

INTERNATIONAL STUDENTS IN HUNGARIAN HIGHER EDUCATION

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Abstract: Overall, higher education in Hungary is popular with students from abroad, even if there are significant differences in terms of its structure. The ever-faster increase in the annual headcount of the international student body serves as proof to this statement. The expansion of the size of the body of international students is of special importance in higher education since in 2016 the Hungarian government set the objective of having 40,000 international students by 2023 (EMMI, 2016).

Numerous studies have been published on this topic, usually focusing on specific issues, including, for example, the countries from which we receive most of the students, the most popular majors, possible economic advantages due to the presence of a great number of international students, and how internationalization takes place in higher education in Hungary.

By means of processing data published by the Hungarian Educational Authority [Oktatási Hivatal], this paper aims to present the changes in the number of international students in Hungary over the past ten years. This also includes the discussion of the structure of these changes related to a variety of issues such as relations, types of institutions and their ownership, levels and types of programs, as well as gender proportions. However, even with this effort, the officially available statistics are suitable for presenting a properly detailed assessment of the situation only to a limited extent.

Keywords: higher education, international students, Hungarian education
(JEL Code: I23)

INTERNATIONAL STUDENTS IN HIGHER EDUCATION INSTITUTIONS

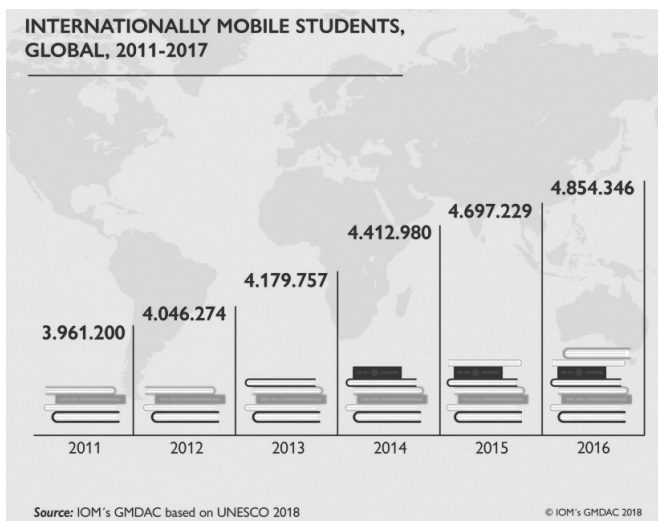
The number of international students¹¹ in higher education has been growing exponentially since the turn of the century – (Figure 1) [in comparison with 2 million students in 2000 [18]. there were over 5.3 international students by 2017), and according to forecasts, this number is expected to reach 8 million by 2025. This means that the value associated with studying abroad has been showing continuous, long-term increase. [8]

¹ An internationally mobile student is “an individual who has physically crossed an international border between two countries with the objective to participate in educational activities in a destination country, where the destination country is different from his or her country of origin” [19].

Some global factors may influence the future of higher education, affecting the operation of the institutions. Changes in the economy, on the labour markets, in the methods of learning, as well as an increase in the number of non-traditional students are just some of the market trends that may have an impact on the future of higher education.

Factors encouraging student mobility may also include demographic, economic, political and technological changes. According to statistical data, more than half of international students today are enrolled in programmes in six countries: the United States of America, the United Kingdom, Australia, France, Germany, and the Russian Federation. Countries from which most international students arrive include China, India, Germany, South Korea, Nigeria, France, Saudi Arabia and several Central Asian countries. The USA continues to be the most popular destination country; however, owing to its increasingly strict immigration policy in recent years, the number of international students is decreasing (Karzunina et al., 2017).

Figure 1: Internationally mobile students, global, 2011-2017



The internationalization of higher education poses new challenges for institutions, resulting in fierce competition between them in many cases. National programmes of excellence, on the other hand, are increasing the differentiation of higher education and call attention to the best performing institutions. In the words of Wit et al. (2015), “the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society.” This indicates a clear intention whereby “internationalization cannot be a goal in itself, but needs to be directed toward quality improvement” (de Wit, 2020).

In the following, we will briefly review the factors and data characterising the five countries that receive the highest number of international students.

United States of America

In the United States, the number of international students, which was over one million in 2018/19, reached the highest level of all times for the fourth consecutive year. International students account for 5.5 percent of the higher education student population in the USA. [17]

International education is a sector that has been developing continuously, from the most popular subjects to the various services. Institutions that are able to keep up with frequently changing needs and can provide the education, research and service activities at a higher standard can maintain their advantage in the competition for enrolling international students.

In the past 10 years, the USA has been able to increase the number of international students enrolled by 38.6%. Some further characteristics of international education in the USA [6]:

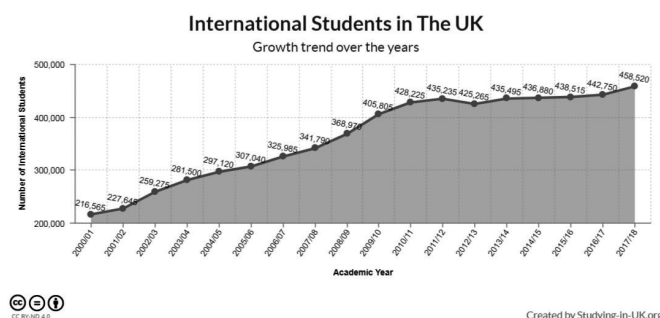
- Emerging economies dominate among the 25 countries from which most international students arrive.
- In the 2018/19 academic year, California, New York and Texas remained the three most popular destination states for international students. New York University is where most international students are enrolled.

- China, India and South Korea continued to be the most important countries of origin; the number of Chinese students increased by nearly 350% in 10 years (Report on Open Door, 2019).
- The most popular are the university, postgraduate and OPT² programmes. In the USA, more than half of international students pursued studies in STEM³ education in the 2018/19 academic year. The most popular area was engineering, which accounted for approximately a fifth of all international enrolments (21.1%); at the same time, O’Connell and Resuli (2020) examined the challenges experienced by engineering students in the USA, the most significant of which were transfer credit issues, as well as overcoming language difficulties.
- What is behind such a marked increase in the number of international students is partly the decline in state appropriations for higher education, since students arriving from emerging economies mean a significant source of income for the institutions (Bound et al., 2020).
- Small and medium-sized American private universities in the USA allocate significant resources to assist international students arriving at different levels of preparation, in the form of courses before their starting their first terms (Shane et al., 2020).

United Kingdom

The United Kingdom is the second most popular destination country for international students. According to the official international enrolment figures (Figure 2), there were a total of 458,520 students enrolled at universities in the United Kingdom up to the 2017/18 academic year. At that point, international enrolments at British universities increased by 3.6% from the previous year. The newly enrolled students (247,685 persons) account for 54% of all students living in the United Kingdom. [12]

Figure 2: International students in the UK, 2000-2017



- 2 Optional Practical Training (OPT) is “a period during which undergraduate and graduate students with F-1 status who have completed or have been pursuing their degrees are permitted by the United States Citizenship and Immigration Services (US-CIS) to work in the USA.” [20]
- 3 STEM is a curriculum based on the idea of educating students in four specific disciplines (science, technology, engineering and mathematics) in an interdisciplinary and applied approach. Rather than teach the four disciplines as separate and discrete subjects, STEM integrates them into a cohesive learning paradigm based on real-world applications. [5]

Major important findings pertaining to international students:

- The five most important EU countries of origin of international students enrolled at universities in the United Kingdom are Italy, France, Germany, Spain, and Greece. Until 2017/18, there were 13,985 students from Italy, 13,660 from France, and 13,545 from Germany. [18]
- Until the 2017/18 academic year, a total 377,140 students attended university in England, 54,235 in Scotland, 21,350 in Wales, and 5,765 in Northern Ireland. The number of EU students reported by English universities was 108,335, followed by Scotland with 21,605, Wales with 6,640 and Northern Ireland with 2,565 students.
- The five most preferred subject areas of education for international students in the United Kingdom are business and administrative studies, engineering and technology, social studies, creative arts and design, and biological sciences.

The recent decades have seen a continuous increase for higher education institutions in the United Kingdom in terms of the enrolment of international students; however, on the basis of certain predictions, this tendency is likely to stop to be replaced by a decline. Higher education has its own limits, and public universities are not able to move to the second and third stages of internationalization, with the exporting of education being difficult to implement. Recent years already brought some surprises for a few British institutions because they were not able to reach their planned enrolment numbers, leading to financial difficulties (Healey, 2019).

Brexit, the withdrawal of the United Kingdom from the European Union, will also result in a decrease in the number of international students, since EU students will most likely not be eligible for student loans to cover their tuition fees (Chankseliani, 2017).

Australia

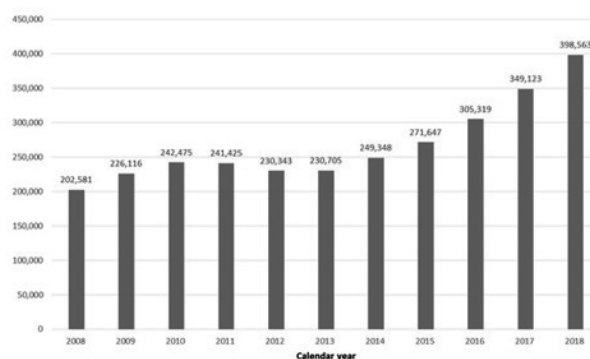
Australia is the third most popular destination country for international students worldwide, especially for those coming from the Asia-Pacific region. In 2018, a total of 395,563 international students were enrolled in institutes of higher education in Australia (Figure 3). [11]

According to the most recent annual report of OECD, international students account for 21% of the total student population in Australia, compared with the average of 6% in other countries. [10] In big cities across Australia, overpopulation is causing significant problems, which was attributed in the past to immigrants arriving with permanent visas; however, today this is rather the result of the arrival of international students and other holders of temporary visas (Birrell, 2019).

