

Health, Human Capital and Global Convergence:

The View from Schumpeterian
Growth Theory

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Endogenous Growth Theory, by Philippe Aghion and Peter Howitt, MIT Press, 1998;

“R&D, Implementation and Stagnation: A Schumpeterian Theory of Convergence Clubs,” by Peter Howitt and David Mayer-Foulkes, NBER Working Paper #9104, July 2002.

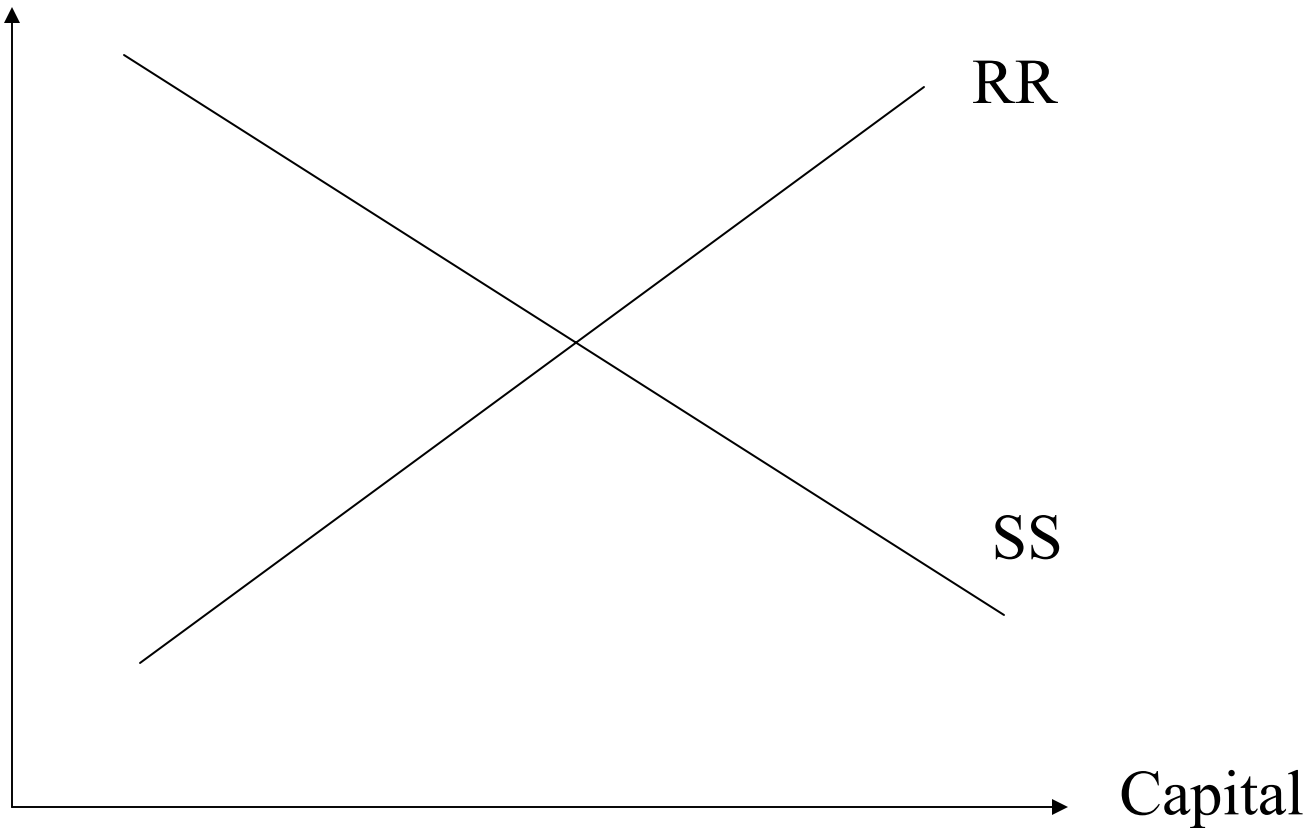
Basic ideas of endogenous growth theory

Two strands: “AK” and “Schumpeterian”

General framework for understanding market economies where competition takes place through innovation.

Detailed micro underpinnings with simple macro structure.

Technology investment



Relevance for poor countries: technology transfer:

$$Y = F(A, K, H, L) = C + I + R$$

$$\dot{A} = (A^{\max} - A) \cdot G\left(R/A^{\max}, H/A^{\max}\right)$$

What determines the long-run growth rate for a closed economy determines the long-run relative productivity level A/A^{\max} for a small open economy that spends enough on technology, and has enough human capital, relative to the global technology frontier.

All the “usual suspects” are amplified through technology

Evidence on club-convergence and importance of productivity in explaining income differences – divergence and low-level development traps.

Channels through which health influences growth.

1. Direct influence on production function
2. Effect of expected lifetime on human capital and other investments
3. Efficiency of the human-capital accumulation function (early development)
4. Efficiency of the R&D function (creativity)
5. Avoidance of the “tale of 2 cities” effect (coping skills)

Neuroscience, early development and coping skills:

1. Neural wiring most active in first three years
2. Especially - development of stress-reactions
3. Windows of opportunity
4. Measurable effects on later development

(McCain-Mustard *Early Years Study* – www.ciar.ca)

General Purpose Technology:

1. Stress of skill-obsolescence – creative destruction
2. Increasing importance of creativity and adaptability

(Helpman (ed.) *GPTs and Economic Growth* MIT Press, 1998)