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Romania disparities in regional development

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Abstract

Being created at the European Union suggestion in order to reduce the differences between territorial development, the developmental regions in Romania are statistical units type NUTS II. Even though they have more than 10 years since they have been created, we can observe a developmental hypertrophy in the Bucuresti-Ilfov region, which disposes of the most diversified infrastructure and the highest and qualified demographic potential. In opposition with this one, the East and South peripheral region, with a state management type of industrial heritage, are still under developed, the territorial developmental discrepancies continuously growing thus proving in our case that this new type of regionalism is inefficient.

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1. Introduction

In order to obtain a harmonic politics of territorial development compared to those in the European Union and financial support for the territorial profile development, Romania created 8 development regions.

By creating the development regions the following objectives were laid down in the article 2 from the 154/1998 Law, as follows:

- reducing the lack of balance between the regions by stimulating the well-balanced development by recovering the delay in development from the disadvantaged areas;
- preparing the institutional frame correspondent to the accession criteria to EU and the access to the structural funds;
- at regional level, correlating the government sectorial politics by stimulating the initiatives and capitalizing the local and regional resources in order to obtain a sustainable socio-economic development of regions;
- stimulating the interregional cooperation nationally, internationally and over the borders, the attendance of the regions to the European organizations, economic, regional and institutional development promoters.

According to the EU requirements and regulations, the national level of funds allotment refers to a too large surface and a great number of inhabitants thus creating the risk of centralized and preferential conveyance of funds for regional development. On the other hand, the lowest administrative rank, the county (the superior rank being the national one) is consider too small (in the number of inhabitants as well) in order to convincingly respond to the need of financial support so the EU recommendation was for us to create territorial units with a minimum of 2 millions inhabitants[1].

The regions created according to the 154/1998 Law [17], later modified through the 143/2003 Law, are not administrative units. They are formed by groups of counties in the territorial contiguity, being, in most cases, very

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heterogeneous, under every aspect (the natural frame, demographic, traditions, level of development, infrastructure). In Romania, the developmental regions work as statistical entities.

According to the EU classifications, the developmental regions in Romania are included in the NUTS II level (Nomenclature des Unités Territoriale Statistiques) (to NUTS I it corresponds the national territory, and to the NUTS III, the counties)[2].

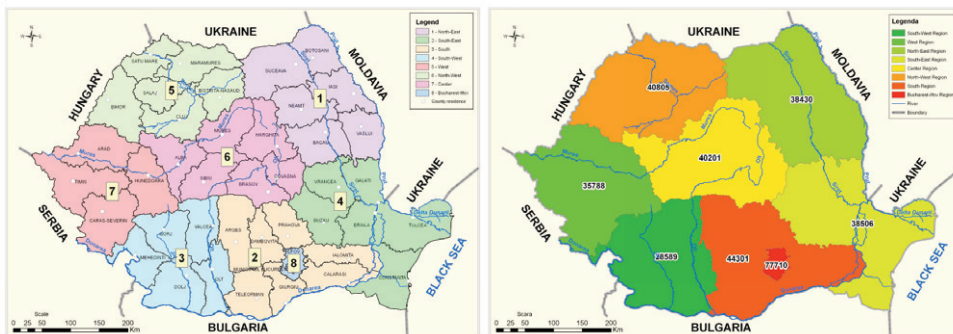


Fig. 1. The Regions of Development in Romania. 1 North-East; 2 South-East; 3 South-Muntenia; 4 South-West; 5 North-West; 7 Center; 8 Bucuresti-Ilfov (after Green Carta, The Regional Development Politics, Bucharest, Romanian Government, 1997).[19] (left).

Fig. 2 GDP/regions. Source: Romanian Statistical Yearbook-2008 [11] (right)

Each development region has minimum 2 millions inhabitants, exception being the West Region eith 1.959.985 inhabitants.

2. Methodology

In this case there have been applied the well-known research methods, subordinate goal, like the analytical method, the statistical method, the mapping and the model methods.

The analysis consists of selecting and describing a set of „measurements” indicators for the regional competitiveness, capable of showing the region's situation from the metric point of view (surface, number of inhabitants), but also from the attribute point of view (GDP/inhabitant, share of population with higher education, etc).

