

Trends in Higher Education in EU Countries and non-EU Countries: Comparative Analysis

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Abstract: The article presents the comparative analysis findings related to the current trends in higher education in the ten European Higher Education Area countries. The focus of this study is to identify Ukraine's transformations and developments in higher education through the lens of similarities and differences in the higher education in the ten countries. Although all these countries belong to the European higher education area (EHEA), the five countries including Austria (AT), the Czech Republic (CZ), Germany (DE), Slovakia (SK), Sweden (SE) are the European Union members while Armenia (AM), Azerbaijan (AZ), Georgia (GE), Moldova (MD), and Ukraine (UA) have a 'non-EU country' status. Being a member of the Bologna process since 2005, Ukraine was the only country with legislation in higher education that was not adjusted to current requirements and realities of the deep transformation process in Europe, until 2014. The findings provide insight for how the countries approach Bologna reforms, what aspects they prioritize, what challenges they are facing. Existing reports and studies tackling the issue of trends in higher education are consulted and thoroughly analyzed through the indicators including the number of the students in the ten European Higher Education Area countries, enrollment trends in tertiary education, tertiary education public expenditure in a year as a GDP proportion, academic staff, age groups and gender division, quality assurance, European Credit Transfer and Accumulation System, and student mobility.

Keywords: *trends in higher education; European Higher Education Area; size of the student population; yearly public expenditure share on tertiary education; enrollment trends in tertiary education; student mobility.*

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Introduction

The ministers of education gathering at Leuven/Louvain-la-Neuve in 2009, broadly focused on issues related to higher education quality and outlined the following main goals to be reached by the end of the present decade. By 2020, the structural reform is expected to have been finalized; research and lifelong learning quality in higher education that ensure high rate of employment will have been implemented; the diversity of students who enter and graduate from universities will have reflected the diversity of population in Europe; at least 20% of students who graduate from higher educational establishment in any country of the European Higher Education Area (EHEA) are expected to have completed a study or have had a training period overseas (Bologna Process 2020, 2009). To achieve these ambitious goals the national systems were required first and foremost to introduce some instruments for converging national systems and ensuring transparency. The main instruments include but not limited to quality assurance, the three-cycle system (bachelor, master, and PhD programmes) grounded in the development of qualifications standards, and the accumulation of credits called ECTS or the European Credit Transfer System followed by issuing the Diploma Supplement. A look at important factors such as the share of the student body, the trends describing the tertiary education enrolment for those aged 18-34, demographic projections, the amount of GDP governments spent on tertiary education given in percentages and what percentage of GDP was spent on R&D (research and development), the division of academic staff by age groups, and gender, the issue of quality assurance, European Credit Transfer and Accumulation System, and student mobility help to identify trends in higher education in the ten countries namely in Austria (AT), the Czech Republic (CZ), Germany (DE), Slovakia (SK), Sweden (SE), Armenia (AM), Azerbaijan (AZ), Georgia (GE), Moldova (MD), and Ukraine (UA) Although the countries are set to move in the same direction to reach common goals, we hypothesize that they develop at widely varying pace.

2. Literature Review

The issue of trends in higher education has been a focus of intensive attention of many agencies, commissions, departments, universities, and individual scholars. Thoroughly outlining the pre-history of the 'Bologna agenda', that originated the European Higher Education Area (EHEA), Zgaga focused on two trends that required broad discussions at institutional, national and European levels from 1999 to 2005. These trends include the

