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REGIONALNI RAZVOJ
I DEMOGRAFSKI TOKOVI
ZEMALJA JUGOISTOČNE EVROPE

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REGIONALNI RAZVOJ I DEMOGRAFSKI TOKOVI
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PREDGOVOR

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"Sve teče i sve se menja"
- Heraklit

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Sve(t) se menja. Još od Velikog praska, kada je pod uticajem različitih faktora nastala, planeta Zemlja se konstantno i dinamično menjala. U početku, te promene bile su isključivo prirodnog i fizičkog (materijalnog) karaktera. Međutim, sa nastankom i razvojem ljudske civilizacije te promene dobijale su i društveni karakter.

Promene su nastajale pod uticajem revolucionarnih događaja, epohalnih trenutaka u svetskoj istoriji, koji su menjali pravce razvoja ljudske civilizacije. Ti događaji imali su prirodni (nastanak života, udari meteora, ledeno doba, zemljotresi, suše, erpupcije vulkana, epidemije i tako dalje), odnosno društveni karakter (otkriće vatre, točka, pisma, bronzanog i gvozdenog oruđa, irigacionih sistema, parne mašine, električne energije, veštačke inteligencije i tako dalje). Pri tome, može se primetiti da je između tih događaja (prirodnih i društvenih) postojala jako izražena uzročno-posledična veza. Kao posledica prirodnih događaja, u velikom broju slučajeva, nastajali su događaji društvenog karaktera, ali i obrnuto. Zašto? Jedan od odgovora na ovo pitanje može biti pojava, odnosno nastanak kriza. Naime, ljudska civilizacija, od njenog nastanka pa do današnjih dana, suočavala se sa brojnim krizama, neravnotežama i cikličnim kretanjima različitog karaktera i izvora. Krize su dovodile do promena, promene su otkrivale postojeće i stvarale nove probleme, a civilizacija je nastojala da pronađe rešenja za njihovo prevazilaženje.

Dvadeset prvi vek predstavlja vek dinamičnih promena. Svet se, dinamičnije nego ikada ranije, menja. Na jednoj strani, intenzivan razvoj nauke, tehnike i tehnologije kreira brojna inovativna rešenja za probleme sa kojima se ljudska civilizacija suočava, svet se povezuje u takozvano globalno selo, protok informacija, ljudi i kapitala postaje sve intenzivniji, dok se, na drugoj strani, otvaraju "brisani prostori" za nastanak kriza. Ovu činjenicu nedvosmisleno potvrđuju događaji karakteristični za ekonomsku krizu iz 2008. godine, ali i za aktuelnu zdravstvenu krizu nastalu pod uticajem pandemije COVID-19.

Sve krize, u zavisnosti od njihovog karaktera, otkrivaju postojanje različitih nesavršenosti, kako prirodnog, tako i društveno-ekonomskog sistema. U tom smislu, zdravstvena kriza izazvana pandemijom COVID-19 izbacila je na površinu različite probleme sa kojima se savremeni svet suočava. Ti problemi su brojni. Neki od njih, kao što su neravnomerni regionalni razvoj i globalna društveno-ekonomska nejednakost, bili su u pojedinim vremenskim periodima zanemarivani. Zbog toga, posmatrano sa globalnog aspekta, može se primetiti da su i nedovoljno razvijeni i demografski "prazni" regioni, ali i oni najrazvijeniji i demografski prenaseljeni regioni platili cenu svoje (ne)razvijenosti. Na jednoj strani,

nedovoljno razvijeni regioni suočavaju se sa različitim infrastrukturnim i institucionalnim problemima koji intenzivno otežavaju sprovođenje neophodnih zdravstvenih i ekonomskih mera, dok se, na drugoj strani, razvijeni i, najčešće, prensaseljeni regioni suočavaju sa, pre svega, logističkim problemima u procesu „upravljanja" pandemijom. Ovakvi problemi, u većini zemalja, zahtevali su intervenciju države i to kako u zdravstvenom sektoru, tako i u oblasti privrednih tokova i upravljanja privrednim razvojem.