Through specialized maps there have been emphasized the regional disparities at singular and compound indicators.

Table 1. Romania. The Regions of Development. Quantitative characteristics

The Name of the Region	The constitutive counties	The region's surface (km ²)	The number of inhabitants	The rate of urban population(%)
The North-East Region	Suceava, Botoșani, Neamț, Iași, Bacău, Vaslui	36.850	3.685.393	40,6
The South-East Region	Vrancea, Galați, Buzău, Brăila, Tulcea, Constanța	35.762	2.852.480	54,6
The South Region	Ialomița, Călărași, Giurgiu, Teleorman, Prahova, Dâmbovița, Argeș	34.453	3.380.516	39,7
The South-West Region	Olt, Dolj, Vâlcea, Gorj, Mehedinți	29.212	2.332.194	43,8
The West Region	Caraș-Severin, Timiș, Arad, Hunedoara	32.034	1.959.985	60,9
The North-West Region	Cluj, Bistrița-Năsăud, Maramureș, Sălaj, Satu Mare, Bihor	34.159	2.744.008	51,1
The Center Region	Alba, Brașov, Covasna, Harghita, Mureș, Sibiu	34.100	2.521.745	58,3
The Bucuresti-Ilfov Region	București	1.821	2.221.860	87,9
România		238.391	21.598.181	52,7

Source: Romanian Statistical Yearbook, 2002) [11]

From these models, we have chosen the one applied by the Applied Economy Group (2007), taking out of it only the “hard” type indicators selected from the structural indicators recommended by the Lisbon Agenda [13].

According to the Lisbon Agenda, three main groups of structural indicators can be seen:

- A. Economic indicators (EI) (the general economic environment and the economic reforms);
- B. The Socio-demographic indicators (SI) (employment and social cohesion);

C. Research-innovation indicators (TI) (aids).

From the economic group of indicators (A) there have been analyses upon the following: GDP/inhabitant, the GDP growth rate, the labor productivity (GDP/occupied population), the net exports, directs foreign investments, the number of companies/1000 inhabitants and the net income/inhabitant;

The social indicators (B) taken are: the employment rate of labor, average life index (% of national average) and rate of employed population with higher education level.

The Innovation Research indicators (C) (aids) used are: costs of research (development) (% of GDP), employment in quaternary sector (% of total) and the number of patents registered (%of total requests).

The Regional competitiveness indicator (IC) represents the weighted average of the three main groups of indicators, the model Applied Economics Group (2007).

Following the GEA model we present the formula which calculates the compound value of variables used for the economic indicator.

$$EI = (30 A1 + 10A2 + 10A3 + 10A4 + 10A5 + 30A6) / 100$$

The compound value of the socio-demographic compound is shown by the formula:

$$SI = (30B1 + 30B2 + 20B3 + 20B4) / 100$$

The compound indicator is being calculated after the formula:

$$TI = (40C1 + 30C2 + 30C3) / 100$$

The index of regional competitiveness (IC) is a result from the weighted average of the economic indicator (EI) , of the socio-demographic relief (SI) and that of innovation-research (aids) (TI)

$$[CI = (40*EI + 30*SI + 30*TI) / 100]$$

In the GEA model. The economic model holds the highest percentage (40%), the other two having equal values (30%).

3. The analysis of competitiveness factors

3.1. The gross domestic product/inhabitant (GDP)

In recent years Romania has registered an outstanding growth of the GDP (between 2002 and 2006, the GDP volume has doubled, rating an yearly growth of over 6 % in 4 years, at real levels).

The GDP structure given on resource categories shows that the highest contribution to the GDP is the industry (over 25%), the most important place being occupied by the manufacturing industry. The next after the industry are the real estate transactions (over 13%), the service activities performed toward the enterprises and on the third place we find the trade.

