# COMPARATIVE ANALYSIS ON COMPETITIVENESS: ROMANIA VS. BULGARIA

# **Bogdan-Daniel**, Floroiu<sup>1</sup>

#### Abstract:

The research developed in the present work is mainly aimed on comparative analysis of competitiveness in Romania and Bulgaria.

We want to draw a warning, because the situation is even more worrying because, according to the latest official reports on global and regional competitiveness, Romania was exceeded by Bulgaria, which will have a negative impact on Romania's development in the medium and long term, unless urgent action is taken to redress situation.

Although entry into the EU, competitiveness has become a national priority for both Romania and Bulgaria, this being transposed in national development programs and operational programs of the EU's competitiveness, the figures show that Romania had a very low absorption of European funds during 2007-2013, two times less than Bulgaria absorbed.

Target, set by the EU Strategy, is that by 2020, investment in research, development, innovation, made both government and the private sector, representing 2% or 1.5 % of GDP for Romania and Bulgaria.

In these circumstances, Romania must develop macroeconomic policies to stimulate economic competitiveness, develop all regions, to attract foreign direct investment, external grants.

Bulgaria has to face two major challenges: to accelerate the grow rate and to make it sustainable. Bulgaria has to ensure conditions for innovations and realization of human capital, including the development of the regions.

Keywords: competitiveness; global; regional; GDP; Europe 2020; structural funds; Romania; Bulgaria

JEL Classification: O57; P52

#### **1. Introduction**

In the current international and European context, marked by economic crisis, we consider it important empirical analysis of competitiveness both globally and regionally.

A broad notion of competitiveness refers to the inclination and skill to complete, to win and retain a position in the market, to increase market share and profitability, and eventually to consolidate commercially successful activities (Filó, 2007). The World Economic Forum (WEF) produces one of the best known competitiveness indexes – the Global Competitiveness Index (GCI).

The Forum defines national competitiveness as the "set of institutions, policies and factors that determine the level of productivity of a country" (Schwab and Sala-I-Martin, 2012; Schwab and Porter, 2007). The WEF definition links micro-(firm-level) to macro-(country-level) competitiveness.

The framework describing a firm's capacity to compete, grow and be profitable (Martin et al, 2006) is relatively uncontested, but applying the same concept to countries or regions has been subject to much debate.

The implicit analogy between firms and nations has been widely criticized because a country cannot go out of business and because competition between countries can benefit both, while competition between companies in the same sector is more likely to be a zero sum game (Krugman, 1996).

Between the micro and the macro level stands the concept of regional competitiveness. A region is neither a simple aggregation of firms nor a scaled version of nations (Gardiner et al, 2004).

<sup>&</sup>lt;sup>1</sup> Ph.D, bogdan.floroiu75@yahoo.ro

Meyer-Stamer(2008) states that: "We can define (systemic) competitiveness of a territory as the ability of a locality or region to generate high and rising incomes and improve the livelihoods of the people living there".

In contrast to the WEF definition focused on the concept of productivity, this definition is based entirely on the benefits to people living in a region. It assumes a close link between competitiveness and prosperity. It characterizes competitive regions not only by using output-related terms such as productivity but also by determining the sustained or improved level of comparative prosperity (Bristow, 2005).

The Joint Research Centre of European Commission defines regional competitiveness as "the ability to offer an attractive and sustainable environment for firms and residents to live and work" (Dijkstra et al., 2011). This definition integrates the perspective of both firms and residents.

# 2. Global Competitiveness: Romania vs. Bulgaria

The research developed in the present work is mainly focused on comparative analysis of competitiveness in Romania and Bulgaria.

This analysis considered important because the two neighboring countries, which joined on 1 January 2007 the European Union, are the last two places in almost all official EU statistics.

We want to draw a warning, because the situation is even more worrying because, according to the latest official reports on global and regional competitiveness, Romania was exceeded by Bulgaria, which will have a negative impact on Romania's development in the medium and long term, if not undertake urgent measures to redress the situation.

