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## **The role of the Univesrities of Oradea and Debrecen in attracting foreign students in the field of medicine**

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# THE ROLE OF THE UNIVERSITIES OF ORADEA AND DEBRECEN IN ATTRACTING FOREIGN STUDENTS IN THE FIELD OF MEDICINE

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**Abstract:** *In the context of cross-border cooperation, the border between Romania and Hungary is a very active one, with cooperation between the two countries reaching diverse fields of interest. At the same time there is a great interest for this cooperation in the Bihor-Hajdu Bihar Euroregion and in Oradea and Debrecen, the centers of the Bihor and Hajdu Bihor counties, respectively.*

*Out of all the fields that benefit from this cooperation, the educational field is the one that stands out the most, especially higher education – with the two university centers in question being the University of Oradea and the University of Debrecen. Between the two institutions the cooperation in the field of medicine will be our subject of study.*

*Given the territorial proximity of the two institutions and the growing interest in the private medical sector in this area, we can talk about a strong cross-border medical pole, Oradea – Debrecen at the border between Romania and Hungary.*

*The experience gained in the field of medicine, coupled with the application of good practice examples, internationally recognized study of medicine and increased visibility of the two centers has attracted more and more foreign students from all over the world that choose to study medicine here.*

*The research methodology applied in this paper has its basis in the analysis of social documents and the statistical analysis of data provided by the two institutions, with the target group being the University of Oradea and the University of Debrecen. Our aim is to highlight the importance of the two centers in the field of medicine and their ability to attract students for study at these universities. We will employ a comparative analysis between the two universities.*

**Keywords:** *mobilities, Bihor – Hajdu Bihar Euroregion, University of Oradea, University of Debrecen, field of medicine*

The educational dimension in the field of medicine at the university centers in Oradea (Romania) and Debrecen (Hungary), is the object of our research, through which we try to address the role that the two centers play in attracting foreign students and later to

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determine the key concepts involved in the determining the attractiveness of these institutions. The four key concepts that need to be addressed are:

- The economic dimension,
- The migration dimension
- The educational dimension
- The globalisation dimension

Through a quick methodological association of three of these concepts we will try to present the level at which these institutions attract students from every corner of the world by means of educational migration. This migration brings important economic advantages to the communities from Oradea and Debrecen that benefit financially from the students coming to them.

Our research perimeter is concentrated around the two university centers: the University of Oradea and the University of Debrecen; taking into consideration the NUTS scale, these two centers find themselves in the intersection between different NUTS dimensions, as shown in Tabel 1. NUTS level at the Romanian - Hungarian border

The subject chosen for academic research, at the level of the Oradea and Debrecen communities, is argued through the SWOT analysis (Tabel 1) of the two cities: the conclusion drawn from this is that the educational dimension represents a strong point for the both communities and an opportunity for sustainable development.

Table 1. SWOT Analysis

S Strengths-Internal Factors			O Opportunities-External factors		
Indicator	Oradea	Debrecen	Indicator	Oradea	Debrecen
Academic background. University	39	108	Academic background, Education	6	11
High school background	9	-	Scholarships	10	-

As presented through the SWOT analysis, the educational dimension represents a strong point and an opportunity for the two universities on a regional, national and European level.

In the current, dynamically intensifying migration process, at present there are 190 million migrants worldwide, of whom about 20 % are qualified and competent employees, 10 % are students who study abroad to get a degree or diploma, 27 countries receive 94 % of the students.

Out of which 14 are European countries, receiving approximately 1.2 million students.

The target countries for our study are:

- Hungary - there are 20 - 25,000 students, which is 0.8 - 1 % of the total.
- Romania - there are 10,000 students, which is 0.6 % of the total.

The academic cooperation between the two university centres in Debrecen and Oradea was materialised in conferences dating back to 1993, when a first conference was organised by the geographers from Oradea (Ilieş A. 2010). More international conferences presenting common research and studies followed (Süli-Zakar I.; Horga I.; Ilieş A.; Tömöri M.; Țoca C.V., 2011). The maturity of cooperation between the academic institutions of Oradea and Debrecen translated into the Center of Excellence Jean Monnet

“Institute of Euroregional Studies” Oradea – Debrecen, with the official opening held in 2006.

### Foreign students that study medicine. University of Oradea vs University of Debrecen

To better track the evolution of foreign students from Hungary, relevant information is presented through the use of Tabel 2 where the most active countries are shown sorted by the number of students sent to Hungary in the period between 2004 – 2009. The largest part of foreign students come from countries neighbouring Hungary. There are two main reasons these students choose to study in Hungary: close proximity and the fact that there are large communities of Hungarian minority in Romania, Slovakia, Ukraine and Serbia.

