

## **HIGHER EDUCATION IN EASTERN EUROPE: POST CRISIS POLICIES AND TRENDS**

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### **ABSTRACT**

The paper presents an thorough analysis of the higher education systems of the Eastern European -- post-communist – countries (Romania, Hungary, the Czeck Republic, Slovakia and Poland) before, during and after the economic crisis. On one hand it focuses on quantitative aspects such as financing higher education and research, student fees and student support, the performance of the universities and colleges in terms of student numbers and research output. On the other hand it analyses qualitative features like governance, institutional, financial and academic autonomy, the value of the diplomas, the inclusiveness of higher education regarding mature students etc. The purpose of the analysis is to explore and understand the similarities and/or differencies of the higher education systems in these countries with similar historical paths, as well as to see the similarities and/or differencies in the effects of the economic crisis and the policies implemented as a reaction to it. The paper also deals with the question whether the higher education of the Eastern European region is getting closer to the Wester European countries, or it is still lagging behind, or it is not only lagging behind but experiences a widening gap after the crisis as far as the financing and autonomy of universities are concerned, or there is/will be a special “Eastern European” path in the field of higher education. It The paper also explores the disparities between the different countries of the region, and tries to forecast which of them has given the best answer to the crises and thus will be the Eastern European “center” of the European Higher Education Area. The analyses are based on literature, statistical data of Eurostat, OECD, outputs of European research projects like that of Center For Higher Education Policy Studies, European University Association and Embracing the Modernisation Agenda, and databases such as Eurypedia, Eurydice.

**Key words:** higher education, education policies

**JEL codes:** I210, I220, I280, H750, H810

### **Introduction**

The paper presents an analysis of the higher education (HE) systems of the Middle-Eastern European -- post-communist – countries (Romania, Hungary, the Czeck Republic, Slovakia, Poland, and Slovenia is added to the comparison as a fastly developing country) before and during the economic crisis, ending with the latest available data. It focuses on the conditions the national higher education systems operate in (such as financing higher education, student/teacher rate, student fees and support), the output of higher education (rate of population with HE attainment), indicators reflecting the inclusiveness of higher education (like the rate of mature students, female students and professors), and data reflecting the 'value' of the degrees.

The purpose of the analysis is to explore the similarities and/or differences of the higher education systems of these countries having similar historical paths, as well as to see the similarities and/or differences in the effects of the economic crisis. The paper also tries to forecast which of them has escaped the negative consequences of the crisis the most, and thus will be the Middle/Eastern European “center” of the European Higher Education Area. The paper also deals with the question whether the higher education of the Middle/Eastern European region is getting closer to the Western European countries, or it is still lagging behind, or even worse: it experiences a widening gap after the crisis. The analysis are based on statistical data of Eurostat, OECD, and databases such as Eurypedia, Eurydice.

### 1. Types of higher education institutions and university governance

First I compare the different types of higher education institutions in the six countries regarding status and training profile (see Table 1.).

**Table 1.: Types of higher education institutions**

<b>Czech R.</b>	Higher education institutions: - Universities - Non-universities Tertiary professional schools
<b>Hungary</b>	Universities Colleges
<b>Poland</b>	Higher education institutions: - Universities - Non-universities (including schools of higher vocational education) Colleges
<b>Romania</b>	Universities Institutions Academies of study Post university study schools Doctorate organizing schools
<b>Slovakia</b>	Universities Professional training institutions
<b>Slovenia</b>	Higher education training: - Universities - Single institutions Higher vocational training: Higher vocational colleges

Source: Own construction based on Eurypedia 2013

The less complex is the institutional structure of Hungary, consisting only two types of institutions<sup>36</sup>. In the Czech Republic and Slovenia higher vocational training is part of higher education but is pursued in a separate type of institution. In Poland teacher training, foreign language and social worker training colleges are separated from the rest. (Eurypedia 2013)<sup>37</sup>

<sup>36</sup> In the next years HE institutions will be classified into more categories on the basis of their mission.

<sup>37</sup> There is no detailed information available about Romania.

