

*North International Conference on Economics*

*NICE 2016, September 23 – 24, 2016, Baia Mare, Romania*

Department of Economics and Physics, Technical University of Cluj-Napoca, Romania

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# **PROCEEDINGS**

**of**

## **North International Conference on Economics**

### **1<sup>st</sup> Issue / 2016**

<http://econ.cunbm.utcluj.ro/nice2016>

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**ISSN 2537-317X, ISSN-L 2537-317X**

## **ASPECTS REGARDING THE EFFICIENCY OF THE TERTIARY EDUCATION IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT**

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### **ABSTRACT**

*For the society to become sustainable, the universities must become themselves an eloquent example regarding the promotion of the sustainable development concept. Since the activity in the tertiary education is of a socio-cultural nature, measuring the efficiency in this domain is very a difficult process that supposes the elaboration of a set of performance indicators, in view of growing the quality of the services offered by the universities, but also their financing. The chosen theme is a very actual one, since neither now, on a world level, was managed to create some indicators to measure the exact efficiency of the tertiary education, the process being at its full expansion. The activity of a tertiary education institution is efficient provided its graduates are capable to satisfy the ongoing needs of the labour market, this way contributing not only to the personal well-being, but also to the society's.*

**KEYWORDS:** *sustainable development, the efficiency of tertiary education, the financing of the tertiary education, sustainable universities, sustainable communities*

**JEL CLASSIFICATION:** *I22, I23, I25*

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### **1. INTRODUCTION**

The structure of the writing has three chapters in which there is approached the issue of the efficiency of the tertiary education institutions of Romania in the context of sustainable development.

The chapter “Tertiary education in the context of sustainable development” underlines the fact that the institutions and the academical programs must get involved in creating a sustainable future.

The second chapter named “The sustainable university - the assumption of sustainable communities” states that the universities must become a model of sustainable development in the communities they serve, through teaching and research, through adequate management of campuses, as employers, as suppliers of specialists, etc.

The last chapter represents a “Short analysis of the tertiary education system in Romania during 2009-2015 from the perspective of efficiency” and it presents the situation of the tertiary education of our country in the given period (regarding the number of the tertiary education institutions, faculties, students, as well of the teaching staff), also the problems that it faces. Moreover, it is to be noted the fact that the process of creating a system of indicators that can measure exactly the efficiency of the tertiary education represents a long road of explorations, not only in Romania, as well worldwide, being hard to make.

The methods used within this writing are typical to the research in the economical domain, and that are: the statistical observation, the conceptual one, the analysis of the connections, respectively the logical method.

## **2. THE TERTIARY EDUCATION IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT**

Not only the actual generations, but also the future ones, to have a sustainable future must redesign their personal and professional activities.

To succeed with this step, it is necessary the education of these generations, the society considering that a very important role in the facilitation of it must be played by the universities. In a sustainable community, the sustainable development must be found in the tertiary education, under the shape of sustainable universities.

These, to be competitive on a long term, must have as a main and sustainable objective, the growing of the quality of the given services.

To better respond the needs in a continuous changings onto the labour market, they must furnish well prepared students, not only theoretically, but also practically. For example, in their activity, the economists battle problems of rational choice, but having practical thinking and action, capacity of anticipation, understanding and transformation, they adapt to the economical changes and they find, easily, the way of a wisdom choice.

The Romanian Academic Society, as well many international bodies stressed the importance of implementing the sustainable development in the tertiary education.

The institutes and the academical programs get involved in creating a sustainable future, through: written declarations regarding the mission and the scope of the institution; the academical programs (that will have subjects like: Globalisation and sustainable development; The production and sustainable consumption, etc.); the energetical and consumption practices; the mobilisation of available resources; the development of an employment program at the level of each faculty, and so on.

In view of solving the world problems of sustainability, the institution will cooperate on international level by organizing conferences and inter-students (faculties) programs.

For the society, on its whole, to sustainable develop, it is necessary that the tertiary institutions to settle the sustainable development in the center of the curriculum.

Not only in Romania, but also worldwide, this process is to be found at an early stage of practice.

The universities encounter obstacles regarding the incorporation of sustainable development in the curriculum, like: the limitations imposed by the legislation of the educational domain or by the internal regulations (for example, the guide and methodology of the Romanian Agency for Quality in Tertiary Education for the authorisation and accreditation of study programs); the financial restrictions; the lack of the personnel's expertise; the claiming of the “unfitting” of the concept with the learning domain (specialization); a curriculum too crowded; the reluctance of students regarding the subject, etc.