move to comparable structures of university programs that included shortening longer course, splitting courses into modules that is so-called 'modularisation' in order to establish a two-tier structure. Another trend identified by the author was the issue of quality assurance. Between 1999 and 2005 the issue of establishing defined quality assessment system was on the agenda (Zgaga, 2005). Skinner emphasized the importance of the priorities that the Sorbonne Declaration first outlined including the establishing of Europe as a knowledge region, student and teacher mobility, a two-cycle degree system, and the use of credits. It was underscored that quality assurance, social dimension, lifelong learning, and European cooperation in these areas were added later. Skinner analyzed the student mobility and identified trends in 26 countries that joined the EHEA in 1999. The three countries Poland, the Netherlands, and the UK were examined in detail (Skinner, 2018). Trushnikova examined what senior faculty from the university in Russia thought about the Bologna reform, its negative and positive outcomes and compared their views with faculty's opinions received by Ukrainian and Armenian researchers (Trushnikova, 2018). Shaw et al. (2013) analyzed Ukrainian context and the influence that the Bologna process had on the university organization culture, workload, and course distribution. Voinea states that the UNESCO educational policy emphasized the need for new approaches to satisfy the changing world (Voinea, 2019). The latest research published in the American Council on Education International Briefs, investigates trends that Europe's Higher Education Area countries experienced between 1986 and 2016. Articles and short snapshots provide a focus on different country contexts, discussing new trends and region-wide programs (American Council on Education, 2016). Platonova addresses the 'enrollment economy' that institutions in two post-Soviet countries Belarus and Russia have to deal with, identifying bifurcation as the key aspect that sets Russian higher education apart from from Belarusian (Platonova, 2019). Thus, the literature review proves that there are no studies related to the current trends in higher education in EHEA countries that contrast and compare EU and non-EU countries. So, the purpose of this paper is to give insights into priorities that countries establish developing their higher education under the influence of the Bologna reforms. It also identifies the similar and different trends in higher education in the ten European Higher Education Area countries among which Austria (AT), the Czech Republic (CZ), Germany (DE), Slovakia (SK) and Sweden (SE)) are members of the European Union while Armenia (AM), Azerbaijan (AZ), Georgia (GE), Moldova (MD), and Ukraine (UA) are non-EU countries.

3. Background information

The concept ‘A Europe of Knowledge’ that was recognized by the Bologna Declaration in 1999 as a key principle to ensure students’ mobility and citizens’ employability caused major global changes in Continent’s overall development. Thus, the Bologna Process has engaged European governments striving to establish a common European Higher Education Area in discussions regarding higher education policy reforms. Austria, the Czech Republic, Germany, Slovakia, and Sweden are countries whose ministers of education were among 29 European countries that signed commitment to the European Higher Education Area in 1999 in Bologna, Italy. This declaration referred to as the Bologna Declaration started the changes in higher education known as the Bologna Process. The countries signing the declaration agreed to follow shared principles to ensure high quality and comparability of higher education. These five countries (Austria, the Czech Republic, Germany, Slovakia, and Sweden) were all then-members of the European Union. Other five signatory countries (Armenia, Azerbaijan, Georgia, Moldova, and Ukraine) joined the Bologna process in 2005 to kickstart the changes in their higher education systems. All in all, there are 48 countries including Kazakhstan, the last state that joined the EHEA so far. Despite the numerous obstacles blocking the establishment of the EAHE (European Area of Higher Education), the latest reports evidence tangible results.

4. Methods and materials

To identify similar and different trends in the countries that belong to the European Higher Education area an online desk research was used. Statistics used were received from the projects conducted by the Bologna Follow-up Group (BFUG) and Eurostat, Eurostudent and Eurydice. They also include important indicators that were received by the European University Association (EUA), European Students Union (ESU), and the European Quality Assurance Register for higher education (EQAR) (European Commission, 2018, p. 18). Existing reports and studies tackling the issue of trends in higher education were analyzed through the indicators including the number of students in the ten EHEA countries, enrollment trends in tertiary education, annual percentage of GDP on tertiary education, academic staff, age groups and gender division, quality assurance, European Credit Transfer and Accumulation System, and student mobility.

5. The size of the student population in the ten EHEA countries

It is evident that the numbers of students are extremely various in the 10 EHEA countries. Total numbers given in Table 1 range from 2 977 781 in Germany and 1 776 190 in Ukraine (academic year 2014/15) to 109 395 in Moldova and 103 672 in Armenia. The countries where the tertiary education student numbers were the highest (Germany and Ukraine) represent more than 70 % of the student population of all these ten countries. Germany alone accommodates more than 44 % of the students of those ten countries, while students from the remaining EU countries (Austria, the Czech Republic, Slovakia and Sweden) represent about 20 %. This proves well how diverse the contexts are within these ten EHEA countries.

With regards to some changes in the total student numbers between 2008/09 and 2014/15, it is immediately apparent that there was a slight decline in the student population in the Czech Republic by 5.27 %. The significant decrease was seen in Moldova by 19.5 %, Slovakia by approximately 22 %, and Armenia by 33 %. The highest decline was observed in Ukraine by about 37 %, as opposed to other countries where the number of students grew considerably and steadily: in Azerbaijan by 11.7 %, Germany by 18.1 %, Georgia by 22.1 %, and Austria by 27.65 %. The least increase is seen in Sweden by 1.4 %. However, the total student population declined by more than 7.9 % in the ten EHEA countries over this period. The most considerable changes were seen in Ukraine where the student population dropped drastically by 37 % between 2008/09 and 2014/15 and Austria where there was a considerable increase by 28 % over the same period.