Summarizing what has been presented, the institutional landscape is rather different in the countries, not showing memento of their common historic heritage.

The case is just the opposite concerning the internal management of the six countries. Before the communist era Middle-Eastern-Europe (just like the rest of the countries except the Anglo-Saxon ones) had the so-called continental type of university governance, giving the authority exclusively to the senate composed only of university members. At the end of the 20th century European countries have moved towards the Anglo-Saxon governance system, sharing the authority between the senate – dealing only with academic issues -- and a governing board focusing on financial issues. After the strict central control of the universities in the communist regime, reforms were launched in most of the post-communist countries to turn towards the Anglo-Saxon university governance system, but these reforms have subsided. (See Keczer 2010 for details.) In all six countries the traditional continental system has survived (see Table 2.).

**Table 2.: Governance of higher education institutions**

	Executive head	Academic body	Decision-making body	Advisory/Supervision body
Czech R.	rector	senate (only university members)		board of trustees (only external members)
Hungary	rector	senate (only university members)		economic council (internal and external members)
Poland	rector	senate (only university members)		council (optional)
Romania	rector	senate (only university members)		-
Slovakia	rector	senate (only university members)		board of trustees (only external members)
Slovenia	rector	senate, academic assembly (only university members)		Universities: - Indep. institutions: management board (internal and external members)

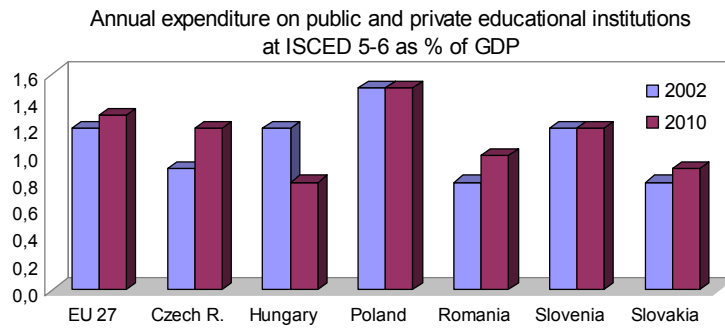
Source: Own construction based on Eurydice 2008 and Eurypedia

Academic and decision-making bodies are not separated, senate performs both functions. Although advisory bodies were set in each countries but Romania, their authority is limited. In this aspect Middle-Eastern-Europe's path differs from that of the rest of Europe.

## 2. Financial conditions

An often-quoted data regarding the financial conditions of education is the percentage of GDP spent on the sector. I display this proportion for the years of 2002 and 2010, to show the progression of some countries out of the six (see Diagram 1.).

**Diagram 1.: Expenditure on higher education<sup>38</sup> as percentage of GDP**

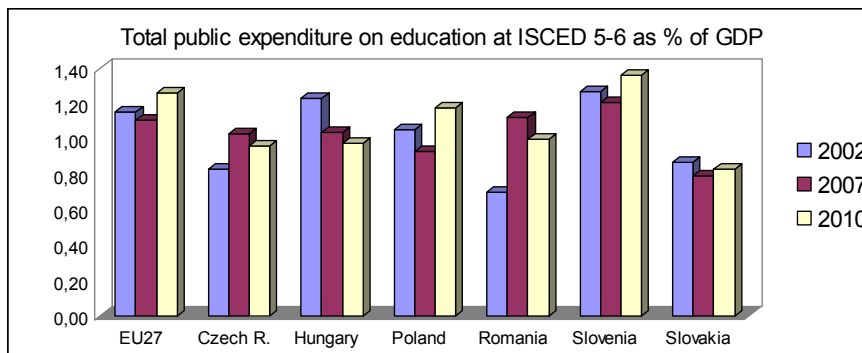


Source: Own construction based on Eurostat data

In 2002 only Poland's spending exceeded the EU average, and that of Hungary and Slovenia was equal with it. The Czech Republic, Romania and Slovakia spent significantly less. But by 2010 the Czech Republic has considerably increased the share spent on higher education, almost reaching the EU average, and Romania and Slovakia also have a promising tendency. Hungary did just the opposite, decreased the rate from 1,2 to 0,8, dropping back to the bottom of the country list.

