

## Trends In Funding Higher Education In Romania And EU

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**Abstract:** Education is one of the determinants of the economic growth in any state, education funding representing thus a very important aspect in public policies. In this article we present the general principles of funding higher education in Romania and how it evolved over the last decade, stressing that the public higher education has been consistently underfunded. We also present an overview of the evolution of the main statistical indicators that characterize higher education in Romania, the number of universities and faculties, the number of students, number of teachers, revealing discrepancies between their evolution and the evolution of funding. We compared the funding of higher education in Romania and EU countries highlighting the fact that Romania should pay a special attention to higher education to achieve the performance of other EU member countries.

**Key words:** higher education, education statistics, education funding

**JEL Classification:** I21, I22, I23

## 1. Introduction

Higher education is a key factor in the preparation of human resources and makes an important contribution to a country's economic growth (Barro and Sala-I-Martin, 1995), (Barro, 2013), (Barro, 2002). For this reason, funding higher education is a decisive factor with major influence on the formation of highly skilled human resources that will help sustain economic growth of a country (McMahon, 1999). In this article we present some developments of financing education in general and especially higher education in Romania compared to other EU countries.

The main legal framework for the financing of higher education in Romania is the National Education Law no. 1/2011, with subsequent amendments. Under the law there are two major sources of funding of education: state budget and own income, which can be used autonomously by universities. According to the law, public higher education funding is achieved through public funds based on a set of requirements.

According to the National Education Law, revenue for higher education institutions in Romania come from the Ministry of Education under a certain contract for basic funding, complementary funding and additional funding, the achievement of investment objectives, funding allocated on a competitive basis for institutional development, funds allocated on a competitive basis for inclusion and social protection of students', grants and own revenues, interest, donations, sponsorships and fees charged under the law to Romanian or foreign person, and other sources. These revenues are used by higher education institutions in terms of university autonomy, in order to achieve

their obligations under the state policy in the field of education and university research.

Basic funding is made on a multiannual basis, throughout a study program and funds are granted to the higher education institutions on the basis of an institutional agreement between the Ministry of Education and each university separately. Depending on the destination of expenditures, complementary funding consists in three categories: accommodation and food subsidies, funds allocated based on priorities and specific rules for facilities and other capital expenditure and repairs, funds allocated on a competitive basis for university' scientific research. According to article 197 from the National Education Law, the government encourages excellence in higher education institution by providing additional funding in the amount of not less than 30 % of the amount allocated to national public universities as basic funding based on quality criteria and standards established by the National Council for Financing of Higher Education and approved by the Ministry of Education.

According to article 197, paragraph 2 a separate fund shall be granted for institutional development, from the budget allocated by the Ministry of National Education. Institutional development fund addresses the performance of higher education institutions in each category and is distributed based on competitive criteria and international standards.

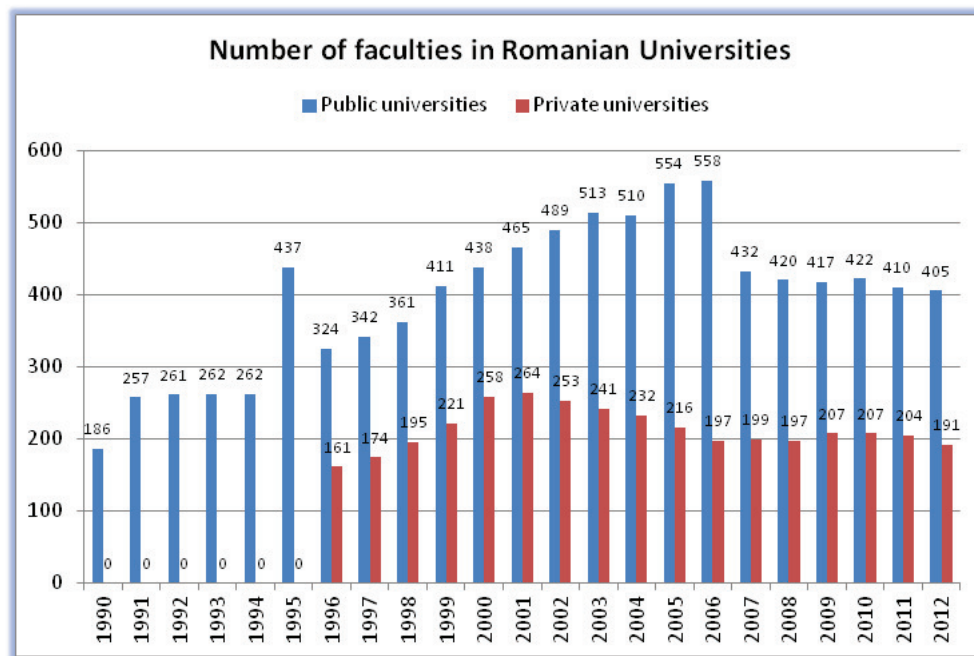
## 2. Romanian higher education in figures

