Estimating Private and Fiscal Returns to Higher Education over the Life Cycle: A Microsimulation Analysis

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Compared to other OECD countries the share of young adults entering higher education in Germany is quite low (OECD, 2017). Even having obtained a university entrance degree, a large fraction of pupils decides to start a vocational training rather than going to university. At the same time, the universities are highly subsidized by taxpayer money. A highly relevant question is therefore whether completing higher education pays off financially both for the individual and for the state and to what extent these returns depend on the tax-and-transfer system.

In this paper, we aim at estimating the private and fiscal returns to higher education over the life cycle for Germany. We build a dynamic microsimulation model to simulate an individual's life-cycle in terms of several key variables of interest, such as employment, fertility, marriage and divorce (for a similar modeling approach see Bonin et al., 2016, or Courtioux et al., 2014). In order to predict an individual's gross wage given the simulated key characteristics, we estimate standard Mincer wage equations. To estimate the internal rates of return to higher education, we link our dynamic microsimulation model with a static tax-benefit simulator for Germany (STSM, see Steiner et al., 2012). The tax-benefit simulator allows to convert gross wages into disposable income, accounting for the various interactions between the income tax, social contributions and transfers at the individual and the household level. In the next step, we simulate the effects of changes in the tax system on private and fiscal returns accounting for behavioral responses in educational choice and labor supply.

Literature

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