Table 1. The size of the student population in the ten EHEA countries

Year /the size of the student population Country	2008 – 2009 (European Commission, 2012)	2011 – 2012 (European Commission, 2015)	2014 – 2015 (European Commission, 2018)	increase (+) decline (-) in percentages
Austria (AT)	308 150	376 498	425 972	+ 27,65
Czech Republic (CZ)	417 573	440 230	395 529	- 5,27
Germany (DE)	2 438 600	2 939 463	2 977 781	+ 18,10
Slovakia (SK)	234 997	221 227	184 390	- 21,53
Sweden (SE)	422 580	453 328	428 557	+ 1,39
Armenia (AM)	154 639	120 733	103 672	- 32,95
Azerbaijan (AZ)	180 276	184 834	204 152	+ 11,69
Georgia (GE)	n/a	99 376	127 640	+ 22,14
Moldova (MD)	135 147	124 784	109 395	- 19,05
Ukraine (UA)	2 798 693	2 347 380	1 776 190	- 36,53

6. Enrollment trends in tertiary education

Another indicator is the enrollment trends in tertiary education (Table 2). There is no opportunity to compare this indicator with numbers in the previous years since the International Standard Classification of Education was introduced in 2011. The report of 2015 is the first source that includes the data collected following the adoption of the International Standards. The percentage of the student enrollment is calculated from the total size of the student population given in 2014/2015 academic year. Most of the students enrolled in tertiary education (at 62.74 %) study in ISCED 6 or first-cycle programmes (Bachelor's or equivalent level); 24.09 % are enrolled in ISCED 7 or second-cycle programmes (Master's or equivalent level); and 9.44 % are enrolled in ISCED 5 or short-cycle tertiary education. Only 3.72 % of students are enrolled in ISCED 8 or third-cycle programmes (doctoral or equivalent level). It is important to emphasize that the majority of students in the countries that belong to the European Union and Moldova, Georgia and Armenia are enrolled in ISCED 6 or first-cycle programmes (Bachelor's or equivalent level) and ISCED 7 or second second-cycle programmes (Master's or equivalent level) while in Ukraine and Azerbaijan the majority is made up of a combination of ISCED 5 or short-cycle tertiary education and ISCED 6 or first-cycle programmes (Bachelor's or equivalent level). Speaking of ISCED 8 or third-cycle programmes (doctoral or equivalent level), the leaders in the enrollment are Germany and the Czech Republic at 6.59 % and 6.21 % respectively. They are closely followed by Austria (5.65 %), Sweden (4.98 %) and Slovakia (4.92 %). In Ukraine, Moldova, Georgia, Azerbaijan and Armenia the enrollment rate in ISCED 8 is below 3 %. Out of these five countries Georgia has the leading position at 2.68 % while in Armenia this category of students is the lowest (1.22 %).

Table 2. The size of the student population enrolled in a certain type of tertiary education (2014 – 2015). (European Commission, 2018, p. 23)

The size of the student population enrolled in a certain type of tertiary education	ISCED 5	ISCED 6	ISCED 7	ISCED 8
Country				
Austria (AT)	77 877 18.28 %	183 768 43.14 %	140 269 32.93 %	24 058 5.65 %
Czech Republic (CZ)	994 0.25 %	236 887 59.89 %	133 066 33.64 %	24 582 6.21 %

Germany (DE)	394 0.01 %	1 792 434 60.19 %	988 753 33.20 %	196 200 6.59 %
Slovakia (SK)	2 847 1.54 %	102 434 55.55 %	70 038 37.98 %	9 071 4.92 %
Sweden (SE)	25 244 5.89 %	246 400 57.50 %	135 555 31.63 %	21 358 4.98 %
Armenia (AM)	8 304 8.00 %	79 623 76.80 %	14 476 13.96 %	1 269 1.22 %
Azerbaijan (AZ)	38 816 19.01 %	143 620 70.35 %	18 781 9.20 %	2 935 1.44 %
Georgia (GE)	2 328 1.82 %	109 424 85.73 %	12 471 9.77 %	3 417 2.68 %
Moldova (MD)	15 468 14.14 %	71 071 64.97 %	20 923 19.16 %	1 933 1.77
Ukraine (UA)	452 292 25.46 %	947 210 53.33 %	346 657 19.52 %	30 031 1.69 %