Table 3. The evolution of GDP/inhabitant/region (lei)

The Years	2002	2003	2004	2005	2006	Euros(2006)
Country total	6.974,9	9.084,0	11413.5	13.362,8	15.967,6	4000
North East Region	5.057,4	6.521,5	7872.0	8.907,6	10.295,8	2574
South-East Region	6.288,8	8.018,6	10470,2	11.541,7	13.569,8	3392
South Muntenia Region	5.613,3	7.294,9	9407,2	11.068,5	13.374,6	3344
South-West-Oltenia Region	5.415,3	7.547,0	9367,2	10.371,1	12.463,2	3116
West Region	7.629,5	10.182,8	13020.1	15.064,7	18.570,1	4687
North-West Region	6.690,7	8,639,7	10901.2	12.538,6	14,946,6	3736
Center Region	7.332,0	9.425,5	11458.8	13.097,6	15.920,2	3980
București-Ilfov Region	14.149,1	18.276,5	22908.7	29.572,6	35.012,1	8753

Source: Romanian Statistical Yearbook , 2008 [11].

The GDP/inhabitant provides data about the region's economic performance reflected on an inhabitant. Highlight regional differences are important, the highest values being recorded, naturally in Bucharest-Ilfov Region. Western region follows. The third group is the center and the North Western Region, and the fourth group is the country's southern and eastern regions (Eur-euro parity is 4/1, the average current during the last year-2009).

We see a gap in the socio-economic area of the country, the western party (macro region 1) is much more developed in relation to the east of the country (macro region 2) lagging behind. Than the national average, by 15976.6 USD/capita (2006) (about 4000 Euro), counties in east and south of the country are below this value. This east-west duality is not a unique situation in our country, the characteristic and Central European countries (eg Ungaria: Északkelet Magyarország – Nzugat Dunántúl), Slovakia (Eastern Slovakia-Bratislava Region), Austria (Burgenland – Oder Österreich) each

characterized by this duality space in terms of level of development [3, 6].

On the category of resources, the highest growth in GDP structure has been construction, real estate and financial intermediation sectors that rely on investment.

3.2. The growth rate of GDP

This indicator presents the specific form dynamic economic region. In the up-coming years will witness explosive growth in the services and their share in national GDP and regional levels.

In the evolution of the value of GDP percentage, the highest annual increase was recorded in 2004, in actually after the first economic boom in foreign investment on privatizations. After 2005, all regions experienced a growth exceeding 6% in 2007 (national average). The highest increase was recorded in the capital and the Ilfov County, which began in 2003 after the decline of an upward trend with values exceeding 7% per year.

Bucharest-Ilfov region was only one since 2004 has increased each year above the national average.

In 2007, the growth was 7.1 % compared to 6.2% the national average and at its economic advance in 2008 to slow to 6.8% and Romania to be 6.3%.

Both in 2007 and in 2008 (estimated), the West region will occupy the last place ranking, with increases of 5.7% and 5.9%.

In 2006, the region's economy grew by 5.8%, after the 2003 and 2004 advanced by 2.6% and respectively 8.5%. Tempered growth is due to a situation of stability, high investment and development projects are fewer, and they belong in other parts of the country. Most projects are in an advanced phase, the comparative advantages (cheaper land, lower-cost human resources) are not very expressive, as these facilities can be found elsewhere in emerging economies.

Table 4. GDP growth rate (%) at national and regional level (changes percentage over the previous year)

Rate in %									
The years	2000	2001	2002	2003	2004	2005	2006	2007	
Total	2,1	5,7	5,1	5,2	8,5	4,2	6,0	6,2	
North-East	-2,5	8,3	5,2	6,7	5,7	2,2	5,8	6,1	
South-East	-2,7	3,2	5,3	5,0	10,3	2,6	5,9	5,9	
South	-3,3	6,2	6,3	6,5	10,6	3,7	6,0	6,0	
South-West	-1,0	1,9	0,5	11,3	9,1	2,6	6,1	5,8	
West	-9,1	8,5	6,2	9,6	8,5	5,6	5,8	5,7	
North-West	0,9	4,7	6,8	8,0	6,3	2,6	5,4	5,9	
Center	2,7	3,1	7,4	4,7	8,4	3,8	5,7	5,9	
Bucharest-Ilfov	23,4	8,1	3,4	-1,9	8,7	7,3	6,6	7,1	

Source: Romanian Statistical Yearbook, 2008 [11]

The Western, North-Western and Center regions had a more advantaged position, closer to western markets and less dependant on primary sector, benefiting more from the direct foreign investments.