Main research techniques, used for the research, were investigating statistical and content analysis of major reports and publications of international organizations and institutions on Romanian and Bulgarian competitiveness, and statistical methods of analysis and interpretation of data, descriptive statistics and correlations respectively. For statistical processing of data collected, we used Excel computer software, Data Analysis module.

The main data sources were taken from the World Economic Forum, the managing authority of operational programme Competitiveness from Romania and Bulgaria and Eurostat databases.

Global Competitiveness Index (GCI) is a composite index that is calculated based on 12 pillars that are found grouped in three sub-Indexes.





Source: processed by the author on official data from WEF Global Competitiveness Reports

According to the WEF Report Global Competitiveness 2014-2015, Romania and Bulgaria have advanced to positions 59 and 54.

As seen in the current report, Bulgaria ranks ahead of Romania by 5 positions. Only for the first sub-indicator Bulgaria exceeds Romania by 18 positions. Romania exceeds Bulgaria, on the second sub-Index by 2 positions and the great advantage of Romania to Bulgaria is 28 positions on the third sub-Index.

As shown in Figure no. 1, Bulgaria's evolution is much better than Romania, the GCI was 76th in 2009-2010 and it reached 54th in 2014-2015, recovering 22 positions.

Instead, Romania has a negative evolution, GCI has fell steadily from 64th in 2009 - 2010, reaching 76th in 2013-2014, although had an advantage of 12 positions against Bulgaria at the beginning of the study period, Romania reach in 2013-2014 the position of Bulgaria in 2009-2010. However, you should consider, according to the lastest report 2014-2015, Romania reached 59th place recovering 17 positions from last report.

Stages of development are determined by GDP per capita (US\$), but for economies with a high dependency on mineral resources, GDP is not the sole criterion for the determination of stages.

As a consequence of this, Romania and Bulgaria are in stage 2 - Efficiency-driven according to WEF Report. In this case, Romania is slightly better than Bulgaria.

Therefore, Romania must recover in all areas, but special attention should be paid to vital areas of Romanian society: health and primary education, macroeconomic environment, infrastructure and institutions, where Romania's score is dramatically lower than Bulgaria.

#### 3. Romania vs. Bulgaria: Regional competitiveness

To improve the understanding of territorial competitiveness at the regional level, the European Commission has developed Regional Competitiveness Index (RCI) which shows the strengths and the weaknesses of each of the EU NUTS 2 regions.

RCI 2013 is the second edition of the index and includes updated and more data together with method refinement.

Unlike RCI 2010 which was a learning index, RCI 2013 has two more changes: inclusion of Croatia and modification of the NUTS region classification for the EU 27.

RCI 2013 is based on a set of 80 candidate indicators of which 73 have been eventually included in the index.

According to Country Competitiveness Index 2013 (CCI), Bulgaria is ranked 27 and Romania occupies the last position – 28.

CCI 2010 showed the same ranking for the two countries analyzed: Bulgaria 26 Romania 27 since Croatia joined the EU on 1 July 2013.

Unfortunately, the worst performers regions are: Severozapaden (Bulgaria) and region Sud-Est and Sud-Vest Oltenia (Romania).

Analyzing the evolution of GDP per capita for Romania and Bulgaria in the EU-28 GDP, extremely important indicator for analyzing the evolution of EU member countries, it is observed that Romania has a small advantage against Bulgaria. Values are worrisome because GDP of countries surveyed is by 50% lower than the average EU-28 (Table no. 1).

Table no. 1 GDP at current market prices per head of population (PPS)Index EU-28=100

Country	2009	2010	2011	2012	2013	2014	2015
Romania	49.7	50.7	51.3	53.0	55.0	55.8	56.4
Bulgaria	43.8	44.1	46.5	47.5	48.1	48.6	49.1

Source: http://ec.europa.eu/economy\_finance/ameco/user/serie/ResultSerie.cfm

In March 2010 was launched "Europe 2020" - the EU's 10-year growth strategy. It seeks to enhance the delivery of growth and jobs for the present decade. At the heart of the agenda is the achievement of "smart, sustainable, inclusive growth brought about through greater coordination of national and European policy."

