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Development Gaps in the Sud Muntenia Region of Romania

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Development Gaps in the Sud Muntenia Region of Romania¹

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Abstract

Development gaps are a common feature throughout the regions of the European Union, and Romania is no exception. Despite all the political and financial efforts, the convergence process is lengthy and complex, and the gaps with the deepest economic and social roots are the most difficult to be dealt with. Using a broad range of indicators and statistical and econometric techniques, the authors present a detailed picture of the development gaps and their dynamics in the Sud Muntenia region of Romania. The results show the presence of an overall development process in the region and its counties, accelerated after the accession of Romania to the European Union, but also hit by the global crisis. The inter-county and intra-county economic and social imbalances however persist, and the inadequate use of territorial resources is still an issue to be addressed by the regional and local government authorities and the private actors. Policy recommendations are proposed to address the challenges and threats to the balanced development of the Sud Muntenia region of Romania, especially considering the significant changes in the implementation of the regional development policy envisaged by the Romanian government in the very near future.

Keywords: regional development, territorial development, development gaps, regional cohesion, regional development policy

JEL Classification: O18, R11, R15, R58

Introduction

Why different regions recorded different growth rates? Should we expect a territorial economic convergence in time? Understanding long-term economic growth and its factors of influence are not only fundamental challenges for economists and other researchers, but also have important political implications. Since the 1980s, and especially after 1990, in the world

¹ The paper presents some partial results of the research theme “Coeziunea economico-socială a României în perspectiva Strategiei Europa 2020”, coordinator Marioara Iordan, Institute for Economic Forecasting, Bucharest, Romania, 2013.

became apparent the increasing intra-national (inter-regional) development disparities and the economic and social sciences have recorded significant progresses in the understanding of economic and institutional factors that favor agglomerations and growth².

In Romania, the economic development of regions and sub-regions has become a topic of interest for researchers, but especially for policy makers and public administration at local, county, regional and national level, with the possibility of accessing European funds aimed at supporting regional development in the pre-and post-accession periods.

Studies on economic development and competitiveness of regions of Romania based on decomposition of GDP per capita revealed a large and increasing gap between regions, three possible "performance levels" being configured: accelerated economic development of "motor regions" (Bucharest-Ilfov); relative economic development of "follower regions" (regions of Transylvania and Banat) and relative economic stagnation ("lagging regions" - Moldova, Muntenia -Dobrogea Oltenia), with oscillations from one year to another. Also in the case of countries and regions in Europe, especially in that of the new Member States, GDP per capita as a measure of overall competitiveness of each country and region considered for analysis in relation to the EU27 average revealed large gaps between regions in the 12 new Member States and the other 15 EU countries, but also large interregional disparities within most EU countries, including some highly developed countries³. Situations of deepening disparities between "core" and "periphery" were also observed in the rest of the new EU member states, especially in the transition and pre-accession periods, showing that regions adapt differently to a new economic environment and the regions that had good economic performance strengthened their previous positions, while the regions with weaker economic performance generally remained losers⁴.

Today, Romania is facing huge challenges in development. The progress recorded until 2008 in terms of catching up slowed sharply due to the crisis, and the GDP per capita is still amounting to only 46% of the EU level, in the context of economic decline by over 8% in 2009 and 2010. After two years of decline, growth resumed in 2011, mainly due to strong growth in industrial production and an exceptional harvest and the real GDP grew by 2.5% in 2011.

The most important indicator of regional disparities analysis, GDP per capita at the regional level, showed a similar pattern to the national level. Thus, in 2009-2012, a slow, continuous growth was revealed in each region. In 2011, the region with the highest growth rate over the previous year was Nord Est, with a 7.9% change, while the increase in Bucharest-Ilfov was only 4.3%. The Regional Disparity Index, calculated as the ratio of the most developed region (Bucharest-Ilfov) to the less developed (Nord-Est) in terms of GDP per capita fluctuated during the period 2009-2011, increasing from 3.76 in 2009 to 3.89 in 2010, followed by a decline to 3.74 in 2011.

This paper presents an analysis of the economic development of Sud Muntenia region and its counties from the perspective of evolution of the main macroeconomic indicators reflecting the economic gaps. Also, using the data available for the period 2000-2011, and a number of *indicators of concentration* were determined, namely coefficient of variation, σ , and the so-called Lorenz curve for estimating the Gini coefficient, G, and the RH coefficient (so-

² Thomas Farole, Andrés Rodríguez-Pose, Michael Storper, *Cohesion Policy in the European Union: Growth, Geography, Institutions*, London School of Economics, January 2009.

³ M.N. Chilian, M. Iordan, Regional Competitiveness in the EU Countries. Focus on the New Member States, Conferința internațională "Competitivitate și integrare europeană", Universitatea Babeș-Bolyai Cluj Napoca, Facultatea de Științe Economice și Gestiunea Afacerilor, Cluj-Napoca, 26-27 octombrie 2007.

