COMPETITIVENESS DYNAMICS IN THE ROMANIAN REGIONS

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Abstract

Regional competitiveness is a topic of major interests among researchers and decision makers of the European Union and of the Member States, lately especially in connection with the economic and social cohesion and subsequent policies. Many attempts were done over years to define it, to identify its key factors and to assess it, with the overall aim of designing and implementing adequate policies to reduce the development gaps of the laggard and less prosperous regions of Europe.

Based on the reports on Regional Competitiveness Index, the paper presents the latest evolutions of the overall competitiveness of the Romanian regions and of its key factors. The findings are not hopeful: except for the București-Ilfov Region, in the last two rankings of RCI (2013 and 2016), all the regions of Romania were ranked among the last in the European Union, and the Sud-Est Region was ranked penultimate among the EU regions for two periods in a row. Only the most developed regions of the country have slightly improved their ranking between 2013 and 2016: Centru, Bucuresti-Ilfov and Vest, while the others stagnated or worsened their rankings. In the case of competitiveness dimensions, most of the Romanian regions have improved their rankings regarding the efficiency dimension (except for Nord-Est and Sud Muntenia), while regarding the most dynamic component of RCI, namely the innovation dimension, most of the regions either stagnated, or worsened their rankings (București-Ilfov substantially), except for two regions that have also improved their overall rankings (Centru and Vest). Such findings call not only for a re-examination of the way the regional policy is implemented in Romania, but also of its inter-connections with other policies enforced at national, regional/county and local levels, in order to create the

much necessary synergies for development where they are missing or to unlock the ones that are blocked.

Keywords: regional competitiveness, regional competitiveness index, competitiveness dimensions, Romanian regions

JEL Classification: 018, R11, R19

Introduction

Regional competitiveness is a topic of major interests among the decision makers of the European Union and of the Member States, lately especially in connection with the economic and social cohesion and subsequent policies. Increasing competitiveness of the laggard and less prosperous regions of Europe is key for achieving the goal of cohesion, especially in the context of the Monetary Union and of integration of the New Member States (Martin et al., 2004), which, in their turn, induced new theoretical approaches in economics that assign a fundamental place to the localization of economic activities and to the development of regional economies (Martin, 2005).

Moreover, the achievement of Europe 2020 goals regarding the smart, sustainable and inclusive growth has depended, depends and to a great extent will depend on the situation of the European regions, and according to the EU vision the competitive regions are those regions able to anticipate and successfully adapt to the domestic and foreign economic and social challenges (Lambregts et al., 2008).

1. Definition and Concept Issues

Nationally, competitiveness involves a *territorial dimension*, the localization of competitive economic agents being usually concentrated within certain areas of the national territory. A study on the key factors of *regional competitiveness in Europe* (Martin *et al.*, 2003) defines it as "the capability to produce goods and services that meet the market requirements, at the same time maintaining high and sustainable incomes" or, more generally, as "the capability of regions to generate relatively high incomes and employment when facing foreign competition". Two broad approaches of regional competitiveness were identified (Martin *et al.*, 2003): i) as *aggregate of companies' competitiveness* – the basic assumption being that the interests of the companies and of the regions where they are located are always convergent, which is hard to support given the fact that the companies seek for productivity and profits, while regional competitiveness

requires also taking into account the employment, the institutional milieu and the market structure; ii) as *derived from the macroeconomic competitiveness* – the limits of such an approach concerning the fact that some laws that govern foreign trade do not apply at sub-national level (the exchange rate dynamics and the wage-price flexibility either do not work properly, or do not exist at regional level), while, conversely, the inter-regional migration of mobile production factors (capital and labor) may turn into a real threat for the regions (Chilian, 2013).

However, many other studies consider as unrealistic such an approach of regional competitiveness, since the regions are neither mere aggregations of companies, nor lower scale models of national competitiveness (Gardiner *et al.*, 2004). In this respect, Camagni (2002) argues that regions compete one against each other on the basis of *absolute advantage* rather than on that of comparative advantage, and that a region has an absolute competitive advantage when it also has technological, social, institutional and infrastructure assets external to the companies, but of which they benefit from, and which confers high productivity to the respective region.

