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The Evolution of Regional Disparities in the Central and Eastern European Countries of European Union

Adrian Liviu SCUTARIU[1]*

Abstract

The theoretical and practical concerns regarding the analysis of economic activity in regional profile are not new, the regional economy, part of regional science, lasting since the beginning of the 19th century. The regional development is a current subject, as the problem of development gaps is still the in EU attention, the communitarian strategies aiming at reducing them. Given that the countries of Central and Eastern Europe, that joined the EU since 2004, included regions that had a low level of development, the disparities become more pronounced in the EU. Therefore, the regional policy took on greater importance and have been allocated to increasing funding. Regional disparities exist not only between eastern and western EU, but also between regions of the same country. In this article we want to analyse how these disparities have evolved in Central and Eastern Europe countries of the EU. We relate at the same time at the EU average. We will use the values of GDP/capita expressed in Purchasing Power Standard, indicator also used by the EU in allocating funds for regional policy. Generally, the region that includes the capital city registers values significantly higher than the other regions, reaching above the EU-28 average and the differences among the region containing the capital city and the others remain. In most cases, the values of GDP/capita at regional level tend to approach the EU-28 average, but the development gaps remain high and the years 2013 and 2014 have witnessed insignificant increases.

Keywords: Regional disparities; European Union; regional policy; GDP per capita expressed in Purchasing Power Standard; Central and Eastern Europe countries.

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1. Introduction

Once with the expansion of EU the existing concern regarding the economic disparities became higher. The Eastern and Central European countries, that joined EU in 2004, included underdeveloped regions, so the disparities became higher because of the different levels of development existing in the EU. As a result, in order to prevent increasing and to lower these disparities, the regional development policy gained increased importance, more funds being allocated to over time (more than a third of the EU budget for the period 2007-2013). The less developed regions receive a bigger part of the funds, in order to decrease the existing regional disparities in the EU and to gain regional competitive capacity.

The EU Member States registered different levels of funds absorption, Romania reporting a low rate compared to the other Eastern and Central Europe states [10]. The eligibility criteria are used for the funds allocation and every EU country creates its own Operational Programs for funds accession, also assuring the needed co-financing.

For the 2014-2020 period the European Structural and Investment Funds are also considerable, because there are still high regional economic disparities at the EU level. The ratio between the highest value of GDP/inhabitant expressed in Purchasing Power Standard (PPS) and the lowest value is about 18, the highest value being more than 5 times the EU average and the lowest one about a third of the EU average. Our previous studies showed that more than a quarter of EU regions were less developed ones (GDP/inhabitant in PPS<75% of EU average), but, however, the number of regions with GDP under 50% of the EU-28 average decreased significantly, this being in 2014 the case of almost 7% of the EU regions [11]. The decrease of the economic disparities existing in the EU is still a priority of the EU, so the biggest part of the funds is designated to the Eastern and Central European countries, while European Regional Development Fund has the highest share in the total funds.

2. Problem Statement

The origin of the term region is in the Latin word "regionem", which is now found in almost all European languages with the sense of land, a geographical area with borders and more or less precise characteristics [7 p43]. It can be considered that the region comprises a material component (territory) on which it is projected the relational component, of the institutional competencies, they being in an indissoluble association [9 p10].

In the general sense, the term *region* refers to the grouping of several elementary spatial units, provided that any two of them, belonging to the same region, are in one way or another similar [3 p458]. However, the notion of "similarity" is susceptible to several interpretations and points of view, so different territorial cuts can be achieved.

In the EU context, a country's territorial cut is a region, and it may or may not have administrative attributions. The European Union Statistics Office developed a unitary classification of the different territorial units: the Nomenclature of Territorial Units for Statistics (NUTS). The NUTS 2 regions, created for statistics collection and implementation of the EU regional policy, are not only administrative units, being also in some cases a joining of some smaller administrative units (as it is in Romania).

The theoretical and practical concerns regarding the analysis of economic activity from a spatial perspective are not new. As a component part of regional science, the regional economy has its beginnings in the 19th century (especially the theory of localization of economic activities), developing in the frame of the main currents of economic theory [1 p.12]. The regional economy is that subdivision of economic science which aims to study the optimal location of the firms and the economic development in territorial profile.

The multidisciplinarity that characterizes it is an advantage for the regional science, also because it can find solutions to a wide range of regional issues. Regional science has the competitive advantage of being able to bring together several elements of socio-economic systems, but also certain thematic approaches, such as urban and regional research and planning [2 p133].

