

Decomposing the dispersion of earnings to analyze the impact of on-the-job training

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This paper proposes a new methodology to analyze the impact of on-the-job training on the dispersion of earnings. The approach is based on a systematic use of the concept of Shapley decomposition. In a first stage the so-called Shapley decomposition gives an exact breakdown of the overall dispersion into between and within groups components, the groups being those who received and did not receive training. In a second stage a Shapley decomposition is again applied to derive first the contribution to the between groups dispersion in earnings of differences between the groups in the regression coefficients, of the between and within groups dispersion in the explanatory variables and of the dispersion of the unobservables. A similar Shapley decomposition is also applied to derive the determinants of the within groups dispersion in earnings.

The methodology is then applied to French data, more precisely to the 2000 Adult Education Survey and the 1999 and 2000 Labour Force Surveys. The 2000 Adult Education Survey complements the 2000 Labour Force Survey in the sense that it reports quite detailed information on the participation of individuals to training programs after they finished school, the period covered going from January 1999 to March 2000. The survey provides also information on the socio-demographic characteristics of the individuals, their job and the firm in which they work. The 1999 and 2000 Labour Force Surveys on the other hand give information on the wages of the individuals. In addition to estimating ordinary least squares regressions we plan to use also a model in first differences, the rate of growth of wages being the dependent variable. Such an approach will allow us to control for an eventual selectivity bias, as it is likely that participation to training is not exogenous.