

INSTRUMENTATION VERSUS ORDINARY LEAST SQUARE ESTIMATES OF RETURNS TO EDUCATION

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ABSTRACT

This work estimates the returns to education using 5% of data drawn from a 20% random sample of working-age men in England from the UK Quarterly Labour Force Survey (QLFS). From the result, the coefficient for *rosla* is 0.064, statistically significant at 5% level, which means a one-year increase in the leaving age raises educational qualification by 6.4%. This implied that the instrument is relevant. All the variables selected are statistically significant at 5% level with p-value of less than 0.05. This justifies the inclusion of the variables. The result shows that the OLS estimate of returns to an additional qualification (controlling for demographic characteristics) is 19% with standard error of 0.008 (3d.p), while that IV instrument gives 10.6% with a larger warfare error of 0.267 (3d.p). Additionally, the F-static in first stage is roughly 21 which is greater than 10, the 'rule of thumb' this means the instrument is not weak. The result showed that OLS estimates of the return to schooling are smaller than their IV counterpart. It was concluded that OLS bias downward and the IV estimates obtained are a better indicator of the population average than OLS estimates. Additionally, Hausman test clearly justifies the use of IV instrument hence instrument is both relevant and consistent. It was recommended that IV regression was more suitable and should be utilized in the presence of endogeneity.

Keywords: OLS, IV, instrument, regression and education.