The lowest growth in 2005 was recorded in North-East by 2.2 %, South-East, South-West and North West by 2.6%. In 2006 and 2007, GDP growth rate was also sensitive to the regions (see Table 4). The more developed regions become more and more developed, this result and the growth of GDP, so that the gap between regions does not appear to decrease, but on the contrary is in a continuous growing.

3.2.1. GDP/inhabitant. Comparisons

It highlights the sensitive possibilities for comparison, the gap in the regional development. In 2005, the GDP indicator per capita expressed in purchasing power based on 271 regions in EU-27, comprises a scale of values that ranged an average of 24% in the North Eastern region, at 303% on average for Inner London area of British capital. These data are provided by the European Statistical System Eurostat, the Statistical Office of the European Communities. According to these data, a region of 6 is GDP per capita at 125% of the EU average for the EU27 [12].

The highest values were obtained by the Inner London region (303 % of average), the Grand Duchy of Luxembourg (264%) and the Brussels region (241%). Among the 42 regions exceeding the 125% of GDP in Eu-27 average are 8 regions in Germany, 5 each from the Netherlands and United Kingdom, 4 from Italy and Austria, 3 from Belgium and Spain, 2 from Finland, one region of the Czech Republic, Denmark, Ireland, Greece, France, Slovakia, Sweden and Luxembourg.

The lowest level of GDP per capita are 15 regions in Bulgaria, Poland and Romania. The lowest values are for the

North-Eastern region of Romania (24% of EU average), and Yuzhen Severozapaden Tsentralen in Bulgaria (both 27%) [8].

The comparative data, although applied to only 30 regions (out of 271) located at each end, it clearly highlights the spatial disparity in the level of West-East development, which is characteristic throughout the Community.

The first 15 positions are occupied mostly by the regions that include major European capitals (Ile de France, Brussels, Vienna, Prague, and Stockholm) or regions with large urban centers and industrial traditions (growth poles) and complex economic profile, as would Darmstadt, Utrecht, Munchen, Hamburg etc.

Last 15 sites are regions of Eastern Europe and some parts of Central Europe, but none of the regions they belong to the capitals of these countries (Bucharest, Sofia).

3.3. Foreign direct investment in Romania (FDI)

The Foreign direct investment means a lasting investment relationship between a resident entity and a non-resident entity and usually involve the exercise by the investor to influence the management of the company has invested” (Report BNR, 2007).

Are considered foreign investment, paid-up capital, loans between investors and the firm has invested, reinvested profits respectively [5].

Types of FDI are:

- greenfield (greenfield investment);
- mergers and acquisitions (acquisition of all or part of an undertaking by a foreign investor);
- development companies (increase FDI holdings in an enterprise resident).

In 2007 there was a level of 7250 million (net inflows) of which 31% ownership, 18% and 51% net income reinvested net credit received by foreign investors in the group (group of companies, fund allocation to parent company to subsidiary).

FDI at the end of the final balance was 42770 million. Opposite the year 2006, the FDI has increased from 34512 billion euros up to 42770 million, a rate of 19.4%.

If we look at the stock on the main economic activity, we found that the most attractive economic industry is manufacturing (32.9 %), in its metallurgy, food beverage and tobacco (5.2%), petroleum processing, product chemicals, etc. On second place are the financial intermediation and insurance, telecommunications activities, services rendered to enterprises. Investments in tourism are relatively low, as a reflection of roads and poor rail and a poor management. Although industry is a branch with a lower weighting in the EU economy, Romania has still a considerable share of this industry, an industry with significant export participation. Foreign investments have a major role in both economic growth and for exports [8]. Most companies with foreign capital are focused on domestic markets (intra-European) and the CIS. Firms with foreign capital contribute to export the country with 70.8% and in terms of imports; their contribution in 2007 was 59.2 % of total imports, thus having a positive impact on Romania's trade balance (ratio NBR, 2008).

Distribution of investments by country of origin shows dominance on the Romanian markets for firms in the Community, of all foreign companies that invested in Romania.