Danas, kada pandemija COVID-19 još uvek traje, veliki broj istraživača bavi se pitanjem njenog završetka. Međutim, ljudsko društvo na globalnom nivou, pored negativnih zdravstvenih efekata, suočava se i sa brojnim drugim, jako izraženim, negativnim efektima koji će trajati i posle završetka pandemije. U tom smislu, ispred istraživača, pre svega, iz oblasti ekonomske nauke nalazi se svojevrsni izazov koji se odnosi na formulisanje i analizu različitih opcija i politika koje će na najbolji mogući način odgovoriti aktuelnim ekonomskim problemima. Pri tome, poseban akcenat oni moraju da stave na iznalaženje rešenja za probleme koji nastaju kao posledica neravnomernog regionalnog razvoja, kako zbog njihovih negativnih efekata na sve sfere društveno-ekonomskog života, pre, u toku i posle pandemije COVID-19, tako i u cilju pripreme i lakšeg suočavanja sa budućim krizama, koje su, ipak, istorijska neminovnost.

*U skladu sa navedenim, Ekonomski fakultet u Nišu i ove godine, 27. put zaredom, organizuje naučni skup pod nazivom **„Regionalni razvoj i demografski tokovi zemalja Jugoistočne Evrope"** koji okuplja veliki broj istraživača koji u svojim referatima analiziraju i ukazuju na različite mogućnosti za postizanje što ravnomernijeg regionalnog razvoja na prostoru zemalja Jugoistočne Evrope, ali i šire. Nadamo se da će rezultati i zaključci sa Naučnog skupa biti od koristi kako kreatorima ekonomske politike, tako i budućim istraživačima iz oblasti regionalnog razvoja i demografskih tokova.*

Koristimo priliku da se zahvalimo svim autorima i recenzentima, kao i svima onima koji su nam na bilo koji način pomogli u organizaciji Naučnog skupa i doprineli u pripremi i objavljivanju zbornika radova koji je ove godine, strukturiran u četiri tematske oblasti i to: (1) Teorijsko-metodološki problemi regionalnog razvoja, (2) Aktuelni demografski procesi, (3) Karakteristike razvojnih procesa u uslovima pandemije COVID-19 i (4) Ostala pitanja regionalnog razvoja i demografskih tokova.

Niš, jun 2022. godine   *Predsednik Naučno-programskog odbora,*
Prof. dr Živorad Gligorijević

FOREWORD

"Everything flows; nothing stands stills"
- Heraclitus

The world is changing. Ever since the big bang formed under the influence of various factors, the planet Earth has been constantly and relatively dynamically evolving. Initially, these changes were primarily of a natural and physical (material) nature. However, with the emergence and development of human civilization, these changes also acquired a social character.

The changes took place under the influence of revolutionary events, moments in world history, which changed the directions of the development of human civilization. These events had a natural (origin of life, meteor strikes, ice age, earthquakes, droughts, volcanic eruptions, epidemics, etc.), or social character (discovery of fire, point, letters, bronze and iron tools, irrigation systems, steam engines, electricity, artificial intelligence and so on). At the same time, it can be noticed that there was a strong causal connection between these events (natural and social). As a consequence of natural events, in many cases, events of a social nature occurred, but also vice versa. Why? One of the answers to this question may be the emergence of a crisis. Namely, human civilization, from its inception to the present day, has faced numerous crises, imbalances and cyclical movements of various characters and sources. Crises have brought about change, change has revealed existing and created new problems, and civilization has sought to find solutions to overcome them.

The twenty-first century is a century of dynamic change. The world is changing more dynamically than ever before. On the one hand, the intensive development of science, technology and technology creates numerous innovative solutions to the problems facing human civilization, the world connects to the so-called global village, the flow of information, people and capital becomes more intense. On the other hand, there are "Erased spaces" for a crisis. This fact is unequivocally confirmed by the events characteristic of the economic crisis of 2008, but also by the current health crisis caused by the COVID-19 pandemic.

All crises, depending on their character, reveal the existence of various imperfections of both natural and socio-economic systems In that sense, the health crisis caused by the COVID-19 pandemic has brought various problems that the modern world is facing. These problems are numerous. Some of them, such as uneven regional development and global socio-economic inequality, have been neglected for a long time. Therefore, it can be noticed, viewed from a global perspective, that both underdeveloped and demographically "empty" regions, and those most developed and demographically overpopulated regions paid the price for their (under) development. On the one hand, underdeveloped regions are facing various infrastructural and institutional problems that intensively hinder the

implementation of necessary health and economic measures. On the other hand, developed and, most often, overpopulated regions are facing logistical problems in "managing" pandemic. Such problems, in most countries, have required state intervention in the health sector, as well as in the field of economic flows and economic development management.

