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Territorial inequalities and economic growth in Romania. A multi-factor approach

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Abstract

Territorial inequalities represent a long-running subject in regional economics and many statistical methods aiming to provide relevant data and information on the magnitude and evolution of disparities have been developed over time. It is a topic of interest in Romania as well, given that the development gaps among counties continuously increased since the transition to market economy, despite many strategies explicitly targeting them. In this context, the paper introduces a new synthetic index of territorial inequalities that includes three variables: GDP/capita, labour productivity and life expectancy in order to capture various aspects of economic and social spatial disparities. This methodological approach offers a better and more complex image on territorial development gaps, compared to the analyses using individual indicators. We further assessed the impact of territorial disparities (as measured by this synthetic index) on the economic development in Romania over 1995-2012, by means of an economic growth model. We found a cointegrating relationship between GDP and the synthetic index of territorial inequalities, suggesting that the regional development in Romania is systematically unbalanced and the disparities have had the tendency to widen with economic growth.

Keywords: inequalities; synthetic index; regional development; Romania.

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1. Introduction

As official EU documents state "*Inequality matters because it contravenes the values of EU citizens, the European Commission's objectives for economic and social cohesion, and the specific objectives of "Europe 2020" Strategy*" (European Commission, 2010). Territorial inequalities represent a special topic of interest in Romania, given the alarming increase of the development gaps among counties and regions since the transition to market economy, despite many strategies explicitly targeting them, and even though the structural and cohesion funds should have fostered economic growth in underdeveloped regions (Dachin, 2008; Goschin et al, 2008; Patache and Grama, 2011; Antonescu, 2010 and 2012; Boldea et al, 2012, Zaman et al., 2013).

Far from alleviating the development gaps, Romania's accession to EU actually fueled the disparities, as developed regions had better access to European funds (Zaman and Georgescu, 2009; Goschin and Constantin, 2010). Other factors that contributed to increased spatial inequalities in Romania were the FDIs, concentrated mostly in Bucharest-Ilfov region (Zaman et al., 2011), as well as the global economic and financial crisis that hit all the regions, but with variable intensity, depending on the specific characteristics and structure of the regional economies (Goschin and Constantin, 2010; Ailenei et al, 2012).

Since the topic of territorial inequalities represent a long-running subject in regional economics, many statistical methods aiming to provide relevant data and information on the magnitude and evolution of disparities have been developed over time. The common approach is based on GDP per capita as the most relevant (and easily accessible, as well) indicator of development level. Since individual indicators (even the most complex ones, such as GDP/capita) fail to provide an accurate picture of social and economic inequalities, we introduce a new synthetic index of economic inequalities comprising three relevant indicators: GDP/capita, labour productivity and life expectancy. We further try to assess the relationship between the new synthetic index and development at county level by means of regression modelling.

The reminder of the paper proceeds as follows. Section 2 presents the synthetic index of economic inequalities and its components for the 1995 – 2012 interval. Section 3 describes the econometric models used for exploring the relationship between the the synthetic inequality index and GDP, as well as the modelling results, while section 4 concludes.

2. A synthetic index of economic inequalities

Socio-economic inequalities are measured in the literature based on a range of indicators able to capture well-being, such as incomes, educational level, health (European Commission, 2010). Taking into account the weak explanatory power of individual indicators while analysing complex economic and social phenomena, this paper employs a multi-factor methodological approach able to provide a deeper understanding of territorial differentials. To this aim, we have built a synthetic index of economic inequalities (SIEI) that includes three relevant indicators: GDP/capita, labour productivity and life expectancy, using county-level data. Our selection of indicators was guided by significance and appropriateness; thus, GDP per capita reflects the development level of the counties, labour productivity captures their economic performance and life expectancy is a proxy for living standard. The selected variables are further transformed (normalized) resulting values that range between 0 (best) and 1 (worst), regardless the unit of measurement or interval of variation for the initial values, thus allowing them to be aggregated (Zaman and Goschin, 2014a). Finally, the synthetic index of of economic inequalities is calculated as a simple arithmetic mean of the normalised values.

Prior to the computation of the synthetic index, we analysed the territorial variation of the individual variables included in the index, based on their coefficients of variation (Table 1). The coefficient of variation describes the deviation of a variable from its mean, regardless of measurement unit, allowing meaningful comparisons with any other variable. The coefficient of variation may range between 0 and $\sqrt{n-1}$, n being the number of cross-sections (counties).