For the most part, foreign direct investment from EU countries or from countries throughout Europe, the first of Austria (food industry, banking and insurance, building materials, sanitation and waste management, etc...), And Netherlands (food, beer, commercial), Germany (trade, transport), France (construction materials, telecommunications), Greece (banking) etc.

For these reasons, we confirm the importance of Romania's EU accession, as investors in the EU is strongly facilitated to enter the Romanian market [10].

The most important recipient of FDI is Region Bucharest-Ilfov, where a huge concentration of foreign capital generates economic growth well above the average country, a very low unemployment, that a labor shortage. The largest amounts invested appear in manufacturing, retail trade and services firms.

In 2006, after the Bucharest-Ilfov second place was the Central region with over 8.3%, South-Muntenia the third place with a share of 7% of total investment.

3.4. The Number of small and medium enterprise with foreign capital

Registration of foreign-owned firms shows a steady growth from 1991 to today, their territorial distribution is uneven.

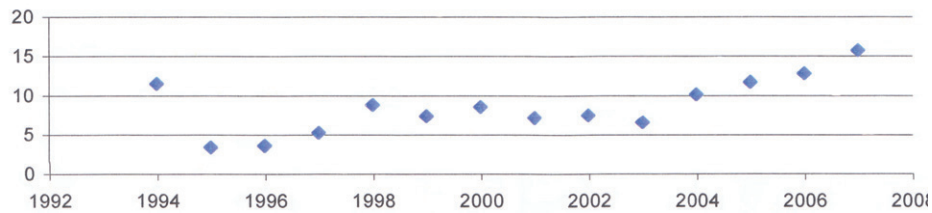


Fig. 7 Registration of companies with foreign participation 1991-2007. Source: NIS, Monthly Statistical Bulletin , December 2007 [24]

The most numerous foreign companies were registered after 2004, reaching 2007 to 15270. Most companies registered in 2008 were in Bucharest Municipality (281 by November 2008), in Timis county 54, 52 Bihor, Cluj 45, Ilfov 44, Arad 31, Constanta 31, 22 in Brasov and Prahova, and 19. Sibiu.

There has been more than 10 companies with foreign capital or foreign capital participation in the counties of Mures, Harghita, Iasi, Arges, Dambovita. Regarding the amount of capital invested, it has fared even more dramatic after 2004, when the total issued capital with foreign participation has exceeded 2 billion euros and in 2008 it reached 3 billion.

In 2007 and until the third semester of 2008, with the highest levels of foreign participation in equity of companies were registered in Bucharest and the counties with large urban centers such as county Brasov, Cluj, Ilfov County, with values much lower, but above the average for the center being Timis, Sibiu, Arad.

The largest number of companies is registered in the capital city and Ilfov County, followed by Northwest and central regions, the fewest companies being registered in South-Muntenia and South-West. There are some counties with a very small number of companies such as Calarasi, Ialomita, Vaslui and Vrancea [19].

Table.9 Net income of the population by region (GDP)

	2002	2003	2004	2005	2006	2007
North-East	431,1	432,1	542,2	655,9	732,6	812,3
South-East	372,5	477,3	582,7	704,9	787,4	873,1
South Muntenia	369,5	469,3	578,9	700,3	774,5	858,7
South-West	401,1	503,8	605,9	732,9	821,1	901,3
West	367,5	479,3	594,7	728,8	817,3	909,0
North-West	339,0	445,7	555,4	683,4	765,6	848,9
Center	344,4	444,6	548,7	671,1	749,7	822,9
Bucharesti-Ilfov	475,9	593,0	736,2	902,3	1.001,8	1.091,4
National Average	378,9	484,0	598,6	731,0	817,0	902,0

Source: Romanian Statistical Yearbook, 2008 [11]

3.5. Net income/capita

3.5.1. The cost and quality of labor

According to Eurostat, on July 1, 2005 the minimum wage in Romania is 86 euros, slightly higher than in Bulgaria (77 euros), but much more lower than the recently joined EU countries (Malta-565 Euros, The Czech republic-239 Euros, Hungary-229 Euros, Poland-207 Euro, etc.). (SOP Competitiveness, 2005). The disadvantage is still present in the Romanian economy for at least 5 to 8 years [12].