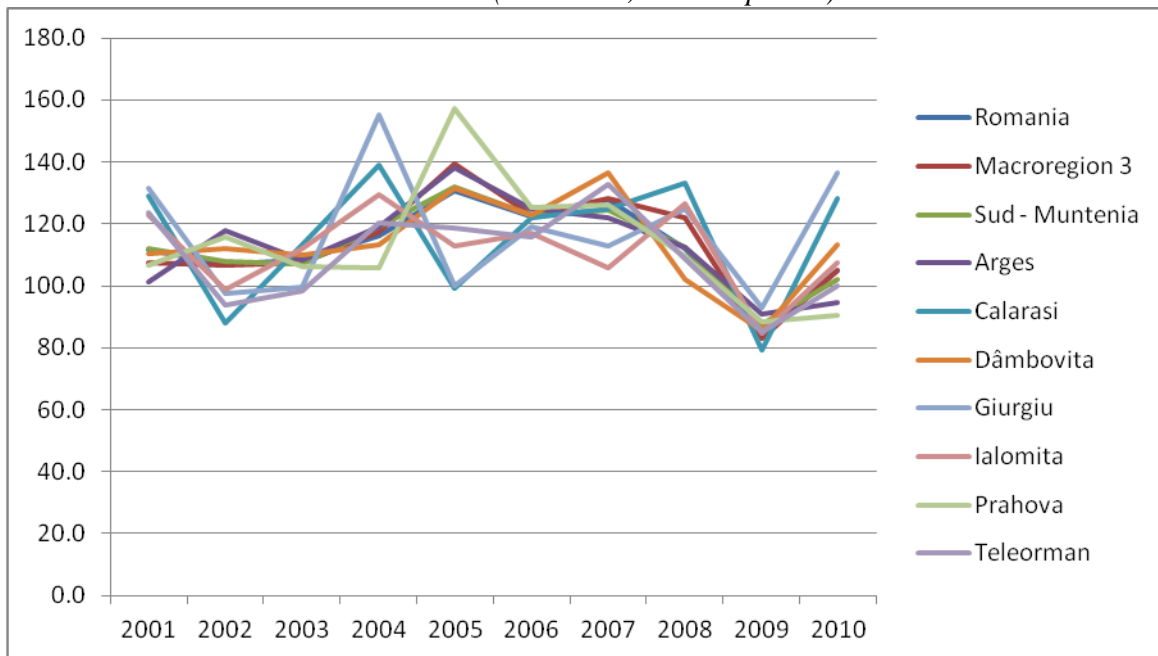
⁴ George Petrakos, Yannis Psycharis and Dimitris Kallioras, Regional Inequalities in the EU Accession Countries: Evolution and Challenges, *Integration, Growth and Cohesion in an Enlarged European Union*.

called Robin Hood coefficient). The lower the absolute value of this ratio is, the higher the degree of concentration is, and conversely, the higher the absolute value, the greater the degree of dispersion. If over the analyzed period there is a downward trend in the absolute values of the considered indicators this signifies a process of convergence within the region, contrary a divergence process being revealed. With the help of Lorenz curve the convergence can be measured directly, i.e. when there is a downward trend of the area demarcated by the diagonal of the unit square (which expresses perfect equality) and the Lorenz curve graph. The divergence is reflected by the increase in that area.

1. Evolution of Gross Domestic Product

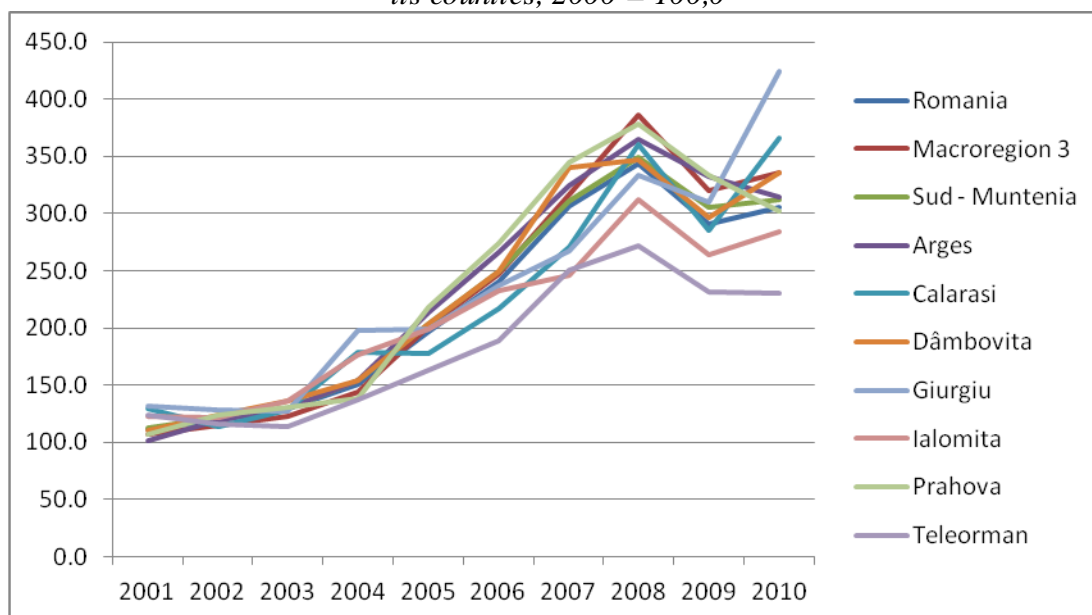
Considered through the perspective of **GDP**, the overall economic development of Sud Muntenia region and its counties was favorable in the period 2000-2010, but although the **annual growth indices** recorded high levels, except in 2009-2010, when the impact of economic crisis felt strongly (especially in the more developed counties - Prahova and Arges), the general trend over the whole period was downward, and developments quite fluctuated from one year to another (Figure 1). Indices of **overall growth** recorded high levels during 2000-2010, despite the slowdown in 2009, and partly in 2010, but the **growth** and **economic strength gaps** among the region's counties have maintained or even accentuated (Figure 2).