- In recent years, the biggest source of revenue increase for Australian universities was overseas student fees. [4]

- In 2017, 70% international students from the most popular countries of origin studied in Australian higher education institution. China, India, Brazil, Nepal and Malaysia are the top 5 countries.
- The states attracting most international students are New South Wales and Victoria.
- In comparison with the 27% share in case of OECD and partner countries, the proportion of new students entering undergraduate programmes in the area of STEM is lower in Australia (21%).
- Almost half of all enrolled students and one-third of doctoral students at Australian universities are international students, resulting in a very disproportionate exposure of the country's higher education to the foreign markets. [10]

Figure 3: International students in Australia, 2008-2018



Source: DoE, Basic pivot table 2015-2019, December 2018

France

Approximately 2.5 million students study in higher education in France. 12% of them are from abroad, making France the fourth most popular destination country for international students, as well as the number one non-English speaking country. In the 2017/18 academic year, there were 340,000 international students enrolled at universities in France, which is more than double of the number 15 years. [16] France enjoys this high level of popularity despite the fact that the country's political attitude to international students is quite peculiar, and for a long time, international students were only admitted on the basis of a strict selection process. At the same time, it is very attractive that after they are enrolled, international students enjoy the same social security benefits as their French counterparts, and they also have better opportunities to stay in the country and settle there (Levatino, 2018).

Universities in France award such national diplomas (bachelor's, master's and doctoral degrees) that have the same academic value. [3]

- It is hardly surprising that the number of international students from countries where French is an official language is particularly high (in the 2017/18 academic year, 39,855 students came from Morocco and 30,521 from Algeria). The top 10 countries also include Tuni-

sia (12,842 students), Senegal (10,974 students), Ivory Coast (8,085 students) and Cameroon (6,872), each of which were French colonies at times in history, resulting in French being an official language in these countries. The third largest group of international students are from China (a total of 30,072 students came to China to France in the 2017/18 academic year). From European countries, Italy sent the most students (13,341), followed by Germany (8,459), Spain (7,826), Portugal (5,091) and Belgium (4,798). [18]

- Most applications are submitted to Parisian universities, which is not surprising as there are more than 20 higher education institutions in the capital city, while in other French cities, one can select from a maximum of 3 institutions only.
- Much more students participated in master's (18%) and doctoral programmes (41%) than in undergraduate programmes. In terms of subject areas, the most dynamic growth was seen in the past 10 years in business and engineering programmes. [2]

Germany

According to the official data provided by the Federal Statistical Office of Germany, approximately 380,000 international students study in the country. [13] Tuition-free higher education and world-class professors are the chief factors of motivation in selecting a destination country for higher education. [14]

Currently, there are over one hundred accredited higher education institutions in Germany, including private and state universities. [13]

- Most international students come from China (27,765) and India (13,387), with Austria, another German-speaking country, in the third place (10,631). They are followed by Russia with 9,620 and then by France with 7,057 students. [18] In the patterns of international student mobility, Germany is an important destination country, since it is oriented towards Northern Europe and, via Austria, also towards South-eastern Europe (Kondakci, 2018).
- The most popular university is the Technical University of Munich, where nearly a third of all students are international students. The second most popular on the list is Ludwig Maximilian University of Munich, a university of undeniable reputation for its excellence

of education, where 17% of the student population are international students. Ranking third is the Karlsruhe Institute of Technology, where the most popular programmes are in the subject areas of engineering, mathematics, law, economics and social sciences.

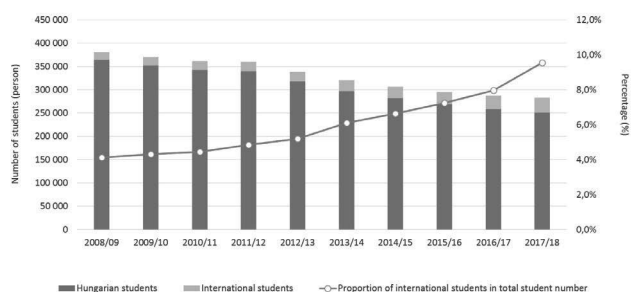
- In 2017, most international students at German universities were in engineering programmes (37%), followed by law, economics and social sciences (27%).
- In 2017, 36.5% of international students were enrolled in bachelor's, 36% in master's, and 10% in doctoral programmes. [14]

INTERNATIONAL STUDENTS IN HUNGARIAN HIGHER EDUCATION IN FIGURES

The internationalization of higher education is a dynamic process that is taking place all over the world. In an international comparison, the ratio of foreign or international students participating in Hungarian higher education is exceptionally high: the 2015 figure for the percentage of international students in higher education in OECD countries was 5.6%, while in Hungary, it was 8.9% (OECD, 2017). In the 2017/2018 academic year, one in 9 students was from abroad, while 10 years ago, this ratio was one in 23, whereas 15 years ago, it was only one in 32.

Figure 4 illustrates how the structure of Hungarian higher education was transformed during the course of 10 years and how it became dependent on international students in a certain part of institutions and programs (see later).

Figure 4: The number and proportion of Hungarian and international students in Hungarian higher education between 2008 and 2017
Source: Compiled on the basis of data from OH [Educational Authority]



During the ten-year time period between 2008 and 2017, there were 17-32,000 students of foreign nationality

Table 1: The number of international students in Hungarian higher education and its changes between 2008 and 2017

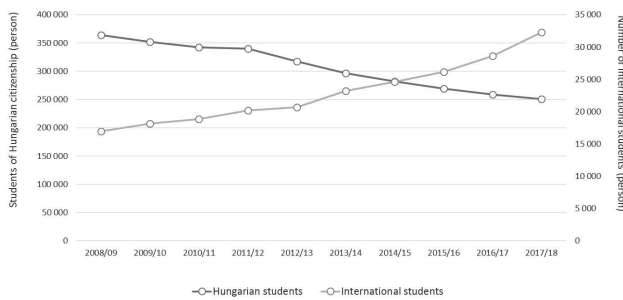
Denomination	Number of students (persons)									
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Total number of international students	16 916	18 154	18 850	20 176	20 694	23 208	24 598	26 155	28 628	32 309
	Change (%)									
	Compared to base year		7.3	11.4	19.3	22.3	37.2	45.4	54.6	69.2
Compared to previous year			4.1	7.8	3.1	14.9	8.2	9.2	14.6	21.8

Source: Compiled on the basis of data from OH [Educational Authority]

enrolled in Hungarian higher education institutions, which means an average of almost 23,000 persons. As compared to 2008, this figure increased by 91 percentage points by 2017, i.e., it almost doubled. This increase was sometimes rather uneven: scattered between the values of 3.1% and 21.8% in the individual years, but still steadily growing. (Table 1)

Within the headcount of the total number of students in Hungarian higher education institutions, the proportion of international students increased from 4.4% to 11.4%. As an annual average, this represents an increase of 7.2%. A key reason for the increase in the proportion of international students was the marked decrease in the number of Hungarian students: their number decreased by 25 percentage points compared to the base year (Figure 5)

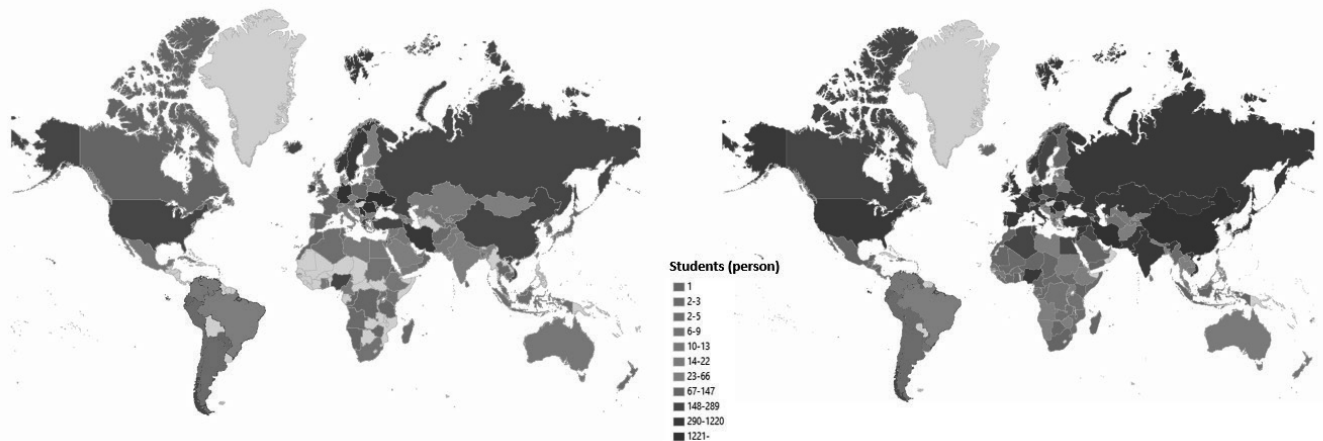
Figure 5: The number of Hungarian and international students in Hungarian higher education between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

When looking at the trend of the changes in the total number of international students, we notice that the proportion of full-time students displays a continuous increase: compared to the 81% in 2008, it grew by 13 percentage points by 2017. This number, just like the total number, increased year by year but the extent of its growth from year to year was higher (scattered between 5% and 12%).

Figure 6: International students in Hungarian higher education in the academic years 2008/2009 and 2017/2018, broken down to individual countries



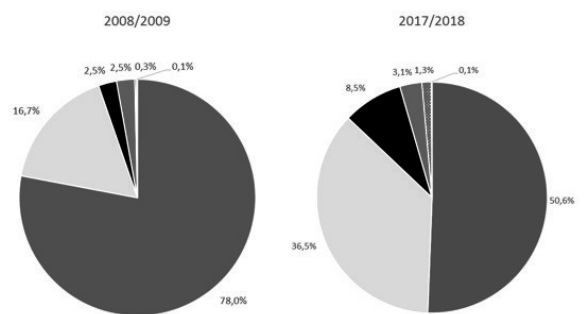
Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

THE COMPOSITION OF THE INTERNATIONAL STUDENT BODY BROKEN DOWN TO CONTINENTS AND COUNTRY-GROUPS

In 2017, students came to Hungarian higher education institutions from as many as 161 countries⁴. This figure was the result of a 36.4 percentage-point increase in the course of nine years. Figure 6 shows the number of students participating in Hungarian higher education at the beginning and at the end of the time interval from the individual countries, broken down to group categories. The vanishing of the grey areas indicates how the early 61% “coverage of the countries of the world” grew to 80% (as compared to the total number of independent countries in the world).

The distribution of students by continents in the first and last year of the 10-year period respectively is demonstrated in Figure 7, which also displays the expansion of relations and the growth of the number of those coming from individual countries.

Figure 7: Distribution of international students by source continents



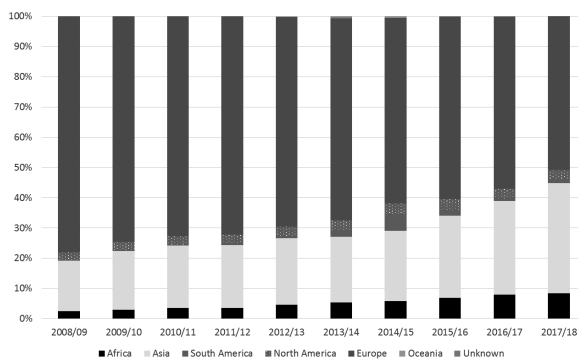
Source: Compiled on the basis of data from OH [Educational Authority]

4 As there were 3 persons of no specific citizenship and another 3 persons from the minor outlying islands of the USA among them, rendering 6 persons to individual countries was not possible.