The three axes of the strategy are:

• Smart growth: developing an economy based on knowledge and innovation;

• Sustainable growth: promoting a more resource-efficient, greener and more competitive economy;

• Inclusive growth: fostering a high employment economy delivering social and territorial cohesion.

The strategy identifies seven flagship initiatives the EU should take to boost growth and jobs that are measured by the 7 pillars.

It is imperative to pay attention to research and development, knowledge-based activities and the target, set by the EU Strategy, is that in 2020, the investment in research, development, innovation, made both government and private sector, to represent 2% of GDP or 1.5% of GDP for Romania and Bulgaria (Figure no. 2).



Figure no. 2 R&D expenditure (% in GDP)

Source:http://epp.eurostat.ec.europa.eu/portal/page/portal/europe\_2020\_indicators/headline\_indicators

Europe 2020 Competitiveness Index is a composite index that is calculated based on 7 pillars that are found grouped in three sub-Indexes (Table no. 2).

According to the WEF Report: Europe 2020 Competitiveness (edition 2014), Romania ranks 28th place, losing 2 positions from edition 2012, instead Bulgaria remains in 27th place.

Bulgaria ranks 27th overall; results confirm that it is still in the process of reinforcing its institutions. The labour market and employment area (16th) represents Bulgaria's main strength. Flexibility in hiring and firing practices (8th) and a healthy relationship between pay and productivity (12th) make the labour market relatively efficient (14th), while the relatively high participation of women in the labour force (9th) is a competitive strength.

Bulgaria also can count on a relatively sound environment for entrepreneurship (16th), characterized by a somewhat accepting attitude towards entrepreneurial failure (15th) and non-distortive taxation (13th). However, Bulgaria trails other EU countries in terms of competition policy (ranking 26th), as well as in the use and impact of ICT, which reflect low performance on the digital agenda pillar (25th). Education and training are other relevant areas for improvement, ranked 27th and 28th on the two sub-pillars, respectively, indicating the necessity to work on both the access to education and the

quality of the system. Bulgaria's environmental performance is also among the lowest in the EU, with a particularly low assessment of the capacity to enforce environmental regulations (27th) and concerns about the quality of the natural environment (28th).

Romania is 28th overall, the lowest position in the Europe 2020 Competitiveness Index ranking. The performance is relatively better in the area of sustainable growth because of a comparatively acceptable level of renewable energy production (11th) and CO2 intensity(14th). At the same time, the country attains the lowest performance in the EU in the smart category (28th). Romania trails almost all EU economies in most of the pillars, with only a few relatively better results in the labour market and employment pillar, where it ranks 22nd. The country's labour market is flexible (ranking 10th in terms of hiring and firing practices), with a relatively better participation of women in the private sector (19th). In terms of smart growth, Romania's performance shows that the country still needs to concentrate on developing sound institutions and market structures before it will become as competitive as the most advanced economies. Romania ranks only 23rd in the enterprise environment pillar. Despite a positive entrepreneurial attitude (3rd), improvements need to be made in the competition component (25th) and towards stronger development of clusters (24th). At the same time, the availability of finance is better than in other countries (15th on access to loans). Also, performance on the digital agenda and the innovative Europe pillars needs to be reinforced; Romania's ranking is 28th on both, pointing to the country's very low capacity for innovation. Taking a holistic approach to building up different areas of development is necessary to enable Romania to close the gap between its competitiveness and European targets.

INDEX	Romania	Bulgaria
EUROPE 2020 INDEX (2014 edition)	28	27
SMART GROWTH	28	27
1ST PILLAR: ENTERPRISE ENVIRONMENT	23	24
2ND PILLAR: DIGITAL AGENDA	28	25
3RD PILLAR: INNOVATIVE EUROPE	28	27
4TH PILLAR: EDUCATION AND TRAINING	28	27
INCLUSIVE GROWTH	26	24
5TH PILLAR: LABOUR MARKET AND EMPLOYMENT	22	16
6TH PILLAR: SOCIAL INCLUSION	27	28
SUSTAINABLE GROWTH	26	25
7TH PILLAR: ENVIRONMENTAL SUSTAINABILITY	26	25

 Table no. 2 Romania vs. Bulgaria: Place on the Pillars of Europe 2020 Index

Source: WEF, The Europe 2020 Competitiveness Report (edition 2014)

# 4. EU structural funds on competitiveness

### 4.1 Romania

As follows from the analysis performed on competitiveness, Romania is far behind Bulgaria globally and in last place in the EU, having to recover significant gaps in terms of knowledge-based society.