In Romania, at the beginning of the 2012-2013 academic year there was a total of 107 universities of which 56 state (public)

universities and 51 private universities accredited or provisionally (Tempo database, 2014). In these 107 universities there were 596 faculties of which 405 in public education. The evolution of the number of faculties in public and private universities in the period 1990-2012 is shown in Figure 1 (data on private education available since 1996).

One can note that in public education the number of faculties experienced an upward trend until 2006 when there were 558 registered faculties, and their number decreased reaching the value of 405 in 2012.

Figure 1. The number of faculties in Romanian universities during 1990-2012

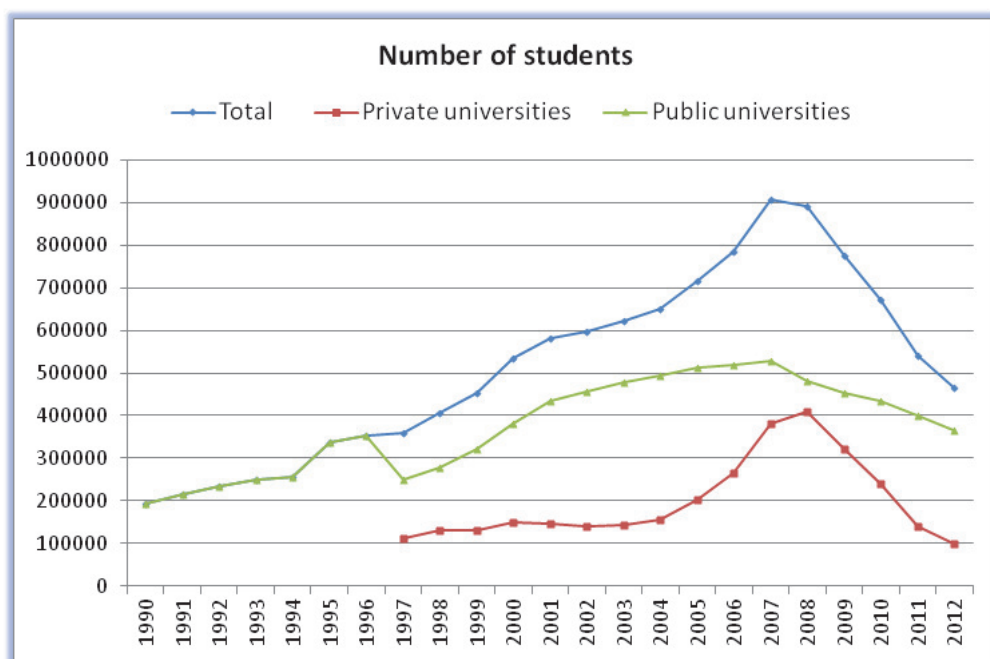


Data source: NIS, Tempo database

In terms of number of students, it increased from 192810 in 1990 to 464592 in 2012. In Figure 2 we show the evolution of the total number of students, the number of students in public universities and private universities respectively.

The number of students has seen a sharp increase until 2007 (907253 students in 2007), and due to both the economic crisis and demographic factors that number dropped to 464592 in 2012.