In the 2008/2009 academic year, 78% of the international students participating in Hungarian higher education were the citizens of one of the countries in Europe. 16.7% of the students came from Asia, 2.5% from Africa, 2.7% from the Americas, and 0.1% of them from Australia and Oceania. A marked shift in proportions seems to have occurred by the end of the time period under scrutiny: the proportion of students from Europe decreased by 30 percentage points, while at the same time, the ratio of those coming from Asia grew significantly, by 20 percentage points; whereas the number of students from African countries also multiplied 3.5 times. This could happen through the increase of the absolute number of students in each category.

Figure 8 displays the “conquest” of Hungarian higher education by Asia on an annual basis. During the course of 9 years, the total number of international students grew by 15,393 persons, the distribution of which according to continents was as follows: Asia 58.2%; Europe 20.5%; Africa 15.0%; Americas 6.2%; Australia and Oceania 0.1%.

Figure 8: Distribution of international students according to continents, annually between 2008 and 2017

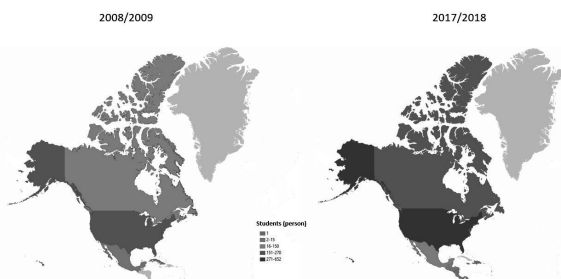


Source: Compiled on the basis of data from OH [Educational Authority] Americas

In 2008, students from North and South America came from a total of 12 countries, and this figure grew to 26 by the fall of 2017. In 2017, students out of 15 of the 23 independent countries of North America (65.2%) and 11 of the 12 independent countries of South America (91.7%) were enrolled in Hungarian institutions of higher education. (Figures 9-10)

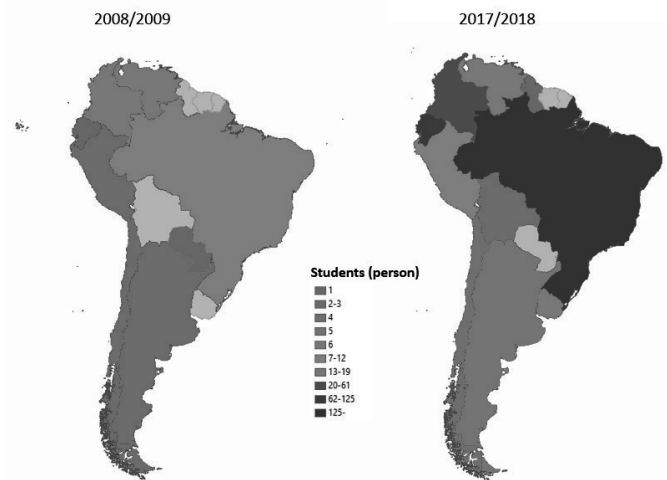
As regards the overall amounts, the number of students coming from the American continent during the time period under scrutiny tripled.

Figure 9: The number of students from the North American continent and its changes by country



Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

Figure 10: The number of students from the South American continent and its changes by country

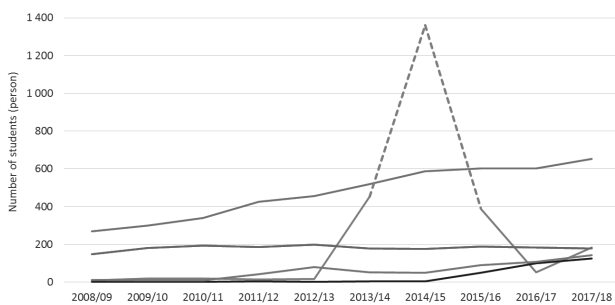


Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

As for distribution by country, in 2017, 46.1% of the students from the Americas came from the United States of America, 13.0% came from Brazil, 12.6% from Canada, 10.1% from Mexico, and 8.8% from Ecuador. Figure 11 displays the student trends in the case of these five countries.

- In the case of the United States of America, the growth in student numbers is continuous from year to year, and the 2008 figure of 270 students studying in Hungary grew almost 2.5-fold by 2017.
- In the case of Brazil, the base-year figure was only 9, which grew by the end of the 10-year time period to 184, showing more than a twenty-fold increase. The outstandingly high value in the fall of 2014 was due to the introduction of the scholarship program called Science Without Borders, which was the largest scholarship program of its kind supported entirely by the state. During the academic years 2013/14 and 2014/15, a total of 2,000 Brazilian students were enrolled in as many as 20 Hungarian higher education institutions. At that time, Hungary was the 10th most popular of the 40 host institutions [7].
- The number of Canadian students grew from 147 to 178.
- In the first part of the 10-year period, there were 11 students coming from Mexico, while in the last one, there were 143 people from that country in Hungarian higher education.
- The student number from Ecuador also kept growing year by year. In 2008, there was only one student, while by the end of the time period under scrutiny, there were 125 altogether. This increase was due to the Stipendium Hungaricum scholarship program, which was also facilitated by talks in held at the ministerial level about strengthening economic relations.

Figure 11: TOP5 countries of international students from North and South America between 2008 and 2017



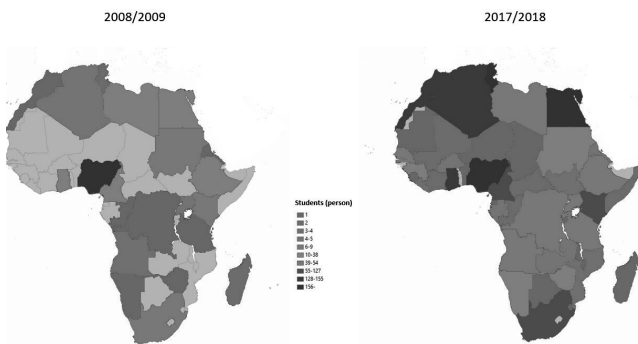
Source: Compiled on the basis of data from OH [Educational Authority]

Africa

While in 2008, students came to Hungary from 24 countries in Africa, by 2017 this number doubled. This means that 90.6% of the 53 independent countries of Africa send their higher education students to Hungary. (Figure 12)

The initial figure of 424 persons increased to 2,731 in 10 years. In the fall of 2017, 36.8% of African students came from Nigeria, 9.9% from Egypt, 8.7% from Tunis, 5.7% from Algeria, and 4.7% from Cameroon. This means that the top 5 countries sending the highest number of students are responsible for more than half of the student number overall from Africa.

Figure 12: The number of students from Africa and its changes by country



Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

The Hungarian government has been financing the studies of foreigners in our country since 2013, through which it has multiplied its bilateral higher education contacts with respect to third countries. It is partly due to this effort that the number of students coming from Africa has grown more than 6-fold.

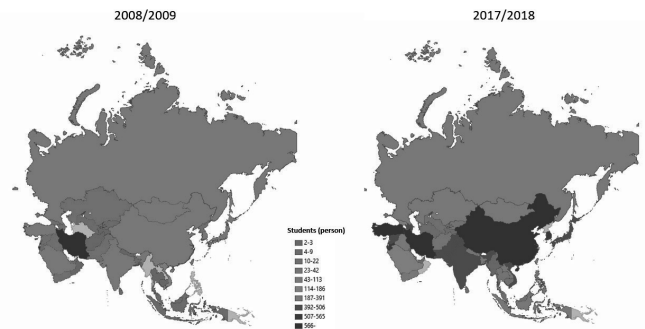
Asia

During the course of the past 9 years, the number of students coming from Asia has more than quadrupled with the annual increases scattered between the values of 7.7%

and 32.8%. In the past decade, there have been numerous initiatives for establishing diplomatic relations with countries in Asia, which would partly explain the increase in the number of students from that region (Pusztai et al., 2016).

Even in 2008, we had students coming to Hungary from close to 90% of all of the independent countries in Asia, which percentage reached almost 100% by 2017. (Figure 13)

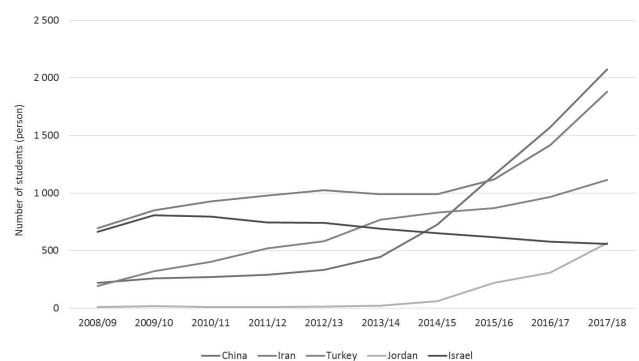
Figure 13: The number of students from Asia and its changes by country



Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

In the fall of 2017, 17.6% of the students from Asia came from China, 15.9% of them from Iran, 9.4% from Turkey, 4.8% from Jordan, and 4.7% from Israel. These five countries are responsible for more than 50% of the students from Asia. Figure 14 illustrates the chronological trends relevant to these five countries in Asia.

Figure 14: Student number trends from the TOP5 Asian countries during the 10 years preceding 2017



Source: Compiled on the basis of data from OH [Educational Authority]

The dynamic change in the student numbers from Asia began in the fall of 2014. The Stipendium Hungaricum scholarship, which was launched in 2013, brought students to Hungarian universities mainly from Eastern Asia, the Middle East and Africa under the aegis of the so-called “keleti és déli nyitás” [eastern and southern opening] strategy. In the framework of Stipendium Hungaricum, international students can spend two years in Hungary on scholarship. By 2017, the number of international students staying in our country on scholarships exceeded 5,000, with the largest numbers coming

to our universities from Jordan, China and Azerbaijan.