Theoretical approaches in the field find their correspondence in practice, especially at the level of regional policies. Moreover, recent years have witnessed an increase in the interest of policy-makers in matters of territory and space. The existence of an efficient territorial system of regions and cities is considered a prerequisite for economic competitiveness. It is desired to create competitive capacity at local level, being given the fact that a local community with a high degree of development is able to ensure the prosperity of the locals without any intervention of the center [12 p113].

It is accredited the idea that EU is in a turning point and has to make changes to its political and economic approach in order to reduce the regional disparities [6]. Analyses showed that the disparities across the EU countries and regions conserved and even increased. However, studies proved that there was a faster increase of GDP per capita in poor economies in the period from 2001 to 2012, but the spatial approach in the convergence context showed no significant convergence within EU-28

countries [13]. Analyses revealed that in terms of GDP per capita, the highest level of convergence was in 2009 until the onset of the financial crisis (the top 25% performing regions were at the smallest distance from the bottom 25% performing regions), but in the following two years, divergence increased as the most developed regions registered higher growth rates than the least performing ones [8 p13].

We must also mention that regional disparities are not only between the East and West of the EU, but also between regions of the same country. This paper will analyse the evolution of these disparities in the countries of Central and Eastern Europe.

3. Research Questions

The research aims at determining the evolution of regional disparities at national level in the Eastern and Central Europe EU countries. We want to reveal if the high development differences still maintain or if they get low. For this we will take as a comparison basis the EU average, on the one hand, and the national average, on the other hand. We will use GDP/inhabitant expressed in PPS, indicator of which values are the benchmark for the EU in allocating funds for regional policy.

4. Research Methods

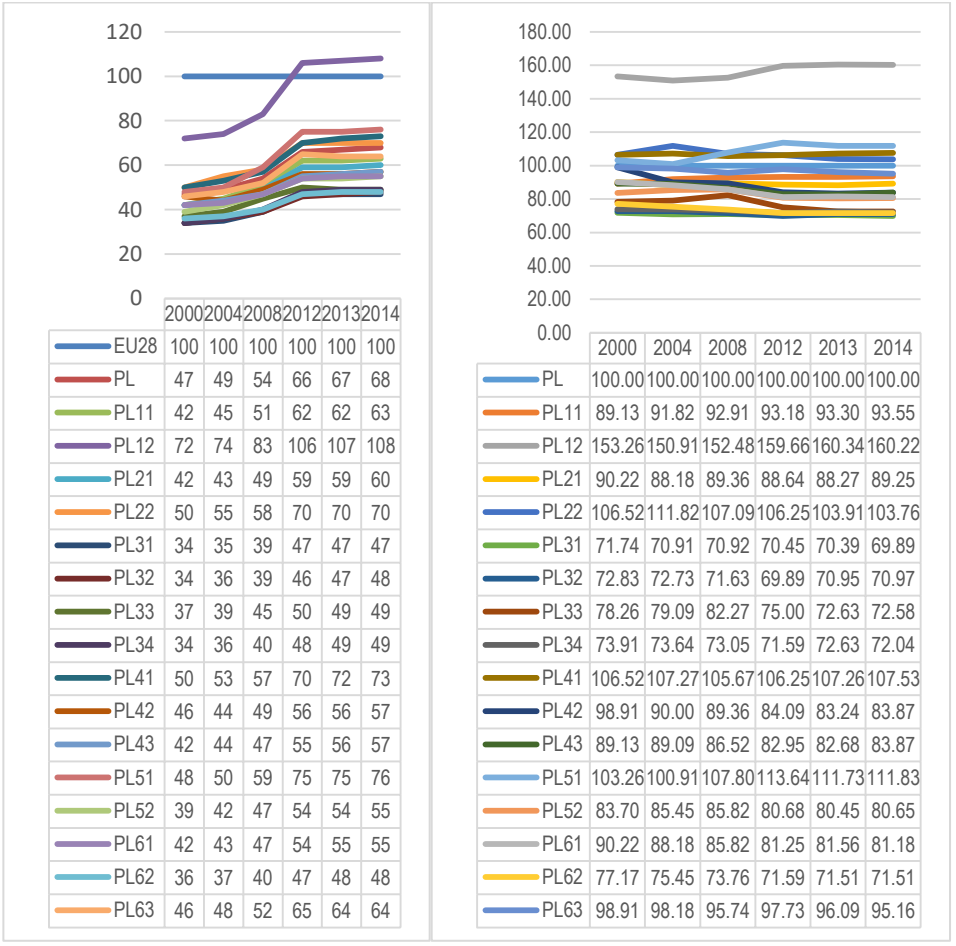
GDP is calculated taking into account the value of all goods and services produced less the value of the goods used for their creation. GDP per inhabitant can be expressed in Euro or in PPS. The surfaces and the populations of the EU countries and of the NUTS 2 regions differ, and also their economies. As a consequence, the general level of prices also differs, which affects the comparability of GDP per inhabitant expressed in Euro. That is why it is often used the indicator GDP per inhabitant expressed in Purchasing Power Standard, inclusively for the regional eligibility of the regional policy funding allocation. For measurement, the total value of the goods and services produced in an economy is divided at the number of inhabitants, GDP per inhabitant in PPS being expressed in a conventional currency.

