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Case study

ANALYSIS OF THE COMPETITIVENESS AT GLOBAL LEVEL IN THE PERIOD 2011 – 2013

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Abstract

The increasing competitiveness has become in recent years an important coordinate of the socio-economic development strategies in most countries of the world, especially in the most developed ones, of the sectoral development strategies within the national economies, as well as of the business strategies. This paper presents an analysis of the competitiveness indices of several countries, including Romania and it is based on data provided by "The World Competitiveness Yearbook 2012-2013". "The World Competitiveness Yearbook" represents an analysis of the competitiveness of 60 economies using 333 criteria, published continuously since 1989. The 2013 edition shows competitiveness of national/regional economies based on 2012 data. The International Institute for Management Development uses over 300 criteria in determining competitiveness and they refer to economy, authorities' efficiency, business efficiency, and infrastructure.

1. INTRODUCTION

Starting with 2005 the analysis of the competitiveness has been based on the Global Competitiveness Index, a full tool measuring the microeconomic and macroeconomic bases.

We define competitiveness as the set of institutions, policies and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be gained by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in their turn are the main drivers of the growth rates. In other words, a more competitive economy is one that can sustain economic growth.

The concept of competitiveness involves static and dynamic components. Although the productivity of a country determines its ability to sustain a high level of income, it is also one of the central determinants of return to investment, which is one of the key factors that determine the growth potential of an economy.

The 12 pillars of competitiveness

Many determinants drive productivity and competitiveness. Understanding the factors behind this process has concerned economists for hundreds of years, generating theories from Adam Smith 's focus on the specialization and division of labour to the attention of neoclassical economists on investment in physical capital and infrastructure, and more recently the interest in other mechanisms, such as education and professional training, technological progress, macroeconomic stability, good governance, firm sophistication and market efficiency among others.

While all these factors are likely important for competitiveness and growth, they do not exclude each other - at least two of them can be significant at the same time, in fact this has been proved in the economic literature. This openness is included in the Global Competitiveness Index by including a weighted average of several different components, each measuring a different aspect of competitiveness. These components are grouped in the 12 pillars of competitiveness.

2. ANALYSIS OF THE GLOBAL COMPETITIVENESS INDEX

The Global Competitiveness Index includes a weighted average of several different components, each measuring a different aspect of competitiveness. These components are grouped into the 12 pillars of competitiveness.

The first pillar: *The institutions*

The institutional environment is determined by the legal and administrative framework in which individuals, companies and governments interact to generate wealth. The importance of a healthy institutional environment became more evident during the recent economic and financial crisis and is crucial for the strengthening of the fragile recovery, given the role played by the state at international level and for the economies of several countries. The quality of the institutions has a strong impact on competitiveness and growth. It influences investment decisions and the organization of production and plays a key role in how societies distribute the benefits and bear the costs of development strategies and policies.

The 2nd pillar: *Infrastructure*

An extensive and efficient infrastructure is essential to ensure the efficient functioning of the economy, because it is an important factor in determining the location of the economic activity and the types of activities or sectors that can develop in a particular case. A well-developed infrastructure reduces the effect of distance between regions, the integration of the national market and its connection to a low on the markets in other countries and regions.

The 3rd pillar: *The macroeconomic environment*

The stability of the macroeconomic environment is important for the business environment and it is therefore important for the global competitiveness of a country. Although it is certainly true that the macroeconomic stability alone cannot increase the productivity of a nation alone, is also recognized that the macroeconomic instability is harmful for the economy, as seen in recent years, especially in the European context. The government can not provide services effectively if it has to make high-interest payments concerning the debts from the past.

The 4th pillar: *Health and primary education*

A healthy workforce is vital to a country's competitiveness and productivity. Workers who are ill cannot function to their potential and will be less productive. A poor health condition leads to significant business costs, because sick workers are often absent or operate at a low level of efficiency. Investments in the provision of health services are essential both for economic and for moral reasons.

In addition to health, this pillar takes into account the quantity and quality of the basic education received by the population. The basic education increases the efficiency of each worker individually. The lack of basic education can become a constraint for the business development, as companies have difficulties in increasing the value chain by creating more sophisticated or intensive products, with the available human resources.

The 5th pillar: *Higher education and training quality*

Higher education and training quality are particularly important for economies that want to evolve to the top of the value chain beyond simple production processes and products. This pillar measures secondary and tertiary education enrollment rates and the quality of education, which are assessed by the business community.

The 6th pillar: *Goods Market efficiency*

The countries with efficient goods markets are well positioned to produce the right mix of products and services, and to make sure that these products can be most effectively traded in the economy, due to its special supply and demand conditions.