If we examine the public expenditure on higher education, we get a slightly different picture. Here we can associate to the negative effects of the crisis in some countries (see Diagram 2.).

**Diagram 2.: Public expenditure on HE as percentage of GDP**



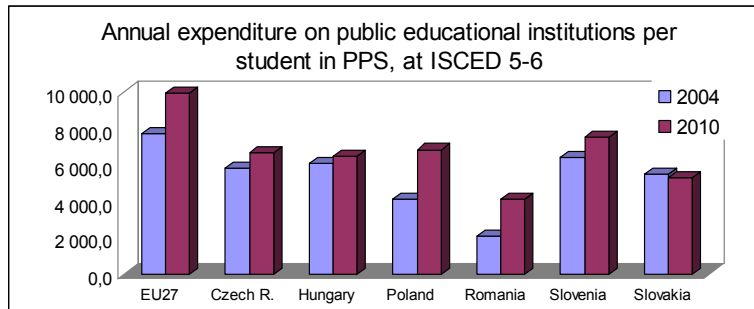
Source: Own construction based on Eurostat data

In 2010 only Slovenia exceeded the EU average, and Poland was close to it. Slovakia is obviously lagging behind. Hungary has suffered a decline in this indicator as well. The possible effects of the economic crisis may be seen in the Czech Republic and Romania, where after a positive tendency between 2002 and 2007, there was a fallback by 2010. Nonetheless, Romania has produced an impressive overall increase from 0,7% to 1,0%.

<sup>38</sup> Higher education is the 5th and 6th levels of the ISCED (International Standard Classification of Education) system.

Instead of overall and relative figures, a more interesting question for those studying and working in higher education, and a more expressive data is the absolute expenditure per student in public institutions (in private higher education the financial background is quite different). Here we experience a shocking difference between the majority of the Middle-Eastern-European countries and the Western-European ones (see Diagram 3.).

**Diagram 3.: Expenditure per student in public HE**

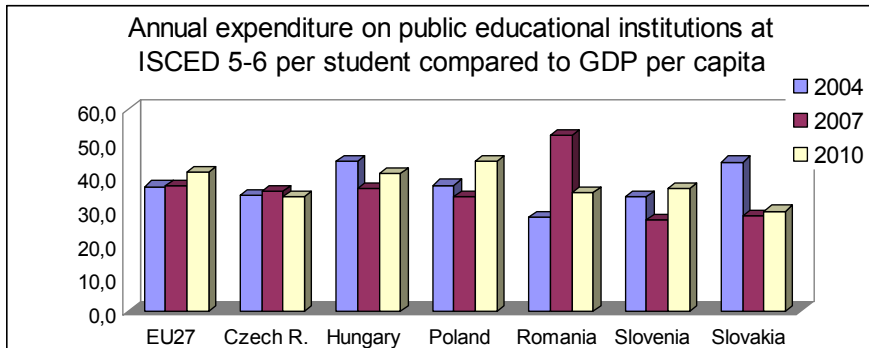


Source: Own construction based on Eurostat data

All of the six countries had and still have to operate with significantly less money per student than the average EU spending. In 2002, in Romania the expenditure per student in Euro PPS<sup>39</sup> was only ¼ of the EU average, and in Poland slightly more than 1/2! Since then these two countries have produced an impressive progress, but Romania still have to educate students with only half of the average EU expenditure. The closest to the EU average in this indicator is Slovenia. To make the comparison more shocking: the expenditure per student in Hungary is less than 6.500 Euro PPS, in the Scandinavian states it is 15.000, in Switzerland close to 17.000, in Japan 20.500. (OECD 2013) So in Japan the expenditure per student is five times more than in Romania.

It could be stated that the Middle-Eastern-European countries do not spend enough on higher education. To qualify this statement it is worth to compare the GDP per capita spending (see Diagram 4.).

