

Marginal Returns to Schooling and Education Policy Change in Japan*

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Abstract

This paper examines the returns to university education in Japan using tuition, availability of universities, and labor market conditions as instrumental variables. For the instrument of availability of universities, this paper creates a measure including total accredited capacity of all universities in the prefecture of residence at the age of 15. This measure captures cross-time and cross-prefecture variations, because birth cohort and prefecture dummies are also controlled. A set of education policy relevant instruments allows estimating the marginal effects for individuals who are induced to enroll in university by different marginal policy changes. Using the estimated marginal treatment effect, this paper recovers the average treatment effects parameters. The main empirical result shows that an additional year of university education increases hourly wage by about 7% on the population average. This paper also finds heterogeneous effects by groups of subpopulation. The average effect of a year of university education for those enrolled in university is about 12%, but the effect is less than 3% for those who did not enroll. Finally, this paper investigates the average returns for those who are induced to enroll in university by a particular policy shift increasing the probability of university enrollment, such as free tuition or an increase in the capacity of local universities. The results suggest that such policy changes bring about positive effects of university education.

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