Regarding labor costs by region, we find that it depends on the sectors that are dominant in the region. Thus, labor costs are lower in regions where the share of employment in agriculture is high. In regions where services are of major importance, labor costs are even higher.

In this respect, it is useful to consider how indicator is net earnings in the last six years, broke down by region of development, its development and regional disparities.

With regard to net earnings of the population, we found a significant increase in the last six years. Although differences between mean values recorded within and between regions in the east of the country are not too high, however, are considerable. These differences were relatively stable in 2005-2006 (10%)

The net earnings indicator is closely correlated with the population share of different sectors of the economy. In regions with a high proportion of agricultural population, the value is lower.

The most significant difference is highlighted in the Bucharest-Ilfov region and in North East, but this difference is not relevant because the capital region is the largest urban agglomeration which concentrates all economic advanced sectors, concentrating a large number of firms over 63% of international foreign investment.

3.6. The research potential for development and the research costs

The light is highlighting its efforts to support regional trends of modernization and economic efficiency of economic activities. In order to quantify this indicator we were taken into account the share of GDP spent on research, the share of employment in the quaternary and the number of patent applications registered in all applications.

The research and development activities continue to be conducted for more than 60% in public sector and 40% in the private sector including the NGOs [21].

In 2003, the number of institutions and units that conduct research and development programs, including universities, was 719, of which: 120 public institutions under the Ministry of Education and other ministries, and the Romanian Academy and the Academy of Agricultural Sciences and Forest (of which 37 are national research and development institutions), 86 higher education institutions, 25 private non-profit and 488 companies (of which 276 are research and development units and 212 are traders who have in their activities the research and development-SOP Competitiveness, 2005).

3.6.1. Expenditure for research and development (CD)

Expenditure activities (R) research and development have an upward trend, but are still far from reaching 1% in the public sector and 2% of GDP in the private sector, especially because local companies lack the capital that adequate human activities, while foreign funds are not allocated for research and development in Romania.(they come in hope of obtaining comparative advantages such as low cost labor, cheap natural resources, educated workforce, etc.). In 2007, the share of GDP spending for research was 0.42%, a much lower value than countries with advanced economies.

As regards total expenditure for conducting research and development, in 2003 it exceeded 762,064,000 lei (190,516,000 euros), and thereafter took an upward trend. In 2004, these funds have exceeded 962,827,000 (240, 706,750 Euro) and in 2005 reached more than 1.183.650 000 lei (295 914 750 Euros). In 2006, total research and development expenditures exceeded 1 565 802 000 lei (391 450 500 Euros) (average parity: 1 Euro=4 Lei).

In the allocation of these amounts by region, we can see that there are serious gaps. It can be seen overwhelming domination of capital, but there are some regions that have relatively large funds allocated for research and development, such as the South, the North West and North East. The Western Region is a very favorable position for all items (GDP, Unemployment, SSI, etc), but occupies an inferior position in terms of number of employees and costs relating to research and development.

Table 17.The number of CD units (research and development) and researchers in scientific fields in 2003 (the classification was performed after each unit's field of research that held its activities of CD in 2003)

Area of activity	Number of units	Number of researchers
TOTAL, out of which:	719	25.968
Natural and exact sciences	85	4.403
Engineering and technological sciences	405	13.971
Medical sciences	66	2.268
Agricultural sciences	103	1.311
Social sciences	37	2.590
Human sciences	23	1.425

Source: Romanian Statistical Yearbook, 2004 [11].

3.6.2. Employment in research and development sector

The existing research potential in 2003 consisted of 39,985 people, including 25,968 researchers.Of all researchers, about 9200 were certified researchers, and doctors were about 8400 scientists.

The finding of a significant human potential, employed in establishments with the CD activity in all fields of science and technology, in all regions of the country, giving more weight, approx 53% in technical sciences and engineering, which is a prerequisite for adaptation to favorable demand to the economic environment.

In the country's capital is concentrated most research centers, which reflects the policy of centralization in the financing of research and development field. Surprisingly a large number of research centers in the North East region, compared to the overall development of the region.