In this study we analysed the values of GDP relative to the EU-28 average, to which has been given the 100% value. Then we have deepened the analysis by expressing the regional values relative to the country average, fact that helped us highlighting the regional disparities existing in the national context.

5. Findings and Discussions

In this part we will analyse the evolution of regional disparities in all the countries that joined the EU after 2004.

Poland registers increasing values of GDP per capita (PPS) relative to the Community average. Thus, if in 2000 the values were between 34% and 72%, in 2014 we notice a progress, the values being between 47% and 108%. The only region reporting higher values than the EU-28 average and significantly higher than the rest of the Polish regions is the one containing the capital city (Figure 1.a).



	2000	2004	2008	2012	2013	2014
EU28	100	100	100	100	100	100
PL	47	49	54	66	67	68
PL11	42	45	51	62	62	63
PL12	72	74	83	106	107	108
PL21	42	43	49	59	59	60
PL22	50	55	58	70	70	70
PL31	34	35	39	47	47	47
PL32	34	36	39	46	47	48
PL33	37	39	45	50	49	49
PL34	34	36	40	48	49	49
PL41	50	53	57	70	72	73
PL42	46	44	49	56	56	57
PL43	42	44	47	55	56	57
PL51	48	50	59	75	75	76
PL52	39	42	47	54	54	55
PL61	42	43	47	54	55	55
PL62	36	37	40	47	48	48
PL63	46	48	52	65	64	64

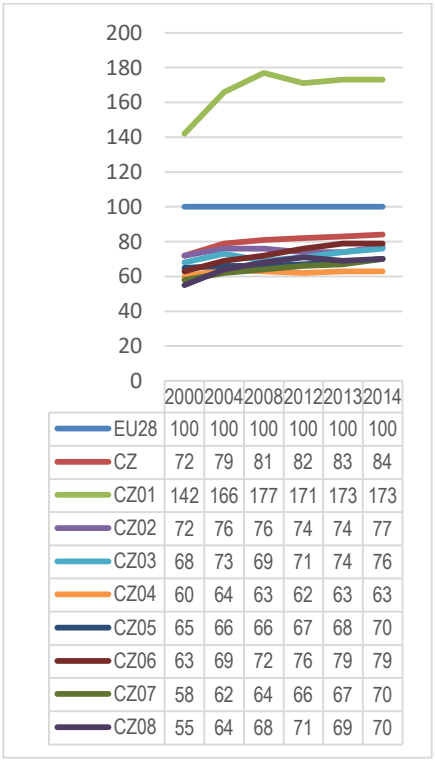
	2000	2004	2008	2012	2013	2014
PL	100.00	100.00	100.00	100.00	100.00	100.00
PL11	89.13	91.82	92.91	93.18	93.30	93.55
PL12	153.26	150.91	152.48	159.66	160.34	160.22
PL21	90.22	88.18	89.36	88.64	88.27	89.25
PL22	106.52	111.82	107.09	106.25	103.91	103.76
PL31	71.74	70.91	70.92	70.45	70.39	69.89
PL32	72.83	72.73	71.63	69.89	70.95	70.97
PL33	78.26	79.09	82.27	75.00	72.63	72.58
PL34	73.91	73.64	73.05	71.59	72.63	72.04
PL41	106.52	107.27	105.67	106.25	107.26	107.53
PL42	98.91	90.00	89.36	84.09	83.24	83.87
PL43	89.13	89.09	86.52	82.95	82.68	83.87
PL51	103.26	100.91	107.80	113.64	111.73	111.83
PL52	83.70	85.45	85.82	80.68	80.45	80.65
PL61	90.22	88.18	85.82	81.25	81.56	81.18
PL62	77.17	75.45	73.76	71.59	71.51	71.51
PL63	98.91	98.18	95.74	97.73	96.09	95.16

(a) (b)

Figure 1. The evolution of GDP/inhabitant (PPS) of Poland regions in percentage of the EU-28 average (a) and in percentage of Poland average (b). Source: own elaboration according to [5] and [4]

