Assessing the degree of competitiveness among countries in the EU using Eurostat indicators

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ABSTRACT: Competitiveness and economic growth are two very discussed topics in comparing different countries. Even in the European Union context, nevertheless it is composed by contiguous countries, until today a lot of differences could be achieved. This could be due to very different economic models, but one of the objectives of EU is to have a unique policy in terms of economic decisions and to realize this, a convergence towards human-centric and sustainable economic progress is necessary. The definition of competitiveness is not easy to quantify and in this work, the authors try to search for an approach based on Eurostat indicators measured in an interval time span. This solution allows to evaluate the dynamic path of competitiveness in terms of convergence or divergence. From a methodological point of view, this could be realized through a multi-way analysis in which the starting matrix is composed by countries, indicators and years. The application of a weighted principal component analysis is useful to draw on a Cartesian plan a time trajectory about two different aspects of competitiveness. Since the definition of competitiveness is complex and multiplex, two aspects have been selected: Research & Development and digitalization. Economic indicators present in this analysis are therefore addressed in these two directions. Finally, since for each country, a dynamic path is available, it will possible to classify countries according to similar trajectories.

KEYWORDS: Economic growth, multi-way analysis, EU countries, digitalization