

Using statistical methods for analysing regional differences of labour market

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According to many studies in the field of social sciences, the problem of high rate unemployment in European countries is one of the most serious phenomena since many years now. The demand for reducing unemployment gets more and more attention in European general objectives, together with the propagation of a ‘longer active career model’, originated in demographic reasons, the so called ‘ageing society’ causing many stress in the labour market which enforced the reforms of the traditional pension scheme, so much as the remarkably growing appearance of unemployed young school-leaver population. In our opinion, the effective way to treat the above mentioned problem requires intervention in sub-national (regional, county, micro-regional) level, however, the evolvement of these programmes requires statistics-based regional labour market research, which may serve for the preparation of economic (labour market) decisions.

Our aspect shows and uses data of two time periods, year 2004, when Hungary joined the European Union, and year 2008, the most up-to-date data available. Our ambition is to demonstrate the changes in the field of regional labour market between the two examined periods.

Accordingly, we pursued a statistical analysis on the 2004 and 2008 labour market indicators (basic data) of the 7 statistical regions, and the 19 counties of Hungary. These indicators are: unemployment rate, employment rate, rate of economically active population.

The comparison is made based on two years descriptive statistical data using various types of methods (diagram, independent sample t-test, analysis of variance, regression analysis, multivariate analysis) with taking into consideration the changes of the three main indicators of the labour market. By means of special scatter plots, we characterised and illustrated the relative changes of the regions by correlating them with each other, namely the more and more strong separation of the main groups, so as the increase of their homogeneity within groups.

Keywords: regional unemployment, rate of unemployment, rate of economically active population, employment rate, analysis (diagram, independent sample t-test, analysis of variance, regression analysis, multivariate analysis), region, county