Today, when the COVID-19 pandemic is still going on, a large number of researchers are dealing with the issue of its end. However, human society on a global level, in addition to the adverse health effects, is facing with great number of other, very pronounced, adverse effects that will continue after the end of the pandemic. In that sense, in front of researchers, primarily in the field of economic science, there is a kind of challenge related to the formulation and analysis of various options and policies that will be a best response to current economic problems. In doing so, they must place particular emphasis on finding solutions to problems arising from uneven regional development, both because of their adverse effects on all spheres of socio-economic life, before, during and after the COVID-19 pandemic, and in order to prepare and easier coping with future crises, which are, after all, a historical inevitability.

*Following the above, the Faculty of Economics in Nis, for the 27th time in a row, organizes a scientific conference entitled **"Regional Development and Demographic Flows of Southeast Europe"** which brings together a large number of researchers who in their papers analyze and point out various possibilities to achieve the most balanced regional development in the countries of Southeast Europe and beyond. We hope that the results and conclusions of the Scientific Conference will be useful to both economic policymakers and future researchers in the field of regional development and demographic flows.*

We would like to take this opportunity to thank all the authors and reviewers, as well as all those who in any way helped us to organize the Scientific Conference and contributed to the preparation and publication of this year's collection of papers which is structured in four thematic areas: (1) Theoretical and methodological problems of regional development, (2) Current demographic processes, (3) Characteristics of development processes in the conditions of the COVID-19 pandemic and (4) Other issues of regional development and demographic flows.

Nis, 2022.   *Chair of the Scientific-Program Committee,*
                    Živorad Gligorijević, PhD, full professor

SADRŽAJ

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REGIONAL COMPETITIVENESS OF BULGARIAN REGIONS AND THEIR PLACE IN THE EUROPEAN UNION

Eduard Marinov, PhD[∗]

Abstract: Changes in the global economic environment in recent years have highlighted the fact that in many countries the sources of growth are not well utilized, thus highlighting the need for better measurement of economic performance, including critical elements to sustainable economic development. The EU Regional Competitiveness Index is the first multi-component indicator to provide a systematic picture of the territorial competitiveness of each region in the 28 (up to 2020) Member States of the Union. The paper briefly presents the methodological framework of the index and then it will be applied to the Bulgarian NUTS 2 regions. The results show the place of the country and its regions in the EU and allow us to draw conclusions about their strengths and weaknesses in their regional development in general, as well as in relation to the eleven main areas that the index measures.

Keywords: regional development, NUTS 2, Bulgarian regions, regional competitiveness, RCI.

1. Introduction

Contrary to most views on national competitiveness, focusing on efficiency and productivity, the competitiveness of regions is more closely linked to wellbeing, paying attention not only to performance factors but also to improving relative wellbeing.

The Regional Competitiveness Index (RCI) was introduced and implemented for all regions (at NUTS 2 level) in the EU with the Fifth Report on Social, Economic and Territorial Cohesion (EC, 2010). It is the first instrument to measure the degree of competitiveness at regional level, covering all EU Member States and regions. The index can be used for an overall assessment and comparison of regions in all areas, as it goes beyond assessing the economic situation of regions in a narrow sense. The RCI and its components are evaluated in a comparative plan comparing all regions in the EU, thus allowing the identification of the specific strengths and weaknesses of a region and its place in the Union.

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RCI provides various opportunities for comparative analysis: firstly, internal comparison – between the main sub-indices, pillars and indicators for the region itself; secondly, external comparison – with other regions in the country and in the EU, incl. for the individual sub-indices, pillars and indicators, and thirdly, comparison in time – tracking the change of the index, incl. of its main components. This article is aimed at the application of these guidelines for analysis to all Bulgarian regions to determine their performance in terms of regional competitiveness, as well as their development in time.

An overview of the literature and the methodology of the RCI is briefly presented, after which the results of the Bulgarian regions are analyzed in order to draw certain conclusions about the strengths and weaknesses of their development.

2. Regional competitiveness of Bulgarian regions: an application of the RCI

2.1. Regional competitiveness from a theoretical perspective

A broad definition of competitiveness includes the ability to compete, win and maintain a market position, increase market share and profits, and ultimately consolidate successful business activities (Filo, 2007). One of the most commonly used competitiveness indices is the Global Competitiveness Index, developed by the World Economic Forum (WEF), where national competitiveness is defined as "a set of institutions, policies and factors that determine a country's productivity level" (Schwab and Porter, 2007). This definition links the competitiveness of microeconomic level (companies) with that of the macroeconomic (state) level. The analogy between companies and countries has been severely criticized because one country cannot "go out of business" and because of the different nature of competition between countries and companies (Krugman, 1996).