Another way to define regional competitiveness integrated different definitions of competitiveness with the concept of sustainability, within the polycentric vision provided by the Spatial Development European Program, elaborated in 1999 (Prezioso, 2008). Closely connected to this aspect is the definition of regional competitiveness proposed by the EU Regional Competitiveness Index 2013, which integrates the perspective of both the companies and the persons operating/living in a region, balancing the goals of business success with those of personal well-being: "regional competitiveness is the ability of a region to offer an attractive and sustainable environment for firms and residents to live and work", sustainability being the capability of a region to provide an attractive environment, both on long and on short term (Dijkstra et al., 2011; Annoni and Dijsktra, 2013). In this way, it responds to the discussion that gross domestic product (GDP) is insufficient by itself and should be complemented by a broader range of measures (Annoni et al., 2016).

2. Assessment of Regional Competitiveness. Rankings of the Romanian Regions among the European Union Regions

Because of its complexity and because of its peculiarities, regional competitiveness raises significant problems regarding assessment. Two of the main questions that must be answered when assessing territorial competitiveness are: 1) how can it be measured?

and 2) by what means it may be improved? The answers to such questions leads to building up different systems of indicators and models to assess the regional competitiveness itself, as well as the inter-connections among indicators and/or models.

In order to answer these questions, in the European Union it was elaborated *Regional Competitiveness Index (RCI)* for the NUTS-2 regions, based on the methodology used by the World Economic Forum, which publishes yearly the Global Competitiveness Report. This index has 11 pillars and 79 de indicators organized by three dimensions (*basic competences*, *efficiency factors* and *innovation factors*), covering a broader range of factors than the purely economic aspects. The pillars of RCI are the following (European Union, 2010; Annoni and Dijsktra, 2013): *basic competences*: i1) quality of institutions, i2) macroeconomic stability, i3) infrastructure, i4) health, i5) quality of primary and secondary education; *efficiency factors*: ii1) higher education and lifelong learning, ii2) labor market efficiency, ii3) market size; *innovation factors*: iii1) technological readiness, iii2) business sophistication, and iii3) innovation.

The three RCI dimensions – Basic, Efficiency and Innovation - are linked. The i1)-i5) pillars are more important for the less developed regions, while the iii1)-iii3) pillars for the more advanced regions (especially for those with a very high development level), but also for the regions in transition from a lower to a higher development level. A region with a good performance in the Innovation group is expected to have a good performance in the Basic and Efficiency groups as they are instrumental in increasing levels of competitiveness. In this sense, Basic and Efficiency aspects can be seen as necessary conditions for good levels in Innovation aspects. Conversely, regions with poor or insufficient levels in the Basic group cannot be expected to perform well in the other two groups. It is assumed that as regions move along the development path, their socioeconomic conditions change and different determinants become more and more important for competitiveness. As a result, improving the competitiveness of more developed regions will require other priorities than for a less-developed region (Annoni and Dijkstra, 2013; Annoni et al., 2016).

This is reflected by a weighting system that takes into account the stage of development. In the 2013 and 2016 editions of the RCI, the EU regions were divided into five development stages based on

 $^{^{13}}$ The 2016 edition; the 2013 edition has included 73 indicators, and the 2010 edition included 69 indicators.

their average GDP per head in purchasing power standard (PPS) expressed as an index (EU-28 = 100). In more than 70% of the cases, the development stage remained unchanged from one period to the other, while about 8% of the regions improved their development stage (from one class to the one immediately above it - regions from Austria, the Czech Republic, Germany, Poland, Romania and Slovakia – Annoni *et al.*, 2016).

Comparing the RCI over time is complicated because each edition of the index incorporates improvements and slight modifications, which do not affect the overall structure of the index, but they limit the possibilities to measure change over time (new indicators became available at the regional level, other indicators are not updated or no longer fit the statistical framework of the index, methodological improvements, and changes in the NUTS regions). Nevertheless, the method has not changed substantially and there is a high degree of continuity in the indicator list. However, the changes in a region's ranking over time may not be always meaningful, because the rankings are based solely on the sequence of the scores (the ordinal properties) and do not take into account the actual differences between scores (Annoni et al., 2016). In most of the EU countries (Austria, Bulgaria, Czech Republic, Denmark, Spain, Finland, Hungary, Poland, Portugal, Romania, Sweden and Slovakia), the regional scores were quite stable from 2010 to 2016.

