RBTC and Human Capital: Accounting for Individual-Level Responses

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Abstract

I test the contribution of individual human capital responses to earnings inequality arising in the process of the routine-biased technological change (RBTC). I develop a life-cycle model of human capital and occupational choice, calibrate it to the NLSY79 data, using the price series for human capital in abstract and routine occupations estimated from the cross-sectional CPS data with the “flat spot” approach. I then use the model to quantify the effect of a change in human capital prices on earnings inequality. I find that an increase in the price for human capital in abstract occupations and a fall in its price in routine occupations associated with RBTC has a modest contribution to the evolution of variance of log-earnings — up to 10.8 per cent by the end of the working life cycle. However, the contribution of RBTC to an increase in the abstract wage premium over the lifetime of the NLSY79 cohorts is up to 28.6 per cent. The growth of the abstract wage premium is significantly dampened by the human capital responses of workers switching from routine occupations.

JEL classification: J24, J31, D15, O33

Key words: RBTC, human capital, life-cycle modelling, NLSY79, AFQT.

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