The competitiveness of a region is its ability to produce high income and to increase the wellbeing of the people living in it (Krugman, 1996). Unlike the productivity-focused definition of WEF, this definition is based solely on the benefits to people living in the region. It assumes that there is a close link between competitiveness and wellbeing and focuses not only on performance-related factors but also on improving the level of relative wellbeing (Bristow, 2005).

The Fifth Report on Social, Economic and Territorial Cohesion (EC, 2010) introduces in regional analyzes the use of the NUTS 2 Regional Competitiveness Index, whose theoretical basis and methodology are presented by Annoni and Kozovska, 2010 and Annoni and Dijkstra, 2013. It has been developed as an analogue and largely in line with the Global Competitiveness Index of the WEF. Subsequently, the regional competitiveness index was calculated and analyzed in 2013 (Annoni and Dijkstra, 2013), 2016 (Annoni, Dijkstra and Gargano, 2016) and 2019 (Annoni and Dijkstra, 2019). The RCI can be used as a general assessment of the regions in various aspects, as it goes beyond the traditional economic aspects in the narrow sense. Its main advantage is that it applies to all EU regions at NUTS 2 level and thus shows the strengths and weaknesses of the regions not only in a national but also in a European context (Marinov, 2016).

Such indicators are very popular in various fields. Bandura (OECD, 2008) identified over 160 composite indices by 2006. The reason lies in their advantages: they summarize complex multidimensional phenomena, they are easier to interpret compared to a large

number of individual indicators, they allow rapid assessment of progress over time, they facilitate communication with the public and increase transparency, etc. But they also have some drawbacks and limitations: they can send misleading political messages if they are not well constructed or interpreted; they can promote simplistic political conclusions; they can be misused, for example to pursue the desired policy, if the process of constructing them is not transparent and is not based on solid theoretical and statistical principles; the choice of indicators and their weighting may be the subject of political controversy; they may lead to inappropriate policies if some aspects and dimensions that are difficult to measure are neglected, etc. (OECD, 2008). Moreover, at the sub-national level there is often a problem with information on important indicators, using regional data for the regions (as is the case with some of the indicators of the RCI). But the popularity of composite indices makes it clear that the advantages outweigh the disadvantages.

Despite the advantages and possibilities of the regional competitiveness index, it is used relatively rarely in regional analyzes in Bulgaria (Marinov and Zhuleva, 2020). The socio-economic analysis of the regions in Bulgaria (NTsTR, 2019) is satisfied only with this until it finds the total value of the index as of 2016 and presents a general comparison of its variation by regions in the EU countries. But it is much more important to take into account other possibilities of the RCI: 1) internal comparison - between the main sub-indices, pillars and indicators for the region itself; 2) external comparison - with other regions in the country and in the EU, incl. for the individual sub-indices, pillars and indicators and 3) comparison in time - tracking the change of the index, incl. of its main components. This article is aimed at the application of these guidelines for analysis.

2.2. The Regional Competitiveness Index: some methodological notes

Regional competitiveness is defined as "the region's ability to offer an attractive and sustainable working and living environment for businesses and residents" (Annoni and Dijkstra, 2019, p. 3). This definition balances the goals of business success and social wellbeing, and through the inclusion of indicators of human capital and the quality of institutions, the RCI is aimed at measuring the long-term potential of the regions.

The Regional Competitiveness Index consists of 11 pillars representing different aspects of competitiveness, which are grouped into three groups (sub-indices) (Annoni and Dijkstra, 2019, p. 17). This structure has not changed since the first edition in 2010, but some changes are being made in the individual indicators used. In interpreting the pillars, a clear distinction is made between inputs and outputs, Inputs include: 1) governance, macroeconomic environment and infrastructure; 2) human capital – health, basic education and higher education and lifelong learning and 3) availability of high technology. Outputs are: labor market efficiency, market size, business complexity and innovation.

The main group (sub-index) includes institutions, macroeconomic stability, infrastructure, health and quality of basic education. These are the main drivers for all economies and the factors that ensure competitiveness. As the economy progresses, so does the more skilled workforce and efficient market. These are the pillars united in the second group – efficiency: higher education and lifelong learning, labor market efficiency and market size. In the most developed economies, the engines of progress are included in the group of innovations – technological readiness, business sophistication and innovation (Annoni and Dijkstra, 2019, p. 17). The RCI approach is based on the understanding that the focus in less

developed economies is different than in medium and highly developed ones. While less developed economies need to focus on basic infrastructure and services, highly developed areas need to focus more on business improvement, technology use and innovation. Therefore, differentiated weighting of groups (sub-indices) according to the level of development has been applied in order to avoid punishing less developed areas for the lack of aspects that are important for competitiveness and at a higher level of development (Annoni and Dijkstra, 2013, p, 4). For example, the weight of the core group decreases from 35% for the least developed regions to 20% for the most developed, and the weight of the innovation group increases from 15% to 30%, respectively.