Figure 2. The number of students during 1990-2012 in Romania



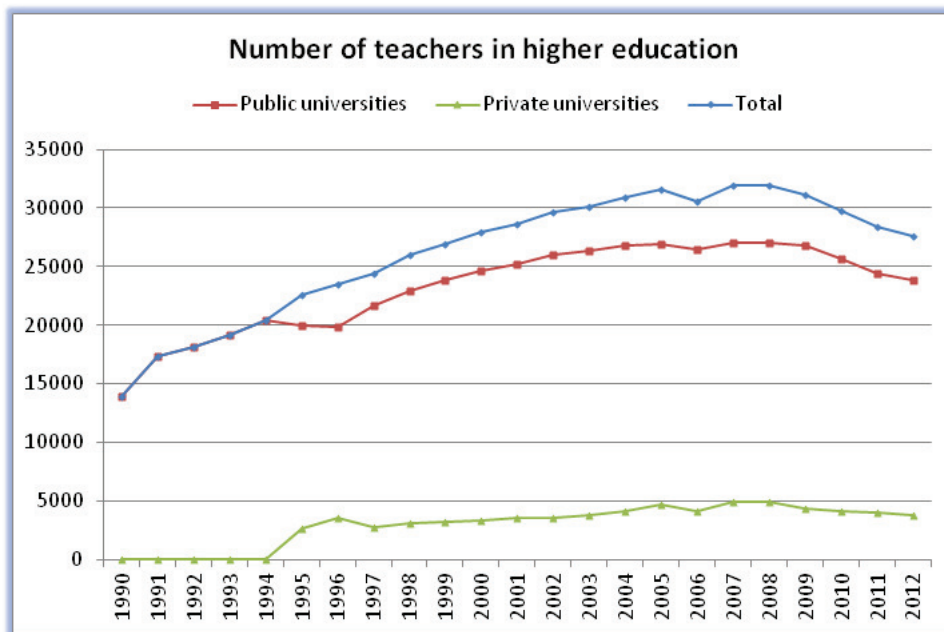
Data source: NIS, Tempo database

According to data published by NIS at the beginning of the academic year 2012-2013 there were 27555 teachers of which 23805 in public education. They accounted for about 55% of all employees in the universities. Among those holding a teaching position in the higher education system in Romania about 86% were employed on a full-time basis in public universities in 2012.

This percentage has remained fairly constant in the period 2000-2012, knowing values of about 88 % during 1995-2000. At the beginning of the 2012-2013 academic year the majority of people employed served as Lecturer (9517 persons) followed by those who held the position of Assistant Professor (7109 people). Figure 3 presents the evolution

of the number of teachers in 1990-2012 in Romania, both in public education and the private sector. It can easily be observed that in this period there was a gap between the number of students and number of teachers, the number of students increasing much faster than the number of teachers. Thus, in 1990 the ratio of the number of students and number of teachers was 13.84 , while in 2012 this ratio has a value of 16.86 with a maximum of 28.38 in 2007. These figures indicate the massification of higher education in Romania but was not correlated with a corresponding increase in resources necessary to the public higher education system, characterized by underfunding (Andrei, 2010), (Andrei, 2010b), (Andrei, 2010c ), (ARACIS, 2009).

Figure 3. The evolution of the number of teachers in higher education in Romania during 1990-2012



Datasource: NIS, Tempo database

### 3. The overall evolution of financing higher education system in Romania

During the period 1999-2011, in Romania funding the public universities was based on Ministerial Order no. 3132 of 19 January 1998, which provides the basic principle "funding follows the student". After the adoption of the Law of National Education in 2011, CNFIS changed its methodology of funding public universities following a number of elements which will allow the comparison of funding. CNFIS proposals were implemented partially in 2012 and they are based on the number of equivalent student and unit equivalent student (CNFIS, 2013).

Taking into account currently international existing practices funding of education is examined in terms of its various sources (public and private funding sources), and in terms of different categories of costs involved

(direct costs and indirect costs of university education).

Public expenditure on higher education come exclusively from the state budget allowing easy monitoring, and cover a number of direct or indirect costs (CNFIS, 2013). This class includes basic funding, complementary funding, additional funding, some of the University's revenue, excluding fees charged to students and sponsorships, donations from individuals or private entities. Private expenditure come from other sources than the state budget and usually covers some indirect costs attributable to the activities of students in universities.

Annual basic funding allocated from the state budget as proposed CNFIS grew in the period 2003-2009, then the value of this funding has decreased continuously until 2012. Table 1 shows the number of equivalent students considered for the development

funding proposals, and the total amount allocated as basic funding. It is found that there is a considerable difference between the amount of basic funding and total

expenditure recorded with higher education which means that universities had to provide significant extra-budgetary funds (CNFIS, 2013).

Table 1. Core funding in higher education in Romania

Year	Number of equivalent students	Number of unit equivalent students	Basic funding (mil. RON)
2003	381385		633.15
2004	386248		847.26
2005	388571		1041.24
2006	362282	572984	1175.35
2007	375188	605667	1680.73
2008	380848	614391	1947.30
2009	396160	641609	1950.04
2010	416824	670113	1908.68
2011	433849	699464	1710.61
2012	437228		1675.28

Data source: CNFIS, 2013.