7. Total amount of public expenditure on tertiary education within a year as a percentage of country's GDP

One more indicator appropriate for comparative analysis of higher education trends is tertiary education public expenditure as a percentage of GDP that governments allocate within a period of one year. By analyzing the country's budget spent on higher education, it is possible to explain a country's priority related to the issues of tertiary education. These outgoings are spent to fund faculty and staff salaries, textbooks and other teaching materials, maintenance of university buildings, research grants, laboratories, education administration, educational research institutions that develop higher education curriculum, and provide policy analysis. The government spending also covers support given to students including grants, scholarships and public loans. However, if households pay tuition fees directly without any sponsorship, they are not included in annual public expenditure.

Table 3 and 4 show the total amount of money governments spent on tertiary education as percentage of GDP and what percentage of GDP was spent on research and development (R&D) in 2011 and 2014. In 2011 Ukraine was the leader in spending on tertiary education at 2.12 %, followed by Sweden at 1.98 %. Although both Austria and Moldova spent 1.56 % on tertiary education, the former spent nothing on R&D while Austria spent 28 % on research and development. Germany, the Czech Republic and Slovakia spent on tertiary education 1.40 %, 1.16 % and 0.98 % respectively. The three remaining countries showed spending around 0.40 % of GDP. Georgia spent the lowest among these EHEA countries (0.30 %). Although

Ukraine was the leader in spending on tertiary education there was no indication for R&D spending as opposed to the Czech Republic that spent the highest percentage 34, 8 % on research and development of the total spending. It was followed by Sweden at 35 %, Germany at 30 %, Austria at 28 % and Slovakia at 21 %.

Table 3 The annual expenditure on tertiary education and research and development (2011) (European Commission, 2015, p. 38)

Expenditures 2011	Country									
	AT	CZ	DE	SK	SE	AM	AZ	GE	MD	UA
Total	1.56	1.16	1.40	0.95	1.98	0.36	0.36	0.30	1.56	2.12
R&D	0.44	0.46	0.42	0.20	0.69	–	–	–	–	–
Percentage of annual spending	28 %	39 %	30 %	21 %	35 %					
The rest	1.12	0.71	0.98	0.75	1.38	0.36	0.36	0.30	1.56	2.12

In 2014 the highest annual spending on tertiary education of GDP was seen in Sweden at 1.94 %. It was closely followed by Ukraine at 1.85 %, Austria at 1.79 %, Germany at 1.31 % and Moldova at 1.28 %. The two countries showed spending below one percent of GDP: Slovakia (0.97), the Czech Republic (0.80). Spending on tertiary education in Armenia and Georgia was 0.31 % of GDP, the lowest among these EHEA countries; there were no available data for Azerbaijan. The analysis of annual public expenditure of the total GDP over two periods 2011 and 2014 indicates the relative priority attached to tertiary education in Austria, Slovakia, and Georgia compared to other six countries where the amount of spending on tertiary education declined.

Speaking of R&D, out of the five countries with the highest spending on tertiary education in 2014 two countries did not indicate any spending on research and development (Ukraine and Moldova) while the Czech Republic was the leader in spending on research and development at 38 % of total annual expenditure on tertiary education. They were closely followed by Sweden and Slovakia both at about 35 %, Germany at 32 %, and Austria at 25 %. While in Germany, Slovakia and Sweden the percentage of expenditure on R&D out of total annual expenditure on tertiary education increased (Slovakia showed the highest increase by 14 %), Austria and the Czech Republic displayed insignificant decrease in expenditure on R&D (by 2 % on average). It is evident that all non-EU countries indicated no expenditures on research and development although in 2003 in Berlin ministers emphasized the importance of close cooperation between the universities and research

institutions. These links were expected to benefit European Higher Education Area countries in terms of the potential received from the innovation that can boost the social and economic development (Bologna Process, 2003). However, the statistics prove that research and development area in non-EU countries requires significant attention.