On the subject of data evolution regarding foreign students that study medicine in Hungary, the Human Resources Ministry data show figures doubled from 2001 - 2002 to 2010 – 2011, from 8,565 students to 15,889. These students came mostly from countries like: Romania, Slovakia, Ukraine, Germany, Austria, Sweden and Israel, 20 % coming from Asia, while the national spread of foreign students shows Budapest (1,373), Debrecen (910), Pécs (916), Szeged (644) having the larger number. The amount of income generated by foreign students has been valued at 24 billion forint, 83 million EURO in 2011.

Details regarding the number of foreign students at the University of Debrecen in Hungary are listed in Tabel 5, where Romania, as a country of origin for these students, has sent 228 students between 2004 - 2005, while in 2008 - 2009 the number reached 561. In the period between 2004 - 2009 the total number of students sent was 1,695 and being in the top position out of the 11 countries featured in our study.

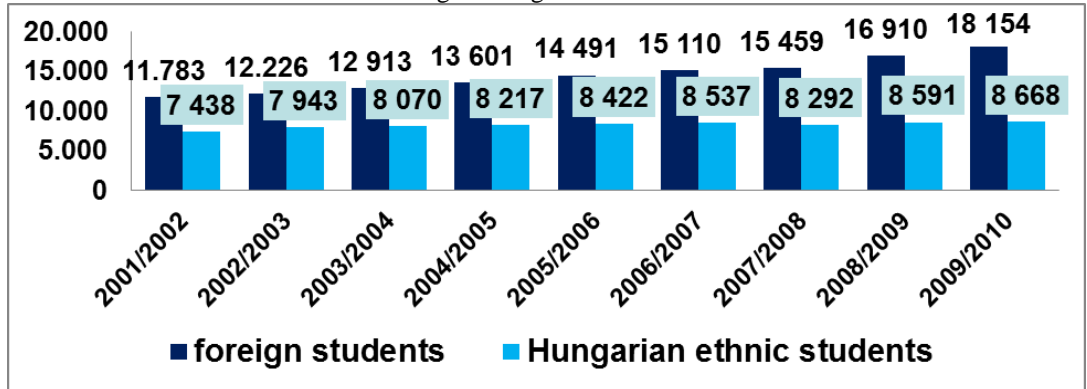
Table 2. Foreign students from the University of Debrecen based on country of origin

Country	No. of students each year				
	2004/2005.	2005/2006.	2006/2007.	2007/2008.	2008/2009
Romania	228	281	285	340	561
Israel	213	242	254	292	337
Ukraine	194	172	210	234	255
Norway	191	186	183	175	162
Iran	99	89	104	129	146
Nigeria	15	24	42	78	131
Slovakia	38	57	77	104	112
Sweden	23	35	56	75	93
Great Britain	4	20	46	59	76
Vietnam	3	17	25	39	57
Island	26	34	51	60	52
Vietnam	3	17	25	39	57
<b>Total</b>	<b>117</b>	<b>1343</b>	<b>1541</b>	<b>1873</b>	<b>2390</b>

Source: Teperics K., *Az oktatás szerepe a nemzetközi migrációban – Esettanulmány: Debrecen*

Working further based on the information provided in Tabel 2 we will present the number of foreign students and ethnic Hungarian students in the Hungarian higher education since 2001/2002 up until 2009/2010 university years in Graph 1.

Graph 1. Changes in the number of foreign students and ethnic Hungarian students in the Hungarian higher education