**Diagram 4.: Expenditure per student compared to GDP per capita**



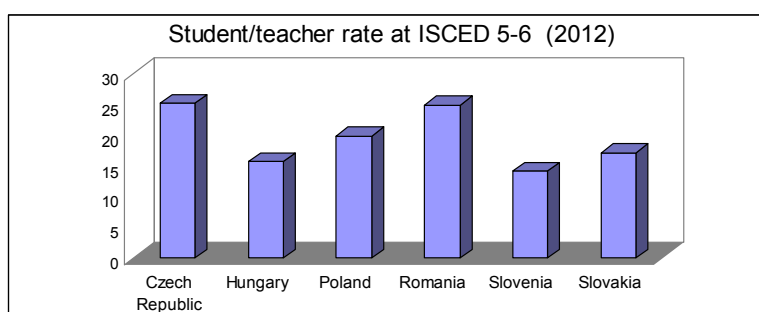
Source: Own construction based on Eurostat data

<sup>39</sup> Euro PPS (Purchasing Power Standard) is a fictive currency unit having the same purchasing power with that of 1 Euro in the EU on average.

In Poland the rate of GDP per capita spent on a student is higher than the EU average, in Hungary it is equal, and in the rest of the countries (except Slovakia) it is close to it. In the Scandinavian countries mentioned above this rate is 45%, only slightly more than in Poland or Hungary, yet, the expenditure per student is three times more. (OECD 2013) Thus, we can conclude that in the Middle-Eastern-European countries the poor financing is the result of the low level of GDP. In the case of Romania it is worth to mention the significant increase of the rate of GDP per capita spent on one student between 2004 and 2007, and the heavy decline by 2010. In Slovakia the rate was highly above the EU average in 2002, but they suffered a decline by 2007.

Another important indicator of the operating conditions of higher education is the student/teacher rate (see Diagram 5.).

**Diagram 5.: Student/teacher rate in higher education (2012)**



Source: Own calculation and construction based on Eurostat data

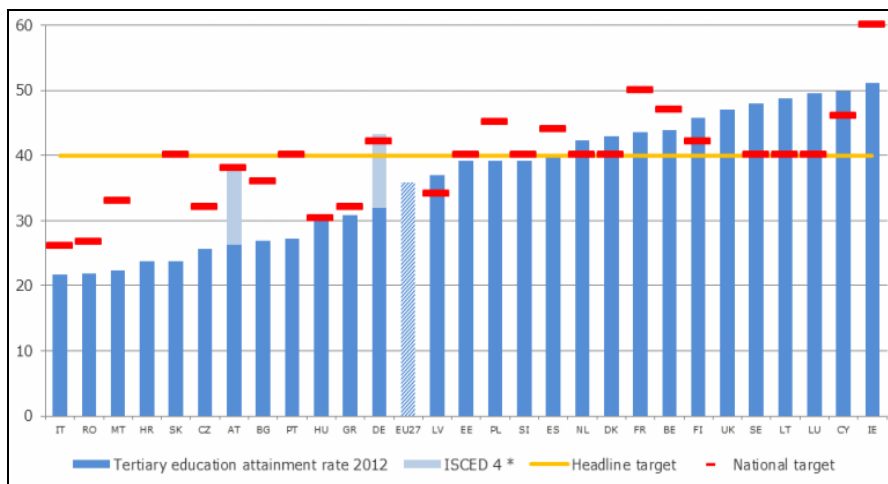
In the Czech Republic and Romania the number of students per teacher is considerably higher than in Hungary or Slovenia, making education harder. In 2011 the average in the EU21 was 15,9. (OECD 2013)

