

## INVESTMENT IN HUMAN CAPITAL AND ECONOMIC GROWTH: A COMPARATIVE ANALYSIS OF WESTERN BALKAN COUNTRIES AND NEIGHBORING EU MEMBER STATES

Miroljub Nikolić<sup>1</sup>, Andrea Andrejević Panić<sup>2</sup>, Danijela Despotović<sup>3</sup>, Slobodan Cvetanović<sup>4</sup>

<sup>1</sup>Academy of Technical & Applied Studies Belgrade, Zdravka Čelara 14, Belgrade, Serbia,  
nbskonsalting@gmail.com

<sup>2</sup>Educons University, Vojvode Putnika 85–87, Sremska Kamenica, Serbia,  
andrea.andrejevic@educons.edu.rs

<sup>3</sup>University of Kragujevac, Faculty of Economics, Liceja Kneževine Srbije 3, Kragujevac, Serbia,  
danijela.despotovic@uni.kg.ac.rs

<sup>4</sup>Educons University, Vojvode Putnika 85–87, Sremska Kamenica, Serbia, prof.cvet@gmail.com

### ABSTRACT

This paper examines investment in human capital as a determinant of economic growth in ten countries – five from the Western Balkans (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia) and five neighboring European Union member states (Bulgaria, Greece, Croatia, Hungary, and Romania) – over the period 2013–2023. Based on a balanced panel of 110 observations, three hypotheses are tested regarding the impact of expenditures on education, research and development (R&D), and healthcare on GDP per capita in purchasing power parity terms. The analysis employs the pooled ordinary least squares (Pooled OLS), fixed effects (FE), and random effects (RE) models. The Hausman test ( $\chi^2(3) = 13.50$ ;  $p = 0.0037$ ) confirms the fixed effects model as a consistent estimator. The results indicate that R&D expenditures have a statistically highly significant positive effect on GDP per capita ( $\beta = 0.254$ ;  $p < 0.001$ ), supporting hypothesis H2. Healthcare expenditures also exhibit a positive effect in the FE model ( $\beta = 0.045$ ;  $p = 0.031$ ), confirming H3. In contrast, education expenditures do not show a short-term positive effect within countries, and thus H1 is not supported. The average development gap between Western Balkan countries and their EU neighbors amounts to approximately USD 13,184 per capita annually (PPP, 2021 prices). The paper provides an empirical basis for formulating policies aimed at reducing the development gap through strategic investments in innovation and healthcare.

**Keywords:** human capital, economic growth, Western Balkan countries.