Healthy competition on the market, both internal and external, is important in leading to the market efficiency and thus to the business productivity, by ensuring that the most efficient companies manufacturing goods required by the market, are the ones that thrive.

The 7th pillar: *Labor market efficiency*

The efficiency and the flexibility of the labor market are essential to ensure an efficient allocation of the use of the workers and incentives so that they provide the best return at the workplace. Therefore, labor markets must have the flexibility to change workers from one economic activity to another, quickly and at low cost, and to allow wage fluctuations without much social disruption. Efficient labor markets must also ensure a clear relationship between worker incentives and their efforts to promote meritocracy in the workplace, and also they need to promote equality between men and women in business.

The 8th pillar: *Financial market development*

The recent economic crisis has highlighted the important role played by the proper functioning of the financial sector in economic activities. An efficient financial sector allocates the economic resources saved by the citizens of a country, as well as those entering the economy from abroad, to be used in the most productive manner.

The 9th pillar: *Technological Ability*

In today's globalized world, technology is increasingly important to the prosperity and competitiveness of companies. The technological ability pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of industries, with particular emphasis on its capacity to fully use communication information and technology in daily activities and production processes, in order to increase the efficiency and to allow innovation for competitiveness.

The 10th pillar: *Market size*

Market size affects productivity, because large markets allow companies to exploit economies of scale. Traditionally, the markets available to companies have been constrained by the national borders. In the era of globalization, international markets can substitute domestic markets, to some extent, especially in small countries.

The 11th pillar: *Business Complexity*

There is no doubt that sophisticated business practices are conducive to greater efficiency in the production of goods and services. The complexity in business requires two elements that are closely interlinked: the quality of the global business networks of a country and the quality of the operations and strategies of individual companies.

The 12th pillar: *Innovation*

Innovation can result from technological or non-technological knowledge. The final pillar of competitiveness focuses on technological innovation. Although substantial gains can be achieved through improvements in institutions, building infrastructure, reducing macroeconomic instability or improving human capital, all these factors eventually seem to imply decreasing returns. The same goes for the labor market efficiency, the financial efficiency and the efficiency of the goods markets**.**

3. RELATIONS BETWEEN THE 12 PILLARS

It is very important to note that the 12 pillars are not independent: they tend to reinforce each other, and a weakness in one area often has a negative impact on others. For example, a strong capacity for innovation (the 12th pillar), will be very difficult to achieve without a healthy, well educated and trained workforce (the 4th and 5th pillars), which is adept to the absorption of new technologies (the 9th pillar) and without sufficient financing (the 8th pillar) for research and development or an efficient goods market which enables new innovations on the market (the 6th pillar).

The Global Competitiveness Index takes into account the developmental stages by a higher assignment of the relative weights for those pillars that are the most relevant for an economy given its particular stage of development. Although the 12 pillars are important to some extent for all countries, the relative importance of each depends on a certain stage development of a country. To implement this concept, the pillars are organized into 3 sub-indexes (stage 1 - internal factors, stage 2 - efficiency, stage 3 - innovation).

The economies in each stage of development

In the 1st stage of development, determined by internal factors, there are 38 out of the 144 economies analyzed, including Bangladesh, Kenya and Moldova. In the stage of transition from the 1st stage to the 2nd stage there are 17 economies, including Botswana, Egypt and Algeria. Romania, Albania, Morocco, Peru, South Africa, Serbia, Thailand, Ukraine, etc. are in the 2nd development stage, determined by efficiency.

In the stage of transition from the 2nd to the 3rd stage there are 21 economies surveyed, including Argentina, Croatia, Estonia, Mexico and Russia. The last stage of development, the third, includes developed countries, in which the increase is determined by innovation. Here we find 33 economies including: Australia, Belgium, Canada, Czech Republic, USA, United Kingdom, the United Arab Emirates, Switzerland, Taiwan, China, France.

Table No.1. Sub-indexes corresponding to the development stages

	1st Stage	Transition from the 1st stage to the 2nd stage	1st – 2nd Stage	Transition from the 2nd stage to he 3rd stage	Stage III
GDP per capita ($)	<2000	2000-2999	3000-8999	9000-17000	>17000
Sub-index – internal factors	60%	40-60%	40%	20-40%	20%
Sub-index - efficiency	35%	35-50%	50%	50%	50%
Sub-index - innovation	5%	5-10%	10%	10-30%	30%

Source : The Global Competitiveness Report 2012 – 2013, p. 9, accessed on 20.06.2013 at http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf

4. TOP 10 RESULTS ON THE ECONOMIES FOLLOWING THE ANALYSIS

As in previous years, the top 10 results for 2012, according to the Global Competitiveness Yearbook 2012 to 2013, were dominated by a number of European countries such as Switzerland, Finland, Sweden, Holland, Germany and the United Kingdom confirming their place among the most competitive economies. Together with the United States, three Asian economies also appear in Top 10, Singapore remaining the 2nd most competitive economy in the world and Hong Kong and Japan positioning themselves on 9:10**.**

Switzerland retains its 1st position this year again, due to the large continuous external performances. The most notable strengths of the country are related to innovation sand the efficiency of the labor market, thus positioning themselves as leaders in relation to the Global Competitiveness Index, and the complexity of the business sector, where they rank 2nd.

Singapore retains the 2nd position following an outstanding performance of the whole Index. The country occupies the 3rd position in 7 Index categories and appears in the top 10 in other 3.

Finland climbs in the top by one place compared to last year, positioning itself in the 3rd place as a result of small improvements in a number of areas. Like other countries in the region, Finland boasts the smooth operation and high degree of transparency of the public institutions (ranking 2nd), dominating a series of indicators in this category.

Sweden left behind by Finland, goes down one place, descends one place to the 4th position. Like Switzerland, Sweden has placed significant emphasis on creating conditions for increased innovation. The quality of public institutions remains in position with a high degree of efficiency, reliability and transparency. Private institutions also receive excellent grades, including companies with excellent ethical behavior.

The Netherlands continue to progress in the rankings, climbing this year on the 5th position. The improvement reflects a continuous strengthening of its innovation capacity, as well as the increased efficiency and the stability of the financial markets.

Germany retains the 6th place this year. The country is ranked 3rd for its excellent infrastructure, providing first class facilities especially for all types of transport.

The United States of America continue the decline that began a few years ago, going down by 2 positions compared to last year to occupy the 7th place this year. Although many structural features continue to make the economy extremely productive, a number of unresolved weaknesses led to lowering the U.S. ranking in recent years.

The United Kingdom of Great Britain (8th position) this year continues to recover the lost ground, climbing 2 positions and settling firmly in the top 10. The country improves its performance in different areas, benefiting from clear forces such as the labor market efficiency (5th place), in stark contrast to the rigidity of most European countries.

Placed as the second largest economy of Asia (the first being Singapore), **Hong Kong** climbs to the 9th position improving its score at the same time. The performance is reflected in all the areas composing the Global Competitiveness Index. As in the previous years, Hong Kong is positioned as number 1 in terms of infrastructure, reflecting the outstanding quality of its facilities for all the types of transport, telephone and electricity infrastructure.

Japan descends one place, reaching the 10th place this year, with a performance similar to the one of last year. The country continues to enjoy a major competitive advantage major concerning the business sophistication and innovation, these two pillars ranking 1st and 5th respectively.

5. THE ADJUSTED INDEX OF COMPETITIVENESS

The central idea of a sustainable competitiveness reflects the search for a model of development that should balance economic prosperity, environmental management, and social sustainability.

In relation to the adjusted index of competitiveness, Romania ranks 78 out of 144, with a score of 3,72.

The first link analyzed is that of competitiveness and sustainability of the environment, which includes elements such as pollution, resource scarcity, water availability and the regulatory framework of the measures and policies that relate to the environment.

Summary of environmental sustainability indicators:

- environmental policy: regulations, international environmental treaties, terrestrial biome and protection;
- environmental degradation : the level of pesticides, CO2 intensity, the quality of the natural environment;
- the use of renewable resources: the agricultural intensity, deforestation problems (the chance to cover the losses by planting saplings), overfishing without coverage.

The second type of relationship is that between competitiveness and social sustainability. Usually, a high level of competitiveness leads to high levels of economic growth and implicitly to the increase in the welfare of society, citizens who consume more goods and services available.

However, in some cases, at where the well-being is associated with only certain parts of the population, and others are marginalized from this point of view, the high levels of competitiveness do not automatically lead to high levels of social sustainability.