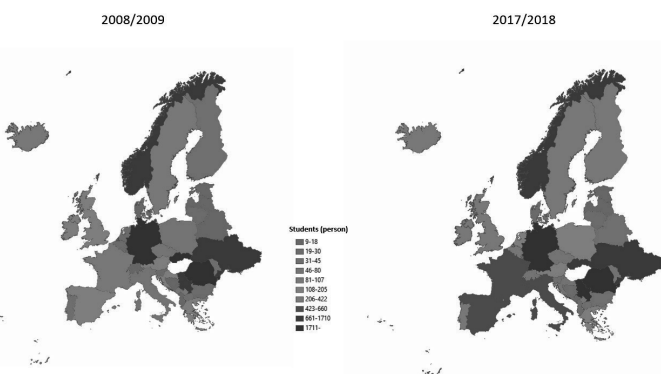
- The growth in the number of students from China is significant. In 10 years, the number of Chinese students in Hungary increased almost tenfold.
- While in the past 6-7 years, the number of students from Iran was notable, it grew suddenly during the past three years. In the time period under scrutiny, their number grew to two and a half times of the original number in the base year, which had been the highest from all five countries to start with.
- The number of students from Turkey increased every year, following a linear trend, and their original number grew six fold by 2017.
- It is notable how the number of students from Jordan grew in a decade: instead of the original nine persons, today there are 559 enrolled students. Their number, which had been stagnant until the 2014/15 academic year, started to grow drastically due to the launching of the scholarship program mentioned above.
- Considering Asia as a whole, students from Israel continue to represent a considerable contingent, yet Israel seems to be the single country out of the five where the student number showed a decreasing trend. As of 2009, the number of Israeli students dropped by almost one third of the original.

Europe

Another indicator of the internationalization of Hungarian higher education – in addition to the marked increase of the number of Asian students - is the growth of the number of students coming from other European countries.

In the fall of 2017, more than 50% of international students came to Hungary from one of the countries of Europe. The 2008 figure, which was about 13,000, grew by the end of the time period under scrutiny to 16,349 persons, which is an increase of 24.0 percentage points. In total, there are students coming to Hungary from as many as 39 European countries, which represents 88.6% of all the independent European countries. (Figure 15)

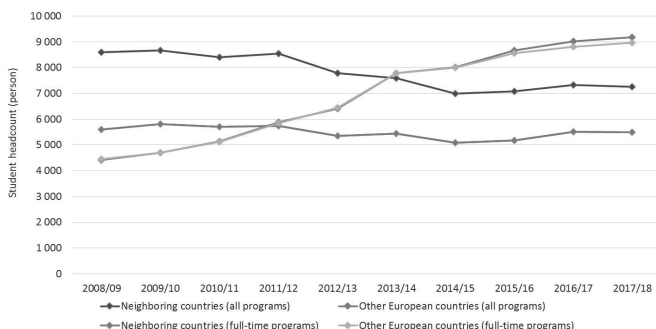
Figure 15: The number of students from Europe and its changes by country



Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

In the time period under scrutiny, 66% of the original 13,000 European students were from the countries neighboring Hungary. This ratio basically turned around by the end of the time period, by which time the number of citizens from non-neighboring countries reached 56%. The year when the two groups were more or less equal was 2013. (Figure 16)

Figure 16: International student figures from neighboring countries in Hungarian higher education between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

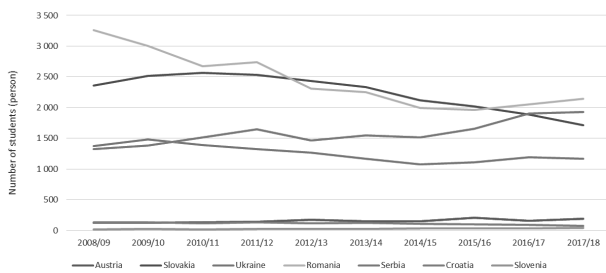
The trend is similar among full-time students: the 55.7% proportion from neighboring countries at the beginning of the period shifted by the end to 62% in favor of the non-neighboring countries. An equal ratio was already reached among full-time students in 2011.

In the 26.3 percentage point surplus of the students from all European countries, the neighboring countries contributed through a 15.5% decrease by the end of the time period, while the number of students from the other countries doubled. The number of full-time students increased by 43.9 percentage points. In this respect, the number of those from the neighboring countries decreased by around 2 percentage points, while the number of students from other countries doubled.

When looking at the data of the 10-year period broken down into individual countries, we see that 85% of the students come from the first 10 countries. In the fall of 2017, the largest group came from Germany (17.7%), with the runners-up being Romania (16.5%), Slovakia (15.2%), Serbia (10.8%) and the Ukraine (8.5 %), while the remaining countries among the top 10 were Norway, Spain, France, Sweden and Italy. In the fall of 2008, at the beginning of the survey, Iceland, Greece and Ireland were among the top 10, while Spain, Italy and France were only in the top 20.

A remarkable tendency in the past few years has been the decrease in the student numbers from Romania, Slovakia and the Ukraine, primarily because of slackening number of cross-border Hungarians. (Figure 17) Although their proportion among international students can still be considered sizable, it keeps decreasing from year to year.

Figure 17: Student numbers from neighboring countries in Hungarian higher education between 2008 and 2017

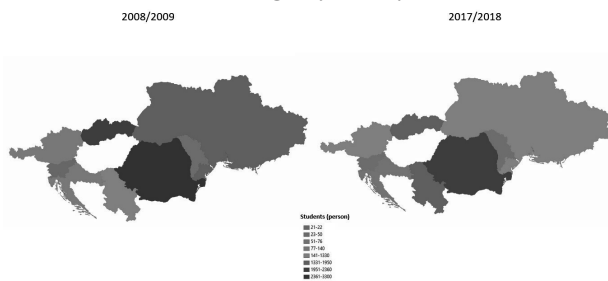


Source: Compiled on the basis of data from OH [Educational Authority]

The structure of the student body from neighboring countries during the 10-year period is made up of 3 distinct groups (Figure 18):

- one of which is made up of Romania and Slovakia, from where more than 20,000 students have come to Hungary in the past 10 years respectively;
- the second group comprises Serbia and the Ukraine (with the number of incoming students between 10 and 20,000);
- while the third group includes the remaining neighboring countries, from where significantly less students come to study in Hungarian higher education.

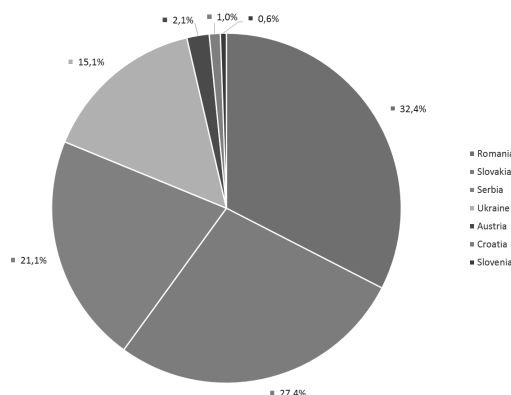
Figure 18: The number of students from neighboring countries and its changes by country



Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

Figure 19 shows the average distribution of students from neighboring countries for 10 years.

Figure 19: Distribution of student numbers from neighboring countries between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

Among the neighboring countries, Austria is worth mentioning for its special status. The number of Hungarian students in Austrian higher education increased almost by twenty percent in a year, which means that this is the most popular country among Hungarian students who plan to go to university abroad. While the number of Hungarian students here is higher than in Germany or in the United Kingdom [15], the number of students in Hungary from Austria grew only to a slight extent (from 123 to 193) during the 10 years surveyed.

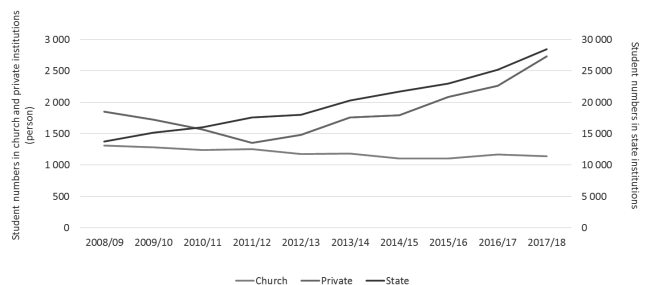
THE NUMBER OF INTERNATIONAL STUDENTS IN PUBLIC AND PRIVATE INSTITUTIONS

The major groups of institutions catering for the needs of international students correspond to the overall domestic structure of higher education in terms of ownership: the system consists of public, church and private-funded institutions.

During the course of the past 10 years, 86.7% of the international students enrolled in Hungary went to state-owned institutions, 5.2% to church-owned institutions, and 8.1% to privately-owned institutions. The share of the different institutions in establishing this ratio differed from one another both in terms of extent and in terms of tendencies:

- in 2008, the proportion of international students in institutions run by the state was 81.3%, and this grew to 88.0% by the end of the time period surveyed;
- the proportion in institutions owned by one of the churches shifted from 7.8% to 3.5%;
- whereas in the case of private institutions of higher education, the respective figures were 10.9% and 8.5%.
- This means that during the past 10 years, the proportion of international students who went to state institutions increased, while that of the international students who went to church or private institutions decreased.

Figure 20: International student figures according to the ownership of the institutions between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

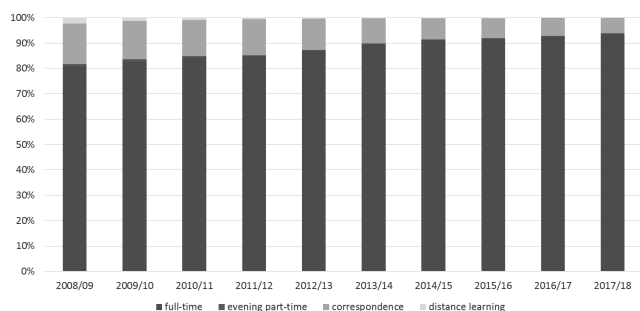
The figure shows that the number of international students in state-owned institutions doubled by the fall of 2017, while the number of those enrolled in church-owned institutions decreased by 13.3 percentage points, and there

was an increase of 47.3 percentage points in the number of international students studying in private institutions. In the last case, we also notice a continuous drop compared to the base year up until 2011 (a change of -26.6 percentage points), following which the number of international students doubled here by the end of the time period surveyed, with annually differing values.