Figure 1. Gross domestic product annual growth indices in Romania, Sud Muntenia region and its counties (mill. euro, current prices)



Source: Authors' computations on the basis of Eurostat data.

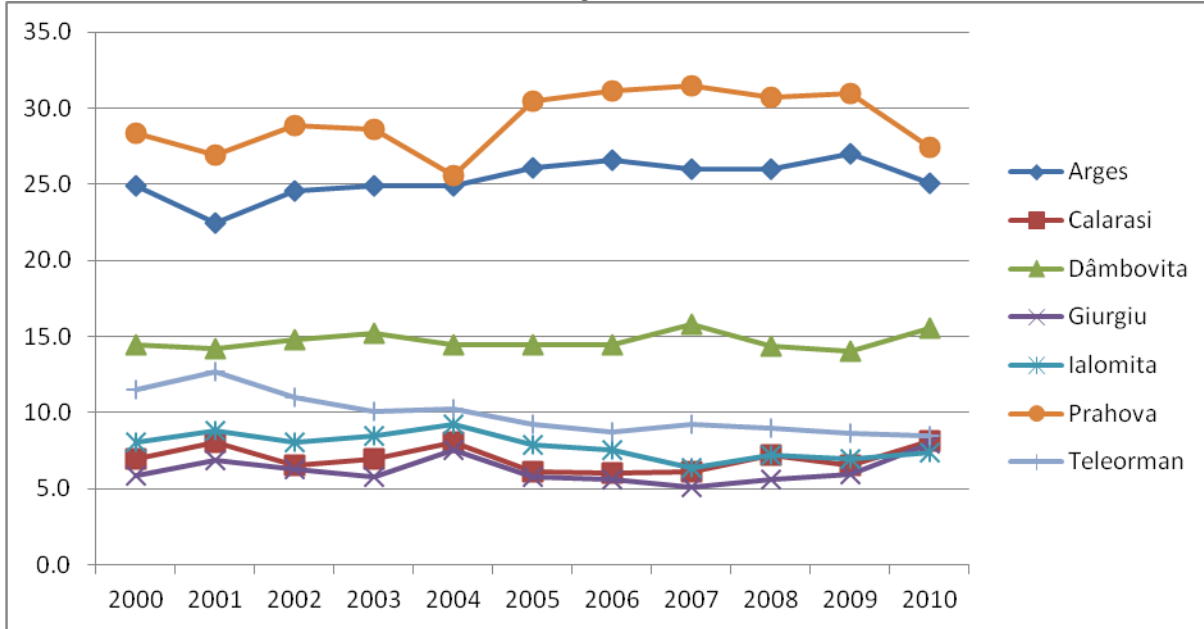
Figure 2. Gross domestic product overall growth indices in Romania, Sud Muntenia region and its counties, 2000 = 100,0



Source: Authors' computations on the basis of Eurostat data.

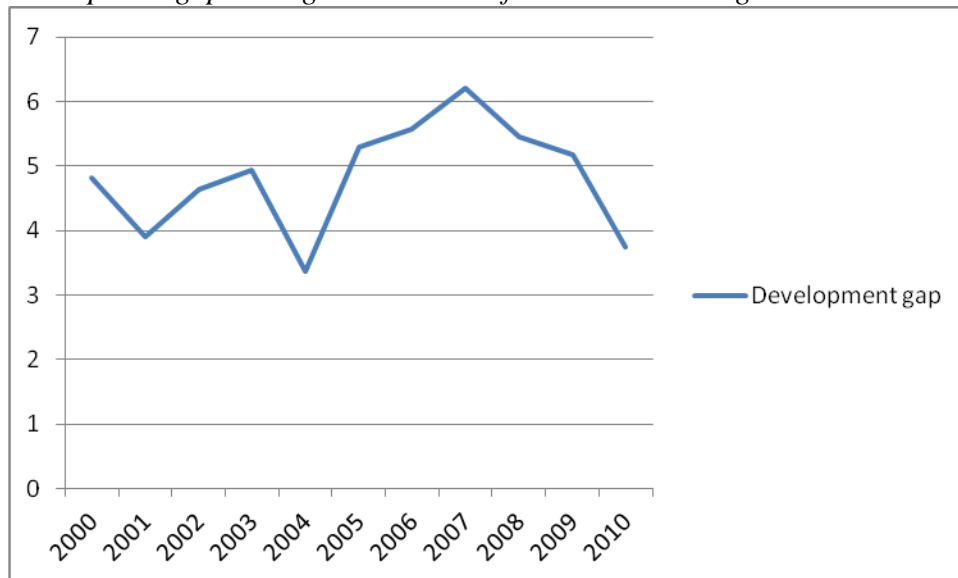
Consequence of such developments, *the participation of counties to create the regional GDP* has changed in the period in favor of the more developed counties (Arges and Prahova), whose shares in the regional GDP recorded net increases, while the shares of other counties recorded, at best, stagnation tendencies (Giurgiu and Dâmbovița), if not reduction (Calarasi, Ialomita and Teleorman - Figure 3). The exception is 2010, when the shares of the more developed counties in the region's gross domestic product have declined, while the shares of some of the less developed counties (Calarasi, Giurgiu, and Dâmbovița) increased. As regards the *absolute level of GDP*, a stratification on three levels can be observed, in 2010 the ranking of counties in Sud Muntenia region being the following: Prahova and Arges (around 4,000 million euro, current prices), followed by Dâmbovița (nearly 2,500 million euro) and then Teleorman, Ialomita, Calarasi and Giurgiu (between 1,100 and 1,300 million euro). The *development gap in relation to the absolute level of GDP* among the counties of Sud Muntenia region increased between 2000-2007, but declined in 2008-2010 (Figure 4).