Statistical data primarily reflect the activities of major university centers, with tradition and reputation in research and development. Bucharest is the strongest, followed by Cluj and Iasi. In the counties of Arges and Prahova are two industrial centers, but Pitesti and Ploiesti University, the research was conducted in petrochemical and engineering.

Research expenditure ratio of gross domestic product of regions is low, below the national average (0.42%), except

region Bucharest-Ilfov (1.53%)

There is an inverse correlation between the large number of researchers in the North East and Central regions, and expenditure on research.

Table 18. The distribution by region of research units and high skilled persons (CD, 2004)

	Number of units	Percentage (%)	Personal CD (full-time equivalent)	Percentage (%)
TOTAL, out of which:	719	100	33.077	100
North-East	81	11	2.503	8
South-East	34	5	1.227	4
South M.	67	9	3.689	11
South-West	40	6	1.715	5
West Region	52	7	2.222	7
North-West Region	73	10	1.937	6
Center Region	80	11	2.850	9
Bucharest-Ilfov region	292	41	16.934	51

Source: Romanian Statistical Yearbook, 2004 [11].

Table 20. Aggregate economic indicator, by region (EIR)

Indicator name	North-East	South East	South-M	South-West	West	North West	Center	Bucharest Ilfov
A1 Labor productivity (% national average)	60,73	83,93	79,59	72,08	113,59	92,04	104,15	200,30
A2 GDP growth rate - %	5,8	5,9	6,0	5,8	5,7	5,9	5,9	7,1
A3 FOB export value, the national average	7,93	13,70	11,23	5,92	15,90	10,86	10,99	22,16
A4 FDI-% of total investments	1,6	5,7	6,9	3,2	5,5	4,5	8,3	64,3
A5 Number of IMM by regions per 1000 inhabitants-the national average %	64,33	88,7	38,99	67,03	103,69	107,43	105,13	224,61
A6 Net income per capita - % of national average	89,61	96,37	94,79	100,5	100	92,61	91,76	122,6
Value IER	53,06	65,49	58,61	59,64	77,15	68,26	71,80	128,66

Source: calculated on the basis of the Romanian Statistical Yearbook, 2008 [11].

Formula: $EIR = (30A1 + 10A2 + 10A3 + 10A4 + 10A5 + 30A6) / 100$ [13].

Table 21. The aggregate indicator of socio-demographic regions (ISR)

Code	Name	North-East	South East	South-M	South-West	West	North West	Center	Bucharest Ilfov
B1	Employment rate(%)	61,3	54,7	60,5	59,3	59,6	57,0	55,1	62,4
B2	Average life index (%of national average)	99,41	99,26	100,0	99,16	98,31	98,31	99,72	102,24
B3	Employment rate with higher education level (%)	9,4	10,4	8,9	11,1	13,2	10,7	12,1	30,1
	Value ISR	48,1	45,8	47,7	47,9	48,7	46,7	46,2	57,4

Source: calculated on the basis of Romanian Statistical Yearbook , 2008 [11].

Table 22. Aggregate indicator research and development (technology) (ITR)

Code	Name	North-East	South East	South-M	South-West	West	North West	Center	Bucharest Ilfov
C1	R&D expenditure as % of GDP	0,31	0,16	0,40	0,22	0,24	0,33	0,17	1,53
C2	Employment in the Quaternary-% of total	8	4	11	5	7	6	9	51
C3	Number of patent applications registered-% of total applications	21,5	9,5	6,3	6,4	7,9	9,5	7,1	31,3
	Value ITR	8,97	4,11	5,98	3,29	4,56	4,78	4,89	25,30

Source: calculated on the basis of Annual Report of National Romanian Bank, Bucharest, 2008 [23].

ITR Formula= $(40C1 + 30C2 + 30 C3) / 100$

ISR formula= $(40B1 + 30B2 + 40B3) / 100$ [13].

The North-East situation is atypical, with a strong growth pole (science) with a potentially high economic and technological innovation, but with outlying rural areas, whose integration is becoming increasingly difficult, amplifying the intra-regional differences.