Table 4 The annual expenditure on tertiary education and research and development (2014) (European Commission, 2018, p. 33)

Expenditures 2014	Country									
	AT	CZ	DE	SK	SE	AM	AZ	GE	MD	UA
Total	1.79	0.80	1.31	0.97	1.94	0.31	–	0.31	1.28	1.85
R&D	0.45	0.31	0.42	0.34	0.69	–	–	–	–	–
Percentage of annual spending	25 %	38 %	32 %	35 %	35.5%					
The rest	1.34	0.49	0.89	0.63	1.25	0.31	–	0.31	1.28	1.85

The average expenditure on tertiary education in the five EU countries totaled 1.36 % while the remaining four countries spent approximately 0.94 % of GDP on tertiary education. In Austria and Germany such high spending on tertiary education relative to the size of their economies can be explained by high enrolment rates for 18–34 years shown in Table 1. However, while Sweden experienced an insignificant increase in the enrolment rate by 1.39 (Table 1), Ukraine displayed a dramatic drop in the size of the student population (by 36.53 %) among the countries with the highest expenditures on tertiary education. In Ukraine, Armenia, Azerbaijan and Moldova, tertiary student enrolment from 2011/12 to 2014/15 (Table 1.) experienced a significant decline.

It is necessary to emphasize that Sweden allocated higher proportion of total public expenditure to tertiary education in 2014 than in 2008. In Sweden, Austria, Germany, and Georgia the total public expenditure decreased while the annual public expenditure on tertiary education increased. Austria illustrated three increases between 2008 and 2014. In the Czech Republic the percentage of tertiary education expenditure was lower in 2014 than in 2008. In Slovakia and Armenia, the percentage of total public spending and expenditures on higher education remained almost unchanged in 2014 relative to 2008 (European Commission, 2018).

8. Academic staff, age groups and gender division

Table 5 illustrates the academic staff divided into four age groups:

those under 35, between 35 and 49, between 50 and 64, and 65 and over. Data are available for the EU countries except the Czech Republic. In Austria, Slovakia and Sweden the largest proportion of academic staff is easily seen in the 35–49 age group ranging from over 30 % to over 40 % while in Germany the largest group is represented by young academic staff under 35 at 43.2 %. Germany is also the only country where two first age groups (those under 35, between 35 and 49) make up 75 % of academic staff. While in Austria, Slovakia and Sweden, the youngest group of academic staff aged under 35 accounts for less than 20 % of all staff, 50-64 age group represents between 21 % and 36 %, which makes a significant proportion. The 65-year old and over is the smallest category overall in all EU countries (four in the analysis). In Austria and Germany, it is under 4 %. Yet, the share of the oldest academic staff is still relatively high (10 %) in Slovakia and (7 %) in Sweden. In the analyzed EHEA countries, their share of the oldest academic staff is under four percent.

Looking at the gender distribution among academic staff in 2016, the data is available only for four EU countries. In all these countries female academic staff accounts for less than 50 % of academic staff. The country with the lowest proportion of female academic staff is Germany (38.2 %) while Slovakia has the highest percentage of female academic staff (45 %). There is no data available for all non-EU countries and the Czech Republic.

It is also important to note that the two countries Austria and Sweden supports higher education with specific legislation that promotes gender equality, political and religious tolerance, and democratic and civic values while in other eight countries these societal goals and values are supported by top-level legislation. The most common requirements listed in such legislation are anti-discrimination measures related to the issues of staff to be appointed and promoted as well as equal access to education issues (European Commission, 2018, p. 45).

Table 5 Academic staff by age groups (2015), and female (%) (European Commission, 2018, p. 32) –

Age groups	Country									
	AT	CZ	DE	SK	SE	AM	AZ	GE	MD	UA
<35	20.0	n/a	43.4	19.1	15.2	–	–	–	–	–
35-49	42.8	n/a	31.3	36.2	41.6	–	–	–	–	–
50-64	33.5	n/a	21.3	34.6	36.2	–	–	–	–	–
65 and over	3.2	n/a	3.4	10.0	7.0	–	–	–	–	–
Female (2016)	42.1	n/a	38.2	45.4	44.3	–	–	–	–	–

9. Quality assurance

Another aspect used to compare and identify trends in higher education is the issue of quality assurance. The Berlin Communiqué signed by ministers responsible for higher education in 33 European countries recognized that quality assurance in higher education is the primary responsibility for each institution (Bologna Process, 2003). This idea is reflected in the Standards and Guidelines for Quality Assurance in the European Higher Education Area. It is stated that ‘the quality assurance plays a crucial role in supporting higher education systems (...) and it also remains the key institutional missions’ (Standards and Guidelines, 2015, p. 6).