In the last two rankings of RCI (2013 and 2016), all the regions of Romania, except for the Bucureşti-Ilfov Region, were ranked among the last in the European Union (ranks higher than 240, from among 262/263 rankings – Appendices 1 and 2), and the Sud-Est Region was ranked penultimate among the EU regions for two periods in a row. Considering the above-mentioned observation regarding the meaning of ranking evolution, we must however say that three regions of Romania have slightly improved their ranking between 2013 and 2016: Centru, Bucureşti-Ilfov and Vest, which happen to be the most developed regions of the country. The others have stagnated on very low rankings, or even worsened their rankings a little bit (Sud-Est, Sud Muntenia and Sud-Vest Oltenia). As compared to the other New Member States (NMS) Romania fares slightly worse, while most of the other NMS saw improvements in their regional competitiveness.

In the case of *competitiveness dimensions*, most of the Romanian regions have improved their rankings regarding the *efficiency dimension* (except for Nord-Est and Sud Muntenia), while regarding the most dynamic component of RCI, namely the *innovation dimension*, most of the regions either stagnated, or worsened their

rankings (Bucureşti-Ilfov substantially), except for two regions that have also improved their overall rankings (Centru and Vest). As regards the main groups of indicators of the three dimensions, the evolutions were very different and divergent among indicators and regions. Thus, from among the Basic Competences indicators all the Romanian regions worsened their rankings regarding infrastructure, four regions regarding the institutions (Nord-Vest, Sud-Est, Sud-Vest Oltenia and Vest), and three regions regarding health (Nord-Est, Sud-Est and Sud-Vest Oltenia). From among the Efficiency indicators, all the Romanian regions improved their rankings regarding the market size, all but one (Centru) worsened their rankings regarding labor market efficiency, and five regions worsened their rankings regarding higher education and lifelong learning (Centru, Nord-Est, Sud-Est, Sud Muntenia and București-Ilfov). Finally, from among the Innovation indicators, all regions but one (Sud Muntenia) improved their rankings regarding technological readiness (Bucureşti-Ilfov and Vest quite substantially), all the regions have worsened their rankings regarding business sophistication indicators (especially București-Ilfov, but also Centru and Sud-Est), and only a single region (Vest) has really slightly improved its ranking regarding innovation indicators, while in the case of all the other regions the variations in rankings were minor.

The gap between the capital region and other regions is particularly wide in Romania (but similar to Greece, Slovakia, Bulgaria and France, countries which are also characterized by a high level of variability within the country, mostly due to the outperforming capital). A big gap between the capital region and the rest of the country is generally a reason for concern as it puts substantial pressure on the capital region while it may leave some of the resources in other regions underutilized (Annoni et al., 2016). At the same time, one may see that the București-Ilfov Region (the most developed region of Romania) is surrounded by regions with much lower rankings (Sud Muntenia, Sud-Est and Sud-Vest Oltenia), revealing concentration of the competitiveness factors and limited "competitiveness spillover". This is due both to the condition of transport infrastructure, and (mostly) to the high differences in the sectoral structure and dynamics, in business evolution and in innovation propensity between the Bucuresti-Ilfov Region and its neighbors. Moreover, the București-Ilfov Region is already included in the group of regions in the fifth stage of development (innovationinduced economy), unlike the rest of the Romanian regions, which are still included in the second group of development stage (transition

towards an efficiency-induced economy – the Vest Region) or even in the first stage of development (basic conditions-induced economy – the rest of the Romanian regions).

The above-presented findings are not hopeful for Romania on short and medium term. In our opinion, they call not only for a re-examination of the way the regional policy is implemented in Romania, but also of its inter-connections with other policies enforced at national, regional/county and local levels, in order to create the much necessary synergies for development where they are missing or to unlock the ones that are blocked. Not only the EU, but also Romania has different development and growth speeds, and specific policies should be designed and implemented to address such a condition. Insofar, the results of the attempts to harmonize the internal different growth speeds and paths of regions/counties and to reduce the development gaps between the more and the less advanced ones were modest.