From the students' and the families' point of view it is important what fees the students have to pay in higher education and what support they and their families get. Among the six countries three major differences have to be noted. First, students do not have to pay tuition only in the Czech Republic. Second, in Hungary, Romania and Slovakia there is a special system of state-supported and not-supported student places in both full-time and part-time training. In this system the state finances a certain number of student places in each public higher education institution, and if a higher education institution has a capacity left, it can enroll students who pay tuition. The number of places in study programmes subsidized by the state is decided every year at central level by the ministry, depending on the national priorities. This system cannot be found anywhere else except some Baltic states. Third, there are only two countries where families of students do not have tax allowances or subsidies: Hungary and Romania, while there are several Western countries – Belgium, Germany, Ireland, France, Italy, Austria, Portugal – in which families are given some form of state support. (Eurypedia, Eurydice, OECD 2013)

### 3. The output of higher education

The numerical output of higher education is the number of graduates, but a more telling data is the rate of population with higher education attainment. In the Europa 2020 strategy the EU set the target of raising the average rate of the 30-34 year-old population to 40 percent. The member countries also set their national targets. Among the six countries Poland set its national target the highest, at 45 percent, and in 2012 they were at 40%. Romania set a more modest objective, 26,7%, and was above 20% in 2012. Hungary was also modest with its 30,3%, but is almost have reached it by 2012. The Czech Republic was farther away from its 32% target. Slovakia seems to be in the greatest trouble setting an optimistic 40% as a target but being below 25% in 2012. (See Diagram 6.)

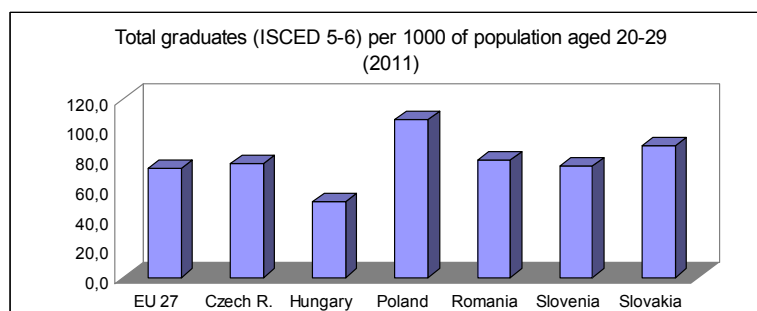
**Diagram 6.: Europe 2020 strategy and its accomplishment in 2012for higher education attainment rate in age group 30-34**



Source: EC 2013

But Slovakia may well be optimistic building on the high rate of graduates among the 20-29-year-olds, and Hungary's limited perspective as far as the rate of people with higher education attainment is concerned is obvious based on the low level of the same indicator (see Diagram 7.).

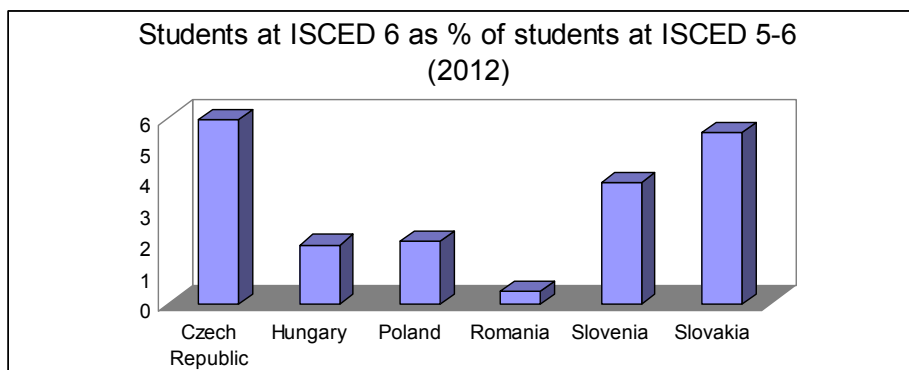
**Diagram 7.: Rate of graduates among the 20-29-year-olds (2011)**



Source: Own calculation and construction based on Eurostat data

For high innovation potential, „new blood” in research and development, a sufficient number of new PhDs is crucial for a county. It can be assessed by the rate of PhD students. In 2012 the Czech Republic and Slovakia was performing extremely well in this indicator, Slovenia fairly, Hungary and Poland modestly, Romania poorly. The progress Slovenia has made between 2005-2012, multiplying the number of PhD students fourfold, is rather impressive. (See Diagram 8. and Table 3.)