74 indicators were used for the calculation of the RCI in 2019, and the data are mainly for 2015-2017 (in some cases - for 2018 and 2014). RCI values are presented in two ways - as normalized z -points (conversion to a common scale based on the mean and standard deviation, where the EU average is 0, respectively, positive values show a higher level than the EU average, and negative - lower) and as min-max normalized points (conversion on a scale from 0 to 100 based on the minimum and maximum values).

2.3. Regional competitiveness of Bulgarian regions

Bulgaria is divided on six region on NUTS 2 level – Severozapaden (BG31), Severen Tsentralen (BG32), Severoiztochen (BG33), Yugoiztochen (BG34), Severen Tsentralen (BG42) and Yugozapaden (BG41) (in which enters and the capital). Five of the Bulgarian regions have a GDP of less than 40% of the EU average, as low as 29% for the Northwest (the lowest in the EU), and in 2019 the region including the capital has a relative GDP of 77% (173rd place out of 268) compared to the Union average.

With an RCI value of 21.21 min-max points and -1.04 z-points in 2019, Bulgaria is last in the EU. With the exception of the capital's Yugozapaden region, the other regions in the country are among the 25 weakest regions, All regions have a total RCI of less than -1.04, with the exception of Yugozapaden with -0.42, which ranks 181st in the EU RCI. In comparative terms, all regions, except the capital one, are among the last 25 in the EU – Severozapaden (with an RCI of -1.40) is in 260th place, Yugoiztochen (-1.24) is in 248th, and Severen Tsentralen (-1.09), Yuzhen Tsentralen (-1.07) and Severoiztochen (-1.04) are in 241st, 240th and 237th place respectively. All regions in Romania and Greece (excluding the capitals Bucharest and Athens) and the French overseas territories have similar results to the Bulgarian regions.

The situation is similar in most regions in South-Eastern Europe (Romania, Greece), with the exception of the capital, as well as some regions in southern Italy (Campania, Sardinia, Puglia, Calabria, Sicily), Hungary (Northern Great Plain), Portugal (Madeira) and Spain (Extremadura). The fifteen regions with which the Bulgarians are comparable are Sud-Est (RO 22), Świętokrzyskie (PL 72), Warmińsko-mazurskie (PL 62), Podkarpackie (PL 82), Ipeiros (EL 54), Dél-Alföld (HU 33).), Lubelskie (PL 81), Anatoliki Makedonia, Thraki (EL 51), Sud-Muntenia (RO 31), Öszak-Magyarország (HU 31), Dél-Dunántúl (HU 23), Észak-Alföld (HU 32), Sud -Vest Oltenia (RO 41), Nord-Est (RO 21) and Mayotte (FRY 5). These regions, along with the five Bulgarian ones without Yugozapaden, are also the poorest in the EU.

On average, the Bulgarian regions have similar results to the 15 comparable regions (in terms of GDP per capita) both in the general index and in almost all pillars, standing better in the pillars "macroeconomic stability" (measured at national level), "infrastructure" and

"labor market efficiency". The country is weaker than the comparable European regions in the "institutions", "technology readiness" pillars and the "innovation" sub-index.

When we consider the performance of Bulgarian regions by sub-index groups, in the basic group of indicators Bulgarian regions have very low positions in the EU and together with all Romanian and Greek regions form the last 26 in the Union, the best performing among them are the Athens region (-0.87) and the Bulgarian Yugozapaden, which is 231st (-0.82). In the efficiency group, the capital region, which is 142nd in the EU (-0.03), is again the best, while all the others are again among the last 26 in the Union, in the company of Greek, Romanian and some peripheral Italian and Spanish regions and the French overseas territories. In the group of innovations again all Bulgarian regions except the capital one (-0.79) are among the worst performing in Europe (237-260), along with some regions from Poland and Greece and all Romanian regions, except Bucureşti-Ilfov,

The implementation of the RCI for all Bulgarian regions shows that they are weakly competitive in European terms, occupying the last places in the EU in terms of overall RCI. The general features of the Bulgarian regions are:

- poor performance of all regions at European level in the Institutions (234-257) and Technology Readiness (244-260, Severoiztochen is the weakest in the EU) pillars;
- weak results in all regions except the capital one in Health (243-261), Market size (231-261) and Innovation (245-261), and according to all three indicators Yugoiztochen is the weakest region in the EU;
- Bulgarian regions are relatively better in terms of Infrastructure (199-236), Labor Market Efficiency (130-234) Business Sophistication (29-245), as well as in Higher Education (187-238, with the exception of Severozapaden region, which is 257), and in all four components the strongest is the metropolitan Yugozapaden region;
- the only Bulgarian region with above-average results for the EU is Yugozapaden in the pillars Labor Market Efficiency and Business Sophistication.