FULL-TIME AND PART-TIME ATTENDANCE AMONG INTERNATIONAL STUDENTS

Similarly to the growth in the total number of international students, the full-time programs also play a decisive part in the transformation of student proportions according to program type in higher education. (Figure 21)

Figure 21: International student numbers according to program type between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

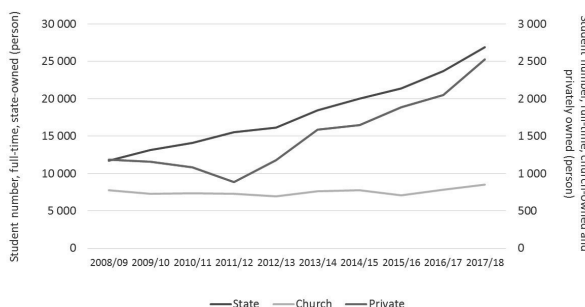
Between 2008 and 2017, 88.7% of the total number of approximately 230,000 international students in Hungary attended courses full time. In 9 years, the overall headcount grew by a total of 90.1 percentage points, in which the full-time students played the key part through a more than double increase in their number. The categories of all the other types of programs displayed decreasing student numbers. Evening classes and distance learning practically lost most of their significance: the former dropped by half, while the latter shrank tenfold. The number of international students participating in correspondence education contracted by 28.2 percentage points, after an initial increase in their number up until 2011, which was then followed by an annual cutback from the original circa 2,700 students to 1,900.

When examining the types of programs and the operational structure at the same time, we notice a marked difference by type of ownership: the institutions offer a range of possibilities, while the students go for different services. The process worked as follows:

- Full-time education is of primary importance for every one of the owners, although not equally so. In this respect, state institutions are especially decisive: their average figure for the proportion of full-time students during the entire time period was 90.9%. The same proportion in the case of church-owned institutions was

62.9%, while for private institutions it was 81.8%. As regards the tendency, it is clear that the expansion of full-time student numbers was the largest in state-owned institutions, which were followed by private institutions, and the lowest growth was experienced in church-owned institutions. In the case of private institutions, however, the number of students declined up until 2011, only to grow almost threefold by the end of the time period surveyed. (Figure 22)

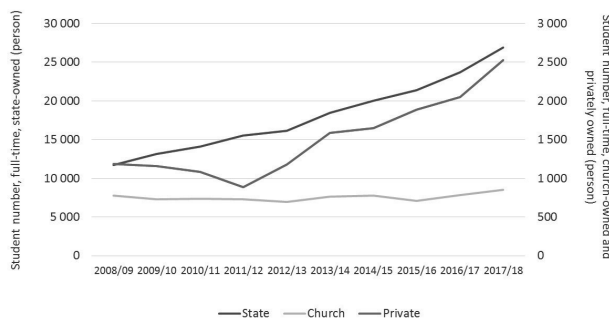
Figure 22: The number of full-time international students by type of ownership between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

- Out of the four types of programs, correspondence education is the second most popular, although the proportion of students participating in this kind of education decreased in the case of all three types of owners. The average proportion of correspondence students for 10 years was the lowest in state-run institutions: 8.4%, which started out at the beginning of the surveyed time period at 13.0% to drop to 5.1% by the end of it. The proportion of correspondence students was the highest in church-owned institutions: 35.7%, which dropped from 39.3% to 24.4%. The average for private institutions was 15.5%, which started from 21.7%, and dropped back to 7.4% by the fall of 2017. All in all, the number of correspondence students decreased by almost 30 percentage points, which was the slightest in the case of state-owned institutions (18.2%), while in private and church-owned institutions, the number of students dropped to almost half of the original figure. (Figure 23)

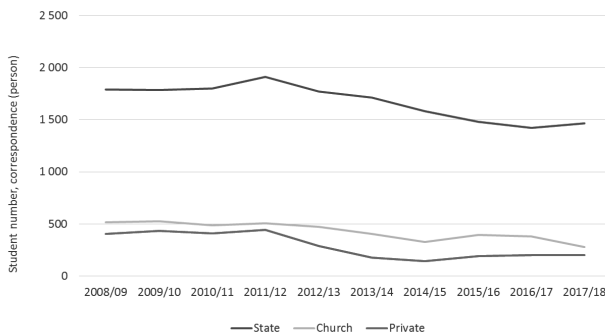
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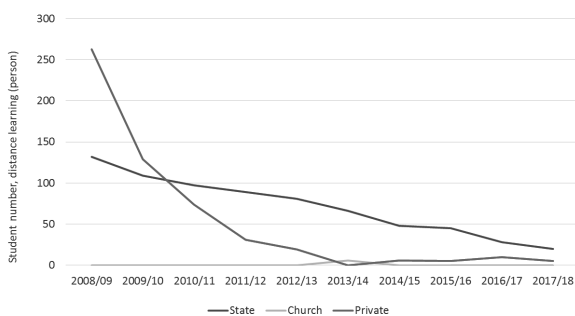
Figure 23: International student figures in correspondence education by type of ownership between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

- Distance learning is available at present only in state and private institutions, with average figures for the 10 years at 0.4% in state-owned institutions and 2.9% in private institutions. Distance learning, in a way similarly to correspondence education, is practically getting close to being phased out. (Figure 24)

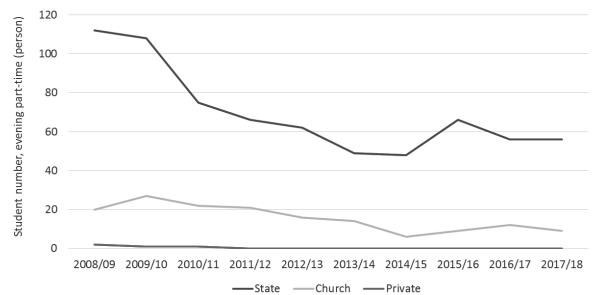
Figure 24: International student figures in distance learning by type of ownership between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

- The lowest number of students participate in part-time education (referred to as evening program). The decisive actors in this scene are also the state-owned institutions, while in the case of private institutions, this type of program has not been available since the 2011/2012 academic year. Overall, there was a general decrease of participants in evening part-time education both in state-owned institutions and in church-owned institutions, with varying degrees of fluctuation. (Figure 25)

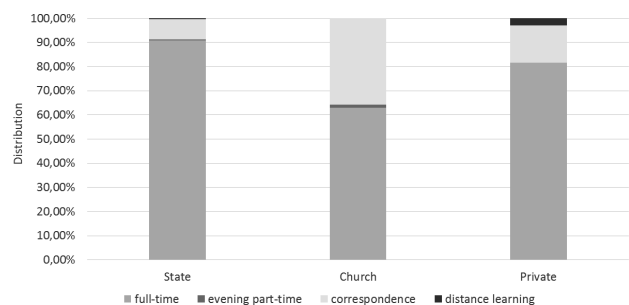
Figure 25: International student figures in part-time education by type of ownership between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

Figure 26 shows the 10-year average of the operating structure figures by type of ownership. The full-time percentage for international students in state-owned institutions is 90%, which is higher than the average 78.5%, while in the case of the other two types, it is 63% and 82%, respectively. The average part-time figure is 0.6%, which is higher only in the case of church-owned institutions, as there is no such possibility available in private institutions any longer. The average proportion for correspondence education is 19.6%, which is the aggregate of the state-owned 8.4%, the church-owned 35.7%, and the privately owned 15.5% figure. Last, the distance learning average percentage of 1.1% is a composite of the higher proportion in private institutions (almost 3%) and the lower figure in state-owned institutions (0.36%), while there has been no such format of education in church-owned institutions since 2014.

Figure 26: 10-year average of the operating structure of programs according to type of program by ownership

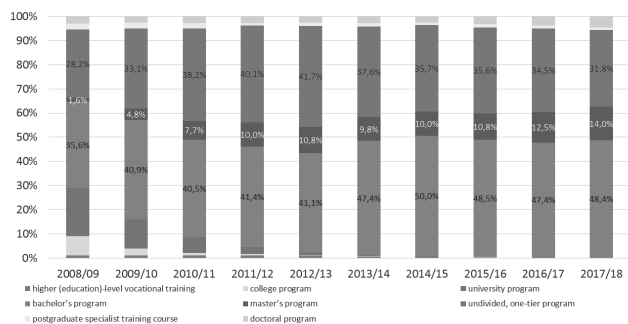


Source: Compiled on the basis of data from OH [Educational Authority]

INTERNATIONAL STUDENT FIGURES BY PROGRAM LEVEL

The number of students at various program levels changed due to the so-called Bologna process. On average, most international students took BA or BSc courses in the past 10 years, but undivided, one-tier (combined bachelor's and master's) programs were also popular. Figure 27 illustrates the breakdown of student numbers in the time period surveyed according to different program levels.

Figure 27: Distribution of international student numbers by program level between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

On the basis of Figure 27, the following observations may be made:

- The number of students participating in traditional college and university programs continuously decreased as a matter of course, and in the 2017/2018 academic year, there were no such international students at all.
- Parallel with the above process, the expansion of bachelor's and master's programs can be observed. In the case of the former, the proportion grew from 35.6% to 48.4%, and in the case of the latter, from 1.6% to 14.0%.
- The share of undivided, one-tier programs did not show significant differences at the beginning and at the end of the time period surveyed, and the average proportion for the 10 years was 35.6%.
- The average proportion of those involved in higher-level vocational training was 0.7%, which fluctuated between the initial 1.0% and the final 0.3% to a variety of extents.
- The proportion of postgraduate specialist training course participants was 1.5%, which kept moving between 2.5% and 1.5% during the 10-year period, displaying a decreasing tendency.
- The average proportion of those participating in doctoral programs was 3.1%, which moved between 2.8% and 4.1% with an increasing tendency.

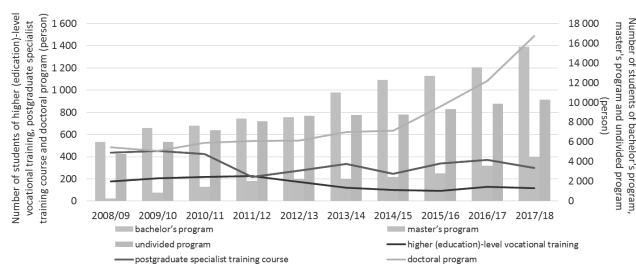
All in all, in an international comparison – as it has been pointed out above – it is clear that the proportion of international students in Hungary is higher than that of the average of OECD-countries (OECD, 2017). Primarily, this is the consequence of students participating in bachelor's and

master's programs. In doctoral programs (despite the above tendency, at least, for the time being) this proportion is lower.

The changes in the student figures at different program levels available in the 2017/2018 academic year is shown in Figure 28.

- Student numbers decreased at two program levels: in higher education vocational training and in postgraduate specialist training. The extent of change in case of the former was 34.5 percentage points, while in the case of the latter, it was 31.2 percentage points.
- In the case of the other program levels, which started out at a significantly different base value, the largest increase was achieved by those participating in master's programs, whose number grew by the end of the time period 16.5-fold (their base value had been the lowest). The number of those enrolled in doctoral programs tripled, while the number of participants in bachelor's programs increased 2.5-fold, while the number of those in undivided programs doubled.