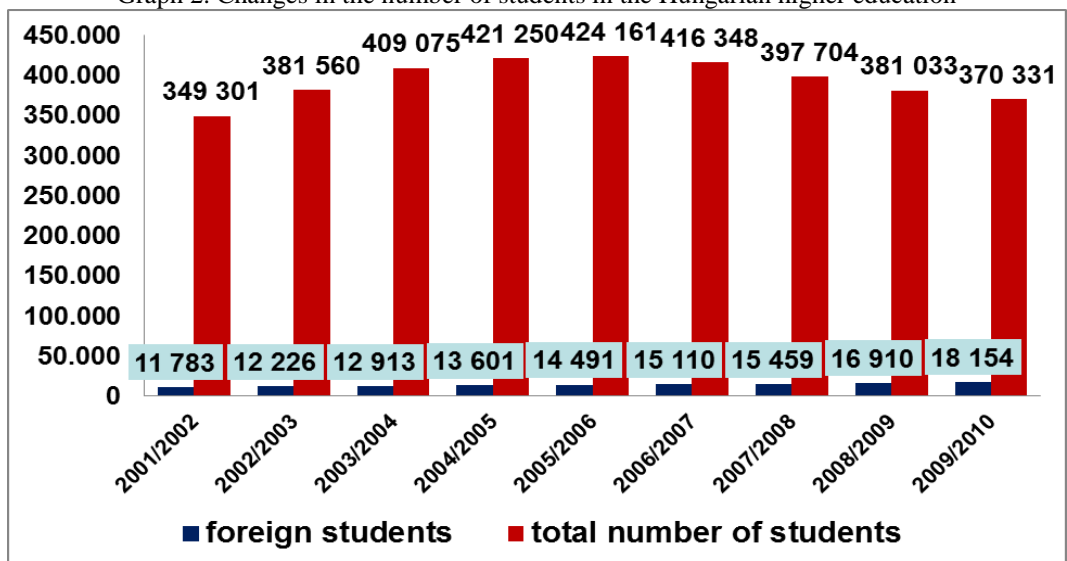


Source: based on data from Ministry of National Resources, Hatos, P. 2012

Based on the number of foreign students that study at the University of Debrecen, as shown in Graph 1, we can see that starting with the 2001/2002 university year up until 2009/2010 there is an increasing amount of students that choose to study in Hungary: in 2001/2002 we have 11,783 foreign students while in 2009/2010 there are 18,154 students. These figures show the level of attractiveness of Hungary for students that look to study at university centers.

Another association can be made between the shrinking level of students in Hungary and the increase of foreign students that wish to study there, as shown in Graph 2.

Graph 2. Changes in the number of students in the Hungarian higher education



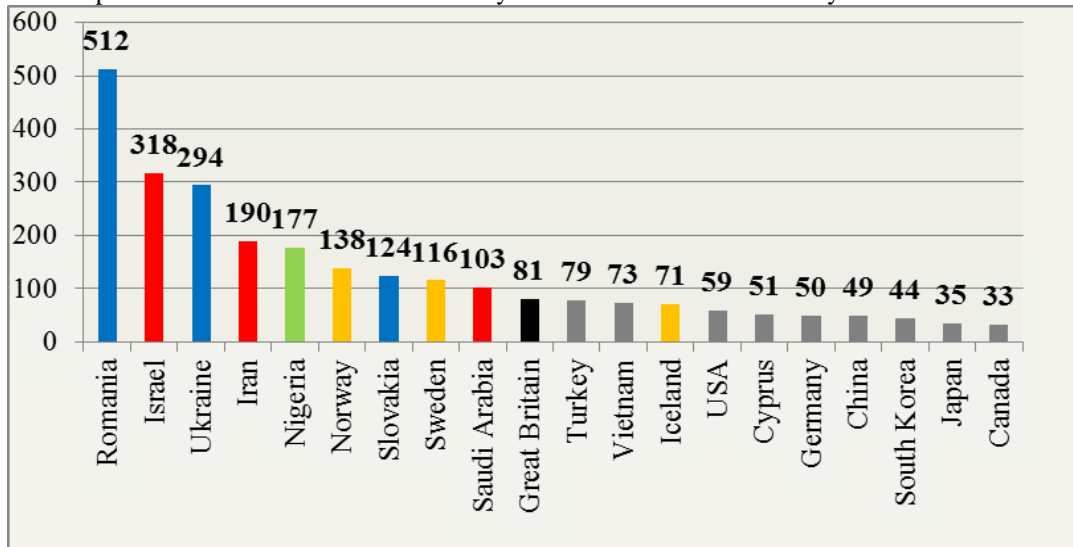
Source: based on data from Ministry of National Resources, Hatos, P. 2012

An important indicator in this study is the attractiveness of the University of Debrecen at a global level, as shown in Graph 3 that presents the main countries that provide foreign students that study at the University of Debrecen in Hungary, taking the university year of 2009/2010 as a reference point.

Based on the data in Graph 3, we can observe that there are 9 countries that send over 100 students to study at the University of Debrecen. 5 of these countries are European countries, which can be explained in terms of proximity and the European legislation that facilitates access to study at any European university. The top 3 countries that send students to Debrecen are: Romania (512 students), Israel (318 students) and Ukraine (294 students). The level of attractiveness that the University of Debrecen has in the case of students from Romania and Ukraine is determined by a couple of factors:

- The geographical proximity of these countries;
- The ethnic dimension: we have a significant number of students that represent Hungarian minority in these countries and the fact that they already know the language is an important part of their educational process.

