

Complementary Human Capital Investments and Long-Run Development

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Abstract

This research offers a novel perspective regarding the ways in which child and adult mortality rates influence the accumulation of human capital and the process of long-run economic development. We propose a unified growth model where the human capital of adult agents is built through sequential complementary investments undertaken first by the agents' parents during their childhood and then by the agents themselves during their early adulthood. In the context of this model, we demonstrate that in an environment of high child mortality human capital accumulation will be limited, even if adult mortality is low and that reductions in child mortality are necessary in order for human capital accumulation to pick up and become a driver of long-run economic growth. Furthermore, by endogenizing mortality and making it dependent on the level of economic development, we show in a calibrated version of the model that the process of long-run economic development begins with an endogenous decline in mortality rates, followed by a decline in fertility and an increase in human capital accumulation. A further series of simulation exercises illustrates how our model can reconcile previous conflicting results in the literature. Finally, looking at both historical as well as contemporary data on mortality and educational attainment from different countries we document a series of evidence that lend support to the general mechanism proposed by our theory. In particular, we document that early rises in human capital observed in Western European countries during the 19th century and in developing countries in the mid 20th century were preceded by declining mortality rates of children, but not of adults. Changes in adult mortality, on the contrary, seem to be correlated only with subsequent increases in human capital taking place at later stages of economic development.

JEL Classification codes: I10, J10, J20, O10, O40

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