It is proved that legislation is a powerful tool for countries to achieve quality assurance. In the Czech Republic, Germany, Moldova and Georgia higher education institutions are legally required to have a strategy for quality assurance and inform the public by publishing it. Higher education institutions in Austria, Slovakia, Sweden, and Ukraine are also legally obliged to have a quality assurance strategy, however, the institutions can decide whether they need to publish it. Only in two countries Azerbaijan and Armenia higher education institutions are not legally obliged to have a special requirement for quality assurance. This criterion of HE accountability has been developing at a very fast rate if only in 2012 it was stated higher education institutions were required to publish a quality assurance strategy in a relatively small number of systems (12). Higher education institutions in Ukraine and Slovakia were reported to be lacking any formal requirements for establishing a policy related to internal quality assurance at that time (European Commission/EACEA, 2012, p. 68).

The Bologna Process Implementation Report is unique in terms of data as European Commission/EACEA/, 2018 gathered information related to on what level and how often student government were involved in developing external quality assurance policy or executing external policy activities (European Commission/EACEA, 2018, p. 133). There were five different criteria according to which student participation in external quality assurance was rated: mandatory requirement for students to participate in reviewing external quality assurance level; whether students are advised to participate in these review teams, and they are commonly involved; or students are involved on a rare basis; or/and students do not participate and such review teams are not available. As the data reveal, in Sweden and Slovakia student participation is advised, and commonly happens; in Ukraine and Moldova student participation sometimes happens, Georgia, Azerbaijan, and Armenia did not submit any information while in the remaining EU

countries (Germany, Austria and the Czech Republic) students are required to be part of review teams handling the external quality assurance issues.

10. European Credit Transfer and Accumulation System

One of the important elements that ensure the implementation of the Bologna reform is the use of European Credit Transfer and Accumulation System (ECTS) (European Commission/EACEA, 2018, p. 53). Out of the ten countries only Sweden a national credit system is required. Sweden also determines how the national system should be turned into ECTS by developing rules to convert national grades. The Czech Republic is lacking any formal requirements concerning any higher education credit systems. In all remaining countries, ECTS is practiced by all or almost all higher education institutions (European Commission/EACEA, 2018, p. 51). Besides, when approaching ECTS learning outcomes are extremely important as they are used to plan a course in terms of students' accomplishments. A course curriculum usually contains description of what students are expected to know (content), what they are expected to be able do (skills) by the program completion. Statistics shows that Ukraine, Sweden, Georgia, Moldova, and Azerbaijan report 100 % linkage of programmes components to learning outcomes, while in Germany, Austria, Slovakia, the Czech Republic, and Armenia learning outcomes are described in more than 50 % of all programs.

11. Student Mobility

The trends in student mobility are given in Table 6 from 2008 to 2015, in three different periods. The table illustrates the trends in student mobility as opposed to the total student population in the EHEA recipient country. Speaking of inside mobility, in 2008/2009 (European Commission, 2012, p. 156) the highest percentage of students from inside the EHEA chose Austria. The Czech Republic and Germany were also attractive for students from the inside EHEA. All other countries show levels below 2.5 % out of which all but two (Moldova and Ukraine) are below 1 %. The weighted average of students coming from EHEA for EU countries is 6.36 % while non-EU countries stood at 1.5 % as the weighted average.

The concept of outside (outside EHEA) measures the degree mobility percentage of students coming to EHEA countries from the whole without students from other EHEA countries. The proportion of these mobility students are indicated as a percentage of the total number of students. It should be noted that in 2008/2009 many countries used the

concept of foreign citizenship/nationality instead of mobile students per se which may decrease the precision of the statistics (European Commission, 2012, p. 154). Only three countries, namely Germany, Sweden, and Austria ranged from 4 % to 2.4 %/ as opposed to the remaining six countries that reach less than 2 %. The weighted average of EU countries is 2.2 % while non-EU countries' average account for exactly 1 %.

In 2011/2012 (European Commission, 2015, p. 253). Austria, Germany, Azerbaijan, and Ukraine experienced a decline in the number of incoming students from the EHEA, while in the Czech Republic, Slovakia and Sweden the rates increased insignificantly. In the other remaining countries, the mobility rates remained unchanged. In terms of incoming students from the outside EHEA all countries but the Czech Republic, Slovakia, Moldova, and Ukraine experienced a decline. Georgia was included in the list.

