Engineering Sustainable Development in Romania

Abstract: Economics is just the core of a development cell. Every healthy society wants prosperity. The model that Romania has been looking for a long time has to come from the following criteria: prosperity for the country, a state of development for a critical mass of the population and a lower level of poverty. At the same time, the possibility of having a normal, decent state for those in need of social assistance should be considered. If Romania wants to have a wider perspective, then it is better suited for sustainable development. It is at this model that Romania should think of, because it needs it.

Keywords: Romania, economic model, sustainable development.

1. INTRODUCTION

Romania recorded economic growth in 2008, but at the end of the last quarter of that year it entered the crisis. Poland was the only country in the European Union that was not in crisis in 2009. In 2016, when Romania advanced to the dawn of recovery, it was the first to grow in the EU. It is still the country with the highest economic growth, but fails to ensure a healthy, sustainable growth.

Romania is now number seventh in the EU at the number of inhabitants with a resident population of 19.5 million, which does not take into account another three to four million living abroad. Instead, Romania is the seventeenth country in the EU after GDP with 186 billion euros. The growth model that Romania is looking for throughout the world is found ... in its own history. In 1913, Romania ranked eleventh in Europe from 19 countries analysed.

2. THE STATE OF ROMANIA

Romania achieved an economic growth of 8.5% in 2008, the highest rate of economic growth in the European Union that year, but in the fourth quarter the country had already entered the crisis. In the first year of decline in 2009, Romania had a significant economic decrease of 7.1%. The largest economic downturns in the EU in that year were: Lithuania (-14.8%), Estonia (-14.7%) and Latvia (14.3%). On the opposite side, the lowest negative developments were: Cyprus (-2%), Belgium (-2.3%), Malta (-2.5%) and Portugal (-3%). Romania recovered slightly in 2010, when the economic growth began.
In 2015 Romania had an economic growth of 3.5%, in 2016 an evolution of 4.8% (the country with the highest growth rate in the EU) in 2017 (5.7% in the first quarter and 5.9% in the second quarter), almost double the EU average.

By population size, Romania is seventh in the EU with 19.5 million inhabitants according to official data, plus three to four million Romanians abroad. On the contrary, according to Gross Domestic Product, Romania is ranked 17th in the EU, with 186.5 billion euros in 2016. Our GDP is very small. On the scale of the truth, we are on the 27th place with 17,500 euros per capita, according to Eurostat. This problem of GDP per inhabitant is one of the most important problems to be solved for Romania.

There are ten EU countries with smaller populations than Romania, but with higher GDP. One of the most striking examples is Ireland, which has a GDP of 307 billion euros to 4.6 million people [1].

3. LESSONS FROM OUR OWN HISTORY

The model we are still looking for throughout the world is found in our own history. Since 1990, the top Romanian politicians are still looking for a development model. There was talk about the Swedish, the German, and then the Japanese one. None of these models had any points in accordance with the specific situation in Romania. But if we go back in 1913, we might find a solution. Here we refer to the book "This Time Is Different: Eight Centuries of Financial Folly" written by Carmen Reinhart and Kenneth Rogoff [2]. The two researchers sought the most powerful economies on every continent. In 1913, they selected 19 countries from Europe, of which Romania ranked 11th, followed by Turkey, Sweden, Hungary, Denmark, Greece, Portugal, Finland and Norway.

How was that result made? What did Romania do to get there? What kind of Romania did that result have? How did Romania recover in 54 years, from 1859 to 1913, three centuries of return? Interesting is the "Cuza Report on the State of the Nation," in December 1859, at the end of the first year of the union that said we had everything to create. Following the "creation" of public credit, the leu in 1867, the National Bank of Romania (the 16th bank in the world even before the FED), in 1880, road openings (such as railways, roughly the same time as the United Kingdom and with US, bridges) etc. How have they been done? By organizing the work, organizing the finance, and building an internal change program. In addition, at that time, for the first time in an official document in Romania, the word restructuring appeared - on May 10th, 1866, in the oath passed by Carol I as the ruler of Romania. Since May 10th, 1866, we are still pronouncing this word, but restructuring has not yet begun. In addition, at that time, the institutions were extremely powerful. One of them was the Public Ministry, which was led by some of the most powerful people at the time - Ion I.C. Bătianu, his son Ionel Bratianu, Manolescu, Saligny. They have made some constructions that make the fairer of Romania today, because we have nothing to blame for what we have done. This climate could not have been developed without good schools. The emphasis on school was very strong at that time. If we had everything to create and made public credit, we also made a system to convey, for a critical mass, the common sense of money. And today, we would need to implement the common sense at the level of the country's population.