**Diagram 8.: Rate of PhD students<sup>40</sup> among all students**



Source: Own construction based on Eurostat data

**Table 3.: Number of students at ISCED 6**

	2005	2012
Czech R.	<b>24 907</b>	<b>26 105</b>
Hungary	<b>7 941</b>	<b>7 254</b>
Poland	<b>33 040</b>	<b>40 263</b>
Romania	<b>22 348</b>	<b>23 818</b>
Slovenia	<b>964</b>	<b>4 098</b>
Slovakia	<b>10 290</b>	<b>12 145</b>

Source: Eurostat

#### 4. The inclusiveness of higher education

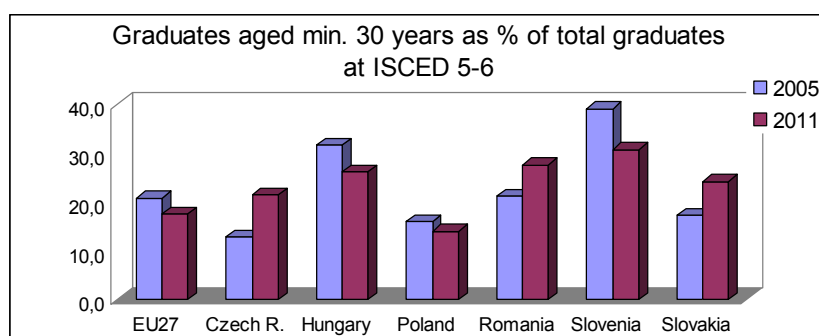
The inclusive character of higher education is going to be assessed by two parameters: the rate of adult/mature students (aged 30 or more) and the rate of women among students and teachers.

<sup>40</sup> It is ISCED 6 level.



The European Union in the Lisbon Strategy had set a target that 12.5% of the adult population should participate in lifelong learning. The Europe 2020 plan increased this proportion to 15%. Higher education plays an important role in achieving this goal, thus the rate of mature graduates is an important indicator. The Middle-Eastern-European countries, except Poland, are performing definitely well on this field, exceeding the EU average. Slovenia is leading the ranking. It is also impressive that some countries – including Romania -- made an increase between 2005-2011, while the EU in general suffered a slight incline. (see Diagram 9.).

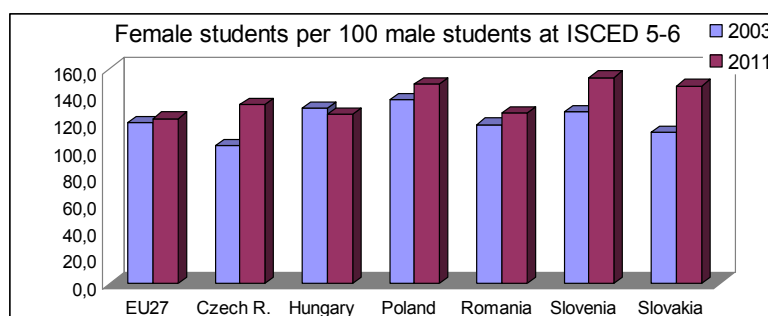
**Diagram 9.: Rate of mature graduates**



Source: Own construction based on Eurostat data

It is a well-known fact nowadays that there are more female students in higher education in the developed countries than males. It has been true also in the Middle-Eastern-European countries for more than a decade, and the rate of women among students went even higher between 2003-2011 (see Diagram 10.).