Figure 28: Distribution of international students according to program levels between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

Between 2008 and 2017, 88.7% of students in Hungarian higher education were full-time students; the features presented above showed similar trends in the case of those involved in full-time studies.

INTERNATIONAL STUDENTS IN VARIOUS TYPES OF PROGRAMS

When examining data about international students, we differentiate between data concerning mobilities for earning a degree (degree mobility) and mobilities for earning individual credits (credit mobility). The former involves studying abroad for the duration of an entire program, while the latter means a few semesters spent in a foreign country (Berács et al., 2017).

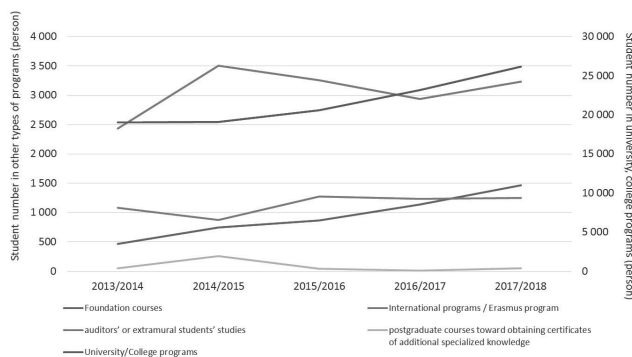
The international student figures registered by the Hungarian Educational Authority include (in this chapter, we are going to call these “types of programs”):

- university and college students enrolled in higher-level vocational training, postgraduate specialist training, bachelor's programs, master's programs, undivided programs, and in doctoral programs;

- students participating in foundation courses;
- participants in programs related to international projects,
- students pursuing extramural studies as auditors, and
- (post)graduate students working toward obtaining a certificate of additional specialized knowledge.
- Relevant data can be presented for the past 5 years, given the fact that OH has collected data in this area according to a different methodology since 2013.
- On the basis of data covering 5 years, on average,
- 80.5% of international students participate in Hungarian higher education at any program level,
- 11.4% are enrolled in programs called “Nemzetközi program képzése / Erasmus képzés” [International programs / Erasmus program],
- 4.2% pursue studies as auditors or extramural students,
- 3.5% take part in foundation courses, and
- 0.3% work toward obtaining certificates of additional specialized knowledge.

78.4% of the increase of more than 9,000 persons is related to students in traditional programs, 10.9% to those in foundation courses, 8.7% to participants in International programs / Erasmus program, and 1.9% to auditors or extramural students. (Figure 29)

Figure 29: International student figures according to type of program between 2013 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

- In the case of postgraduate courses for obtaining certificates of additional specialized knowledge, the same number of students was involved at the beginning and at the end of the 5-year period surveyed, but there was some annual fluctuation in the years in between. By 2014, the number of students in this field grew more than five-fold, and then it dropped to the 2013 level, which was followed by further decrease (practically, there were no more students left), and by the fall of 2017, the student number was the same as it had been in 2013.
- The number of auditing or extramural students decreased by 2014, and then it grew beyond the original level only to stay stagnant for the past 3 years.
- In the case of International programs / Erasmus program, the student number shows an annual fluctuation,

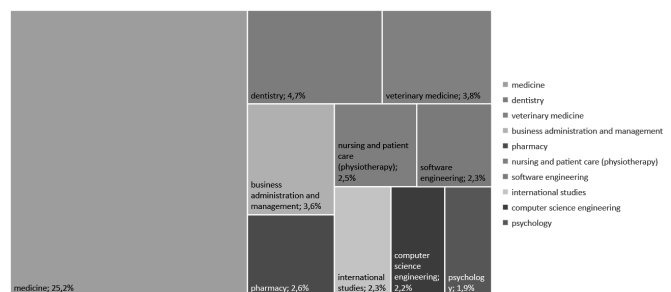
following a similar tendency to that of those involved in postgraduate courses for obtaining certificates of additional specialized knowledge.

- The most significant change occurred in the case of students taking foundation courses, whose number rose more than three-fold with differing annual values of increase.
- The number of those enrolled in university/college programs has displayed a more or less linear increase since 2014.

THE MOST POPULAR MAJORS AMONG INTERNATIONAL STUDENTS

We have also examined the most popular majors in the 2017/2018 academic year. Figure 30 shows which 10 majors were chosen by the highest number of international students, as well as the ratio of their number compared to the total number of students in the given major. The list of majors contains 677 records this year.

Figure 30: The 10 most popular majors in 2017/2018



Source: Compiled on the basis of data from OH [Educational Authority]

Studying medicine is the most popular major among international students: about 30% of the total number is enrolled in medicine and dentistry. The third place goes to veterinary medicine with a 3.9% share, followed by business administration and management at 3.7%. The TOP 10 list also contains other majors related to healthcare: pharmacy (the 5th most popular at 2.6%), as well as nursing and patient care (the 6th most popular with 2.5%). The list continues with software engineering and international studies (both at 2.3%). Among engineering majors, the presence of international students is the most notable in computer science engineering (9th with 2.2%). The last major in the TOP 10 list was psychology (1.9%).

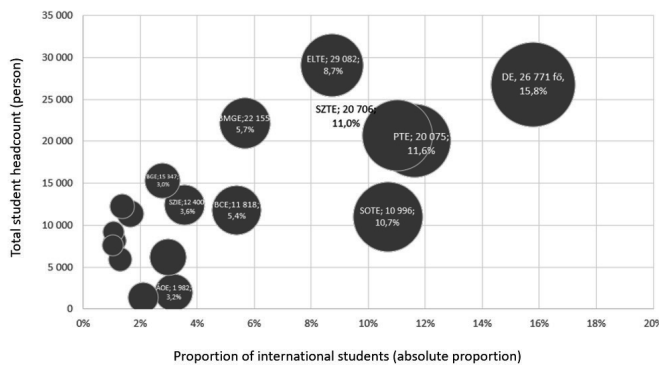
In an international comparison, the proportion of international students stands out in healthcare and medicine as well as in veterinary medicine, while it is lower in the fields of sciences, the humanities and social sciences (OECD, 2017).

HIGHER EDUCATION INSTITUTIONS IN COMPETITION FOR INTERNATIONAL STUDENTS

Figure 31 shows the ratio of international students in Hungarian higher education institutions compared to the total number of international students in the 2017/18 academic year.

The figure contains data about the institutions where this absolute proportion is higher than 1%. The first four places in the list go to institutions where medicine is offered, which is not surprising, given the fact that on the basis of the most popular majors it is clear that more than 30% of the students study medicine and dentistry. Among the four universities, Debreceni Egyetem (DE) [University of Debrecen] attracts the largest number of international students (15.8%), followed by Pécsi Tudományegyetem (PTE) [University of Pécs] (11.6%); while the third place goes to Szegedi Tudományegyetem (SZTE) [University of Szeged] (11.0%) and the fourth place is taken by Semmelweis Egyetem (SE) [Semmelweis University] (10.7%).

Figure 31: The 10 most popular higher education institutions among international students in 2017/2018



Source: Compiled on the basis of data from OH [Educational Authority]

In Table 2, in addition to the absolute proportion, we also show the proportion of international students within the institution itself.

Table 2: The number and proportions of Hungarian and international students in Hungarian higher education in 2017

Name of institution	Total number of students (person)	Absolute proportion of international students (%)	Proportion of international students within the institution (%)
Debreceni Egyetem (DE)	26 771	15.8%	19.0%
Pécsi Tudományegyetem (PTE)	20 075	11.6%	18.6%
Szegedi Tudományegyetem (SZTE)	20 706	11.0%	17.1%
Semmelweis Egyetem (SOTE)	10 996	10.7%	31.3%
Eötvös Loránd Tudományegyetem (ELTE)	29 082	8.7%	9.6%
Budapesti Műszaki és Gazdaságtudományi Egyetem (BMGE)	22 155	5.7%	8.2%
Budapesti Corvinus Egyetem (BCE)	11 818	5.4%	14.7%
Szent István Egyetem (SZIE)	12 400	3.6%	9.2%

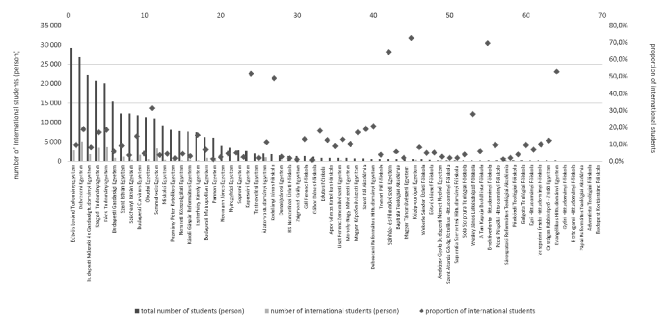
Állatorvosi Egyetem (ÁOE)	1 982	3.2%	51.5%
Budapesti Műszaki Egyetem (BME)	6 178	3.0%	15.5%
Budapesti Gazdasági Egyetem (BGE)	15 347	2.8%	5.8%
IBS	1 387	2.1%	48.9%
Óbudai Egyetem (ÓE)	11 355	1.6%	4.6%

There is only one private institution among the top 10 most popular institutions: Budapesti Metropolitan Egyetem. The rest of the universities are all state-owned.

Among our institutions of higher education, there are huge differences concerning the number of international students. Three quarters of international students is concentrated in nine institutions (i.e., 14.1% of all the institutions, and 15.5% of the students enrolled here). Typically, the largest groups of international students in Hungary are at institutions offering programs in medicine and healthcare, and applications to the English-language or German-language programs in medicine are well above the quota.

In Figure 32, we show the total student numbers of the institutions and the relevant proportion of international students in them. It seems clear that it is either the largest institutions that can attract high numbers of international students or the small ones with specialized features in their programs. The medium-sized institutions in between them are in a difficult situation, and the proportion of international students is much lower [1]. (Figure 32)

Figure 32: Total student numbers in Hungarian higher education institutions and the proportions of international students in them in 2017



Source: Compiled on the basis of data from OH [Educational Authority]

Among international students, the University of Debrecen is the most popular institution. In the group of major universities, Semmelweis University stands out by having a high proportion of international students (31.3%) compared to the total number of students in this institution. In the case of two smaller universities (IBS and Gyula Andrásy German-Language University of Budapest) the proportion of international students is over 70%.