The overall level of economic activity in Romania remains low. An analysis of the level, structure and sector performance clearly shows that the issue of competitiveness is a challenge for Romania:

• Current dependence employment of a very low value-added agriculture, where small farms are very large share (almost 93% of all farms) with low orientation towards the market, low productivity and technical equipment, grove large areas diminished (50%);

• Entrepreneurial culture as reflected by the relatively low density of businesses in all regions except the Bucharest-Ilfov region and move towards low value-added activities;

- Levels of productivity internationally uncompetitive in many industries;
- Low current representation services with added value in the economy;

• Fragmentation, excessive standardization, inefficient use of resources in the Romanian media and academic research and development, the absence of a strategy for the development of intensive research institutions.

In these circumstances, Romania must develop macroeconomic policies to stimulate economic competitiveness, develop all regions, to attract foreign direct investment and external grants.

The European Commission approved Romania, on 12 July 2007, Sectoral Operational Programme "Increase of Economic Competitiveness". The total project budget was around EUR 3 billion, of which, Community assistance was EUR 2.55 billion (about 12.7% of the total EU money invested in Romania under Cohesion Policy in 2007-2013).

Absorption rate was only 36 % at September 30, 2014.

General objective of OP "Increase of Economic Competitiveness" was to increase the productivity of Romanian companies, to reduce disparities compared to the average productivity of the Union. Measures taken in 2015 will generate an average increase in productivity of approx. 5.5 % annually and will allow Romania to reach a level of about 55% of the EU average.

Specific objectives of the OP Competitiveness 2007-2013:

Strengthening and developing the productive sector;

• Establishment of a favorable environment for enterprises;

Achieving these two goals can be gauged by "SMEs contribution to GDP growth" by 10% in 2015.

• Increasing the capacity of R&D and fostering cooperation between RDI institutions and the productive sector;

Achieving this objective will contribute to increasing the value of R&D expenditures (GERD) to 3% of GDP in 2015.

• Harnessing ICT potential and its application in the public sector (administration) and private (citizens, enterprises);

The target is to increase the penetration of Internet services (access to online services enterprises) from 52% in 2003 to 70% in 2015.

• Increasing energy efficiency and sustainable development of the energy system;

The target is to reduce primary energy intensity by 40% by 2015.

Promoting Romanian tourism potential;

The target is to increase the tourist flow in Romania by 20% by 2015.

Currently, there are few available evaluation results, which provide a picture perspective on the relative effectiveness of specific types of intervention. Regarding lessons learned in 2007-2013 can be highlighted:

• Shortage of demand for R&D in less developed regions of Romania, that prevent the development of market economy;

• Fragmentation of the research environment and the inadequacy of its links with growing business needs and social challenges;

• Absence of appropriate financial instruments for R&D needs for ensuring its links with the productive sector/technology transfer;

• The importance of simplifying the rules on access and the implementation of projects;

• The lack of thematic concentration/sectoral actions for enterprises of OP Competitiveness, Priority Axis 2 "Competitiveness CDI" had a slow start, but showed a continuous annual growth rate of contraction, achieving total allocation contracting in 2013.

An important recommendation of the Council on National Reform Programme for Romania in 2013 and that includes an opinion on the convergence program of Romania for 2012-2016 refers to the need to increase the synergy between research, innovation and industry, in particular by prioritizing research and development activities that have the potential to attract private investment.

# Romania's development objectives for 2014-2020 must:

• To meet the specific development of Romania, based on competitiveness that should be promoted by national investments;

• Contribute to the objectives of smart, sustainable and inclusive European nion, established by the Europe 2020 strategy, the basic document that foreshadows all EU policies and programs.