**Diagram 10.: Rate of female students**

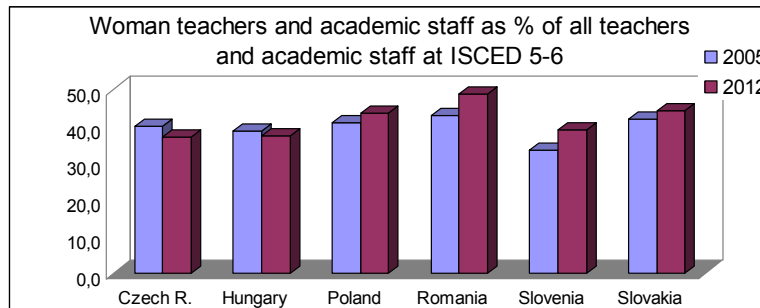


Source: Own construction based on Eurostat data

A hot issue related to the inclusiveness of higher education is the so called „glass ceiling” phenomenon, a traditional-socio-cultural barrier preventing women to get higher in academic setting. The existence of the glass ceiling can be tested against the rate of women among university teachers. Diagram 11. shows that there are less women than men among the teachers and other academic personnel in all of the six countries, Romania performing the best, Hungary, the Czech republic and Slovenia worse. Thus, in spite of the fact that

more women graduates, less are employed in academic jobs. But in four countries the trend favors women.

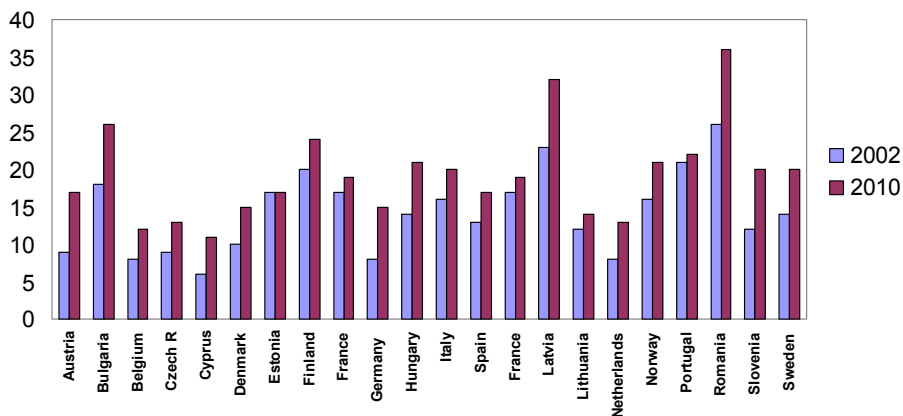
**Diagram 11.: Rate of women in teaching and other academic jobs**



Source: Own construction based on Eurostat data

It has to be noted that this indicator relates to the overall rate of women in all academic jobs, and experience shows that women are employed in higher rate in non-teaching academic positions. To qualify the issue further, it is worth to see the rate of women in higher academic ranks. It is remarkable that in none of the surveyed countries goes the rate of women in professorial position<sup>41</sup> above 35 percent, thus, the glass ceiling definitely exists in higher education, although the trend is favorable for women (see Diagram 12.). The best-performing is Romania, where this rate was already high in 2002, and has made further progress by 2010.

**Diagram 12.: Rate of women among professors**



Source: Own construction based on EC 2012

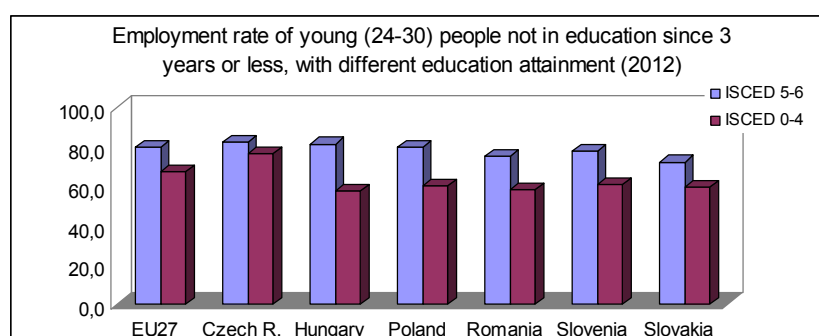
<sup>41</sup> The highest rank of university teachers in the national higher education systems.

## 5. The 'value' of the degrees

A general indicator of the 'value' of higher education attainment is its weight on the labor market, that can be assessed by the employment chances and unemployment rates of people with and without university degree.