FEMALE INTERNATIONAL STUDENTS IN HUNGARIAN HIGHER EDUCATION

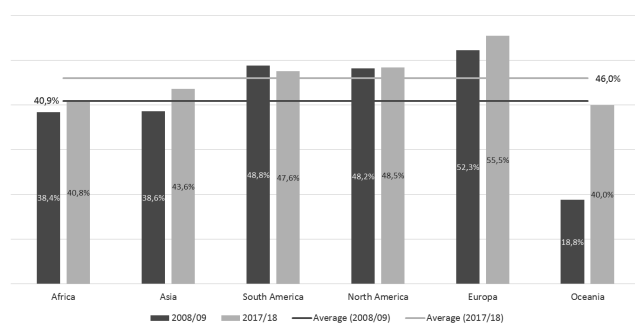
In the past five years, the average proportion of female students of Hungarian nationality was 54.5%, whereas the same indicator among international students was 44.7%.

In the case of international students, the 10-year average figure for this proportion was 43.9%. This value varies for individual continents (presented in a decreasing order); Europe: 54.0%, North America 45.5%, Africa 43.1%, South America 42.9%, Asia 40.5%, and Australia and Oceania 37.2%. Figure 33 illustrates by continent how the proportion of female students changed from the initial to the final year of the survey. In the 2007/2008 academic year, the average proportion of female students was 40.9%, which increased to 46% by the end of the time period surveyed.

In the 2007/2008 academic year, Africa, Asia, and Australia and Oceania were below the average, and they could not catch up to reach that average even by the end of the time period surveyed. At the same time, the proportion of female students grew in all three of these continents.

- The most significant change (21.2 percentage points) occurred in the case of Australia and Oceania, but it is this continent from where Hungary receives the least students, and the proportion of female students from there was very low even in the base year.
- In the case of Africa, the change was 2.4 percentage points, and it was in the 2017/2018 academic year that the average of 10 years before was reached again.
- The change is significant in the case of Asia, where the proportion of female students rose by 5 percentage points.

Figure 33: Proportion of female students by continent in 2008/2009 and 2017/2018



Source: Compiled on the basis of data from OH [Educational Authority]

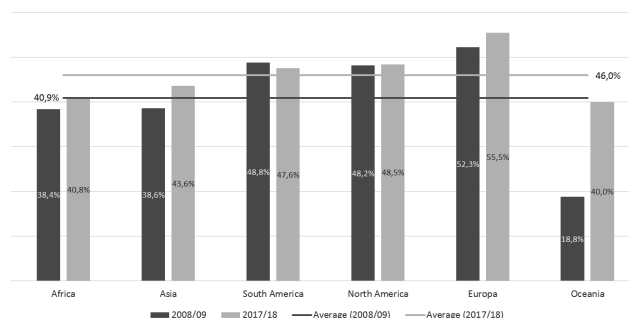
In the case of South America, North America, and Europe, the proportion of female students was above the average in both years examined.

- South America could not improve in this respect, and the proportion of female students coming from there decreased by 1.2% percentage points.
- In the case of North America, the gender composition of the students hardly changed at all.

- In the 2017/18 academic year, 55.5% of the students from Europe were female, and this meant a 2.2 percentage point rise compared to the figure 10 years before.

During the time period surveyed, the number of female international students, just like the overall student number, increased, and their number almost doubled. The annual change differed each year, with an average of a 9.5 percentage point value, between 4.1 and 18.1 percentage points. (Figure 34)

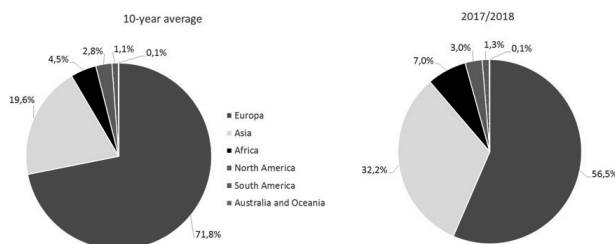
Figure 34: The number of female students by continent between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

The 10-year average and the 2017/2018 academic year distribution of the headcount figures by continent is illustrated in Figure 35. On the basis of these data, we can reach similar conclusions concerning the development of the number of female students to the ones we have made about the total international figure. Asia's advance in this case is easy to note, as the number of female students from there almost quadrupled. A marked change is evident in the case of Africa too, where the low base number grew almost seven-fold by the end of the time period surveyed. All in all, the number of female students in the case of the American continent tripled, while the relevant value for Europe was 1.3.

Figure 35: The distribution of the number of female students by continent between 2008 and 2017



Source: Compiled on the basis of data from OH [Educational Authority]

According to program type in terms of credit hours,

- almost 100% of the female students from Africa and Asia are enrolled full time, and this is true for both the

last academic year surveyed and for the 10-year period as well;

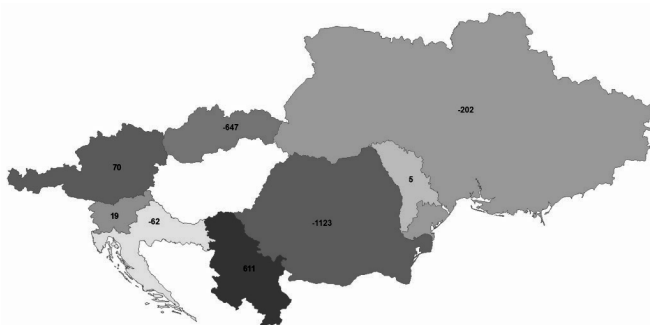
- this indicator for South America in the 2017/2018 academic year was 98%, but concerning the 10-year trend, it is notable that the proportion, which started out at 67%, increased in a linear fashion up until 2013, and became stagnant at around 98%;
- In the case of North America, the tendency we can see is the exact opposite, since from the initial 99%, the proportion of female students enrolled full time decreased to 95.4% by 2017/2018 through a number of changes of varying intensity and direction throughout the years;
- Europe displays an increasing tendency, with a value of 74.7% in the base year that grew gradually to 89%.

CONCLUSION

In the course of the past nine years, the number of international students in Hungarian higher education almost doubled, and their share within the total student headcount increased by 10 percentage points. A drastic decrease in the number of Hungarian students in parallel with the increase of the number of international students may be identified behind the dependence of Hungarian higher education, or at least that of a few of its major institutions, on international students.

If we take a look at a world map that is colored based on how many students came to Hungary in 2017 and from where, we might see that 80% of the countries would be colored with a color other than grey. Compared to 2008, the changes in the colors illustrate the prominence of Asia, while we can also witness a significant drop in the student numbers from neighboring countries. Figure 36 shows the changes between the fall of 2017 and 2008.

Figure 36: Number of students from neighbouring countries in the fall of 2017 and 2008



Source: Compiled by Attila Dobos (UD) on the basis of OH [Education Authority] data

If broken down into countries,

- The average data of the 10-year-period surveyed show that the highest number of students to Hungary come from Germany, which is followed by Romania, Slovakia, Serbia and the Ukraine;

- By the fall of 2017, the order did not change in the case of the first two countries: the leading role of Germany and Romania seems to be steady (the latter one despite the fact that its number dropped by 1,100 persons by the end of the time period surveyed), while the third place went to China, the fourth to Serbia and the fifth to Iran.

There is an interesting tendency developing, even if these trends cannot possibly be compared numerically. On the one hand, the popularity of Hungarian higher education in neighboring countries is decreasing. On the other hand, the fact that today we receive students from 80% of the countries in the world means that we also have students from a number of exotic countries: as an example, in the fall semester of 2017, there was one student involved in studies in Hungary from each of the following countries: Botswana, Burundi, Chad, Dominican Republic, Ivory Coast, Haiti, Niger, etc. However, it is not only the so-called exotic countries that we receive students from but also more and more of them come from the developing countries, while Hungarian higher education institutions are also popular with people in Western Europe.

The major groups of institutions where international students are taught correspond to the overall domestic structure in terms of ownership and funding: the system includes public, church and private institutions. In the time period under scrutiny, the number of international students in state-owned institutions doubled, the number of international students in church-owned institutions decreased by 13.6 percentage points, while the number of international students in privately-owned institutions grew by 47.6 percentage points. Concerning the proportions, however, there was an increase only in state-owned institutions.

As regards the type of programs according to credit hours, the most decisive is full-time study and its development. Between 2008 and 2017, 88.7% of the approximately 230,000 international students in Hungary studied full time. Their headcount grew during these years by a total of 90.1 percentage points, with full-time students taking a leading role whose number more than doubled. In the case of the other types, the student numbers decreased, while the part-time schedule and the distance learning forms practically lost their significance, as the former dropped to half of its original level, while the latter to one-tenth.

The number of students at various program levels changed in relation to the so-called Bologna processes. Parallel with the phasing out of the previous traditional university and college (one-tier) programs, students took more and more BA or BSc courses in the past 10 years, but undivided programs were also popular. The numeral increase was also significant in the case of doctoral programs, where especially the 2014/2015 academic year may be considered as a pivotal point.

80.5% of the international students in Hungarian higher education pursue studies at one or the other program levels of university and college programs that may be regarded traditional, while the remaining 20% are involved in other program forms (scholarships, auditor's or extramural studies, foundation studies, etc.) of Hungarian higher education. (2013-2017)

The most popular programs include primarily those related

to medicine and healthcare: the TOP 5 are medicine, dentistry, pharmacy, veterinary medicine, and business administration and management. (fall 2017 data)

International students bring a number of benefits to the universities and thus these institutions (through a variety of means) make significant efforts to recruit them. At the institutional level, the revenues coming from the tuition fees of international students are important (as the institutions charge more substantial tuition fees for programs offered in foreign languages) because these constitute a large portion of their own income. At the level of individual instructors and other members of the teaching staff, the payment received for classes held in a foreign language is higher, which enhances the competitiveness of the work of instructors.

The presence of international students is favourable not only for the higher education institutions. These students are especially important for university towns outside the capital. Both in Debrecen and in Pécs, one in every 40 citizens is an international student, while one in 46 in the case of Szeged. (Table 3) Local economies are also invigorated by the growing presence of international students through their consumption and use of services.