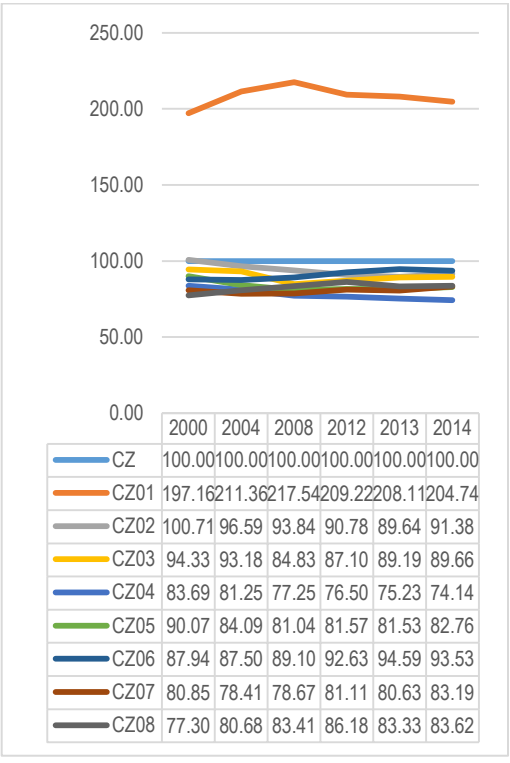
The existing disparities among the regions of the country are maintained and even slightly increasing, so that, compared to the country average, the regional values were between 71% and 153% in 2000, and between 69% and 160% in 2014 (Figure 1.b).

Compared to the EU-28 average, the regional GDP per capita (PPS) in the Czech Republic recorded a positive trend, from values between 55% to 142% in 2000, at values between 63% and 173% in 2014 (Figure 2.a). In this case, too, the value of the capital city region is much higher than the EU-28 average, but also more than double that of the other Czech regions. The differences among the regional values are not very high in the Czech Republic, but they tend to maintain, the lowest value being 77,3% in 2000 and 74,14% in 2014 (Figure 2.b).



	2000	2004	2008	2012	2013	2014
EU28	100	100	100	100	100	100
CZ	72	79	81	82	83	84
CZ01	142	166	177	171	173	173
CZ02	72	76	76	74	74	77
CZ03	68	73	69	71	74	76
CZ04	60	64	63	62	63	63
CZ05	65	66	66	67	68	70
CZ06	63	69	72	76	79	79
CZ07	58	62	64	66	67	70
CZ08	55	64	68	71	69	70

(a)



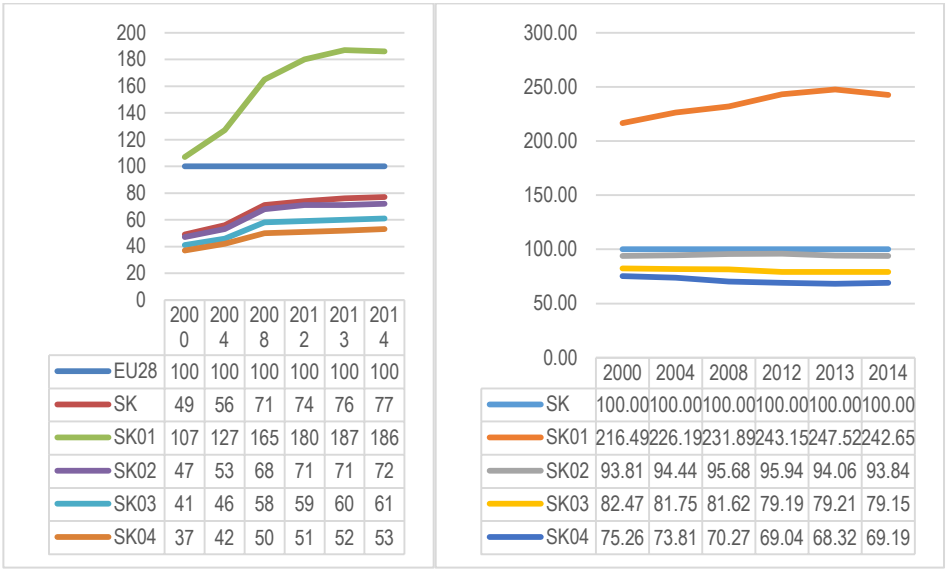
	2000	2004	2008	2012	2013	2014
CZ	100.00	100.00	100.00	100.00	100.00	100.00
CZ01	197.16	211.36	217.54	209.22	208.11	204.74
CZ02	100.71	96.59	93.84	90.78	89.64	91.38
CZ03	94.33	93.18	84.83	87.10	89.19	89.66
CZ04	83.69	81.25	77.25	76.50	75.23	74.14
CZ05	90.07	84.09	81.04	81.57	81.53	82.76
CZ06	87.94	87.50	89.10	92.63	94.59	93.53
CZ07	80.85	78.41	78.67	81.11	80.63	83.19
CZ08	77.30	80.68	83.41	86.18	83.33	83.62