An important criterion that led to the funding of higher education from the state budget by 2011 was to allocate funds based on qualitative components. In 2011 there were a total of 17 quality indicators (IC) who had a share of about 30% in basic funding. Among quality indicators, the most important was IC6 - the level performance in scientific research.

Basic funding of public universities in Romania has experienced an upward trend from the value of 617 million lei in 2003 to 1709 million lei in 2011 (CNFIS, 2013). If this trend is corrected with inflation and purchasing power, the amount allocated in 2011 as the basic funding is only 5% higher than that allocated in 2003 while the number of students increased from 381385 equivalent students in 2003 to 433849 in 2011 indicating a constant underfunding higher education system in Romania.

In Table 2 we present the evolution of funding per equivalent student and per unit equivalent student. If we consider only the nominal values then it can be said that funding has increased but these figures corrected for inflation shows only a slight increase in funding per equivalent student in 2011 compared to 2003 and a decrease in funding per unit equivalent student in 2011 compared to 2006.

In 2012, funding of higher education institutions has been conducted by Ministerial Order 3998/2012 which states that after allotment corresponding to doctoral grants the rest of the funding from the state budget will be allocated as follows: 68% basic funding, 30.55% additional funding (including the funding based on excellency 25%) and 1.5% funding for institutional development. Thus, the basic funding allocated was 1,063,855,350

lei and the additional funding was allocated 500,637,812 lei of which 78% for additional funding based on excellence and 22% for the remaining components of additional funding.

#### 4. Higher education funding at European level

In terms of education spending as a whole, in Romania, the share of education expenditure in GDP ranged from 3.37% in 1999 to a maximum of 4.25% in 2007, values that are below the European average of 4.86 % in 1999, 4.95% in 2007 and 5.44% in 2010 (Eurostat database, 2014).

Table 2. The allocation per equivalent student and unit equivalent student

Year	Allocation per equivalent student (lei)	Allocation per unit equivalent student (lei)
2003	1660.13	
2004	2193.56	
2005	2679.66	
2006	3244.30	2051.28
2007	4479.70	2775.01
2008	5113.06	3169.48
2009	4922.35	3039.30
2010	4579.10	2848.30
2011	3942.87	2445.60

At European level there is an increase in the share of education expenditure in GDP while in Romania it was an oscillating evolution: decreases from 3.38% in 1996 to 2.88% in 2000 and then increase to 3.51% in 2002, followed by a further decrease to 3.45% in 2003 (European Commission, 2011). Then follows a period in which this percentage drops to 3.28% in 2004 and then increase steadily from 3.48% in 2005, to 4.25% in 2007, 4.24% in 2009, followed by a decrease to 3.53% in 2010 and 3.07% in 2011 likely due to the economic downturn.

Figure 4 shows the evolution of the percentage of GDP allocated to education for Romania and for the EU27 in the period

1999 to 2011 (no data available for Romania in 2006 and 2008).

Although at the European level the percentage of GDP allocated to education is constantly over 5% after 2000, in Romania it has had a fluctuating trend never reaching the European average.

To perform a comparative analysis of education systems in various countries, international organizations such as the OECD and the European Commission gather comparable data as a system of statistical indicators (European Commission, 2013). Unfortunately, Romania is among the few countries who do not submit complete data on the funding of the education system,