The relatively high result achieved by the country in the field of macroeconomic stability cannot compensate for the last places of Bulgaria in the other nationally measured indicators, which is reflected in the low overall RCI of the Bulgarian regions.

The national comparison (Figure 1) shows that the Yugozapaden region is the best represented in almost all pillars, ranking fourth only in the Institutions pillar. But in most cases the differences between the regions of Bulgaria are small, and the main difference is between the Yugozapaden (capital) region and all the others. Yuzhen Tsentralen region ranks second with a close result to the capital region in the group of basic indicators, but lags behind the Yugozapaden region, and to a lesser extent – from the Severoiztochen region in the other two groups. The region is second in the country in terms of infrastructure, labor market efficiency and innovation, but also lags behind the Severoiztochen in institutions, health, market size, technological readiness and business complexity. The only significant lag (fourth place in the country) is observed in the pillar of higher education.

The comparison with the EU regions in general, as expected, outlines the unfavorable position of Bulgarian regions. The country's performance as a whole confirms the relatively small differences between the country's regions in terms of scale change. Bulgarian regions exceed the EU average only in macroeconomic stability (measured at national level) and approach it in terms of labor market efficiency (with a difference of 0.18) and to a lesser extent (with a difference of 0.55) in infrastructure.

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Figure 1. Regional Competitiveness Index - national comparison (z -points, rank)
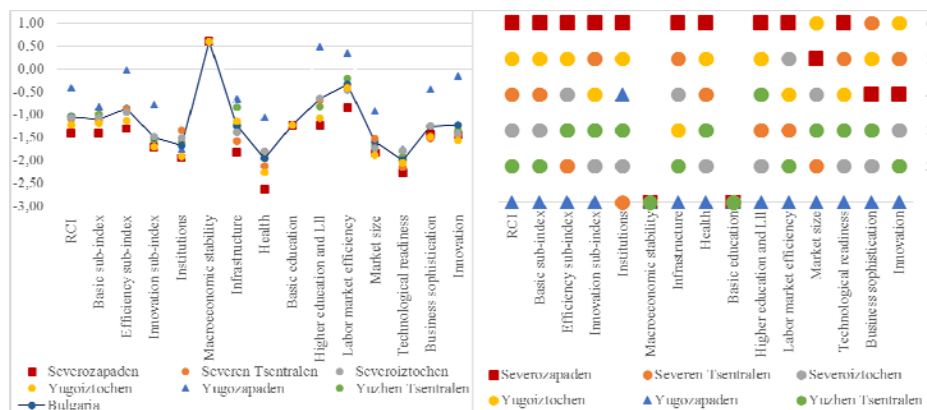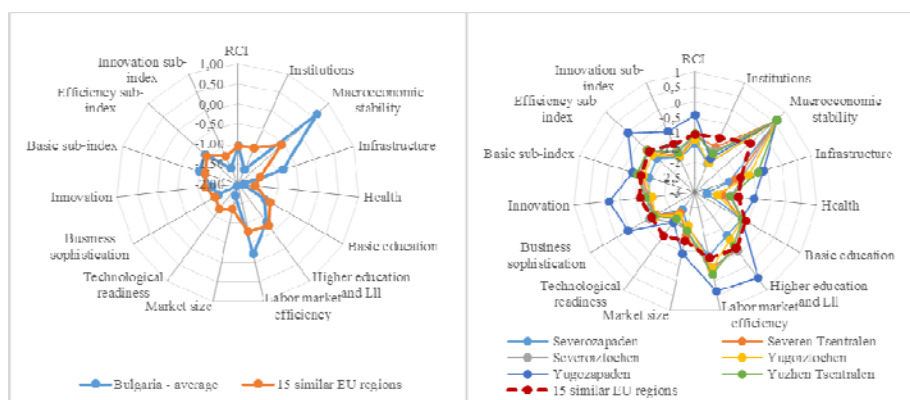

Source: own calculations based on Annoni and Dijkstra. 2019.

Therefore, as recommended in the RCI report, a comparison with similar regions (with a comparable level of development, respectively GDP per capita) is more appropriate - Figure 2.