In 2014/2015 Austria and Azerbaijan continued losing students coming from the EHEA. While in Germany the enrolment rate of students coming from the EHEA also dropped, in comparison with 2011/2012 it increased. The other remaining countries experienced insignificant increases in the number of students coming from the EHEA while Ukraine after the drop in 2011/2012 returned to the numbers of 2008/2009. With regards to the rates of students coming from outside the EHEA countries as a percentage of the total number of all enrolled students, Austria and Azerbaijan showed declines, while in other countries the rates increased. The most significant increase was seen in Ukraine, Georgia, and Moldova, while in the other countries the increase was insignificant ranging from 0.3 % to 1 % between 2008/2009 and 2014/2015. Overall, in 2008/2009 in all the countries the percentage of student mobility from countries inside the EHEA was higher compared to the share of students coming from countries outside the EHEA. However, the reverse was true for Sweden and Ukraine. In 2014/2015 Moldova, Georgia and Germany joined the list of countries where the percentage of students coming from outside the EHEA was higher than the share of students arriving from another EHEA country. The weighted average of students coming from EHEA for EU countries increased from 6.36 % to 6.52 % while since 2011/12 in the non-EU countries the weighted average declined from 1.5 % to 1.46 %. The weighted average proportion of enrolled international students from outside the EHEA in the EU countries increased from 2.2 % to 2.32 % since 2011/12 while in non-EU the weighted average share also increased from 1 % to 1.72 %, with increases in the majority of countries, with the exception of Azerbaijan which registered a decline of about 50 %.

Table 6 The mobility rate – the degree of tertiary education student mobility – the percentage of the EHEA students (insiders) as of the total number of enrolled students, by destination, and a percentage of outside students as of the total number of students enrolled, by destination, in 2008/2009, 2011/12, 2014/15. (European Commission, 2012, 2015, 2018, p. 253).

	Country									
	AT	CZ	DE	SK	SE	AM	AZ	GE	MD	UA
2008/2009										
Inside	16.9	6.4	4.3	2.4	1.8	1.8	2.4	n/a	0.6	0.4
Outside	2.4	0.9	4.0	0.3	3.4	1.5	1.1	n/a	0.5	0.9
2011/2012										
Inside	14	8	2.8	3.8	1.9	1.8	1.7	0.9	0.6	0.2
Outside	1.4	0.9	2.6	0.3	3.2	1	0.8	0.9	0.9	0.9
2014/2015										
Inside	13.9	9.5	3.2	5.5	2.5	2.4	1.5	1.7	0.8	0.9
Outside	2.0	1.0	4.5	0.4	3.7	1.9	0.6	2.1	1.7	2.3

13. Conclusions and further research perspectives

The indicators in the ten EHEA countries including the size of the student population, enrollment trends in tertiary education, annual public outgoings spent on tertiary education as a proportion of GDP, academic staff, age groups and gender division, quality assurance, European Credit Transfer and Accumulation System, and student mobility were analyzed to compare and contrast national governments' priorities. Although the findings prove a widely varying pace at which the countries are working to achieve declared goals, there are certain similarities and differences that are common to these EHEA countries. In many indicators sharp differences divided EU countries and non-EU countries. While the majority of EU countries experienced an increase in the size of the student population, non-EU countries experienced a decline in numbers of students enrolled. In EU countries enrollment trends in tertiary education show the significant difference between ISCED 5 and ISCED 7 where the number of students in ISCED 7 exceeded ISCED 5, whereas in non-EU countries this difference is insignificant or the number of students enrolled in ISCED 5 prevailed. Although average spending on education declined most EU increased their spending or remained at the same level, while the majority of non-EU countries experienced significant declines. There is no data available for research and development spending and age groups and gender division for all non-EU countries. Similarly, there is no data or very low participation in non-EU countries in terms of student involvement in external quality

assurance review teams. In terms of student mobility, the weighted average for both indicators (inside EHEA and outside EHEA) in non-EU countries are lower. Since current findings are lacking recent, updated information on the obstacles that countries are dealing with, the new study is expected to analyze the barriers that have to be overcome for the further progress. The investigation of the new indicators that have been developed recently will enable to identify the newest trends.

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