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Country	Region Code	Region Name	Basic Competences Dimension	Efficiency Dimension	Innovation Dimension	RCI 2013	Basic Competences Dimension	Efficiency Dimension	Innovation Dimension	RCI 2016
Bulgaria	BG31	Severozapaden	254	259	255	262	258	248	259	258
Bulgaria	BG32	Severen tsentralen	252	237	252	246	242	235	255	245
Bulgaria	BG33	Severoiztochen	251	242	247	247	237	225	253	238
Bulgaria	BG34	Yugoiztochen	260	244	257	259	247	241	258	253
Bulgaria	BG41	Ywsozanadenditing &	237	189	158	208	241	166	179	207
Bulgaria	BG42	Yuzhen tsentralen	243	245	256	248	239	228	256	243

Appendix 1. The Regional Competitiveness Index (RCI) - Ranks, the EU-15 Countries, 2013 and 2016

Czech	I	Praha + Střední					146	93	62	102
Republic	CZ00	Čechy	147	91	74	96	140	75	02	102
Czech Republic	CZ03	Jihozápad	170	163	185	166	170	170	165	166
Czech Republic	CZ04	Severozápad	187	175	199	180	194	197	190	189
Czech Republic	CZ05	Severovýchod	161	157	182	164	147	162	161	159
Czech	CZ03	Severovýchou	101	137	102	104	156	153	144	151
Republic	CZ06	Jihovýchod	154	178	163	168	1.50	171	170	164
Czech Republic	CZ07	Střední Morava	185	179	201	179	159	171	170	164
Czech Republic	CZ08	Moravskoslezsko	181	170	208	176	177	160	176	167
Estonia	EE00	Eesti	73	195	132	148	81	162	144	141
Cyprus	CY00	Κύπρος / Kıbrıs	176	162	160	163	232	162	166	184
Croatia	HR03	Jadranska Hrvatska	229	226	190	225	228	215	196	222
Croatia	HR04	Kontinentalna Hrvatska	227	214	184	213	228	213	193	220
Latvia	LV00	Latvija	230	223	198	226	217	193	174	191
Lithuania	LT00	Lietuva	235	205	195	224	227	167	198	194
		Közép-					223	145	110	152
Hungary	HU10	Magyarország	214	153	78	144	226	184	207	205
Hungary	HU21	Közép-Dunántúl	223	184	204	192	224	190	207	207
Hungary	HU22	Nyugat-Dunántúl	216	180	213	189	224		218	207
Hungary	HU23	Dél-Dunántúl	233	213	191	219		215		
Hungary	HU31	Észak-Magyarország	231	208	212	218	236	223	225	231
Hungary	HU32	Észak-Alföld	234	217	227	231	233	224	237	232
Hungary	HU33	Dél-Alföld	232	207	218	220	235	202	223	224
Malta	MT00	Malta	153	231	117	193	201	213	141	187
Poland	PL11	Łódzkie	202	191	221	197	205	174	221	181
Poland	PL12	Mazowieckie	189	134	147	147	186	122	164	150
Poland	PL21	Małopolskie	183	186	203	184	170	155	211	171
Poland	PL22	Śląskie	188	164	215	175	185	149	219	170
Poland	PL31	Lubelskie	205	200	237	204	208	189	239	197
Poland	PL32	Podkarpackie	195	215	242	214	197	205	242	204
Poland	PL33	Świętokrzyskie	208	201	246	212	202	184	246	194
Poland	PL34	Podlaskie	207	202	243	211	196	215	241	211
Poland	PL41	Wielkopolskie	199	204	234	209	188	184	232	190
Poland	PL42	Zachodniopomorskie	201	206	220	207	198	195	228	198
Poland	PL43	Lubuskie	204	203	232	206	199	199	232	202
Poland	PL51	Dolnośląskie	206	185	209	190	205	171	200	177
Poland	PL52	Opolskie	186	197	231	196	187	209	232	205
		Kujawsko-					200	205	244	211
Poland	PL61	Pomorskie Warmińsko-	210	211	233	215	202	212	243	215
Poland	PL62	Mazurskie	211	233	236	230				
Poland	PL63	Pomorskie	197	196	206	194	190	176	211	179
Romania	RO11	Nord-Vest	255	221	253	241	256	220	254	241
Romania	RO12	Centru	256	241	258	255	250	231	256	246

		1								
Romania	RO21	Nord-Est	259	229	262	251	261	229	262	251
Romania	RO22	Sud-Est	261	251	260	261	263	250	261	262
Romania	RO31	Sud - Muntenia	258	234	261	252	252	237	260	254
Romania	RO32	București - Ilfov	250	113	143	165	238	112	159	161
Romania	RO41	Sud-Vest Oltenia	257	240	259	254	258	233	263	255
Romania	RO42	Vest	262	222	251	242	257	221	247	240
Slovenia	SI01	Vzhodna Slovenija	152	144	169	155	137	162	166	157
Slovenia	SI02	Zahodna Slovenija	143	104	96	112	136	113	80	113
Slovakia	SK01	Bratislavský kraj	167	69	32	78	210	53	58	96
Slovakia	SK02	Západné Slovensko	203	190	205	191	222	182	204	196
Slovakia	SK03	Stredné Slovensko	222	210	210	216	225	199	190	211
		Východné					228	219	205	225
Slovakia	SK04	Slovensko	228	230	216	229				