Although the overall index is much lower (by -0.37), Bulgarian regions outperform similar regions in macroeconomic stability (by 0.9), infrastructure (by 0.6) and labor market efficiency (by 0.57).), which provides them with relatively higher results on the sub-indices "Basic" (by 0.15) and "Efficiency/Productivity" (by 0.04). The values for all other pillars are similar, although slightly lower than the comparable regions (from 0.02 to -0.16), but they are inferior in terms of technological readiness (by -0.71), market size -0.34), institutions (-0.54) and health (-0.28), which leads to a lower value in the group "Innovation" (by -0.32). Here, too, it should be noted that, unlike all other Bulgarian regions, the capital's Yugozapaden region performs much better than the comparable 15 European regions.

Figure 2. Index of regional competitiveness of the Bulgarian regions - comparison with the EU (min-max points) and 15 regions with similar GDP per 1 g. (z -points)
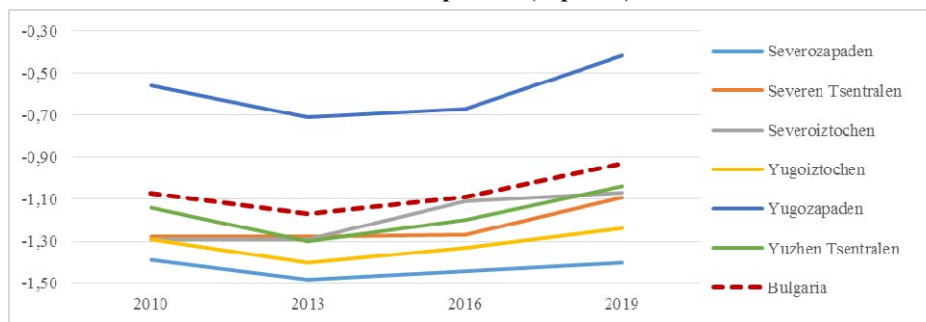

Source: own calculations based on Annoni and Dijkstra. 2019.

Changes in the overall regional competitiveness index over time (between the four editions of the report) are small (Figure 3). Compared to 2010 (data for which reflect the situation before the global financial and economic crisis), the Bulgarian regions show a slight improvement compared to 2010 - between -0.01 (Severozapaden) and 0.22 (Severoiztochen) on average for Bulgaria 0, 14.

The picture looks more positive if 2013 (the post-crisis period) is taken as a basis. Compared to 2013, the index of Bulgarian regions, with the exception of the Northwest (0.08), the improvement is similar, as only in Yugozapaden is higher (0.29), compared to the national average of 0.24. Nevertheless, the changes for the country as a whole can be assessed as small and the variation between the regions remains at a similar level, especially if the slightly more dynamic Yugozapaden region is excluded.

**Figure 3. Change in the Regional Competitiveness Index over time (2010-2019) -
national comparison (z -points)**

Source: own calculations based on Annoni and Kozovska, 2010, Annoni and Dijkstra, 2013,
Annoni, Dijkstra and Gargano, 2017 and Annoni and Dijkstra. 2019.

Although in general the comparison of the ranks of the regions between the different editions is not considered appropriate for the Bulgarian regions, it is indicative of – albeit a weak, trend of improvement. Here, however, we see serious differences – a huge improvement in the place of the capital's Yugozapaden region, which started from 208th place in 2013 and reached 181st place in 2019.

In 2013, Severen Tsentralen, Severoiztochen and Yuzhen Tsentralen region are on respectively 246th, 247th and 248th place, In 2016 they moved to 245th, 238th and 243rd place out of 263 regions (getting ahead of Central Greece, Peloponnese, Eastern Thrace and Macedonia, Guyana and the Southeastern region of Romania), and in 2019 they are on 241st, 240 237th out of 268 regions, followed by all Romanian and Greek regions, excluding the capitals, as well as some regions of southern Italy (Sicily, Calabria), Spain (Extremandura, several autonomous urban regions) and the French overseas regions. Severozapaden and Yugoiztochen region remain in their place among the latter - as if Yugoiztochen still has some improvement (from 259th in 2013 to 248th in 2019), then in Severozapaden region the place remains almost unchanged (260th in 2019), leaving only the poorest regions of Greece and Romania, and two overseas regions of Spain and France.

The analysis of changes over time at a lower level (sub-indices, pillars) even for a single region faces serious methodological challenges. Despite the preservation of the general structure of the index, changes in the scope of indicators have been made in the individual

editions. Therefore, the focus is not on year-on-year comparisons or calculating overall change, but on identifying general trends that are less dependent on specific indicators (Marinov and Zhuleva, 2020). Figure 4, along with the absolute values of the pillars (z-points), reduced to a common scale, and shows trend-lines, colored on the principle of traffic lights (green – improving, yellow – maintaining the level, red – deteriorating).