Figure 3. Participation of the counties of Sud Muntenia region to creation of regional GDP (share in regional GDP, %)



Source: Authors' computations on the basis of Eurostat data.

Figure 4. Development gap among the counties of Sud Muntenia region in relation to total GDP



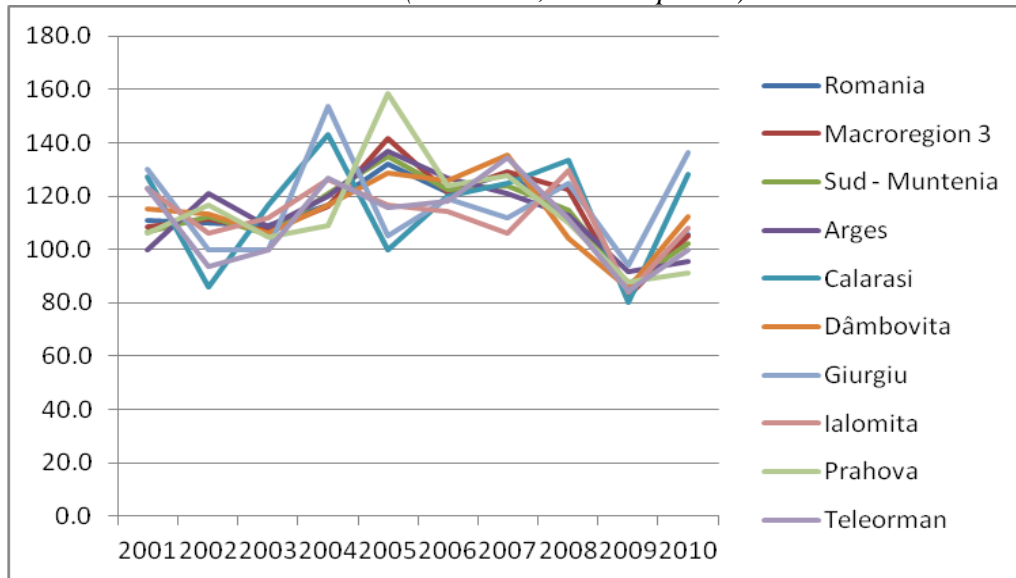
Source: Authors' computations on the basis of Eurostat data.

2. Evolution of GDP per capita

Considering the level of *GDP per capita*, the same overall apparently favorable economic development of Sud Muntenia region and its counties during 2000-2010 is noticed, with annual growth indices similar to GDP and the same general downward trend over the period, with oscillations from one year to another (Figure 5). Compared to the EU and national averages of the indicator, the developments of annual GDP per capita in the Sud Muntenia region were close to the national level and a higher in growth as compared to European levels by 2009, when the

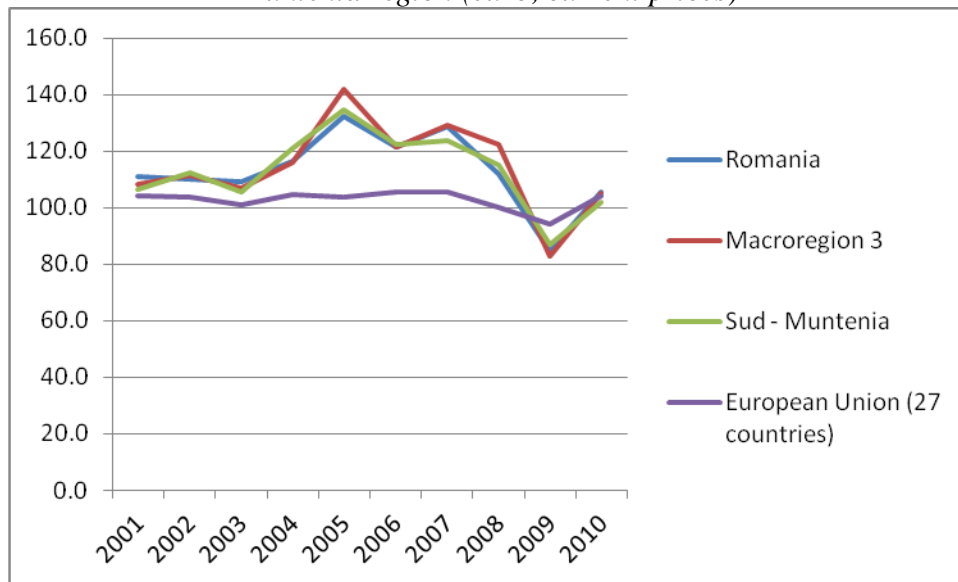
decrease in both the national and the regional levels have been greater than the decline in GDP per capita across the EU as a whole (Figure 6).

Figure 5. GDP per capita annual growth indices in Romania, Sud Muntenia region and its counties (mill. euro, current prices)



Source: Authors' computations on the basis of Eurostat data.

