

Mateusz Papien¹
Sylwia Roszkowska²

Heterogeneity of Return on Education in Emerging and Developed Countries in Europe – the Empirical Importance of the Systems of Regressions Approach

Abstract: We estimate the Mincer equations for a set of European countries. The variability of parameters, describing the impact of years of schooling, and the experience, to the wages, was obtained by application of the system of Seemingly Unrelated Regression Equations (SURE). Each equation in the system is the Mincer regression built for a particular country. The differences between parameters were tested given two alternative stochastic assumptions. In the first model, no contemporaneous correlations between error terms in the system is imposed. This may be related to the standard country regression approach. In the second approach the unrestricted covariance matrix is considered, making error terms stochastically dependent. The contemporaneous correlations of error terms in the SURE system were empirically supported. Also, rich parameterisation of covariance matrix of contemporaneous relations reduced statistical uncertainty about differences in parameters describing return on education effect. The country heterogeneity of return on education, which seems to be intuitively correct, was obtained in the system of regressions with complex stochastic structure.

JEL Codes: J31, C31

Keywords: Mincer equation, SURE, Zellner estimator

¹ Department of Econometrics and Operations Research, Cracow University of Economics, e-mail: eepipien@cyf-kr.edu.pl

² Department of Macroeconomics, University of Lodz and Narodowy Bank Polski, e-mail: sylwiaroszkowska@gmail.com