Figure 4. Change in the Regional Competitiveness Index over time (2010-2019) - national comparison (z -points)

Source: own calculations based on Annoni and Kozovska, 2010, Annoni and Dijkstra, 2013, Annoni, Dijkstra and Gargano, 2017 and Annoni and Dijkstra. 2019.

Against the background of the weakly changing overall index of regional competitiveness, two pillars show a general trend of improvement - macroeconomic stability and basic education. Seven pillars maintain a relatively constant level, albeit with fluctuations over the years - infrastructure, the three pillars of the efficiency group and the three pillars of the innovation group. Two of the pillars in the basic group show a deteriorating trend (institutions and especially health). It is problematic that in the basic group, which is crucial at the current level of development, improvement is only related to pillars assessed at national level (macroeconomic stability, and from 2019 – primary education), while in all other pillars we see a deteriorating trend.

More generally, the trends in the various pillars are ambiguous and this is the main reason for the weak dynamics of the overall index of regional competitiveness of Bulgarian regions.

3. Conclusion

Changes in the global economic environment in recent years have highlighted the fact that in many countries the sources of growth are not well used, outlining the need for better measurement of economic performance, including elements critical to sustainable economic development.

The EU's Regional Competitiveness Index is the first multi-component indicator to provide a systematic picture of the territorial competitiveness of each region in the 28 (by 2020) Member States of the Union. The index takes into account the level of development of the regions, giving more weight to the main issues in the less developed and the innovative capacity in the more developed regions, and its components measure not only problems related to companies, but also such, affecting those living in the regions and their quality of life.

Although starting from an enviably low starting level, the Bulgarian regions are in a stable condition during the period under review, and can be included in the group of most European regions with slow but positive development.

It should be noted that while in the indicators examining the conditions for increasing regional competitiveness the results are mixed – both in terms of EU comparison, as well as as development over time, the indicators related to the outputs are at a relatively good level and remain relatively stable over time.

Based on the results in the various pillars, the regions in Bulgaria can be divided into three groups, the first of which includes only the metropolitan region (Yugozapaden), which performs much better than the others; the second group is composed of Severen Tsentralen, Severoiztochen and Yuzhen Tsentralen, with results around and slightly below the national average; the third group includes Severozapaden and Yugoiztochen, which have the lowest results in almost all components both at a national and in a EU perspective.

The relatively high results in comparison with similar regions in the indicators related to the main drivers for all economies and factors ensuring competitiveness, can be noted as positive. Bulgarian regions also show relatively high results, even in a supranational comparison, but also good development over time in the factors that take into account the more skilled workforce and efficient market.

All this is indicative on the one hand for the uneven regional development in the country, especially in terms of development over time, giving us the opportunity to substantiate the argument for the development of Bulgaria at two or even three speeds, with obviously better results achieved mainly due to large cities and agglomerations. On the other hand, there is a worrying serious lag in the innovation group, which is related to sustainable, intelligent and knowledge-based highly efficient catching-up economic development, which on its hand is a prerequisite for creating and expanding the competitiveness of the local economy and improving the wellbeing of the inhabitants of the regions of the country.

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KONKURENTNOST REGIONA U BUGARSKOJ I NJIHOVO MESTO U EVROPSKOJ UNIJI

Abstract*: Promene u globalnom ekonomskom okruženju poslednjih godina, istakle su činjenicu da u mnogim zemljama izvori rasta nisu dovoljno iskorišćeni, i samim tim, potrebu za podrobnijim ispitivanjem ekonomskih performansi, uključujući suštinske elemente održivog ekonomskog razvoja. Indeks regionalne konkurentnosti EU je prvi multikompozitni indikator koji omogućuje sistematičan prikaz teritorijalne konkurentnosti svakog regiona među 28 zemlja članica EU do 2020. Rad, ukratko, prikazuje metodološki okvir indeksa koji će se primeniti na dva NUTS regiona u Bugarskoj. Rezultati prikazuju poziciju određene zemlje i njenih regiona u EU i omogućuju nam da donesemo zaključke o njihovim prednostima i manama u regionalnoim razvoju uopšte, kao i u odnosu na jedanaest glavnih oblasti koje indeks meri.*

Keywords: *regionalni razvoj, NUTS 2, regioni u Bugarskoj, regionalna konkurentnost, RCI.*