The employment rate of young people in their first three years after leaving school is higher with, than without higher education attainment in each of the six countries, and Middle-Eastern-Europe is above or very close to the EU average (see Diagram 13.).

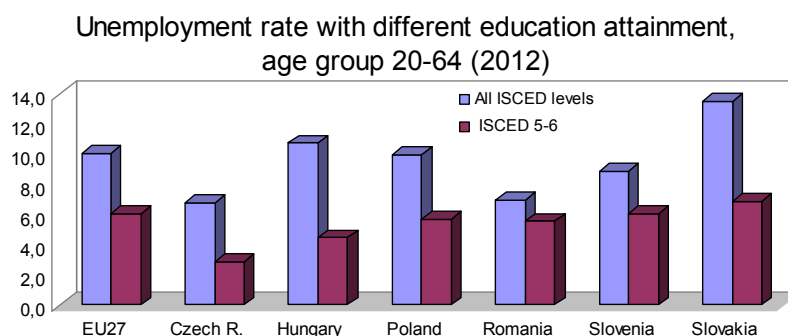
**Diagram 13.: Employment rate of young people after leaving school with different education attainment**



Source: Own construction based on Eurostat data

Also, the unemployment rate among people with degree is significantly lower than the overall unemployment rate in all of the six countries, and some of them (the Czech Republic, Hungary, Poland and Romania) performs better regarding the unemployment rate of people with higher education attainment than the EU average (see Diagram 14.). The greatest difference in the overall unemployment rate and that of people having a degree is in Hungary and Slovakia, in these countries the unemployment rate of people with diploma is the half of the overall unemployment.

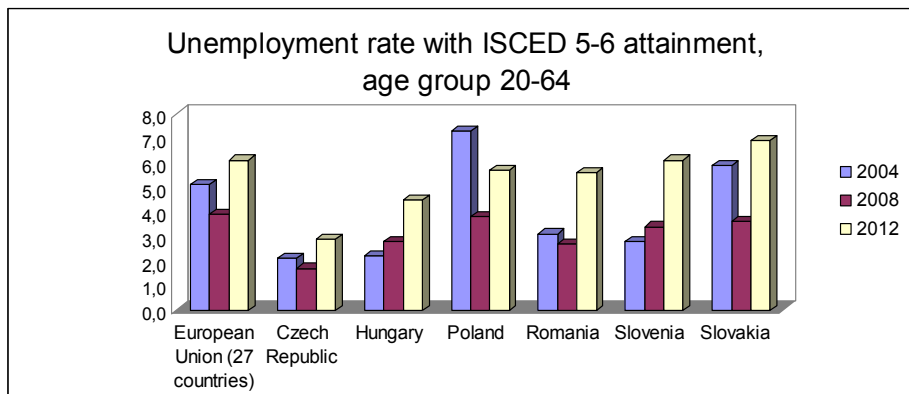
**Diagram 14.: Overall unemployment rate and unemployment rate among people with higher education attainment (2012)**



Source: Own construction based on Eurostat data

To see the whole picture trends are also of relevance. The economic crisis had a negative impact on the employment of graduates. Between 2008-2012, after a drop between 2002-2008, unemployment rate increased among people with higher education attainment in four of the six countries, in line with the EU average (see Diagram 15.). In Hungary and Slovenia the increase started earlier.

**Diagram 15.: Unemployment rate with higher education attainment**



Source: Own construction based on Eurostat data

## 6. Conclusions

Facts and statistical data show that national higher education systems of Middle-Eastern-Europe run on worse financial platforms than the EU average, and in significantly harsher conditions than the developed countries. They are lagging behind in terms of the rate of degree holders, but the tendencies are promising. As far as the inclusiveness of higher education is concerned, the region is in line with the rest of the continent. The value of the degrees is proven by the labor market in each country. The institutional setting of higher education systems and the student fee and support systems show great diversity inside the region, but the university management systems have a common character that differs from the Western trends. The effects of the economic crisis are discernible in the financing of higher education and in the increasing unemployment of people with degree.

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