Synthesis indicators of regional competitiveness [13]. Based on aggregated indicators of competitiveness in the regional hierarchy of regions can be established synthetic multi-criteria. To this end we used data recorded for 2006, out of dynamic data (GDP growth rate) which were calculated for several years.

Obviously, the highest value of socio-demographic indicator is the Bucharest-Ilfov region, followed by West and North-Eastern region, the lowest value accounting for South-East and Central region due to lower employment rate.

The aggregate research and development indicator is the largest in the capital region, the following region being the North-East, respectively South Muntenia. The lowest values are registered in South-West and South-East. Regarding this indicator, no region has a high performance.

The synthetic aggregate competitiveness indicator (CI) was calculated by the formula:

$$IC = (40 \cdot IER + 30 \cdot ISR + 30 \cdot ITR) / 100, \text{ where:}$$

IER-aggregate economic indicator, I, ISR-aggregate indicator of Socio-demographic and ITR-pointer aggregate research and development (technology), by region.

Table 23. Synthetic aggregate regional competitiveness indicator (CI)

Regions	North-East	South East	South-M	South-West	West	North West	Center	Bucharest Ilfov
IER	53,06	65,49	58,61	59,64	77,15	68,26	71,80	128,66
ISR	8,97	4,11	5,98	3,29	4,56	4,78	4,89	25,30
ITR	48,1	45,8	47,7	47,9	48,7	46,7	46,2	57,4
IC	38,34	41,16	39,54	39,20	46,83	42,59	44,04	76,27

Source: calculated on the basis of Romanian Statistical Yearbook, 2008 [11].

Table 24. Comparison of IC ranking with GDP ranking, 2006

Name of region	Value IC	Ranking IC	Gdp per capita / RON	Gdp ranking / inhabitant
North-East	38,34	8	10.295,8	8
South-East	41,16	5	13.569,8	5
South-Muntenia	39,54	6	13.374,6	6
South-West	39,20	7	12.463,2	7
West	46,83	2	18.570,1	2
North-West	42,59	4	14.946,6	4
Center	44,04	3	15.920,2	3
Bucharest-Ilfov	76,27	1	35.012,1	1

Source: Statistical Yearbook of Romania , 2008 [11].

Scattering (the gap between the capital region and other regions) is such that IC value of the region of Bucharest-Ilfov exceeded 76, which is two times the amount recorded in the North-East.

It is obvious that the region Bucharest-Ilfov affects the entire country in a positive way. The value calculated at national level is 51.22, not even one region exceeding the national average, heavily distorted by economic and demographic concentration of capital and its surroundings.

The rating shown is similar to that established by the Group of Applied Economics (Handbook of Regional Competitiveness, 2006), with a linear correlation between the value of GDP per capita and aggregate synthetic indicator of regional competitiveness (IC), established by us.

4. Conclusions

As a first conclusion that is generated is the hypertrophy overheads Bucharest-Ilfov, deviating significantly from the other seven regions, both by population, the high degree of absorption or resources development. In addition to these a central role of redistributor of national income and the concentration of power in decision-making role in the economic faith of other regions.

The most competitive regions are in central and western country, with higher development level even between the two world wars.

They are also physically closer to the markets in Western Europe, quickly assimilating European spirit (tolerance, decentralization, competition, etc against a more expressive ethnic diversity compared to other regions).

The capital and the first rank cities in the national hierarchy (Iasi, Galati, Constanta, Craiova, Timisoara, Brasov and Cluj-Napoca) are engines of regional competitiveness, Romanian economic development in the last 20 years being urban-style by excellence (population concentration, production and consumption). Regional competitiveness in Romania is

based on industrial production in comparison with the western part of the continent, which is the engine of regional development services.

Upon the development gaps at regional levels. Intra-regional disparities are more pronounced, rural areas and small towns are significantly more far away than compared with the large cities [20].

A regional disparity, highlighted on the competitiveness index is directly correlated with the value of GDP per capita at regional level, resulting in the same regional anarchy.

The rural becomes even more rural (less developed), and large urban concentrations draw with increased power the economic strength of the regions.

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Abbreviations

NIS- National Institute of Statistics

NBR-National Bank of Romania