The solutions that aim to overcome these obstacles are: the necessity that the whole teaching staff, having the support of the management of the university, to personalize their own experiences regarding the sustainable development (study specialization); to inform and perfect the personnel (for example, through the workshops), etc.

## **3. THE SUSTAINABLE UNIVERSITY - THE ASSUMPTION OF SUSTAINABLE COMMUNITIES**

The universities must make themselves as an eloquent example regarding the promotion of the sustainable development concept. They must contribute to the developing of values, aptitudes

and thinking of the students for them to realize the necessity and to be able to set in practice the sustainable development. In this regard, the universities must adapt their study programs, teaching plans, the pedagogical approaches and extra-curricular activities, as well the academical and the campus life.

The sustainable development must be found all around the current activities made in an university (acquisitions, investments), also in the students' life, in general.

The university campus is the place where students assimilate the values of sustainable development, preparing themselves as, after leaving the universities, to be capable to resolve the problems they face in real life.

Operational practices, like: the preserving of the water and energy consumption, the reducing of the emission of carbon dioxide, the sustainable building (renewal) of the buildings, the promotion of ecological food and of its benefits over health, the decrease of the paper consumption, etc. in view of the environmental protection are integrated in the educational and research activities of the universities. The decisions, the daily behaviour and the actions that the students undergo bear an impact over the worldwide people's quality of life. That is why, not only the students, but also the universities must have in the center of their preoccupations the sustainable development of the tertiary education in the benefit of the whole society.

The students that go through courses that are specific to the education headed in the scope of promoting the sustainable development of the society, develop: interdisciplinary aptitudes; ethical aptitudes; critical and reflexive thinking; growth of the responsibility regarding the impact of the decisions they take growth of the grade of perception of the aspects related to the challenges of sustainability and developing of the aptitudes in view of their settlement.

Nowadays, a larger and larger number of employers seek graduates who, to use in their professional work, the sustainable education received in the universities that have incorporated and promote the good practices of the sustainability.

That is why, the universities must form students like some citizens who should actively get involved in the global economy, giving it an impulse and sustainable developing it.

Thus, they must be taught in the spirit of human developing and of actions that assure the growth of social cohesion, assumptions that must lay at the basis of the Romania's sustainable development strategy.

Human development represents an essential factor in the sustainable economical development and it implies investments in the human capital, in the view of its growth. It supposes preoccupations related to: fighting against poverty, education and health, the participation of social and political life of the society, as well the gender equality, etc.

The social cohesion must lay at the basis of the sustainable development, it favoring the development, equal economical growth. The achievement of the social cohesion in Romania represents a hard objective to get which supposed that: poverty should be decreased/eliminated; the process of polarization to be stopped; the state's institutions and the civil society to work efficiently and transparently; in the activity of the public officials to be promoted the professionalism; fight the birocracy and corruption; to be formed a responsible and believable political class, etc.

Romania's E.U. integration supposes not only difficulties that it has to overcome, but also opportunities that need to be exploited, that will be made only by the cooperation of the society's members, in view of the national economical reconstruction.

The universities must become models of sustainable development in the communities they serve, by teaching and research, by proper management of campuses, as employers and as suppliers of specialists, etc.

This way, their leaders play an essential role in sustaining the transition towards sustainable development, in this regard, they must realize interactions between the institutions they lead and the external holders of interests (business areas, local communities, the civil society, government, etc.) in order to support each other and to act efficiently.

The universities are able to develop the intellectual environment that is necessary in sustaining the practical applications regarding the sustainable development concept, by organising conferences and academical exchanges, in which to lighten up all its dimensions (economical, social, ecological and cultural).

They can establish their academical subjects needed for the resolution of great problems that human society battles, they can assure resources, they can create impulses and programs to develop aptitudes and can rule by example, through politics and institutionalised practices sure in point of ecology, minimalising their own impact over the environment.

Sustainable development, being an international challenge, universities must learn from the experience of other countries and sectors, growing altogether their good-name.

#### **4. SHORT ANALYSIS OF THE TERTIARY EDUCATION SYSTEM IN ROMANIA, DURING 2009 - 2015 FROM THE PERSPECTIVE OF EFFICIENCY**

During 2009 - 2015, the situation of the tertiary education in Romania, regarding the number of the tertiary education institutes, faculties, students, also teaching staff is rendered in Table 1. Considering Table 1, in the university year of 2014/2015 in Romania there were 101 universities (state and private) where 583 faculties were performing, the number of the students being of 541.653. Analysing the period 2009 - 2015, we can see a permanent decrease of the students' number. This way, in the university year of 2009/2010 there were registered 999.523 students, their number decreasing every year, in the university year 2014/2015, their number being of 541.653 students.