The overall goal for 2014-2020 will be determined based on the need to boost the sustainable economic growth in Romania, coupled with the major objectives of EU development.

Development priorities will be identified based on major development needs of Romania in the following areas: infrastructure, competitiveness, human resources (including employment and social inclusion), administrative and territorial development.

For 2014-2020, Romania's priority is to increase competitiveness, which has been transposed on the recommendation of the European Commission in funding priority "Promoting economic competitiveness and local development", with funding of EUR 1.33 billion representing 4.3% of total funds.

# **Thematic objectives:**

• Strengthening research, technological development and innovation;

• Improving acces, use and quality of information and communication technologies;

• Increase the competitiveness of SMEs, the agricultural sector and fisheries and aquaculture sector;

Needs indicated in the Agreement to increase competitiveness are:

• Creating an R&D public more compact and modern, who focus on the needs of the economy, social changes and technologies that Romania has worldclass potential, in accordance with the principles of smart specialization and to raise the level of marketing and internalizing research;

• Promoting a culture of entrepreneurship and innovation in the entire educational system in companies.

Component Research, technological development and innovation (R&D) to upport business competitiveness and pursue the following specific objectives, which are subsequent general objectives:

♦ Encouraging private investment in R&D and research partnerships between businesses and research organizations (research and development institutes, universities) in order to increase the transfer of knowledge, technology and personnel with advanced skills and development of R&D products and services based on R&D in economic sectors with growth potential.

• Facilitating access to financial instruments to support private investment in research and innovation and to stimulate start-ups and spin-offs innovative.

• Development of public and private R&D both clusters as part of existing/emerging centers of excellence and other types of CD structures established at national, regional, European, and in the priority thematic areas, in agreement with existing potential and/or competitive advantage.

• Unlocking the potential for excellence in R&D by creating synergies with EU R&D program - Horizon 2020.

## 4.2 Bulgaria

For the first program period for Bulgaria 2007-2013, by Operational Programme "Development of the competitiveness of the Bulgarian Economy 2007–2013", resources are allocated at the size of EUR 1.16 billion (10.3% of total funds), of which EUR 0.99 billion (85% of the resources) are funding by the EU along the line of ERDF and EUR 0.17 billion (15% of the resources) national co-financing.

Absorption rate was 74% at September 30, 2014.

The purpose of the support within the framework of OP Competitiveness is to develop a competitive and efficient production and business potential, to contribute to increasing the economic effect and to assist the necessary structural changes in economy with a view to achieving a sustainable progress and feasible cohesion during the programme period. The overall objective of OP "Competitiveness" is to develop a dynamic economy competitive at the European and world market.

The general objective of the operational programme shall be implemented through two specific objectives that cover both aspects of competitiveness – the preparedness of Bulgarian enterprises for the Common European Market and for the fast changing conditions on international markets, as well as the condition of the environment in which they function.

The expected impact of the investment:

◆ To raise the expenditures on Research and Development (R&D) by 0.64% up to the level of 1.15 % by 2013;

• To raise the export as a share of the GDP ratio by 30 % by 2013;

♦ To reduce the overall energy intensity level by 25 % compared to the level of 2004 and to create additional capacity of 16 GwH for the needs of the enterprises of renewable energy production in the national grid;

• To create 2120 jobs, and 300 jobs in the research area;

♦ In overall, the contribution of small and medium enterprises (SMEs) to GDP is set at 32.3% for 2013, i.e. 10% increase in comparison with 2004 data; and Labour productivity increase will be 11.5% for the same period and baseline.

Outside the resources granted for the financial engineering tools (36%), the biggest percentage is of the granted resources for technological modernization and management systems (33% of the totally granted resources), followed by the resources for innovation and support for the SRDA (17%) and energy efficiency and green economic.

The effect of the resources granted on the Bulgarian economic indicates positive impact on the GDP, employment, the export of goods and services, as the most significant is the impact on the growth of the private investments. In this sense, the effect of then operational programme is measured not so much in the quantity of submitted resources and/or in the financing ,,by the pieces, and the initial push of projects which are later taken and further developed by the private sector by taking the benefit for itself.

