

COMPARATIVE ANALYSIS OF THE RECENT EVOLUTIONS OF ROMANIAN AND EUROPEAN UNION'S COMPETITIVENESS

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The main subject of this paper refers to an analysis of the recent trends and evolution of Romanian competitiveness compared to the European Union competitiveness and it is structured in four main parts. The first section of the paper regards an introduction of the competitiveness evolution process, recalling the three actual evaluation models of the competitiveness level. In the second part of the paper there can be found the competitiveness indexes practiced and published by the World Economic Forum, indicators that are structured on three main levels as following: the Global Competitiveness Index and its aggregate indicators that are developed on three categories of factors that are essential for the competitiveness process (Basic requirements, Efficiency Enhancers, Innovation and sophistication factors) and the indexes associated to the twelve pillars of competitiveness: Institutions, Infrastructure, Macroeconomic stability, Health and primary education, Higher education and training, Goods market efficiency, Labor market efficiency, Financial market sophistication, Technological readiness, Market size, Business sophistication, Innovation. Based on the values obtained after consulting the World Economic Forum Reports and regarding the competitiveness from a global perspective, the third part of the paper presents a comparative analysis of the evolution of the Romanian competitiveness process and the one of the EU25. In the last part of the paper there can be found the conclusions of this analysis, with respect to the values found

Key word: competitiveness, indicators, analysis, differences, evolution

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Introduction

At the beginning of the XXI century, the world economy is governed by two strong forces: technology and globalization, both of them having an important impact on the companies, economies and countries. Nowadays, when the globalization process is happening significantly, the main objective of any country and nation remains the competitiveness.

After a 235 years long evolution, from Adam Smith [1] to present, the concept of competitiveness is considered by the economists, the governing law of the capitalist economies. Economic literature [2,3,4] presents the important personalities, starting with the year 1776, that have contributed to the development of competitiveness concept.

In 1990, Michael Porter published his work entitled „The Competitive Advantage of Nations” [5], paper in which he mainly resumes all competitiveness related ideas developed ever since. Michael Porter presents them in a universal model, entitled “competitiveness diamante” basically devoted to the companies competitiveness analysis, that is based on the following factors:

- Production factors (4)
- Local / National demand (2)
- External environment of the company (2)
- Related and complementary industries (2)

Nowadays, the competitiveness concept has different approaches, both at company level and at national level, and the recent written economic literature shows that concept is also raising a regional dimension.

The practical importance of competitiveness is designed by a large number of international institutions that manage the research in this field.

- International Institute for Management Development, World Competitiveness Yearbook
- World Economic Forum, Global Competitiveness Report
- World Bank, Doing Business, KAM
- Organization for Economic Co-operation and Development, New Economy Report
- European Commission, European Competitiveness Report

IMD World Competitiveness Centre director, Prof. Stephane Grelli, is the author of certain competitiveness related theories [6]. In this context, one nation's competitiveness factors are distributed by Prof Stephane Garelli in the so called "competitiveness cube", in which every two of the eight facets are connected to the fundamental or essential drivers:

- Economic performance: Attractiveness vs. Aggressiveness
- Governmental efficiency: Proximity vs. Globalization;
- Business efficiency: Stock vs. Processes
- Infrastructure: Cohesion vs Assumed Risk

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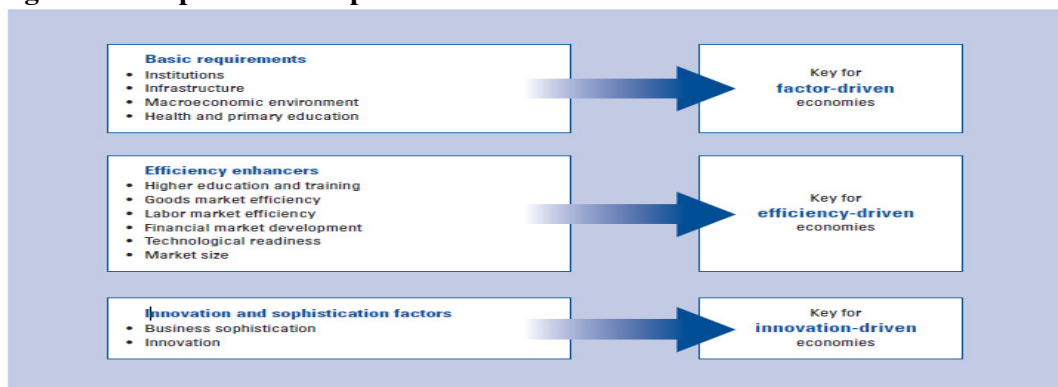
World Economic Forum (WEF) competitiveness index

World Economic Forum is an independent international organization committed to improving the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas. Over the past 30 years this institutions has published annual reports regarding the world economy status, has also analyzed policies and economic indicators.