The decrease of the students' presence is the consequence of: decrease of birth rate; of the decrease, starting with 2005 altogether with the implementation of the Bologna system, of the years of study for Bachelor studies; of the dropout registered in the pre-university education; the increase of the demands of the bacalaureate exam, as well the number of the faculties, in the analyzed period, is the consequence, on the one hand, of the decrease of the students' number, and, on the other hand, of the economical crisis.

By analyzing the number of the teaching staff in the tertiary education during 2009 - 2015, we can see that this is permanently decreasing from 31.103 in the university year of 2009/2010 to 27.555 in the year 2012/2013, registering a fair increase in the university year of 2013/2014, when there were 28.211 persons, for in the university year of 2014/2015 to decrease to 27.772 persons. The application of the enforcements of the national education Law no. 1/2011, regarding retiring, as well the obstruction of the vacancy contest, explains the decrease of the teaching staff in the tertiary education in the university year of 2011/2012.

Starting with the university year of 2012/2013 there took place an improvement of the number of the teaching staff for the tertiary education, following the elimination of some given restrictions.

Mainly, to measure the economical efficiency we report the obtained effects (in physical or monetary expression) to the given efforts (the used and consumed resources) or the efforts to the effects (Vasilescu et al., 2000). In the first case, we maximize the report, and in the second case, we minimised it.

**Table 1. The tertiary education in Romania during 2009 - 2015**

	Tertiary Education					
	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
<b>Tertiary education institutions</b>	108	108	108	107	103	101
<b>Faculties</b>	624	629	614	596	590	583
<b>Students/post-graduates enrolled - total</b>	999.523	871.842	705.333	618.157	578.705	541.653
<b>Short term education</b>	570	610	-	-	-	-
<b>Bachelor studies</b>	774.749	672.391	539.852	464.592	433.234	411.229
<b>Master and post-graduate studies</b>	195.241	171.356	141.663	132.209	125.480	111.109
<b>PhD and post-doctoral programs</b>	28.963	27.485	23.818	21.356	19.991	19.315
<b>Teaching staff</b>	31.103	29.746	28.365	27.555	28.211	27.772

Source: *The Romanian Statistical Yearbook (2016)*. The National Institute of Statistics

The economical efficiency is appreciated at a microeconomical level, by the means of the company's profitability, and, at the level of the national economy, by the national labour productivity work (Dobrotă, 1999).

Regarding the activity of a tertiary education institution, this is considered to be efficient, not if it grows the number of its graduates, but if these (making use of the knowledge and of the abilities gathered in the teaching process) find themselves a job, this way contributing not only to the self being, but also to the society's (Cicea, 2005).

Any economical activity has social implications, considering that any social activity has economical consequences.

The educational activity, in general, and the tertiary one, is, specially, one of a socio-cultural nature, which means that the efforts can be easily counted, while the effects are hard to be measured, because they take time to happen and not always bear the monetary shape.

Within the problems that humanity faces we find poverty, illiteracy, etc. To settle these issues we need to have an efficient and modern learning system, able to mitigate the discrepancies existing between people, regarding the standard of living (Rojanschi & Bran, 2002). Moreover, it was concluded the fact that, generally, the educational training of an individual is in reverse proportion with the unemployment rate.

This way, usually, unemployment is high and increasing for the individuals with a poor training. Giving as example, Romania's situation, as per Table 2, it can be noticed that in 2014, the unemployment rate was of 6.8%. For the ones with university studies, in the same period, the smallest level (5.8%), in relation to the ones of medium level (7.2%) and, respectively, low on education (6.7%).

The most effective universities in Romania, that stand between the first 500 universities worldwide, as per Quacquarelli Symonds Classification (QS), mainly based on the academical

reputation are: The Bucharest University, The “Babeş - Bolyai” University in Cluj, The West University of Timisoara and the “Al. I. Cuza” in Iasi (Ştefănescu, 2016).

**Table 2. The unemployment rate in Romania, after the level of education, in 2014**

	Total	Level of education		
		High	Medium	Low
Unemployment rate (%)	6.8	5.8	7.2	6.7

Source: *The Romanian Statistical Yearbook (2015)*. The National Institute of Statistics

The financing of the tertiary education in Romania is settled by the national education Law no. 1/2011, published in the Official Gazette of Romania no.18/2011, with its subsequent modifications and completions. Considering the Article 8 of this law, the activities in the educational domain (not only pre-university, but also university) are financed from, two sources: the state budget and own incomes.