Figure 6. GDP per capita annual growth indices in European Union, Romania and Sud Muntenia region (euro, current prices)



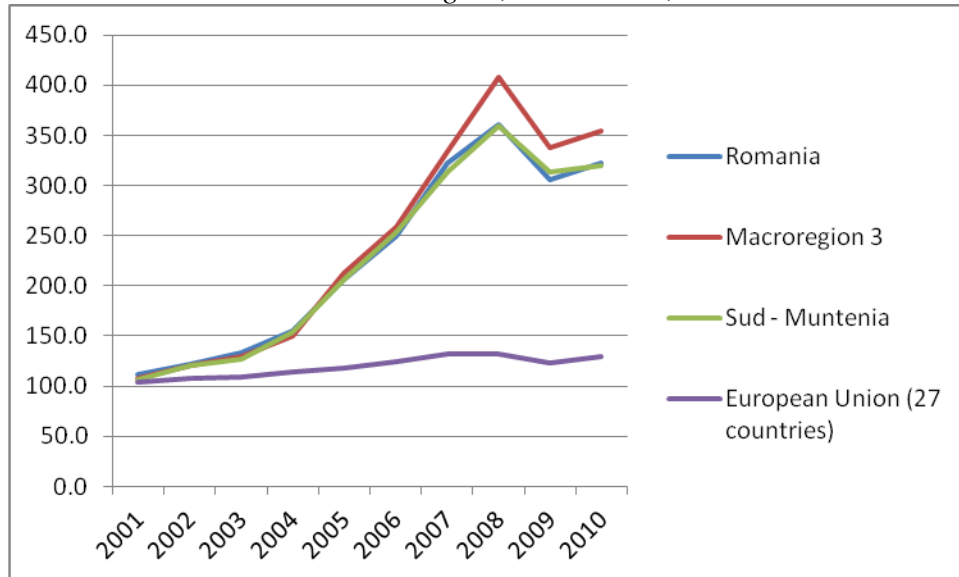
Source: Authors' computations on the basis of Eurostat data.

Regarding the counties of the region, it appears that significant reductions in the level of GDP per capita were recorded in 2010 also in the developed counties (Arges and Prahova), while the remaining counties registered increases in GDP per capita over the previous year.

Indices of *overall growth in GDP per capita* in the period 2000-2010 have also revealed a strong upward trend until 2008 in Romania and Sud Muntenia region, the increase being much

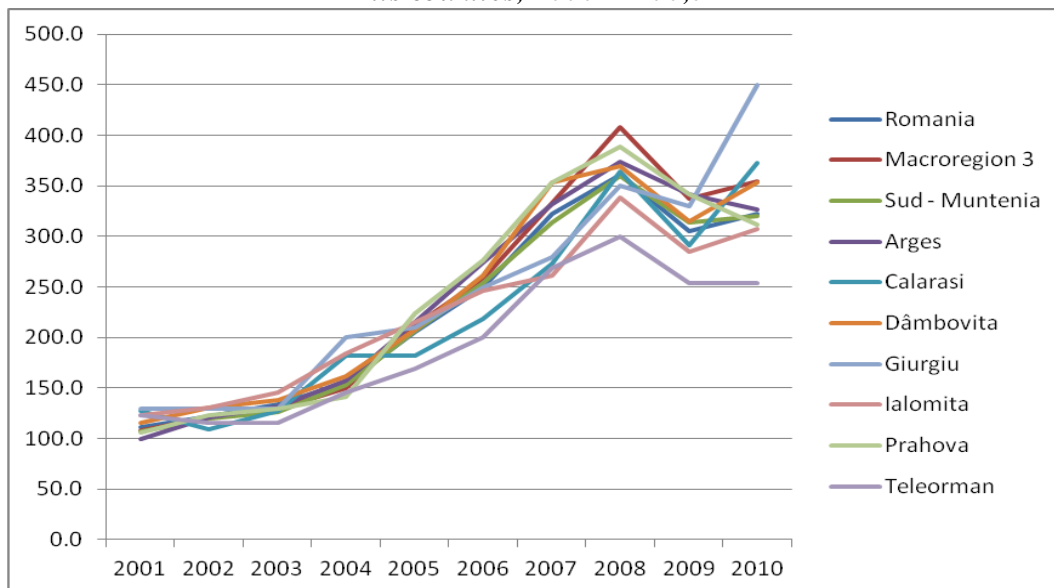
higher than in the EU as a whole, indicating a process of reducing economic disparities with the rest of the European Union (Figure 7), but discontinued in 2009. The most significant overall increases in the level of GDP per capita were recorded especially by Prahova and Arges counties (which have not revealed increases in 2009-2010), leading the overall development of the region, and by Giurgiu County (which has experienced significant growth in 2010). Other counties (Calarasi, Dâmbovița, Ialomita and Teleorman) also recorded a resumption of growth in the same year (Figure 8).

Figure 7. GDP per capita overall growth indices in European Union, Romania and Sud Muntenia region, 2000 = 100,0



Source: Authors' computations on the basis of Eurostat data.

Figure 8. Gross domestic product overall growth indices in Romania, Sud Muntenia region and its counties, 2000 = 100,0



Source: Authors' computations on the basis of Eurostat data.

Despite favorable developments, the GDP per capita (still regarded as a crucial indicator of assessing the level of economic development, despite its limitations), both in Romania and in Sud Muntenia region is still *significantly lower than in the European Union* (Table 1). Moreover, its level in the Sud Muntenia region was below the national average in the period under review (but this average is strongly influenced by the Bucharest-Ilfov region, which records a much higher level of GDP per capita as compared to the other Romanian regions and counties).

