

Darko B. Vukovic¹, Doctor of Economics, Assistant Professor and Research Fellow

Yaroslav Vyklyuk², Doctor of Technical Sciences, Professor

Milan M. Radovanovic¹, Doctor of Geographical Sciences, Senior Research Associate and Director

1. Geographical Institute "Jovan Cvijić" of Serbian Academy of Sciences and Arts, Belgrade, Serbia
2. Bukovinian University, Chernivitsi, Ukraine

THE RELATIONSHIP OF EDUCATION AND AGING ON LABOR PRODUCTIVITY OF THE EUROPEAN UNION COUNTRIES

In the last decades, a number of papers has been recognized demographics as a factor which are strongly correlated with productivity. On the other hand, education significantly affects the growth of labor productivity. In this paper we analyze the relationship of basic education and aging indicators on labor productivity on the group of 28 countries of the European Union. Based on Eurostat data, we have identified the following nine education and aging indicators: pupils and students, students - tertiary education, tertiary graduates in science and technology per 1 000 inhabitants aged 20-29 years, total public expenditure on education, annual expenditure on public and private educational institutions per pupil, lifelong learning, life expectancy, proportion of population aged 65 and over and old-age-dependency ratio. In a preliminary regression analysis, it was determined that there was no statistically significant regression of all indicators presented in the multiple regression model. On the other hand, there are statistically significant correlations between each of these indicators and labor productivity presented in simple linear models. In this way, we can determine single relationship of basic education and aging indicators on labor productivity, which represents the main objective of our research. The analysis was originally included twenty education and aging indicators, but checking the model was found that only nine indicators have sufficient statistical significance in the regression models. After analyzing and measuring the influence of these variables on labor productivity in the regression models, we shall calculate Pearson's coefficient of correlation. Through the multiple correlation analysis we will determine interactional relationship between indicators and labor productivity. Our analysis included a group of European Union countries that will be analyzed and measured of each regression models.

Acknowledgement:

This paper is the result of the project No. III47007 funded by the Ministry for Education and Technological Development of the Republic of Serbia.