The allocation of funds in the tertiary education is made based on a methodology that involves not only the number of students (for each being settled a sum of money, that differs, in point of form or of the study domain), as well the registered performances, that are measured by a set of indicators and it aims the growth of the quality of the services given by the universities.

Not only in Romania, but also worldwide, up to now, there weren't established synthetically indicators that will allow an accurate measure of the quality of the services given by the universities. The process of creating such indicators is still running.

The funds that are being given for the teaching system (inclusive for the university one) depend, directly, on the evolution of the Gross Domestic Product (G.D.P.). This way, if the G.D.P. decreases, then the amounts of money allocated to education, will decrease, but, if we have economical growth, meaning the G.D.P. is growing, this doesn't necessarily mean that the funds allocated to education will automatically grow and not in the same measure with the growth of this indicator.

Under-financing represents the biggest problem that the Romanian tertiary education system battles with and it lies on the economical crisis. Other issues of the Romanian university system are represented by: the decrease of the number of students, on the one hand, the dropout in the pre-university system, as well the increase of the demands of the baccalaureate exam, respectively of some's possibilities to study out of the country, etc.

The evolution of the legislative frame in the domain of national education was marked, along the years, by a number of changes, especially in point of financing, trying for it to stand on qualitative criteria, to aim for academically and research results. At the basis of these legislative changes stood, on the one hand, the constant efforts to adapt to the market requests of the teaching system, and, on the other hand, the permanent adaptation of the national legislation to the one of the E. U. Yet, the legislative instability, can affect the rightfulness and the efficiency regarding the implementation of the reforms in view of the refreshing of the universities.

The National Reform Program (2016), aims, among others, to implement to Romania's level the Europe 2020 Strategy objectives, that our country imposed as a full member of the E.U. regarding:

- the rate of the early dropout, that in 2014 was of 18.1%, and for 2020 it is foreseen to 11.3%;
- the tertiary education, among the persons aged 30 - 34 years, where in 2014 registered a ratio of 25%, the target for 2020 being of 26.7%. Here is also foreseen the growth and the development of the teaching frame during life, in this regard already functioning the National Strategy for Lifelong Learning (2015 - 2020).

## **5. CONCLUSIONS**

For the society, on the whole, to sustainable develop it is necessary that universities become sustainable, functioning as research and teaching centers for sustainability. In this regard, they must settle the sustainable development in the center of the curriculum.

The academical research, the education and the university curriculum must aim the promotion of the sustainable development.

The universities must become themselves an eloquent example regarding the promotion of the sustainable development concept. They have to take part at the developing of the values, aptitude and thinking of the students for these to understand the necessity and to be able to set into practice the study curricula, the learning plans, the pedagogical approach and the extra-curricular activities, as well the academical life and the one in the campus, this way, after their leaving from the universities, the future graduates to be able to resolve the problems that real life faces, getting actively involved in the global economy, giving it an impulse and sustainable developing it. Thus, they must be taught in the spirit of human developing and of the actions that assure the growth of social cohesion, assumptions that must lay at the basis of the Romania's sustainable development strategy.

By analyzing the period between 2009 - 2015 there is noted a permanent decrease in the students' number, as a result of: decrease of birth rate; the compression of the bachelor studies; the dropout registered in the pre-university education; the demands of the baccalaureate exam. The decrease of the tertiary education institutions, as well of the number of faculties, in the analyzed period, is the consequence, on the one hand, of the decrease of the students' number, and, on the other hand, of the economical crisis.

The decrease of the teaching staff in the tertiary education in the given period is explained by the requirements of the national education Law no. 1/2011 regarding retiring, as well the obstruction of vacancy contest of the academical jobs.

The activity in education in general and in the tertiary education, especially, is one of a social-cultural nature, which means that the efforts can be easily counted, while the effects are hard to measure, because they take time to happen and not always bear the monetary shape.

Generally speaking, the educational training of an individual is on a reverse proportional relation with the unemployment rate.

The financing of the tertiary education, directly, depends on the level of the Gross Domestic Product and it lays on the basis of qualitative criteria, that aims for academical and research results.

Few of the problems that the Romanian education system battles are: under-financing (mainly given to the economical crisis); the decrease of the students' number; the legislative instability (that can affect the coherence and the efficiency of implementation of the reforms in the system), etc.



The Romanian Reform Program for 2016 aims, among others, to implement to Romania's level the Europe 2020 Strategy objectives regarding the early dropout of school rate and the tertiary education among persons aged between 30 – 34 years.

Not only in Romania, but also worldwide, till now, there weren't settled synthetically indicators to allow a precise measuring of the quality of services given by the universities. The process of the elaboration of such indicators is at its full expansion.

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