Graph 3. Catchment area of the University of Debrecen in the academic year of 2009-2010



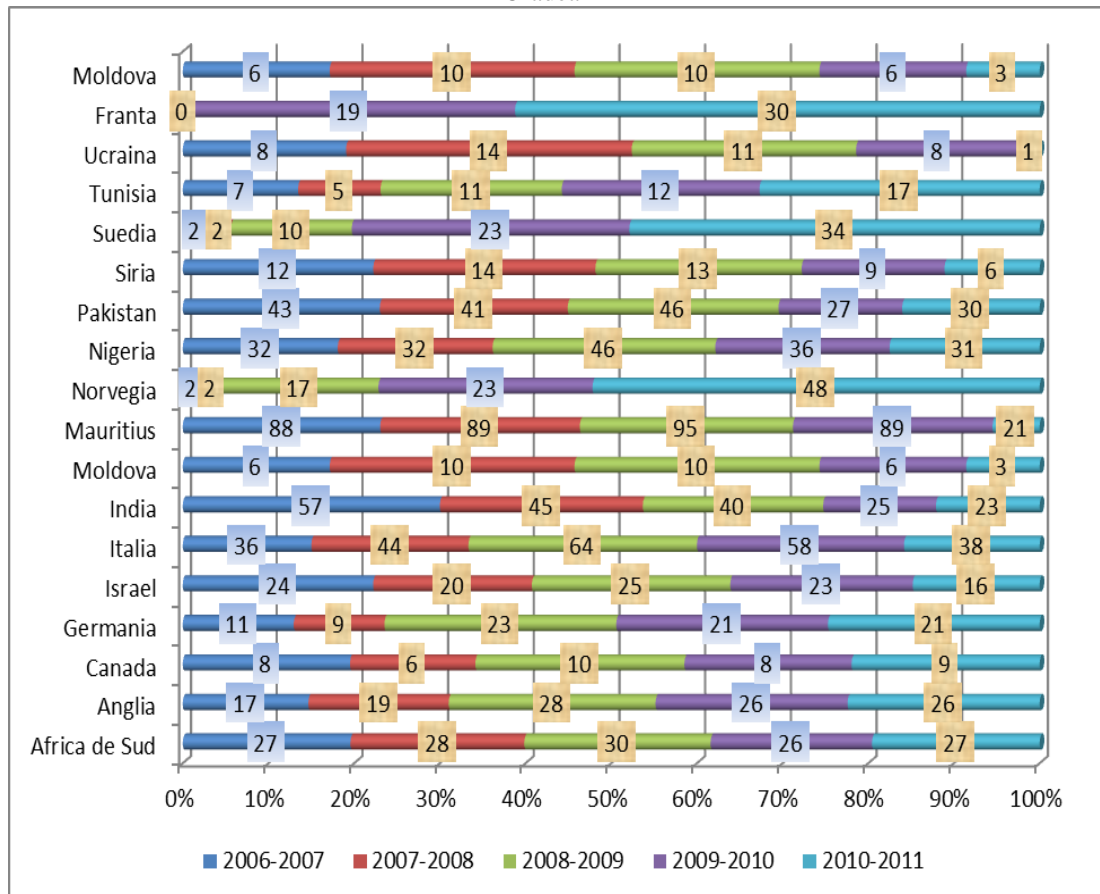
Source: Institutional data service, 2009

Similar to the University of Debrecen, the University of Oradea represents an attractive pole in the field of medicine, especially for students from Asia, Northern Africa and European countries.

The origins of foreign students coming to Oradea to study medicine is very diverse, as shown in Tabel 2 and 3. From a total of 68 countries around the globe, 18 of them are the most active as origin countries for foreign students to Oradea, as shown in Chart 1. Between 2006 - 2011, countries that have sent more than 30 students have been added up for a total of 2,094 students out of the 2,599 that have registered to the University of Oradea. The countries with the highest number of students sent to study medicine at the University of Oradea are: Mauritius 382, Pakistan 187, Nigeria 177, Italy 240, India 190, countries that constantly send students each year (Graph 4).

There are also countries that send students from the Romanian ethnicity to study in Oradea such as Moldova, Ukraine, Germany, Israel, Albania, Italy. These students can benefit from scholarships offered by the Romanian state.