Table 3: Population figures and student numbers in Hungarian cities outside the capital in 2017

City	Statistical number of students (person)	Statistical number of international students (person)	Population (person)	Proportion of students compared to the population (%)	Proportion of international students compared to the population (%)	Population / international students
Debrecen	27 367	5 137	204 156	13.4%	2.5%	40
Szeged	22 006	3 567	164 647	13.4%	2.2%	46
Pécs	20 271	3 748	150 046	13.5%	2.5%	40
Győr	12 416	453	125 139	9.9%	0.4%	276
Veszprém	6 103	419	56 927	10.7%	0.7%	136
Eger	7 597	237	53 505	14.2%	0.4%	226
Gödöllő	12 400	1 145	32 164	38.6%	3.6%	28
Miskolc	9 197	343	161 197	5.7%	0.2%	470

Source: Compiled on the basis of OH and nepesseg.com data

International students also present multiple advantages for Hungary in general. On the one hand, international students tend to spend a lot of money. On the other hand, even if they leave after graduation to go back to their mother country, they continue to represent important contact points, which can play a significant part in making business decisions or investment choices and facilitating the chances of Hungarian companies to access foreign markets. In addition, if they decide to stay in Hungary, they will join the ranks of highly-skilled experts of the labor market, which may prove to be advantageous for compensating the lack of Hungarian workforce due to dwindling population figures and growing affinities to work abroad [1].

Table 4 contains a SWOT analysis concerning international students; however, the present study is not meant to support the implications therein through facts and figures. In quite a few cases, there are no specific and precise data available to justify these statements either, as a part of the assertions come from empirical experience hitherto not validated numerically.

Table 4: SWOT analysis of international students in Hungarian higher education

STRENGTHS	WEAKNESSES
Through the tuition fees paid by international students, the institutions get access to significant amounts of revenue, and this results in sustaining/improving the level of utilization of the available capacities	The number of places available for students in Hungarian public-funded programs decreases
The range of programs on offer expands, and the number of programs in foreign languages increases	Programs in Hungarian are put into the background, and the level of quality of these programs declines: senior teaching staff members prefer to give courses in foreign languages for a complementary income, whereas the courses in Hungarian are left for the junior teaching staff members
The improvement of the instructors' language skills is significant	An unbalanced situation of workload and salaries develops among the teaching staff members
The competitiveness of the instructors' income brackets improves	Inequality may develop in the evaluation of Hungarian and international students
There is a multicultural environment developing at the institutions, with an expansion for the possibilities of getting to know foreign cultures	Significant additional expenditure may be induced by the process, since all institutional services need to be rendered in Hungarian and at least in English (establishing a separate organization for the administration of international students, in addition to notice boards, web pages, etc.)
	The problem of providing sufficient dormitory capacity is not solved, and Hungarian students will not be favored in the selection process
OPPORTUNITIES	THREATS
An impact that invigorates the economy, which in turn, through the incoming foreign capital, generates new enterprises and creates new jobs	Prices on the markets adjust to the existential level of international students (prices of rented apartments around the university, together with prices in nearby stores and cafes, significantly increase)
Competition in higher education becomes more and more fierce at the international level	
A broad market supply develops that follows the demands of international students (new cafes, stores, service providers, etc.)	The declining numbers of places available for students in Hungarian public-funded programs increase the inclination among young Hungarians to move abroad
Foreign companies may implement investments in the areas where major universities are located	
International institutional and personal contacts become stronger	
An environment for learning (in) foreign languages develops, creating an opportunity for an expanding knowledge of foreign languages	
There is a chance that conditions for creating a student-friendly and integrative culture improve	

REFERENCES

- Berács J., Derényi A., Kádár-Csoboth P., Kovács G., Polónyi I., Temesi J. (2017): "Hungarian Higher Education 2016: Strategic progress report" Report of project. NFKK, Budapest
- Birrell B. (2019): Overseas students are driving Australia's Net Overseas Migration tide, The Australian Population Research Institute. Permanent link to this document: <https://apo.org.au/sites/default/files/resource-files/2019/04/apo-nid232056-1353726.pdf>
- Bound J., Braga B., Khanna, G., Turner, S. (2020): A Passage to America: University Funding and International Students, *American Economic Journal: Economic Policy*, Vol. 12 No. 1. pp. 97 – 126
- Chankseliani M. (2017): Four Rationales of HE Internationalization: Perspectives of U.K. Universities on Attracting Students From Former Soviet Countries. *Journal of Studies in International Education*. Permanent link to this document: <https://doi.org/10.1177/1028315317725806>
- de Wit H. (2020): Internationalization of Higher Education. *Journal of International Students*, 10(1), i-iv. Permanent link to this document: <https://doi.org/10.32674/jis.v10i1.1893>
- de Wit H., Hunter F., Egron-Polak E., Howards L. (Eds). (2015): Internationalisation of higher education: A study for the European parliament. Permanent link to this document: [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU\(2015\)540370_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU(2015)540370_EN.pdf)
- Emberi Erőforrások Minisztériuma [Ministry of Human Resources of Hungary]. 2016. "Fokozatváltás a felsőoktatásban [Shifting Gears in Higher Education]." https://www.kormany.hu/download/c/9c/e0000/Fokozatvaltas_Felsookatasban_HONLAPRA.PDF
- Healey N. M (2019): The end of transnational education? The view from the UK, *Perspectives: Policy and Practice in Higher Education*. Permanent link to this document: <https://doi.org/10.1080/13603108.2019.1631227>
- Karzunina D., West J., Moran J., Phillippou G. (2017): Student Mobility & Demographic Changes, *QS World University Rankings*, QS Intelligence Unit.
- Kondakci Y., Bedenlier S., Zawacki-Richter O. (2018): Social network analysis of international student mobility: uncovering the rise of regional hubs. *Higher Education*. 75. Permanent link to this document: <https://doi.org/10.1007/s10734-017-0154-9>
- Levatino A., Eremenko T., Molinero Gerbeau Y., Consterdine E., Kabbanji L., Gonzalez-Ferrer A., Jolivet-Guetta A., Beauchemin C. (2018): Opening or closing borders to international students? Convergent and divergent dynamics in France, Spain and the UK. *Globalisation, Societies and Education*. Vol. 16 Iss 3. Permanent link to this document: <https://doi.org/10.1080/14767724.2018.1457432>
- O'Connell R. M., Resuli N. (2020): Academic Challenges for Chinese Transfer Students in Engineering. *Journal of International Students*, 10(2). Permanent link to this document: <https://doi.org/10.32674/jis.v10i2.674>
- OECD. 2017. "Education at a Glance 2017: OECD Indicators", OECD Publishing, Paris. Permanent link to this document: <http://dx.doi.org/10.1787/eag-2017-en>
- Pusztai G, Fekete I., Dusa Á. R., Varga E. (2016): "Knowledge Brokers in the Heart of Europe: International Student and Faculty Mobility in Hungarian Higher Education." *Hungarian Educational Research Journal* Vol. 6 Iss. 1 pp. 60-75. doi:10.14413
- Report of Open Door, Institute of International Education (IIE) (2019): Retrieved from <https://www.iie.org/Research-and-Insights/Open-Doors/Data/International-Students/Enrollment/1948-2019>
- Shane M. J., Carson L., Macri D. G. (2020): First Term Support for International Graduate Students Attending Small to Mid-Sized Colleges and Universities in the United States. *Journal of International Students*, 10 (2). Permanent link to this document: <https://doi.org/10.32674/jis.v10i2.1126>

INTERNET SOURCES

- Bucsky P., 2018, g7.hu, data accessed: 08.11.2019. <https://g7.hu/kozelet/20180626/mar-minden-nyolcadik-egyetemistakulfoldi-nem-is-mukodne-nelkuluk-a-magyar-felsooktatasi/>
- Dauphin L., 2017, publication.enseignementsup-recherche.gouv.fr, data accessed: 07.02.2020. https://publication.enseignementsup-recherche.gouv.fr/eesr/8EN/EESR8EN_ES_13-foreign_students_in_higher_education.php
- École Supérieure D'Agricultures, groupe-esa.com, data accessed: 11.02.2020. <https://www.groupe-esa.com/en/international-etudiants-internationaux-2/lenseignement-superieur-francais/>
- Ferguson H., Sherrell H., 2019, aph.gov.au, data accessed: 23.01.2020. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1819/Quick_Guides/OverseasStudents
- Hom E. J., 2014, livescience.com, data accessed: 18.01.2020. <https://www.livescience.com/43296-what-is-stem-education.html>
- Independent News for International Students, 2019, studyinternational.com, data accessed: 17.01.2020. <https://www.studyinternational.com/news/international-students-usa-universities-2019/>
- Magyar Rektori Konferencia, 2012, mrk.hu, data accessed: 23.11.2019. <http://www.mrk.hu/2012/11/30/magyarorszag-csatlakozott-a-brazil-science-without-borders-osztondijprogramhoz/>

Migration Data Portal, 2020, migrationdataportal.org, data accessed: 01.17.2020. <https://migrationdataportal.org/themes/international-students>

OECD.Stat, 2020, stats.oecd.org, data accessed: 11.02.2020. <https://stats.oecd.org/Index.aspx?DataSetCode=RFOREIGN>

Segarun S., Independent News for International Students, 2019, studyinternational.com, data accessed: 17.01.2020. <https://www.studyinternational.com/news/international-students-australia/>

Studies in Australia, 2017, studiesinaustralia.com, data accessed: 11.02.2020. <https://www.studiesinaustralia.com/studying-in-australia/why-study-in-australia/international-students-in-australia>

Study in UK, 2020, studying-in-uk.org, data accessed: 20.01.2020. <https://www.studying-in-uk.org/international-student-statistics-in-uk/>

Studying in Germany, 2020, studying-in-germany.org, data accessed: 15.02.2020. <https://www.studying-in-germany.org/top-german-universities-for-international-students/>

Studying in Germany, 2020, studying-in-germany.org, data accessed: 24.01.2020. <https://www.studying-in-germany.org/germany-international-student-statistics/>

Talabér D., 2018, eduline.hu, data accessed: 05.12.2019. https://eduline.hu/felsooktatas/20181205_ausztriai_magyar_diakok

The Local, 2019, thelocal.fr, data accessed: 24.01.2020. <https://www.thelocal.fr/20191009/where-do-all-the-foreign-students-in-france-come-from>

The Power of International Education, 2019, iie.org, data accessed: 17.02.2020. <https://www.iie.org/en/Why-IIE/Announcements/2019/11/Number-of-International-Students-in-the-United-States-Hits-All-Time-High;20200217>

UNESCO, 2020, uis.unesco.org, data accessed: 13.02.2020. <http://uis.unesco.org/en/home>

UNESCO, 2020, uis.unesco.org, data accessed: 13.01.2020. <http://uis.unesco.org/en/glossary-term/international-or-internationally-mobile-students>

Wikipedia, 2020, en.wikipedia.org, data accessed: 18.01.2020. https://en.wikipedia.org/wiki/Optional_Practical_Training