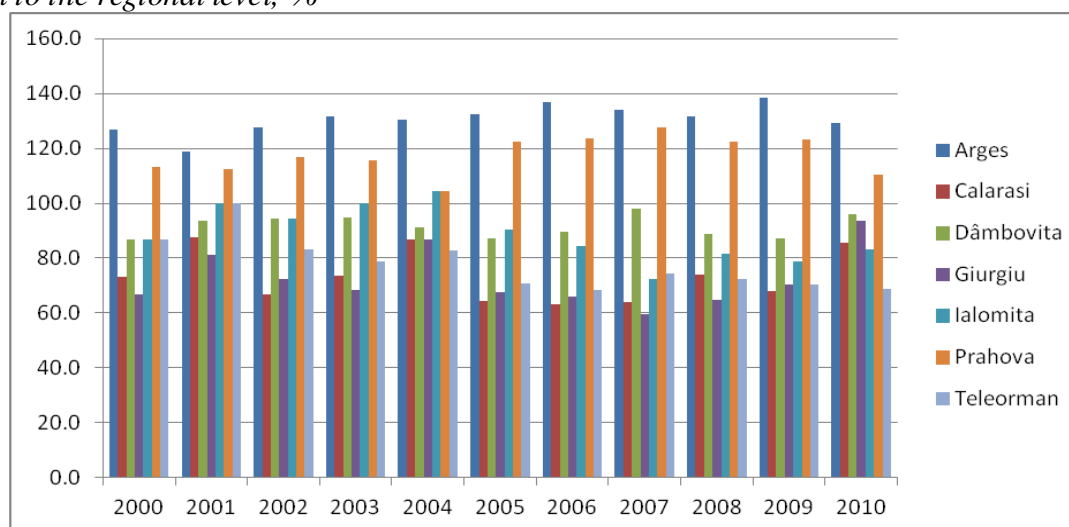
Table 1. GDP per capita in România and Sud Muntenia region as compared to EU level, %

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Euro per capita, current prices											
Romania	10	10	11	12	13	16	19	23	26	23	24
Sud - Muntenia	8	8	9	9	11	14	16	19	21	20	20
Euro per capita, at PPP											
Romania	26	28	29	31	34	35	38	41	47	47	47
Sud - Muntenia	21	22	24	25	28	29	32	34	39	40	39

Source: Data from Eurostat.

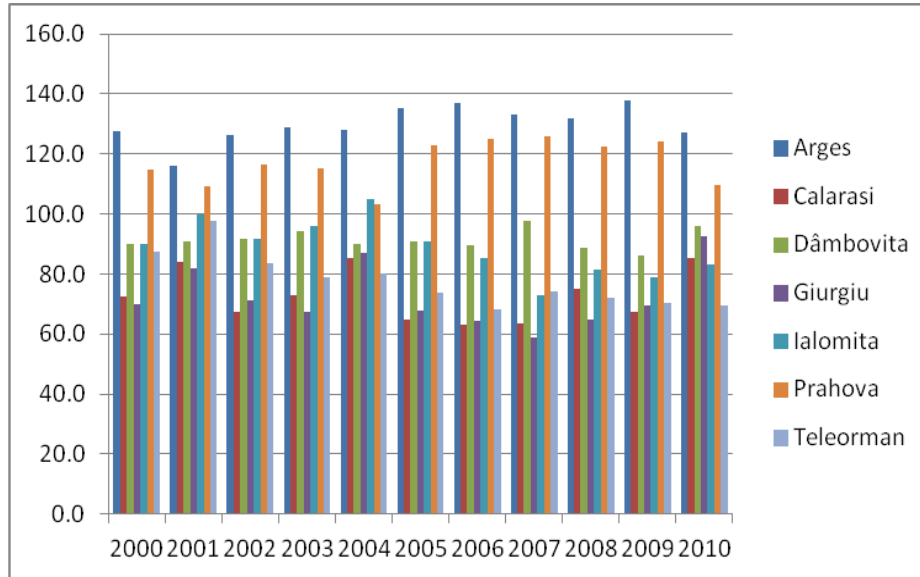
Among the counties of the Sud Muntenia region, there are also *important gaps in terms of GDP per capita*. Thus, in 2010, they ranged between 129.2% of the regional level in Arges County and 68.8% in Teleorman County (calculated on the basis of absolute level - Figure 9) and between 127.4% of the regional level in Arges County and 69.5% in Teleorman County (measured in terms of purchasing power parity - Figure 10). Moreover, the gap between developed counties (Arges and Prahova) and the other counties tended to increase, the development gap in relation to the level of GDP per capita registered an upward trend during 2000-2010, but with downward trend towards the end of period (Figure 11).