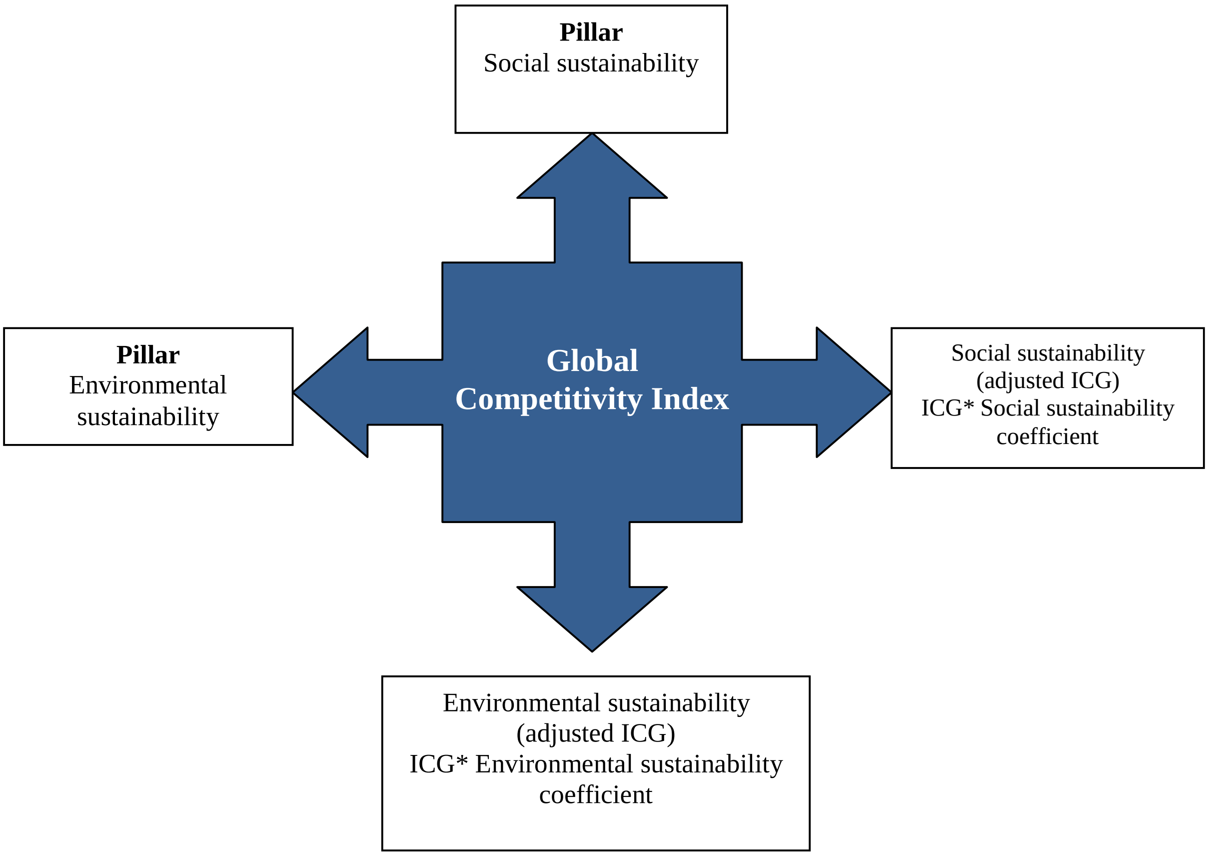
The social sustainability indicators are:

- access to basic needs: access to sewerage, drinking water, medical care.
- vulnerability to shocks: vulnerability in terms of employment, the extent of the informal economy, social protection.
- Social cohesion: social mobility, unemployment among the youth.

Conclusions on the results of the Global Competitiveness Index adjusted for the two types of sustainability described above.

For starters, there are a few preliminary conclusions that can be drawn based on these results: there are no compromises between being competitive and being sustainable. The analysis consisted of a positive correlation among the three dimensions of the competitiveness and social and environmental sustainability.

A corridor of the first point is that the political will is essential in achieving sustainable competitiveness. There is no physical law that warns a country that it is on a sustainable path; the political will and the public interest management are the keys to achieving this objective, this understanding being also reflected in the specialized literature.



Source : The Global Competitiveness Report 2012 – 2013, p.52, accessed on 20.06.2013 at http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf

Figure No.1. Structure of the adjusted competitiveness index

According to the report, Europe is as a whole the most "uniform" region in terms of income. The European social model places 18 countries in the top 20 countries with the lowest income, however, at larger scale, the social sustainability of Europe shows a similar division with that of its internal competitiveness, with the economies in the Southern Europe different compared to the northern economies. Moreover, a series of specific conclusions can be drawn for each country and region. Switzerland leads the adjusted Global Competitiveness Index ranking, obtaining notable performances in all aspects related to the sustainable competitiveness and proving that it is not necessary to have compromises between the social and the environmental sustainability and to be competitive**.**

Similarly, the Northern countries perform well in both dimensions, Finland is the country that leads the group with the highest score in both areas. All these countries have achieved an excellent result in terms of the global competitiveness index adjusted for social sustainability (Norway, Denmark, Finland and Iceland rank in the top 10 economies). Sweden, however, has a youth unemployment rate quite high (25.2 %), which implies a slightly lower performance. Norway stands out by the fact that it has achieved remarkable results in terms of social sustainability indexes. Also, the Northern countries have good positions and get high results following the adjustment of the Global Competitiveness Index to the environmental sustainability, although all have in common a concern aimed at overfishing.