Graph 4. Top 18 country. Number of foreign students that study medicine at the University of Oradea



Source: International relations department from the University of Oradea and own research from Tabel 1 and 2 found in Anexes

Through Graph 5 and 6 we looked at the evolution of the number of students and compared the figures between the two universities.

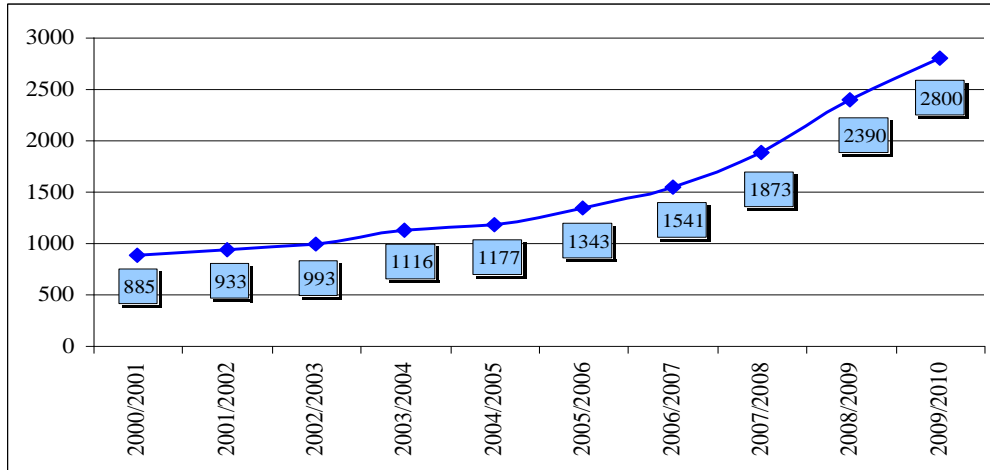
There are a number of aspects that need to be analyzed:

-The University of Debrecen attracts a higher number of foreign students than the University of Oradea, thus rating higher for attractiveness;

-There is a constant growth of foreign students' number at the University of Debrecen, with 885 students in 2001/2002 up to 2800 students in 2009/2010, while at the university of Oradea we can see that around the 1000 mark, student numbers start leveling out – in 2006/2007 there were 956 foreign students, while in 2010/2011 there were 1066;

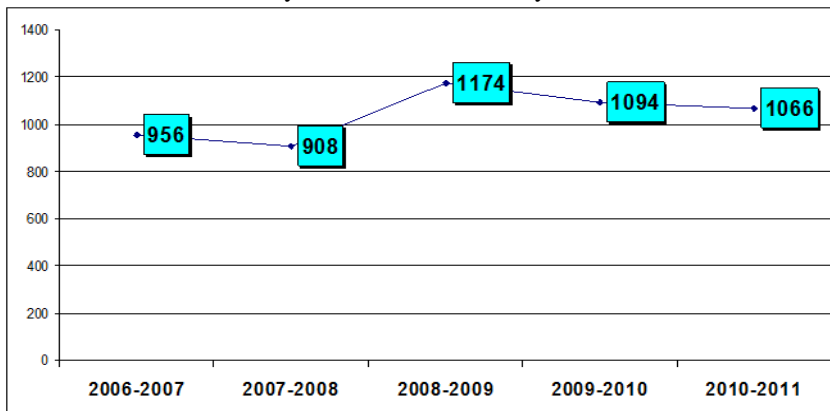
-Based on these figures we can state that the University of Debrecen presents a higher level of attractiveness over the University of Oradea, thus being more dynamic in the field of medicine and pharmacy out of the two centers.

Graph 5. Changes in the number of the foreign students at the University of Debrecen



Source: Institutional data service, 2009

Graph 6. The evolution of foreign students numbers studying at the Faculty of Medicine and Pharmacy in Oradea – University of Oradea



