital externality indeterminacy occurs when the PCH externality is strong enough. Second, in contrast to the standard growth models, the "intertemporal *complementarity* between present and future consumption" may hold when a steady-state equilibrium (SE) is saddle-point stable. Then per capita consumption is initially chosen at a high level and then begins to decrease along a transition path starting from low initial capital stock. Third, when an SE is perfectly stable, an equilibrium path typically converges to the SE with cyclical movements. It may either diverge from the SE with cyclical movements or exhibit an endogenous cycle when the supercritical Hoph bifurcation occurs. These results are consistent with real data of low-income developing economies for the past several decades. Forth, when the subcritical Hoph bifurcation occurs, no equilibrium paths exist if initial capital stock falls short of a critical level. This is the first theoretical explanation for how a poor society fails to establish a market economy system. "Big Push" may help escape from this new type of "underdevelopment trap". Finally, an introduction of human development aid can induce a cyclical path converging to a new SE with higher welfare. We cannot always expect that a poor economy will smoothly follow a monotonic growth process even if the aid improves SE welfare.

Keywords: Hoph Bifurcation, Human Development, Indeterminacy of Equilibrium, Productive Consumption Hypothesis, Underdevelopment Trap

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