Figure 9. Ratio of GDP per capita (absolute level) of the counties of Sud Muntenia region to the regional level, %



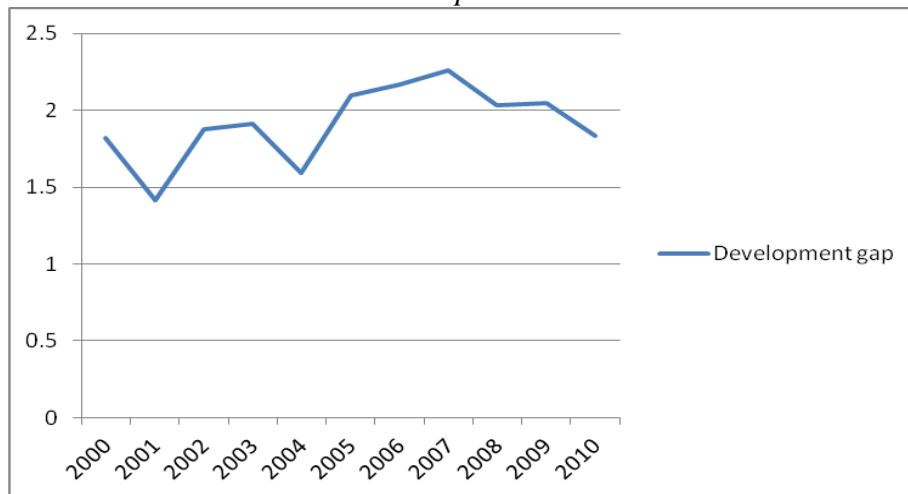
Source: Authors' computations on the basis of Eurostat data.

Figure 10. Ratio of GDP per capita (PPP) of the counties of Sud Muntenia region to the regional level, %



Source: Authors' computations on the basis of Eurostat data.

Figure 11. Development gap among the counties of Sud Muntenia region in relation to GDP per capita



Source: Authors' computations on the basis of Eurostat data.

As **absolute level of GDP per capita** (at purchasing power parity), one can observe a stratification on several levels (*indicating a process of divergence*), according to which in 2010 the ranking of Sud Muntenia region counties was: Arges (over 12,000 euro per capita), Prahova (almost 10,500 euro per capita), followed at a distance by Dâmbovița (less than 9000 euro per capita), Giurgiu (about 9000 euro per capita), Calarasi (over 8000 euro per capita), Ialomita (about 8000 euro per capita) and Teleorman (6,500 euro per capita).

3. Disparities among counties regarding economic efficiency

The trend of divergence within the region during 2000-2010 regarding the GDP per capita growth is also reflected by the *coefficient of variation* (σ_y), whose evolution is shown in Table 2. A significant process of divergence is revealed for the period under review (expressed by the increasing value of the coefficient of variation, from 18.8% in 2000 to 26.3% in 2010).

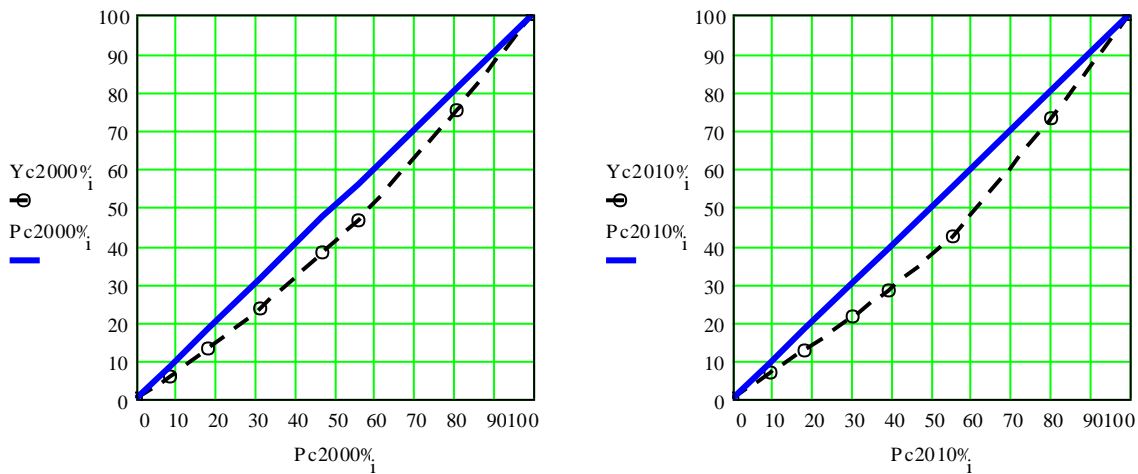
The trend of divergence between 2000 and 2010 is also reflected by the two estimated *Lorenz curves* (Figure 12), where the horizontal axis marks the cumulative weights of counties in total population, $Pc2010\%$ and $Pc2000\%$, respectively, and the vertical axis the cumulative weights of counties, ranked ascending by GDP per capita in the total GDP of the region $Yc2000\%$ and $Yc2010\%$. On this basis, the computed *Gini* and *RH coefficients* increased from 11.7% in 2000 to 15.1% in 2010 and from 9.4% in 2000 to 13.2% in 2010, respectively, reflecting a *process of divergence*.

Table 2. Dynamics of coefficient of variation of GDP per capita in Sud Muntenia region

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
18.836	11.372	18.516	19.598	16.342	24.261	26.685	25.776	25.712	23.983	26.349

Source: Authors' computations on the basis of Eurostat data.

Figure 12. GDP Lorenz curve in Sud Muntenia region



If considering *labor productivity* (calculated by the ratio of GVA to employment) between 2000 and 2010 there is also a divergence trend reflected the dynamics of the *coefficient of variation* (σ_{vab} - Table 3). It is noted for the reporting period a significant divergence process similar to that revealed by GDP per capita (expressed by the increasing value of the coefficient of variation, from 18.2% in 2000 to 24.6% in 2010).