Source: Office of International Relations at the University of Oradea

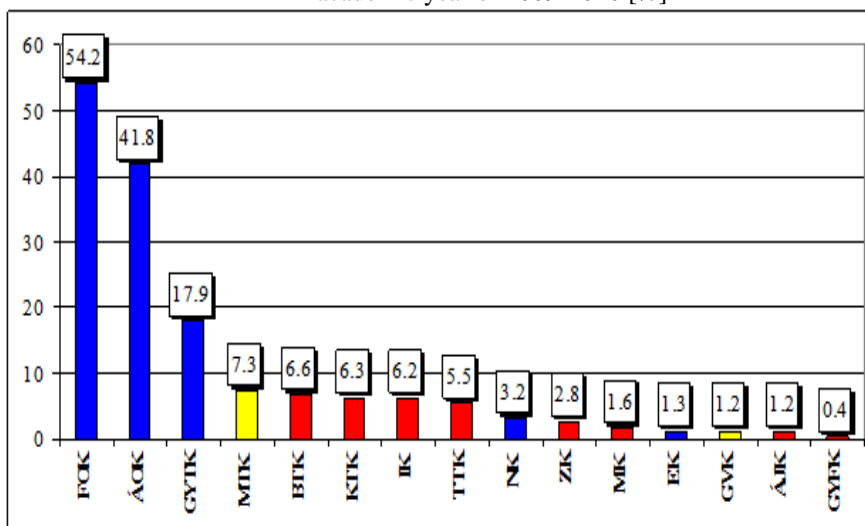
To better showcase the importance of medicine as a field of study at the University of Oradea and the University of Debrecen, Graphs 7 and 8 show the ratio that these fields have in the context of the total number of foreign students that come to study at the two centers.

At the University of Debrecen, as shown in Graph 7, there are 3 faculties in this field (Faculty of Dentistry, Faculty of Medicine and Faculty of Pharmacy). The Faculty of Dentistry has the highest percentage of foreign students at 54.2 %. The Faculty of Medicine 41.8 % of the foreign students count while the Faculty of Pharmacy has 17.9 %.

By comparison, at the University of Oradea there is only one faculty in this field, the Faculty of Medicine and Pharmacy. Through Graph 8 we can see the percentage of foreign students for 2011/2012 and 2012/2013. Both university years show a high percentage of foreign students in comparison with Romanian students: 57.31 % for 2011/2012 and 56.69 % for 2012/2013.



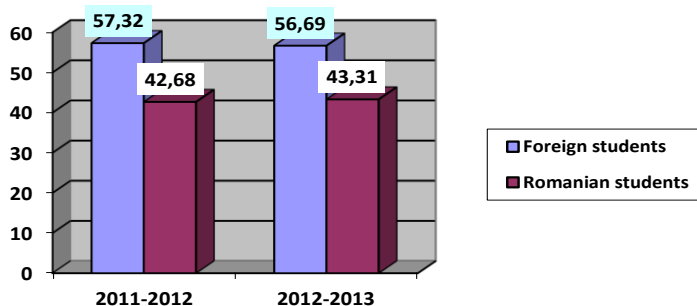
Graph 7. Ratio of foreign students at the University of Debrecen by Faculties in the academic year of 2009-2010 [%]



Source: Institutional data service, 2009

Legend: FOK – Faculty of Dentistry; ÁOK – Faculty of Medicine; GYTK – Faculty of Pharmacy; MTK – Faculty of Agricultural Sciences; BTK – Faculty of Arts and Humanities; KTK – Faculty of Economics and Business Administration; IK – Faculty of Informatics; TTK – Faculty of Science and Technology; NK – Faculty of Public Health; ZK – Faculty of Music; MK – Faculty of Engineering; EK – Faculty of Health; GVK – Faculty of Applied Economics and Rural Development; ÁJK – Faculty of Law; GYFK – Faculty of Child and Adult Education

Graph 8. Ratio of foreign students at the University of Oradea – Faculty of Medicine and Pharmacy in the academic year of 2011-2012 and 2012-2013 [%]



Sursa: International Relations Office, University of Oradea

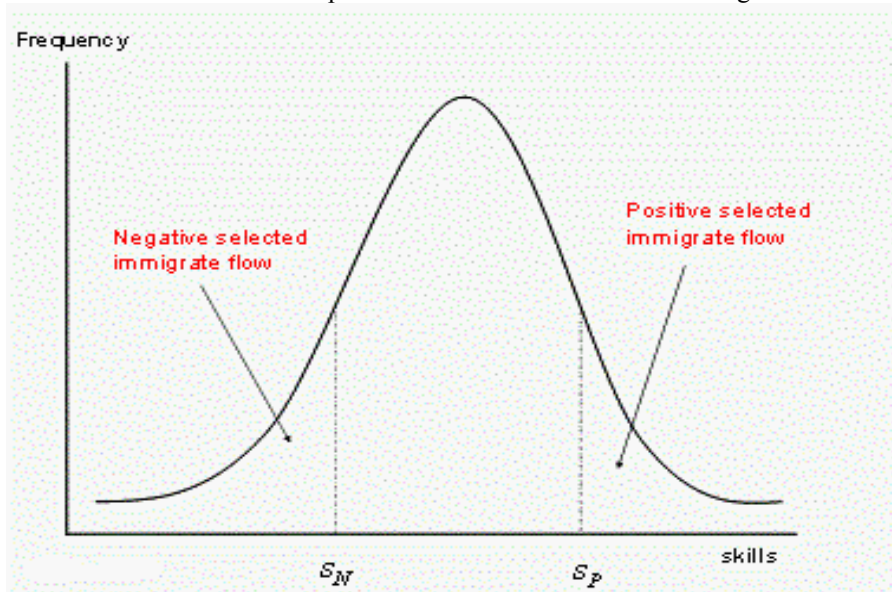
The research results on the target group (foreign students that come to study at the University of Oradea and University of Debrecen) demonstrate the fact that there is exterior interest in these two university centers with regards to education mobility.

