Endogenous Wage Determinants and Returns to Education in Spain

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One of the major contributions of human capital theory and subsequent empirical work has been to prove the important role of years of schooling as a determinant of wages. However, the exact value of such effect, the private return to schooling, and how it should be estimated remain a source of both theoretical and empirical discussion. Some of the open questions refer to which variables should be included as regressors in the wage equations and by which method they can be consistently estimated.

In this paper, we add some empirical evidence for the Spanish labour market. Using the instrumental variable –IV- approach proposed by Hausman and Taylor (1981) -HT- and data from the 1994-1997 Spanish section of the European Community Household Panel (ECHP), we contribute to asses the direction and amount of the bias that affects ordinary least squares (OLS) estimation. The HT procedure allows us to take into account the possible endogeneity of education as well as other determinants of wages, while making it unnecessary to use instrumental variables excluded from the earnings equations.

These equations are estimated on two incomplete panels, corresponding to male and female wage earners. Our results suggest that the returns to schooling are substantially higher once endogeneity in the wage equations is taken into account. This result is in line with most empirical work for other countries, and does not depend on which measure of educational investment is considered (actual years of schooling versus the minimal years required to achieve each educational level). Besides, we find evidence suggesting that other regressors, as sector of employment, part-time (versus full-time) work and specific training are also endogenous in the determination of wages. Under the light of this evidence we finally discuss some underlying methodological issues, such as the possible ability bias, measurement errors in variables and the endogeneity of human capital investment decisions.

Keywords: Wage level, human capital, panel data, instrumental variable.