Starting with the year 2005, the World Economic Forum underlies its competitiveness analysis, defined as being an ensemble of political factors plus the Global Competitiveness Index (GCI). This aggregate index has been developed by Prof. Xavier Sala – i – Martin and it is meant to quantify the national performances, by including certain complex aspects, appropriate to the multidimensional phenomenon that this index is modeling [7]: diversity and the numerous competitiveness factors, their evolution through time, positive impact of some key factors (for example Education and continuous formation) and the negative impact of some other factors.

The Global Competitiveness Index evaluation starts from quantifying the competitiveness main factors, that are grouped in 12 pillars [7], presented in Figure 1, where there are also resumed the key directions for competitiveness growth and pillars split in certain specific directions:

Fig. 1: The 12 pillars of competitiveness



Source: Global Competitiveness Report (GCR) 2010 - 2011

Every year the World Economic Forum publishes the Global Competitiveness Report, that presents the evaluation methodology of the GCI and the obtained values, for the countries that

provided the data needed for the index assessment. The Global Competitiveness Report (GCR) represents an essential document at international level, that is usually consulted by the economic and political actors, with the purpose of identifying the best solutions for improving the competitiveness.

Since 2005 the Global Competitiveness Report evolution refers to its content and inward and outward data accuracy [7,11]. The Reports issued starting with the year 2006 – 2007, are extremely important for Romania, as they are based on the information provided by the Applied Economy Group and are also assumed by certain international institutions, in the context of preparing our country's EU accession.

The main purpose of this paper is to present the Romanian competitiveness level, based on the Global Competitiveness Index values registered in the period 2006 / 2007 until 2010 / 2011.

The following table presents the development stages of different economies, depending on GDP per capita values.

Table 1: Income values for development stages

Stage of development	GDP per capita (in US\$)
Stage 1: Factor driven	< 2,000
Transition from stage 1 to stage 2	2,000–3,000
Stage 2: Efficiency driven	3,000–9,000
Transition from stage 2 to stage 3	9,000–17,000
Stage 3: Innovation driven	> 17,000

Source: Global Competitiveness Report 2010 - 2011

Comparative analysis of Romanian competitiveness evolution

The Global Competitiveness Report provides the values for the following indexes:

- Global Competitiveness Index; (GCI)
- The Aggregate Indexes organized in three factor categories that influence the competitiveness (Figure 1 IAC)
- Indexes associated to the 12 pillars of competitiveness (IPC)

The research methodology used in this paper implies following the next steps:

Step 1 – The evaluation of the following measures taken for every type of indexes

The medium value for EU25:

$$I = \frac{\sum_{i=1}^n I_{ji}}{n}, (1)$$

where $I = \{GCI, IAC, IPC\}$; $i=1,25$ for UE 25 $j=1$, for GCI ; $j= 1,3$ for IAC; $j=1,12$ for IPC

Romanian competitiveness indexes values deviation, compared to the EU25 average

$$\square I_j = I_j - Ir_j (2),$$

where Ir_j is the *type i and j category* Index for Romania

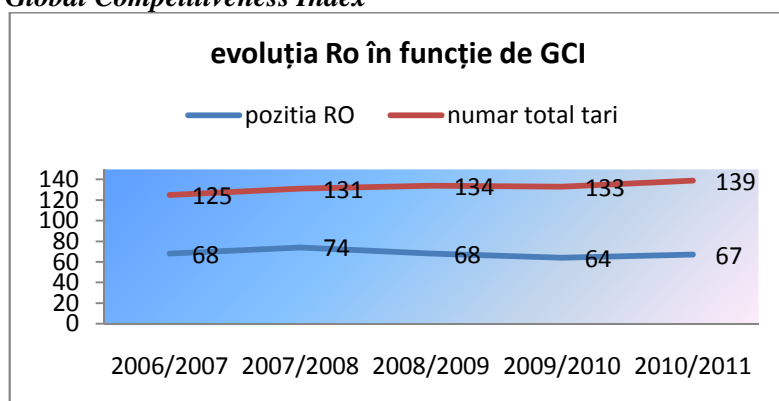
Step 2 – The graphic representation of the time evolution in the period of deviation analysis:

$$\square I_j = f(t)$$

Step 3 – Identifying the Romanian competitiveness strengths and weaknesses, based on the previous characteristics; outlining the possible solutions for increasing the competitiveness. Besides the evaluations and graphic representations, the next figure, Figure 2 presents the

evolution of our country's position, considering the value registered by the Global Competitiveness Index compared with the countries listed in the Global Competitiveness Report

Figure 2: The evolution of our country's position, considering the value registered by the Global Competitiveness Index



Source: Author's calculations

It is very important to mention that under the development stage (in Table 1), during the analyzed period of time, Romania is listed in "Group 2", except 2009 / 2010 when our country is listed in transition from stage 2 to stage 3 countries group

In the following table, Table 2 there are presented the average values of competitiveness index at the EU 25 level and at our country's level, during the period of time analyzed.

Table 2: Average values of EU (Ij) and Romanian (I_{ro}) competitiveness indexes

Anul		2006/2007 [1]	2007/2008 [2]	2008/2009 [3]	2009/2010 [4]	2010/2011 [5]	
Nivelul indicatorului							
UE 25	GCI	4,9672	4,8048	4,804	4,7456	4,7432	
	IAC	1	5,3144	5,2636	5,2868	5,1772	5,2664
		2	4,866	4,7244	4,7708	4,746	4,6924
		3	4,6216	4,4972	4,4636	4,4284	4,3868
România	GCI	4,02	3,97	4,10	4,11	4,16	
	IAC	1	4,19	4,07	4,15	4,10	4,36
		2	3,99	3,98	4,18	4,25	4,18
		3	3,52	3,54	3,53	3,44	3,24

Source: Author's calculations

The following figures, Figures 3, 4, 5 and 6 present the evolution of GCI, IAC and the 12 pillars of competitiveness deviations.

Figure 3: Deviations associated to GCI and IAC

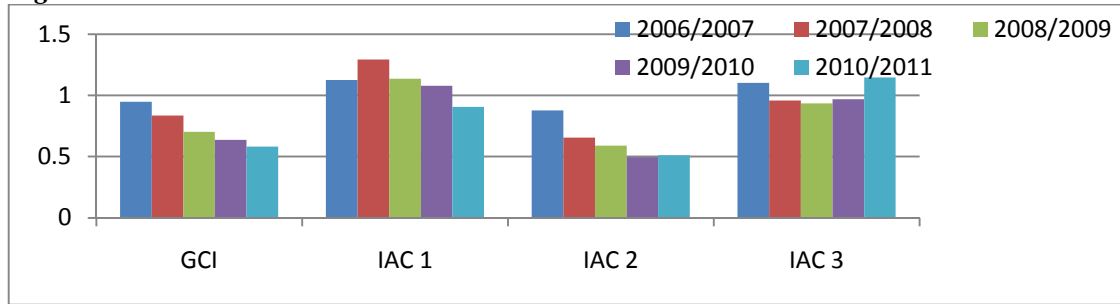
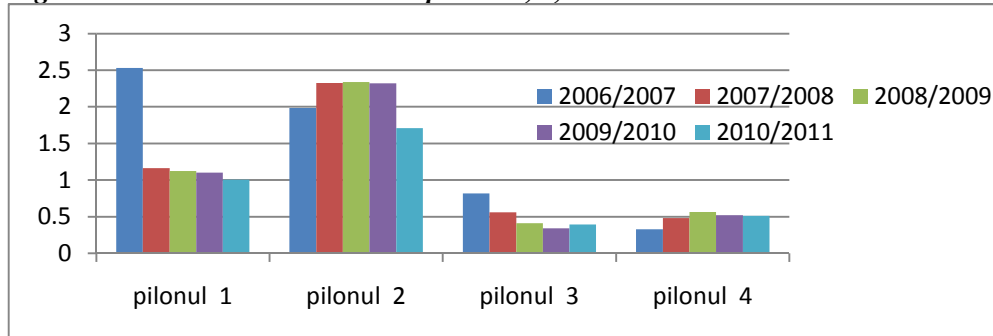
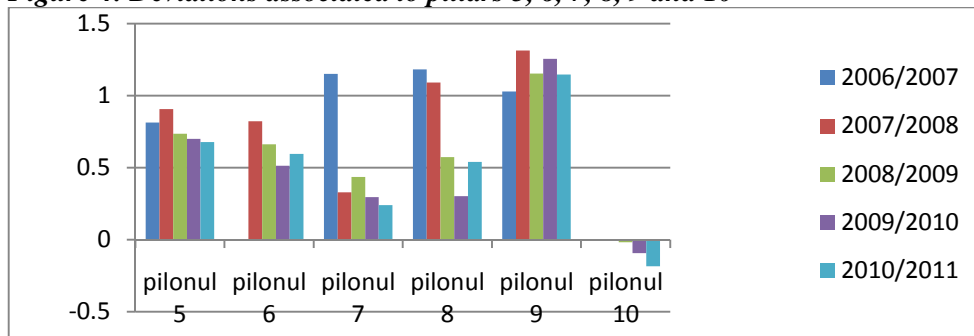