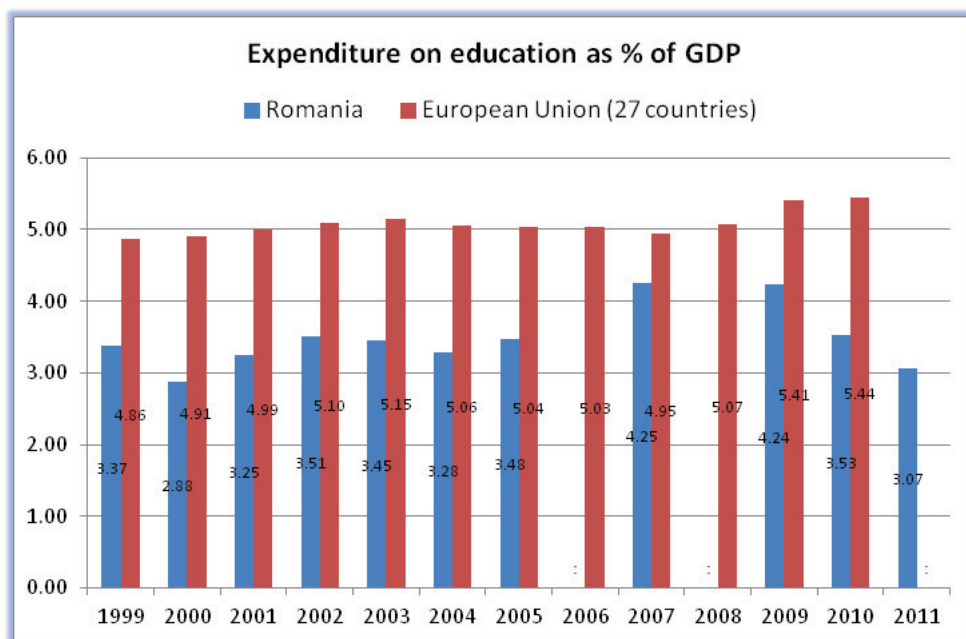
being thus excluded from most international analyzes (European Commission/Eurydice, 2010).

Regarding the share of higher education expenditure in GDP, in Romania it ranged between 0.68% in 2002 and 1.20% in 2008. The European average percent has always been higher than the values recorded in Romania, only in 2007 the value recorded in Romania (1.12%) surpassing the EU27 average (1.11%).

Public expenditure on education expressed as a percentage of GDP can be

viewed as a measure of the degree to which governments are committed to developing highly skilled human resources (Dragoescu, 2013a). These expenses comprises current and capital spending of the educational institutions, loans to students, subsidies and transfers to non-profit organizations or private companies that offers educational activities (Savova, 2013).

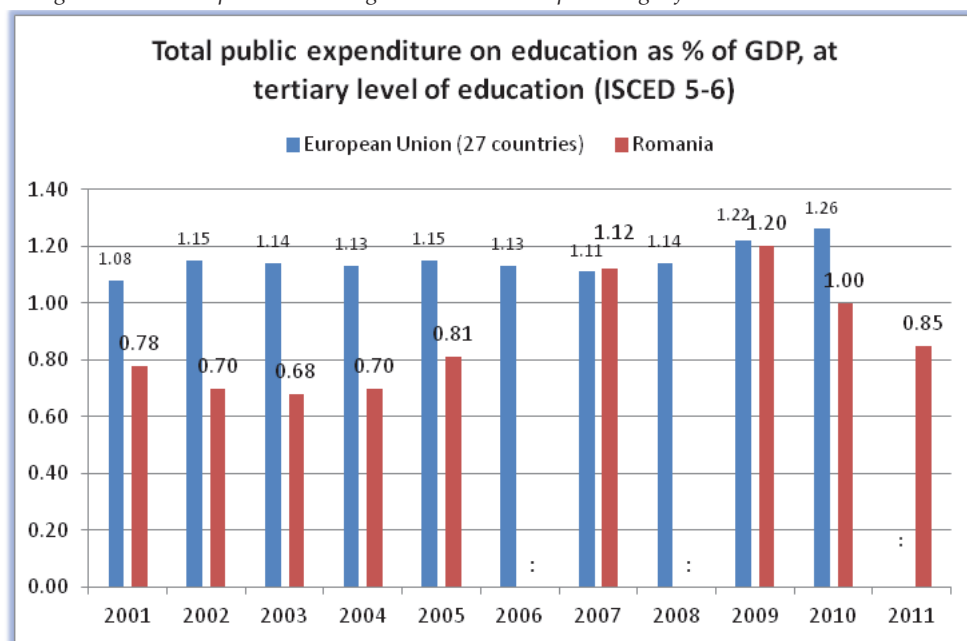
Figure 4. Expenditure on education as % GDP for Romania and EU27



Datasource: Eurostat



Figure 5. Public expenditure on higher education as a percentage of GDP in Romania and EU27



The last complete data set available on Eurostat database shows that in 2010 the EU27 average public education expenditure was 5.44 % of GDP, but there are large differences between member states in terms of percentage of GDP allocated to education: while Denmark allocates 8.80 % of GDP to education, Romania has allocated only 3.53% of GDP education in 2010 being one of the lowest percent among EU27 countries (Dragoescu, 2013b). The percentage of GDP allocated to total and higher education (ISCED 5 and 6) expenditures for EU27 countries are plotted in figure 6. The higher education public expenditure ranges between 2.41% of GDP for Denmark and 0.61% of GDP for Bulgaria.