Despite of the contribution of the funds granted along the line of the European funds, incl. of the operational programme for competitiveness, for overcoming the negative economic trends in the first programming period for our country, Bulgaria continued to be the worst developed member state of the EU with GDP per capita 45% of the average for the EU, with the lowest indicators in terms of competitiveness, efficiency, power consumption and resource efficiency.

The main challenges before the Bulgarian economy remain the difficult access to sources of financing, low rate of business internationalization, low rate of innovativeness of the Bulgarian enterprises, high rate of energy intensiveness and resource consumption of the production, bad structure of the export (based mainly on the exportation of raw materials and goods with relatively low added value). One of the main debates on the European level is the new industrial policy of the EU. Europe, historically, has always been economically strong based on the production.

However during the last decades, a greater share is acquired by the services and finances.

At the same time Europe could not leave the crisis without production and well paid jobs. In this sense, a dialogue is needed with the business and the whole society regarding

the starting of a process of reindustrialization of Bulgaria an attraction of investments for export oriented productions.

The importance of the OP "Competitiveness" 2007-2013, respectively of the new operational programme for innovation and competitiveness for the period 2014-2020, is determined by the special place of the business compared to all other participants in the development, namely: the business creates the public goods and is the actual agent of the economic development as a main component of the development and all other participants (public authorities on central and regional/local level, non-governmental sector) can be qualified as "supporting the development—, to obtain certain public benefits.

Considering the results achieved and lessons learnt from the current program period, the existing problems, needs and dispositions of the target groups, the proposed vision for the Operational Programme "Innovation and competitiveness (OPIC) is as of 2020, Bulgaria is a resource – efficient, eco-friendly industry and competitive industry and competitive economy, ensuring conditions for innovations and realization of human capital, including the development of the regions as per the specific giving.

Thus, the economy of Bulgaria is facing two main challenges, which need to be addressed by the OPIC— during the programming period 2014-2020.

The first challenge is to search for the base of the acceleration of the grow rate of the economy aiming for the catch-up development, and meanwhile compensating the decrease of the population in labor capacity age with the fostering of the overall economic activity and labor productivity.

The second challenge is to ensure that the accelerated grow rates will be sustainable – with accent ob the ecology and energetic and generally the resource effectiveness. These challenges also require serious institutional and administrative support.

To overcome the main challenges for accelerated and stable growth, the following two priority axis have been defined with the relevant intervention areas:

PRIORITY 1. Entrepreneurship, export and production potential as a base for accelerated growth

A) Technological development and innovations ("smart— growth) – in relation to the likely investments, as provided in the Thematic objective 1 of the General strategic frame;

B) Competitiveness and productivity of the enterprises (fast growing) – considering the Thematic objective 3 of the General strategic frame;

PRIORITY 2: Green and efficient economy as a guarantee of sustainable growth

C) Green economy and resource efficiency – following the investment logic of Thematic objective 6 of the General strategic frame;

D) Energy technologies and energy efficiency – in execution of Thematic objective 4 of the General strategic frame;

Within the frame of the indicated conditions, the total size of the resources on the Operational programme "Innovation and competitiveness 2014-2020" is EUR 1.18 billion representing 12 % of total funds.

### **5.** Conclusions

As follows from the analysis performed on competitiveness, Romania has been exceeded by Bulgaria with 5 positions overall, Romania remains the last position in the EU, having to recover significant gaps in terms of knowledge-based society.

Lack of vision has been identified as one of Romania's main deficiencies in implementing Competitiveness OP. In addition, it was recommended to establish a stable set of indicators for outputs, outcomes and impacts, to help monitor the effectiveness of the program and its objectives.

In attracting structural funds on competitiveness, Romania registered an absorption rate, two times smaller than Bulgaria, in 2007-2013.

In these circumstances, Romania must develop macroeconomic policies to stimulate economic competitiveness, develop all regions, to attract foreign direct investment and external grants.

Bulgaria has to face two major challenges: to accelerate the grow rate and to make it sustainable. Bulgaria has to ensure conditions for innovations and realization of human capital, including the development of the regions.

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