Another aspect of our study is related to the role of education in migration:

- Qualified and competent employees;
- “Produced” by the national educational systems;
- Attracted by the mobilisation of the labour force with the help of migration;
- Receiving countries provide better economic circumstances for the qualified, and exploit the intellectual capital thus gained;
- “Red carpet” versus “red card” – “best of the worst” and “worst of the best”.

Graph 9 illustrates two other important dimensions: negative selected immigrant flow and positive selected immigrant flow.

Graph. 9. The model of “self-selected” migration



Legend:  $S_N$  – Negative selected,  $S_P$  – Positive selected

Source: Borjas, 1987

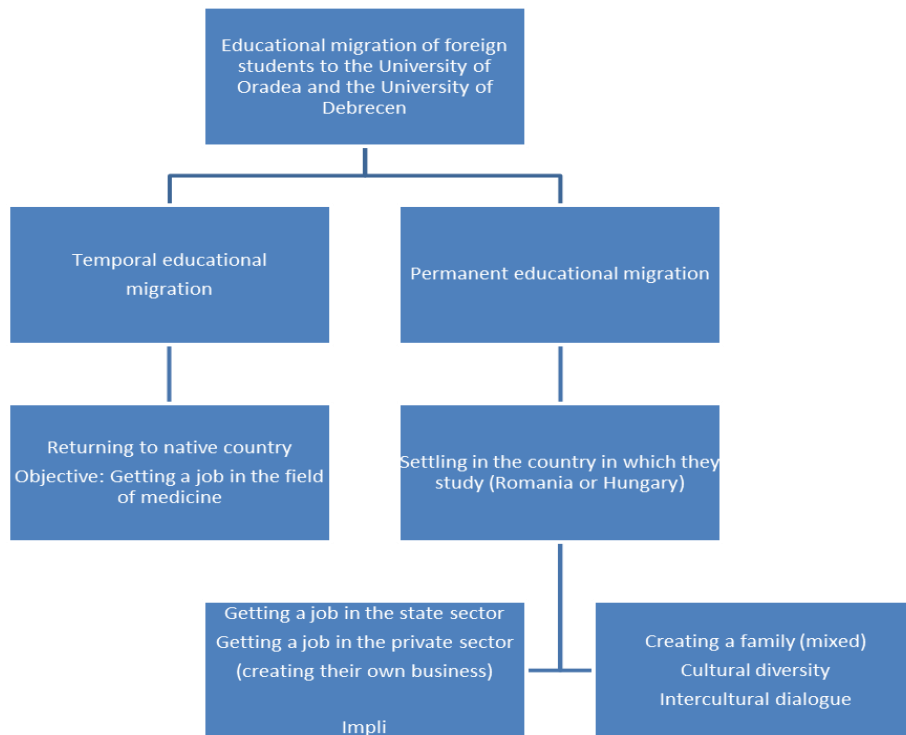
From the perspective of the students that come to these countries and choose to study at the two university centers, their subsequent choices are also taken into account in our study:

- A part of the foreign students finish their studies and go back to their native country to apply the knowledge they gained in the country they studied in;
- A part of the foreign students choose to settle in the country they studied in. They establish a family and choose to work in the state or private medical sector or open their own business. Thus the qualified work force is conserved and there is also great benefit from cultural diversity and intercultural dialogue as the mixed families they create are shaped by different cultural backgrounds. There is also intercultural dialogue with the community they choose to be a part of while being socially, economically and professionally active.

By combining the concepts of migration and education we can talk about an integrated concept called educational migration.

From a migrational perspective, two concepts evolve based on our research data: temporal education migration and permanent education migration. These are presented and expanded on the basis of causality in Schematic 1.