(b)

Figure 2. The evolution of GDP/inhabitant (PPS) of Czech Republic regions in percentage of the EU-28 average (a) and in percentage of Czech Republic average (b). Source: own elaboration according to [5] and [4]

In Slovakia we notice the reduction of the existing development disparities compared to the EU-28 average, the smallest value rising from

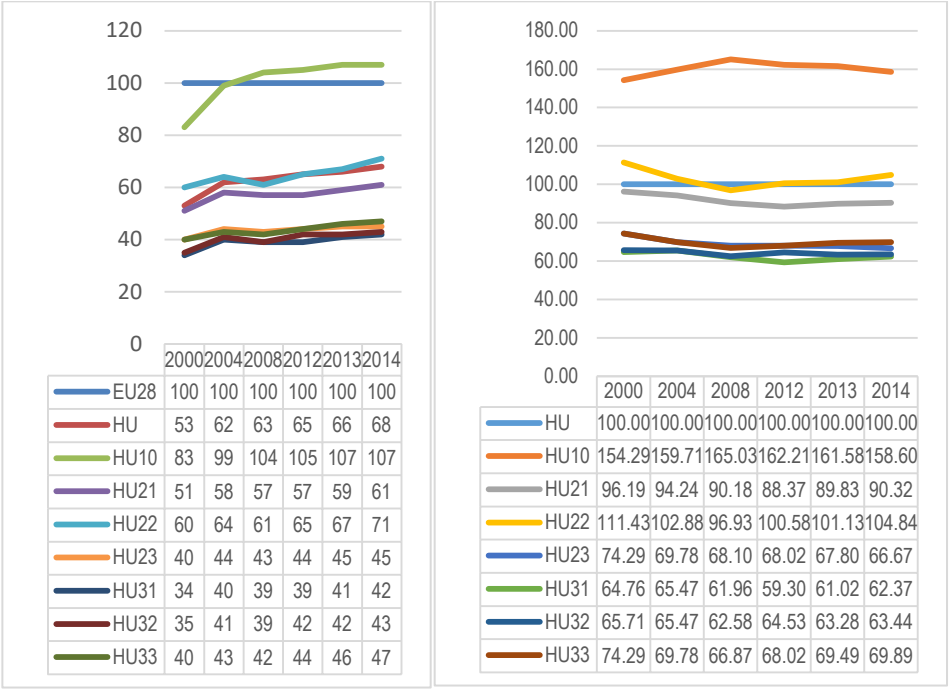
37% in 2000 to 53% in 2014 (Figure 3.a). The region of Bratislava has a significant increasing GDP/inhabitant, from 107% to 186% of the Community average, well above the national average (over 2 times higher). The other regions maintain in terms of value at similar scale compared to previous years: from over 75% to over 69% of the national average (Figure 3.b).



(a) (b)

Figure 3. The evolution of GDP/inhabitant (PPS) of Slovakia regions in percentage of the EU-28 average (a) and in percentage of Slovakia average (b). Source: own elaboration according to [5] and [4]

The regional GDP per capita recorded by Hungary compared to the Community average is increasing, so in 2000 the values were between 34% and 83%, in 2014 they were between 42% and 107% (Figure 4.a). The highest value is recorded in the capital city region, 58,6% higher than the national average. Compared with this, the regional values do not change much, in 2014 being over 62% of the national average (Figure 4.b).



