

Flexibility at a Cost – Should Governments Stimulate Tertiary Education for Adults?

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The increase in educational attainment across OECD countries is slowing down, with the current generation predicted to just barely surpass the educational attainment of the preceding generation, and in the US this rate seems to decrease. As it is widely believed that education is a key factor for economic growth, skill upgrading at later stages of the working life may become more important. Neumark et al. (2011) project that, in the coming decade, adults aged 30-54 in the US will represent 20-25 percent of the influx of workers with at least a Bachelor's degree. Also, the OECD and the EU have long encouraged governments to stimulate adult education to adjust workers' skills to technical change. However, few countries have implemented such policies and the research in economics on formal adult education is very limited.

The aim of this paper is to study the long term effects of post-secondary adult education on earnings. We use Swedish population register data on education and annual earnings from 1982 to 2011 to analyze a sample of first-time enrollees aged 29-55 when registering in higher education in 1992-1993. With data that are unusually rich in detail, we employ difference-in-differences propensity score matching to also account for individual fixed unobserved characteristics. As for time-varying unobserved characteristics, we re-estimate our models with contrasting assumptions and check the stability of the results. To account for potential ability bias, we include measures of GPA and military enlistment test scores of cognitive and non-cognitive skills. The main implications of our results are robust.

Earlier evaluations of adults in tertiary education are rare. Jacobson et al. (2005) studied laid off workers aged 25-59 enrolling community colleges. They found a year of studies increased earnings by 7 to 9 percent for males and by 10 to 13 percent for females. Jepsen et al. (2014) report estimates which are similar in size or considerably higher. For Sweden, earnings returns may be lower than in the US due to a wider dispersion of wages and/or skills. Also, the institutional set-up in Sweden may attract individuals with lower expected returns on average.

This paper contributes with (1) estimations of long-term earnings associations of post-secondary education of mid-aged and older and (2) calculation of economic benefits to the costs from the society's (GDP) perspective. Our preferred estimates indicate earnings returns of approximately 6 percent for males and 10 percent for females. Identification of the positive returns requires a follow-up period of at least ten years after enrollment. Calculations indicate that the benefits for society exceed the costs also under fairly pessimistic assumptions.

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