

Parallel convergence of income and educational achievements on a regional and local level in Poland – analysis of distribution dynamics

The fundamental purpose of the project is the development and operationalization of the concept of parallel convergence and verification if regional convergence of income and educational achievements are related to one another (are parallel) on a regional and local level. An additional aim is the analysis of human capital convergence (measured by educational achievements) on a regional and local level in Poland.

In economic and regional research the term convergence is most often referred to a relatively faster development of poorer countries (regions) as compared to richer countries (regions), causing the reduction of distance between them. The opposite phenomenon – increasing disparities – is called divergence. Analyses of convergence most often relate to the measure of income, for example gross domestic product per inhabitant, but can also apply to other measurable phenomena, for example quality of life, education or unemployment rate.

In the last decade Poland has achieved a significant improvement of economic development indicators. Gross domestic product (GDP) per inhabitant in Poland (taking into account the differences in prices of goods and services between countries) increased from 49% of European Union average in 2004 (a year of Polish accession into UE) to 67% in 2013 showing progress in each year. Simultaneously the impressive progress was achieved by Polish secondary schools pupils, which is confirmed by international comparisons of educational results, namely Programme for International Student Assessment (PISA) repeated every three years under OECD auspices. In mathematics literacy test Polish pupils climbed from 25. place in the world in 2000 into 13. place in the world in 2012. In the reading test they started in 2000 from 25. place in the world, to achieve 10. place in 2012. In the science test the results improved from 22. place in 2000 to 9. place in 2012. As numerous analyses for income show, this impressive progress does not spread out proportionally on all regions.

Education is widely recognized as one of the most important factors of economic growth. High level of education (or broader so called human capital) plays a major role in the success of countries and regions. Barriers in access to education are an important factor of economic and social exclusion. However, what really matters for growth is not the level of human capital – measured for example by a share of population with secondary or higher education or the average number of schooling years, but its quality – measured for example by the average score on the final exams on particular education stages.

The analyses of the relationship between convergence processes of income and educational achievements on a regional and local level and research on convergence of human capital or educational achievements on a regional and local level in Poland have not been yet performed. The project will fill this scientific gap.

The starting point of the research will be the review of the existing convergence concepts in order to seek for possibilities of their generalization to allow for verification of the parallel convergence. The analysis of parallel convergence applied within this project will relate to verification of the existence of a relationship between the convergence processes of income and educational achievements on a regional and local level. In the next step the methodology will be also applied to analyze the impact of Polish accession to European Union on the dynamics of convergence processes of the two aforementioned phenomena. Analyses will be conducted on the level of voivodeships, subregions, poviats and municipalities.

The measure of income considered on the level of voivodeships and subregions will be per capita GPD, while on the level of poviats it will be proxied by the average monthly remuneration or per capita revenue in poviat budget from the share in receipts from personal income tax. For municipalities income will be measured by the per capita revenue in municipality budget from the share in receipts from personal income tax. Educational achievements on all regional and local levels will be measured by the average results of primary school final exams, lower-secondary school leaving exams and upper-secondary school exit exams. These exams provide detailed, standardized and comparable data on educational achievements of Polish schools pupils on all regional levels.