	2000	2004	2008	2012	2013	2014
EU28	100	100	100	100	100	100
HU	53	62	63	65	66	68
HU10	83	99	104	105	107	107
HU21	51	58	57	57	59	61
HU22	60	64	61	65	67	71
HU23	40	44	43	44	45	45
HU31	34	40	39	39	41	42
HU32	35	41	39	42	42	43
HU33	40	43	42	44	46	47

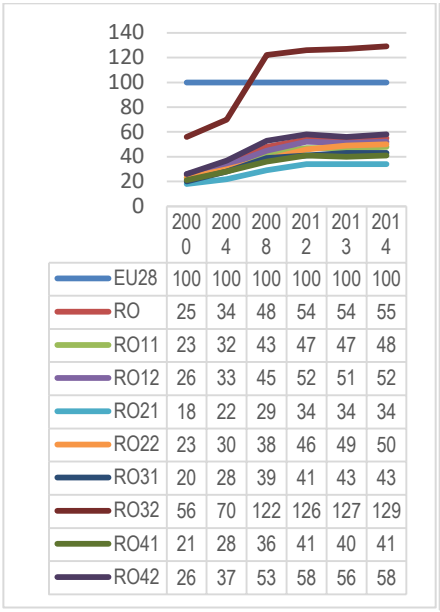
(a)

	2000	2004	2008	2012	2013	2014
HU	100.00	100.00	100.00	100.00	100.00	100.00
HU10	154.29	159.71	165.03	162.21	161.58	158.60
HU21	96.19	94.24	90.18	88.37	89.83	90.32
HU22	111.43	102.88	96.93	100.58	101.13	104.84
HU23	74.29	69.78	68.10	68.02	67.80	66.67
HU31	64.76	65.47	61.96	59.30	61.02	62.37
HU32	65.71	65.47	62.58	64.53	63.28	63.44
HU33	74.29	69.78	66.87	68.02	69.49	69.89

(b)

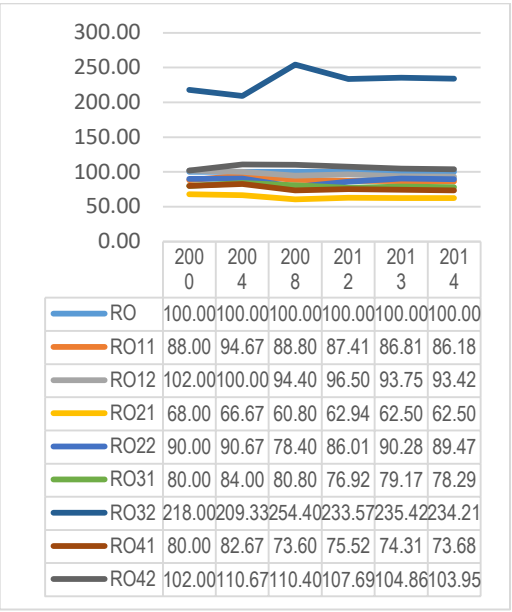
Figure 4. The evolution of GDP/inhabitant (PPS) of Hungary regions in percentage of the EU-28 average (a) and in percentage of Hungary average (b). Source: own elaboration according to [5] and [4]

As far as Romania is concerned, we notice significant increases compared to the EU-28 average. Thus, if the lowest value was 18% in 2000, this was 34% in 2014. However, four of the eight regions had values below 50% of the EU average in 2014, which is worrying (Figure 5.a). The Bucharest-Ilfov region managed to exceed the EU-28 average, being 129% in 2014 and more than twice the national average. Disparities in national space remain and sometimes even increase, so that the smallest value was 68% of the national average in 2000 and 62,5% in 2014 (Figure 5.b).



	2000	2004	2008	2012	2013	2014
EU28	100	100	100	100	100	100
RO	25	34	48	54	54	55
RO11	23	32	43	47	47	48
RO12	26	33	45	52	51	52
RO21	18	22	29	34	34	34
RO22	23	30	38	46	49	50
RO31	20	28	39	41	43	43
RO32	56	70	122	126	127	129
RO41	21	28	36	41	40	41
RO42	26	37	53	58	56	58

(a)