Japan receives a positive overall sustainable competitiveness analysis. For the social sustainability pillar, Japan is well placed, especially since it has a low unemployment rate among young people (though it is not surprising, given the level of aging of the population) and a small informal economy. However, Japan recorded a relatively high inequality score (39,5). On the other hand, in relation to the environment, Japan reaches a mixed performance, with high results in terms of environmental policies (correct commitments of regulations and standards), but still faces strong radiation.

The United States of America shows poor results both in terms of social sustainability, as well as from the point of view of the environmental sustainability, which implies a lower score of the adjusted index compared to the non-adjusted one. The social sustainability of the country is strongly affected by increasing inequality and increasing youth unemployment. However, the sustainable prosperity of the country is affected by the global index adjusted to the environmental sustainability. For example, the United States of America is among the countries that have adopted the fewest environmental treaties.

Mexico is an economy with a poor sustainable competitiveness in both respects. On the social side, Mexico's performance is affected by high inequality and a strong informal economy. From the environmental point of view, Mexico is penalized for high levels of emissions, increased use of water in agriculture and a perception that the natural environment is heavily degraded.

Several countries in **Latin America** foresee certain deficiencies for both pillars, with Argentina and the Dominican Republic facing most problems on the environmental side, and Peru, Colombia and Paraguay, with social sustainability issues. Costa Rica, on the other hand, is remarkable by due to its positive performance on the environment. One area of concern remains overfishing, which is interesting to be addressed, given the importance of this industry in the country.

Brazil is better positioned in the environmental sustainability compared with other types of sustainability. However, this performance masks a number of environmental problems such as the deforestation of the Amazon. In fact, this country has the highest rate of deforestation in the world. And although Brazil proves reasonable overall performance in overall social sustainability, the high inequality in this country remains a concern. In general, apart from Brazil, the other three BRICS (Russia, India and China) reveal significant weaknesses in both dimensions of the sustainable competitiveness. The Russian Federation has very poor performance in terms of environmental sustainability with the worst global performance for three indicators: the intensity of environmental regulations, the number of international environmental treaties ratified and quality of the natural environment.

India has the lowest performance compared with the Russian Federation and China, with major concerns in both areas of sustainability. In the case of the global competitiveness indicator adjusted to the social sustainability, India is a country that does not provide basic services to many of its citizens.

China's competitive performance records considerable declines, especially after taking into account the measures of adjustment of the index. Social sustainability is only partially measured in China, because the country does not provide all the required data related to unemployment and employment of young people. However, the available indicators outline a somewhat negative image because of the inequality in this country and also because of very low access to basic services, such as improved sanitation and sewerage system.

Turkey, one of the countries that have improved the General Competitiveness Index ranking the most this year, yet fails to sustain this performance when sustainability issues are taken into account. The high inequality, a vulnerable employment and an informal sector quite marked, have negative effects in terms of social sustainability of this country. Similarly, the high degree of pollution, the intensive use of water in agriculture, the lack of protection of certain areas of land, as well as the extremely reduced commitments compared to the international environmental agreements remain areas of concern for the environmental sustainability of Turkey.

On the other hand, **New Zealand**, with its strong commitment aimed at a better management of the environment, receives a positive assessment for the sustainable competitiveness of the environment. The good result places it in the ranking upper than Australia. The main differences between the two countries are related to the low level of air pollution in New Zealand and the efforts of the country to withdraw from agricultural use aside some protected areas. Both countries are still receiving very favorable reviews for their social sustainability.

The sustainable competitiveness is a research area in formation and the initial analysis presented above reveals that most of the key concepts are still not available.

However, by combining the social and the environmental indicators with the Global Competitiveness Index it was possible to develop this concept of adjusted index and a preliminary analysis of the social sustainability at regional and national was performed.

The most important finding is that there should not be a compromise between being competitive on the one hand and benefiting from social and environmental, on the other hand. On the contrary, many countries that are leaders in competitiveness also obtained notable performances in the fields of sustainability.

While value creation and being productive remains the basis of economic development, the purpose of the adjusted competitiveness analysis is to explore the manner in which the social and environmental elements are related to economic progress and prosperity because the three areas are clearly interconnected. It is likely that sustained human progress and prosperity will depend on balancing economic progress with social integration and with the efficient management of the environment.

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