Schematic 1. Perspectives of foreign students studying at the University of Oradea and the University of Debrecen



Source: *Own research*

From a globalisation perspective, there are a number of implications that apply to our study. Globalisation is a concept that is very much discussed and debated in cases of migration such as these. Authors such as Anthony Giddens, Thomas Friedman and institutions such as the International Monetary Fund have all contributed to define globalisation as a concept. These can be summarized in a couple of definitive elements: the compressing of time and space through instant access to information, the spreading of knowledge and culture can be done simultaneously around the world, while market liberalisation and technology make these things possible (Şoproni, 2004: 295).

The foreign students' mobility programs at the University of Oradea and the University of Debrecen and other universities around Europe can have a positive impact due to globalisation. Out of the positive effects we mention: economic and social progress, technological innovation, diversity of goods and services, higher living standards, easy access to information and increase of cultural freedom (Şoproni, 2004: 296-297).

The geographical vicinity of the two universities on the Romanian-Hungarian border also brings into discussion the concept of cross-border cooperation. Starting from this we propose the concept of cross-border education / student taking into account the

figures that show student exchanges between the two countries, with ethnic students from Ukraine and Romania travelling to Hungary to study at the University of Debrecen.

The concept of cross-border student is not far from that of the frontier worker (Popoviciu, Cigan, 2013: 25-26; Popoviciu, 2014: 354-366), given that one of the pillars of the European Union's construction is freedom of movement.

In conclusion, our study demonstrates the importance of the two university centers, the University of Oradea (Romania) and the University of Debrecen (Hungary), in the field of medicine. The definitive elements that cover the role of these university centers are covered through the four concepts: education, migration, economy and globalisation. Through mobility programs that are a crucial part to this equation, these universities become educational poles, having a strong capacity to attract students that wish to study in the field of medicine.

The study has showcased a number of different directions through integrative indicators: temporal education migration, permanent education migration, frontier student, cross-border education / student, concepts that require further analysis and study through research.

#### Annexes

The number of foreign students at the University of Oradea in the field of medicine

Table 1

Tara	06/07	07/08	08/09	09/10	10/11
Afghanistan	1	0	0	3	3
South Africa	27	28	30	26	27
Saudi Arabia	6	1	1	1	1
UK	17	19	28	26	26
Australia	0	0	1	3	3
Austria	0	0	0	1	2
Bahrain	3	3	3	2	1
Belgium	0	0	0	1	1
Botswana	1	1	2	2	1
Brasil	0	0	0	1	1
Cameroon	1	1	1	1	2
Canada	8	6	10	8	9
Congo	0	0	0	0	1
Cuba	2	1	3	5	4
Denmark	0	0	1	1	1
EAU	4	3	1	0	0
Egypt	3	3	0	0	0
Finland	0	0	3	3	14
France	0	0	0	19	30
Greece	6	3	4	4	4
Ghana	5	1	5	4	5
Germany	11	9	23	21	21
Jordan	7	2	3	3	2
Israel	24	20	25	23	16
Italy	36	44	64	58	38
India	57	45	40	25	23

Table 2.

Tara	06/07	07/08	08/09	09/10	10/11
Lebanon	1	2	2	2	4
Malaysia	4	3	3	3	2
UK	0	0	0	1	19
Morocco	0	0	0	1	1
Moldova	6	10	10	6	3
Mauritius	88	89	95	89	21
Morocco	4	1	15	14	13
Nepal	1	1	1	1	1
Myanmar	0	1	0		0
Norway	2	2	17	23	48
Nigeria	32	32	46	36	31
New Zealand	1	1	0	0	0
Oman	0	0	1	1	0
The Netherlands	0	0	0	0	1
Palestine	2	1	2	2	1
Portugal	2	2	2	5	6
Pakistan	43	41	46	27	30
Scotland	0	0	0	0	1
Serbia	0	0	2	2	3
Singapore	2	1	0	0	0
Syria	12	14	13	9	6
Sri Lanka	1	2	3	3	3
Somalia	0	0	1	1	0
Spain	0	0	0	1	1
Sudan	1	1	2	1	1
Sweden	2	2	10	23	34

Indonesia	1	1	2	1	1	SUA	2	2	2	5	9
Irak	0	0	0	1	0	Turkey	4	5	7	8	7
Iran	5	3	4	2	6	Tunisia	7	5	11	12	17
Ireland	1	1	1	1	3	Ukraine	8	14	11	8	1
Japan	5	5	9	6	9	Hungary	7	9	8	4	7
Kenya	2	2	2	2	1	Yemen	2	2	2	2	2
Korea	0	0	1	1	1	Zambia	3	3	2	1	2

Source: International relations department from the University of Oradea

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