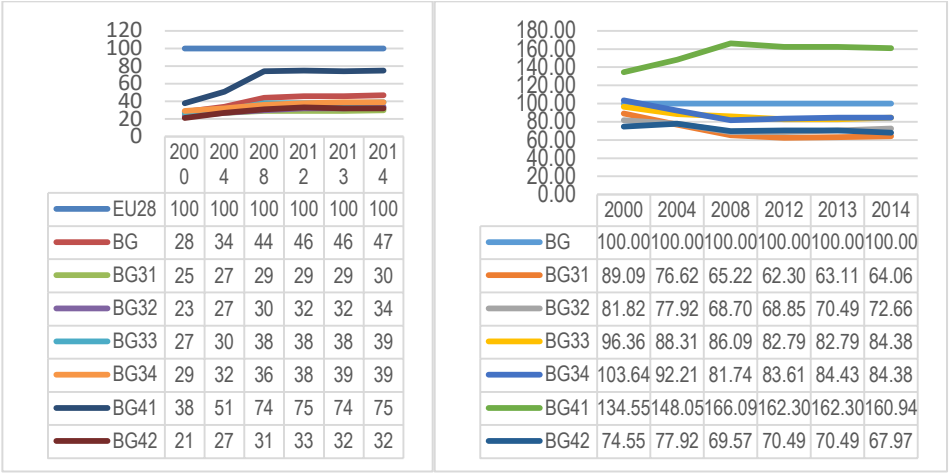


	2000	2004	2008	2012	2013	2014
RO	100.00	100.00	100.00	100.00	100.00	100.00
RO11	88.00	94.67	88.80	87.41	86.81	86.18
RO12	102.00	100.00	94.40	96.50	93.75	93.42
RO21	68.00	66.67	60.80	62.94	62.50	62.50
RO22	90.00	90.67	78.40	86.01	90.28	89.47
RO31	80.00	84.00	80.80	76.92	79.17	78.29
RO32	218.00	209.33	254.40	233.57	235.42	234.21
RO41	80.00	82.67	73.60	75.52	74.31	73.68
RO42	102.00	110.67	110.40	107.69	104.86	103.95

(b)

Figure 5. The evolution of GDP/inhabitant (PPS) of Romania regions in percentage of the EU-28 average (a) and in percentage of Romania average (b). Source: own elaboration according to [5] and [4]

Bulgaria's GDP per capita values are much lower than the EU-28 average, although in recent years they have seen increases - the lowest figure being 32% in 2014 compared to 21% in 2000. The capital city's region, with all progress, hasn't reach the EU average, as happened in other countries in the area, but only 75% of this (Figure 6.a). At national level, however, the capital region has a GDP per capita 60% higher than the country average. Development gaps between the capital city and the other regions tend to increase, the difference was in 2000 from 134,55% to 74,55%, and in 2014 from 160,94% to 67,97% (Figure 6.b).



(a) (b)

Figure 6. The evolution of GDP/inhabitant (PPS) of Bulgaria regions in percentage of the EU-28 average (a) and in percentage of Bulgaria average (b). Source: own elaboration according to [5] and [4]

Concerning Slovenia and Croatia, here we find similar situations in terms of GDP per capita relative to the EU-28 average. Regions containing the capital cities have higher values than the others and no significant changes have been recorded compared to the Community average, the values ranging from 57% to 98% in 2014 (Figure 7).

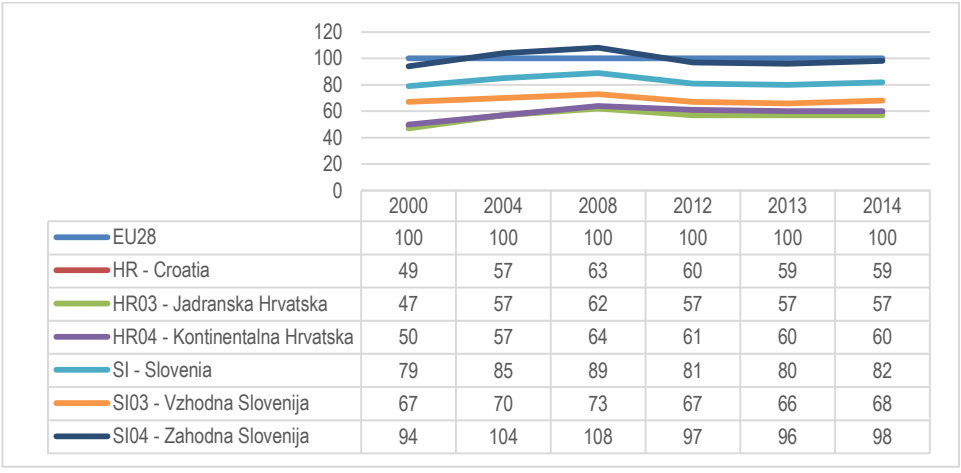
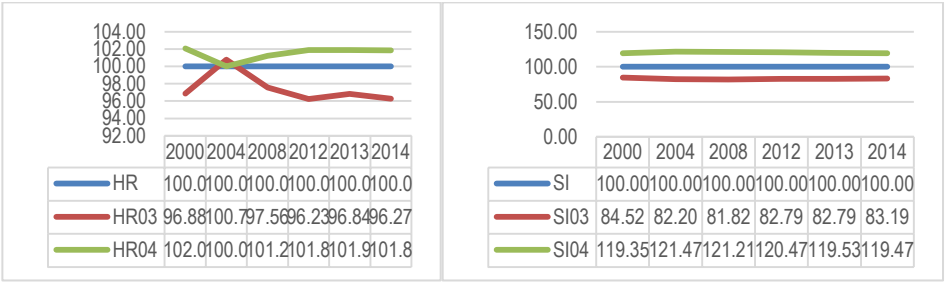


Figure 7. The evolution of GDP/inhabitant (PPS) of Croatia and Slovenia in percentage of the EU-28 average. Source: own elaboration according to [5]

At national level, development differences in Croatia are small, being also times when they did not exist (Figure 8.a). In Slovenia, the situation is slightly different, the difference being up to 20% compared to the average: 119,47% and 83,19% (Figure 8.b).