What does the model we want mean, because the optimal one does cannot be reached so easily? It means wise laws, powerful and efficient institutions, and performant teams. This is the model that, if today, we manage to implement, but we are still far away. For example, there are 16,000 confusing and interpretable laws in Romania. As long as we have those, we will not be able to go forward. According to an EU study of 2016 on financial education, Romania has ranked last of the 28 EU countries. Education is a key condition of this model that we need 10 years from the beginning of the crisis [3].

4. EDUCATION - A KEY FACTOR IN THE SUSTAINABLE DEVELOPMENT PROCESS

The concept of sustainable development must be implemented at the level of the whole society, the role of education - in general - and of higher education - in particular - being decisive. First, universities need to become sustainable, in order to reach a sustainable society. At the level of university education, sustainable development refers to the management of specific processes and activities, by increasing the quality of services provided by representative institutions (state and private universities). Finally, these will be translated into well-trained graduates to meet the real needs of the labour market.
4.1. What does a sustainable university mean?

An important attempt to define what “sustainable university” means was made in 1990 by the Talloires Declaration. Jean Mayer, president of Tufts University, Boston convened 22 rectors in Talloires, France to express their concerns about the state of the world and to create/draw up a document identifying key actions that universities must do for a sustainable future [4].

4.2. How would a sustainable higher education institution look like?

An academic institution dedicated to sustainability would help students understand the origin of environmental degradation and motivate them to discover environmentally sustainable practices, while teaching them the origin of contemporary injustice in contravention with what justice is meant to be and the human nature in theory.

4.3. Sustainable development in the university curriculum

The role of higher education in the context of sustainable development:

- Educating students by helping them acquire knowledge about the complex interactions between economics and social and environmental factors;
- Identifying technical and social solutions to the challenges posed by sustainable development;
- Assume the position of catalyst for learning about the sustainable development, beyond the barriers of higher education, by exchanging ideas and ideas with local communities, the business environment, government and other authorities, and the broader world.

4.4. Barriers to incorporating sustainable development into the curriculum and implementation solutions

The experience of foreign universities shows that the number of identified obstacles is different depending on the specifics of faculties and curricula.

It is often argued that the failure to incorporate sustainable development into the curriculum is due to the "mismatch" of the concept with the field / study specialization, lack of staff experience, financial restrictions, limitations of education legislation, or internal regulations.

Exploring the experience of universities in developed countries highlights four major barriers to a successful implementation of education for sustainable development:

1. agglomerated or over-agglomerated curriculum;
2. irrelevance perceived by academic staff;
3. limited knowledge and expertise of the personnel;
4. the leadership of the institution and the limited dedication of the staff.

Universities that have encountered problems in enhancing sustainable development in the curriculum have identified a number of solutions to overcome the barriers described in the table below:
Table 1. Barriers and Solutions

<table>
<thead>
<tr>
<th>BARRIERS</th>
<th>SOLUTIONS</th>
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<tr>
<td>Crowded curriculum</td>
<td>Creating &quot;space&quot; in curricula by rigorously analyzing existing curricula or redefining them by reconsidering the skills required for each university qualification.</td>
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<tr>
<td>Irrelevance perceived by academic staff</td>
<td>Developing credible teaching materials that are fully contextualized and relevant to each field/specialization</td>
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<tr>
<td>Limited knowledge and expertise of staff</td>
<td>Significant investments in staff development and building the capacity to adapt.</td>
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<tr>
<td>Institutionally limited dedication</td>
<td>Develop new motivation policies and explain possible benefits.</td>
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<td></td>
<td>Revise and modify the institution's institutional mission and policy</td>
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It is of great importance to inform and improve the staff. Workshops are particularly useful for staff to discuss the concept of sustainable development of society (and implicitly about the sustainability of higher education). This concept must be approached from a dual perspective, cultural and scientific.

4.5. **The experience of students in a sustainable university**

Universities must ensure the optimal conditions that allow students to develop their values, skills and thinking to contribute to sustainable development.

In this respect, a good example of the implementation of the concept of sustainable development should be offered to students.

"Providing a good example is not the main way to influence others, but is the only method" (Albert Einstein).

5. **CONCLUSIONS**

Romania in 2017 is growing economically but needs sustainable development. Our own history teaches us that we have had a model that allowed us to recover in the back of 54 years 3 centuries of return: by organizing labor, finances, and building an internal change program.

This climate could not be developed without good schools, which would allow the implementation of the common sense at the level of the country's population. Unfortunately Romania ranks last in the EU in this chapter.

The concept of sustainable development must be implemented at the level of the whole society, the role of education - in general - and of higher education - in particular - being decisive. This is done by: educating students by helping them acquire knowledge about the complex interaction between economic, social and environmental factors; identifying technical and social solutions to the challenges posed by sustainable development; assuming the position of catalyst for learning about sustainable development beyond the barriers to higher education.

For Romania, sustainable development is not one of the possible options, but the only prospect.
REFERENCES


