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INVESTMENT IN HUMAN CAPITAL AS THE BEST SOURCE OF ECONOMIC GROWTH AFTER THE ADOPTION OF THE EURO

Abstract

The paper presents the exogenous growth model of Mankiw, Romer and Weil modified and expanded so as to describe a small economy in an economic and monetary union (EMU). We assume perfect mobility of capital, and immobility of the so-called raw labor (empirically justified in Europe). On the other hand, we assume that human capital (highly skilled and educated individuals) may be mobile. We prove that the unique dynamic equilibrium (the steady state) exists, and is at least locally asymptotically stable. Finally, we derive the golden rules of accumulation of physical and human capital. We prove that the optimal rates of investment in physical and human capital depend upon the natural rate of growth and the real interest rate. If they are equal, there are infinitely many optimal pairs of investment rates. On the other hand, if they differ, the golden rule recommends one of two extreme (edge) solutions. In all three cases, however, the optimal investment rates are linked together by a very simple linear equation (the line H). The economy should always stay on the line H, and move along this line, either up or down, in response to changes in exogenous parameters.

In the second part of the paper, we carry out numerical experiments, based on realistic (calibrated) values of exogenous parameters. Simulations suggest very strongly that current levels of investment in human capital (education) in Poland are way too low. Clearly, there is no better way of promoting economic growth than investing heavily in human capital.

These conclusions are not immune to the increasing mobility of human capital in an EMU. At the final section, we present an extension of our model which allows for different levels of human capital mobility. We demonstrate that low level of mobility of human capital only slightly weakens our conclusions – investing in human capital still remains the best way to improve economic situation in the long-run. However, if the outflow of human capital reaches certain critical level, the economy may fall into the poverty trap.

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