Figure 3: Deviations associated to pillars 1, 2, 3 and 4



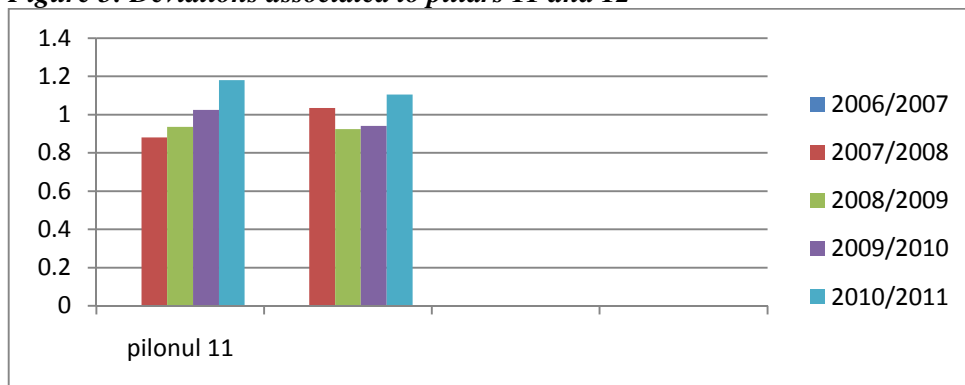
Source: Author's calculations

Figure 4: Deviations associated to pillars 5, 6, 7, 8, 9 and 10



Source: Author's calculations

Figure 5: Deviations associated to pillars 11 and 12



Source: Author's calculations

Conclusions

The Global Competitiveness Report issued by the World Economic Forum is actually a reference document at international level, due to its method of outlining each nation's competitiveness stage.

According to the Global Competitiveness Report for the period of time analyzed 2006 / 2007 until 2010 / 2011:

- Romania tends to occupy the 68th position in the total of 132 (average) countries analyzed;
- Romania is placed under the second group "stage 2 – Efficiency driven" with an average GDP per capita of 3000 and 9000 USD

The evaluations made with reference to the evolution of deviation values of indexes for Romania compared with the EU 25 are the following:

- The obvious tendency of recovering the gap between Romania and EU 25, under the aspect of Global Competitiveness Index
- Recovering the gap between Romania and EU 25 is made with the aggregate index IAC1 and IAC 2
- The aggregate index IAC 3 follows a contradictory evolution in the period analyzed and that leads to a decrease in the competitiveness gap recovery between Romania and EU25.
- Throughout the 12 pillars of competitiveness associated indexes we can note that IPC10 values are over the value of EU25, this being the most powerful gap recovery instrument for the period analyzed. For IPC1, IPC3, IPC5, IPC6, IPC7 and IPC8 the main tendency is to reduce the gap. The indexes IPC11 and IPC12 need to be carefully monitored because they contribute to the increase of the gap between EU25 and Romanian competitiveness, and the indexes IPC2, IPC4 and IPC9 tend to have the same effect, during the period of time analyzed.

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