(a) (b)

Figure 8. The evolution of GDP/inhabitant in (PPS) of Croatia regions in percentage of the Croatia average (a) and the evolution of GDP/inhabitant (PPS) of Slovenia regions in percentage of the Slovenia average (b). Source: own elaboration according to [4]

As for the smaller countries that joined EU in 2004, they have GDP/capita values above 64% of the EU average. Cyprus and Malta have fluctuating values, these being the highest (over 80%) of the EU average. The Baltic countries have made notable progresses, the relative values compared to the EU-28 average almost doubling from 2004 to 2014, when they reached over 64% (Figure 9).

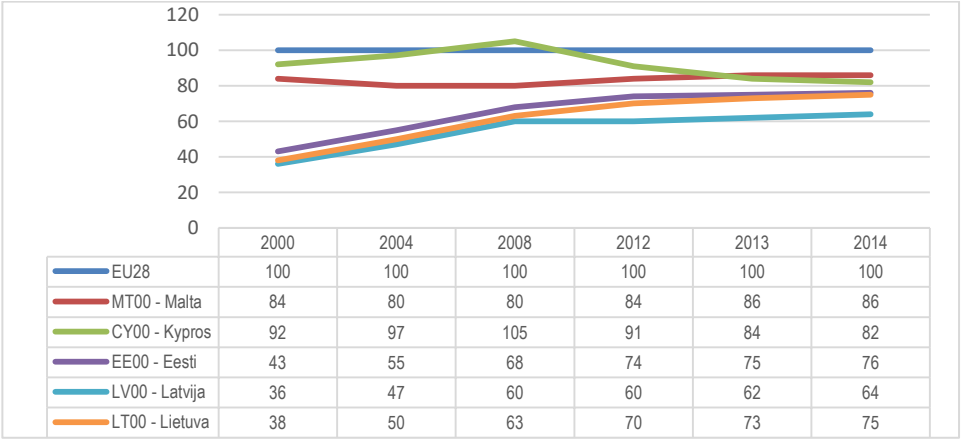


Figure 9. The evolution of GDP/inhabitant (PPS) of Malta, Cyprus, Estonia, Latvia and Lithuania in percentage of the EU-28 average. Source: own elaboration according to [4]

6. Conclusions

The analysis of the evolution of economy in regional profile raised the interest of the researchers, both from the theoretical and practical perspective in the frame of regional science, but especially of regional economy. The issue of regional development is a current topic also because the EU is still facing high regional disparities and is seeking to mitigate them.

As a result of the analysis made, we have concluded that the regional development gaps in the Central and Eastern European countries are still quite high. Compared to the EU-28 average, country values have increased, the smallest of them being in Bulgaria - 47%. At regional level, the values also came close to the EU average in all the analysed countries, except for Cyprus, where the values were already quite close to the average. With all the positive developments, there are regions that still have relatively low values compared to the average, the lowest values being 32% (in Bulgaria), 34% (in Romania) and 42% (in Hungary). Generally, regions that include capital cities have managed to record values above the EU average in many of the Eastern and Central European countries: Poland, Czech Republic, Slovakia, Hungary, Romania and Slovenia. In many cases, here are values well above the national average, going up to more than double. We have also calculated regional values taking as a basis the national average. We have found that in most cases regional disparities persist, and in Bulgaria and Romania they have even increased. Bulgaria, Romania and Hungary have the least developed regions, with the lowest values exceeding 60% of the national average. If we report the maximum value to the lowest one, we notice very large discrepancies in almost all the analysed countries: from a ratio of over 2:1 in Poland, Czech Republic, Hungary, Bulgaria to a ratio of over 3,5:1 in Slovakia and Romania. Baltic countries have made remarkable progresses, GDP/inhabitant relative to the EU average increasing significantly.

Regional policy contributes to decreasing the regional disparities, leading to an equilibrated and durable development within the EU. In the future the national and Community efforts must go also in the direction of decreasing national disparities from the regional level by helping the underdeveloped regions to increase the economic development and the competitive capacity.

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