Regarding the time evolution of education spending, countries like France, Italy, Portugal, Denmark, Finland and Sweden have constantly maintained their level in the period 2000-2007 and after 2007, in response to the economic crisis, education expenditure increased (except Italy) (Eurydice, 2013). Another group of countries formed by Germany, Belgium, Netherlands, Austria,

Poland, Slovenia recorded a slight increase in the expenditure on education in the period 2000-2007 and after 2007 this level continues to rise while a third group of countries (Bulgaria, Romania, Czech Republic, Estonia, Ireland, Spain, Latvia, Lithuania, Hungaria, UK), although recorded significant increases in the period 2000-2010 in the amount of public expenditure to education, after 2007 have evolved very different. Romania recorded the largest decrease in public expenditure on education in real terms, during 2008-2010, the reduction being about 40% .

## 5. Conclusions

The economic crisis of recent years has had a significant effect on the educational systems of EU countries (EACEA, 2012). On the one hand, increasing unemployment in many EU countries leads to an increasing demand for education, many young people trying to increase their chances to hire through better preparation and to postpone to moment they enter the labor market and on

the other hand funding of educational systems was subject to budget cuts (European Commission / EACEA / Eurydice, 2013).

Under these circumstances it is necessary to develop strategies for education that lead to efficient use of resources and increase the administrative efficiency. Among the priorities in educational policy should be: facilitating youth access to the labor market, investments in the material base of the educational system, increasing the attractiveness of the profession of teacher.

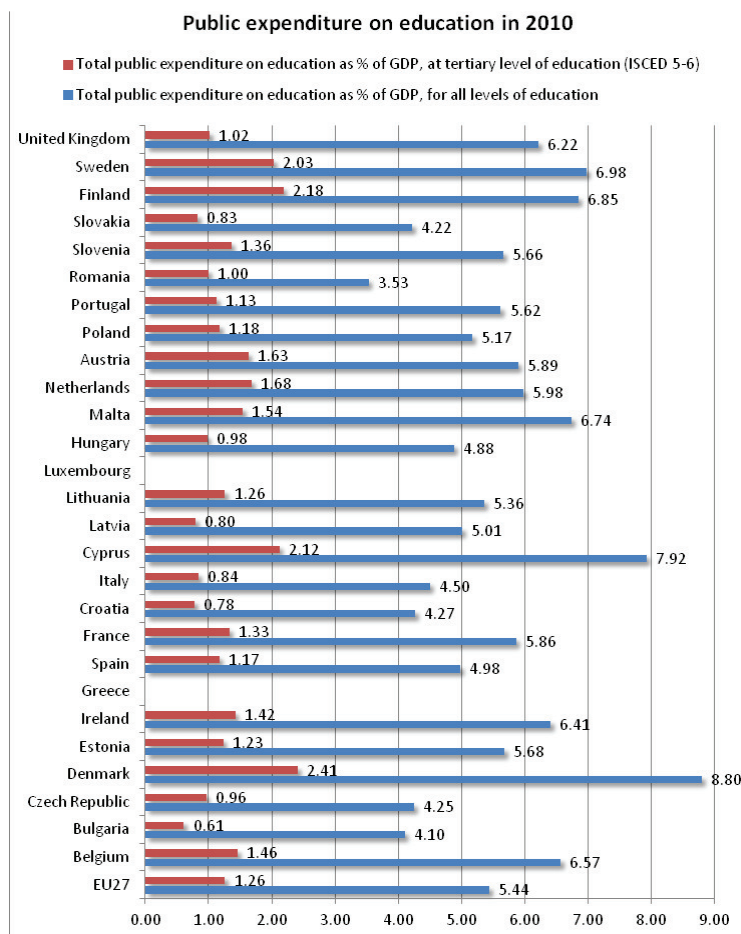
Unfortunately higher education system in Romania has experienced a constant underfunding over the years, making Romania to be still far from the performance of

educational systems in the developed countries of EU. It is necessary to optimize the allocation criteria in funding from the state budget, increasing accuracy of the base indicators on higher education system and diversification of funding higher education.

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Figure 6. Total public expenditure on education as % of GDP for EU 27 countries in 2010



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