Divergence trend between 2000 and 2010 is also reflected by the two estimated *Lorenz curves* (Figure 13), where the horizontal axis marks the cumulative weights of the counties in the region's employment, $Ec2000\%$ and $Ec2010\%$, respectively, and the vertical axis the cumulative weights of counties, ranked ascending by productivity per person employed in the region's GVA, $VABc2000\%$ and $VABc2010\%$. On this basis, the computed *Gini* and *RH coefficients* increased

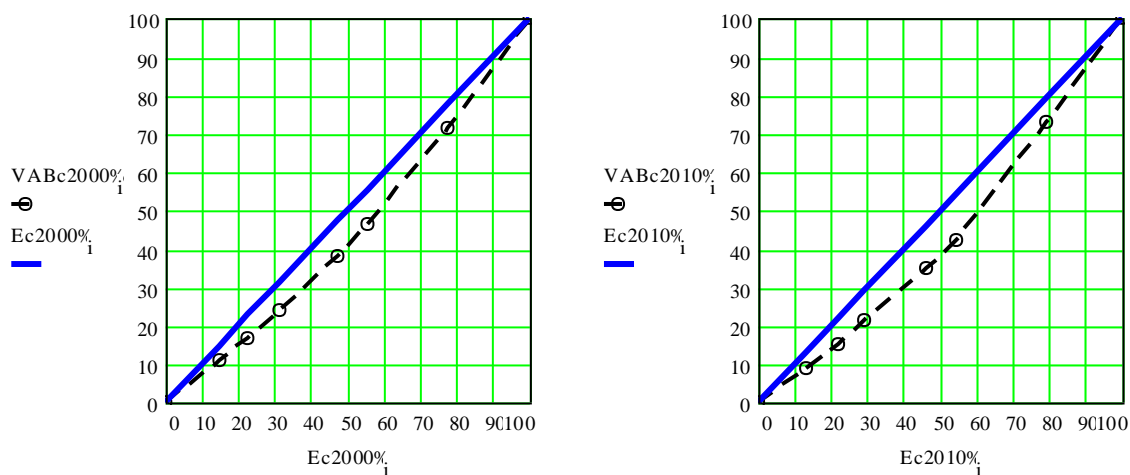
from 11.4% in 2000 to 13.7% in 2010 and from 9.4% in 2000 to 12.3% in 2010, respectively, also reflecting the divergence process.

Table 3. Dynamics of coefficient of variation of GVA per capita in Sud Muntenia region

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
18.227	11.996	16.235	17.925	14.134	21.591	23.627	21.943	22.634	21.804	24.597

Source: Authors' computations on the basis of Eurostat data.

Figure 13. GVA Lorenz curve in Sud Muntenia region



Conclusions

The **Sud Muntenia region** is still at a relatively slow economic development as compared to other regions, with a GDP per capita of 84-85% of the national average in 2009-2011⁵. The disparities among the counties in terms of the absolute level of GDP growth and GDP per capita have increased in the period 2000-2010, although the economic downturn has dampened the process. Even if the region as a whole experienced a convergence trend in relation to national and EU levels, inside it there was a significant trend of divergence and stratification on several levels of development.

The problem is that geographically the Sud Muntenia Region is located close to the most developed regions of Romania – the Bucharest-Ilfov region, which recorded high concentration of competitiveness factors, but a limited and insufficient character of "competitiveness diffusion" from it to adjacent areas. The causes are different, due to both state of transportation infrastructure, and especially to substantial differences in terms of structure and sectoral dynamics and evolution of the business environment, the Bucharest-Ilfov region having by far the structure most similar to that of a modern market economy. The same region has the highest level of overall attractiveness of human capital, but in this case the effect of dispersion begins to

⁵ RAPORTUL STRATEGIC NAȚIONAL 2012 privind implementarea Fondurilor Structurale și de Coeziune, Guverul României, Februarie 2013.

feel in the surrounding areas (including some counties in Sud Muntenia region). Limited effects of competitiveness diffusion are noticed between the counties in the region, especially between northern counties (Arges, Prahova and Dâmbovița), more developed economically, and the southern counties (Ialomita, Calarasi, Giurgiu and Teleorman), with a lower level of development.

In these circumstances, we believe that in the future financial programming period, 2014-2020, would be required either to develop and implement cross-regional and cross-sectoral strategies and policies (Romanian export strategy, rural development policy, education policy and research policy, SME development, etc.), focused on elements of territorial cohesion, such as axes and poles of growth⁶, envisaging a wider area around Bucharest⁷, or a much better coordination between institutional, business and civil society actors operating in this area, especially by using the more flexible institutional framework of cohesion policy⁸.

⁶ Largely overlapping the networks of transport and communications in the area, such as land transport routes and, in the future, the inland river transportation, especially by implementing the EU Strategy for the Danube.

⁷ Encompassing Bucharest-Ifov and Sud Muntenia regions, and possibly areas from Sud Est and Sud Vest Oltenia regions.

⁸ M.N. Chilian (2012), *Coeziunea economico-socială la nivel regional – Elemente de fundamentare a unei strategii naționale*, Proiect POS DRU 2007-2013, ID: 62988, „Cercetarea științifică economică, suport al bunăstării și dezvoltării umane în context european”, Contractor INCE, Subcontractors: IPE, IEN, Institutul de Matematică „Simion Stoilov”, Universitatea București-Facultatea de Administrație și Afaceri, Universitatea Politehnică București, Facultatea de Inginerie Mecanică și Mecatronică, 2010-2013, mimeo.