Legend:

Rank 1-10

Rank 11-50

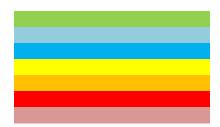
Rank 51-100

Rank 101-150

Rank 151-200

Rank 201-250

Rank above 250



Note: Data in bold show better ranking in 2016 as compared to 2013.

Source: Authors' computations based on data from *EU Regional Competitiveness Index 2013*, 2016, JRC Scientific and Policy Reports, European Commission, DG for Regional and Urban Policy, 2013 and 2016.

Appendix 2. Competitiveness Ranking of the Romanian Regions, RCI 2013 and 2016, Dimensions and Indicators

Region Code	Region Name	Basic Competences Dimension					
region couc	region rume	Institutions	Macroeconomic stability - country	Infrastructure	Health	Basic Education	Total Basic Competences
RO11	Nord-Vest	245/ 254	15/15	233/ 241	251/248	26/26	255/ 256
RO12	Centru	250/237	15/15	223/ 232	247/247	26/26	256/250
RO21	Nord-Est	257/255	15/15	237/ 242	249/ 255	26/26	259/ 261
RO22	Sud-Est	256/ 258	15/15	238/ 244	256/ 260	26/26	261/ 263
RO31	Sud - Muntenia	253/252	15/15	187/ 203	254/252	26/26	258/252
RO32	București - Ilfov	262/261	15/15	143/175	223/216	26/26	250/238
RO41	Sud-Vest Oltenia	251/ 255	15/15	246/ 24 7	245/ 250	26/26	257/ 258
RO42	Vest	258/ 253	15/15	221/ 232	255/252	26/26	262/257
Total positions 2013/2016		262/263	28/28	262/263	262/263	26/28	262/263
		Efficiency Dimension					
		Higher Education and Lifelong Learning	Labor Market Efficiency	Market Size	Total Efficiency		

			I		I	I	
RO11	Nord-Vest	246/245	136/144	250/241	221/220		
RO12	Centru	243/ 252	223/209	247/234	241/ 231		
RO21	Nord-Est	248/ 255	154/ 173	254/251	229/229		
RO22	Sud-Est	254/ 25 7	226/ 234	252/244	251/ 262		
RO31	Sud - Muntenia	249/ 258	212/ 222	218/207	234/ 23 7		
RO32	București - Ilfov	121/131	87/107	115/73	113/112		
RO41	Sud-Vest Oltenia	252/248	201/ 213	248/247	240/233		
RO42	Vest	239/235	164/ 181	253/225	222/221		
Total positions 2013/2016		262/263	262/263	261/263	262/263		
2010/2010		Innovation Dimension	202/200	201,200	202/200		
		Technological Readiness	Business Sophistication	Innovation	Total Innovation	RCI 2013/2016	Development Stage
		Total					
RO11	Nord-Vest	255/247	254/ 259	222/ 251	253/ 254	241/241	1/1
RO12	Centru	258/254	248/ 25 7	252/248	258/256	255/246	1/2
RO21	Nord-Est	262/258	255/ 258	259/ 262	262/262	251/251	1/1
RO22	Sud-Est	261/256	253/ 261	262/262	260/ 261	261/262	1/1
RO31	Sud - Muntenia	254/ 25 7	259/ 262	260/259	261/260	252/ 254	1/1
RO32	București - Ilfov	231/201	77/135	45/89	143/ 159	165/161	4/5
RO41	Sud-Vest Oltenia	257/255	258/ 263	240/ 261	259/ 263	254/ 255	1/1
RO42	Vest	253/236	251/ 256	191/ 207	251/247	242/240	2/2
Total positions 2013/2016		262/263	261/263	262/263	262/263	262/263	

Note: Data in bold show lower 2016 ranking as compared to 2013 ranking; data in italics show the lowest three rankings among the EU regions.

Source: Information from *EU Regional Competitiveness Index 2013*, 2016, JRC Scientific and Policy Reports, European Commission, DG for Regional and Urban Policy, 2013 and 2016.