

# **Theses of doctoral (PhD) dissertation**

## **INTERNATIONALIZATION OF HUNGARIAN HIGHER EDUCATION IN ECONOMICS TRAINING**

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# **1. BACKGROUND, OBJECTIVES AND PRESENTATION OF THE RESEARCH HYPOTHESES**

The internationalization of higher education is one of the most timely topics related to education today. The number of foreign students in major higher education institutions is increasing, and international collaborations in the field of education and research are becoming more frequent. In the course of my research, I processed the literature of the topic in order to present the sources, which often focus on one topic at a time, as a comprehensive study of the internationalization of higher education. As a next step, I performed the primary research. It is of paramount importance that the teachers of Hungarian higher education institutions not only have excellent academic and practical knowledge, but can also transfer their knowledge in a foreign language, and in addition to direct educational activities, the services aimed at support for educational activities should also be made available in the language of training for all students.

Globally, the number of students studying in internationalized courses is constantly increasing, and as a result, an increasing number of countries and institutions are opening their doors to foreign students. Educational activity has become a competition: institutions are in competition with each other for the most talented students. First and foremost, student satisfaction needs to be enhanced, as a satisfied and successful student is a point of reference that increases the attractiveness of institutions. The declared aim of my primary research is to examine the satisfaction of the students in the analysed sample from several aspects, among which, in addition to social conditions, opinions on the quality of education are also emphasized.

The novelty of the theoretical part of the doctoral dissertation is the comprehensive analysis of the examined topic, which determines not only the secondary but also the primary data collection. The practical significance of the choice of topic is given by the analysis of the opinions described by the students of the four institutions included in the primary study. The depth of the study, even while respecting student anonymity, allowed suggestions to be made that could be applied by each of the four institutions in the internationalization of courses.

The dissertation cannot undertake to present all dimensions and circumstances in equal proportions and depth in connection with the internationalization of higher education. Student mobility was the main focus of the study. The theoretical significance of the research is the analysis of the revealed literature and statistical data, while the practical significance is the comparative study of the research carried out primarily in Hungary, which can be carried out in an international context.

Based on the literature (M. CSÁSZÁR – WUSCHING, 2014; GYŐRI, 2018) and statistical data reports (EDUCATION OFFICE, 2018), a large number of foreign students studying in Hungary continue their studies in the field of medicine. In recent years, the number of foreign language courses, majors and foreign students in several disciplines, including economics, has increased dramatically. Trainings in this field can be well internationalized: the curriculum of the economics trainings contains a large amount of knowledge that can be used in a country-neutral way, and there is also plenty of English-language literature in the field.

During the preparation of the dissertation, I intend to create an integrative definition of the internationalization of higher education by exploring the literature sources. In order to establish my primary research and to prove the timeliness of the topic, I set a goal to prepare a comprehensive literature review. It is also my stressed goal to present in detail the Hungarian literature dealing with the international aspects of the operation of higher education. In the framework of my primary research, I aimed to assess the countries from which foreign students came to Hungary and why they chose this country as the place of their studies. I am also examining the conditions under which foreign students live in Hungary and how they live their university years in the country. I examine how satisfied the foreign students are with their education and, in general, how much they like to live in Hungary.

Due to the circumstances detailed above, I decided to carry out my research in the field of economics in order to help the development of the field with my suggestions based on scientifically substantiated results that can also be applied by users.

### **RESEARCH OBJECTIVES, HYPOTHESES:**

1. My research goal was to create a definition of the internationalization of higher education based on a literature review. I want to achieve this goal with the help of secondary research tools, including literature analysis and synthesis.
2. It was my research goal to survey the habits of students to travel home to their families. I was looking for an answer to the question of whether they were more willing to travel more often. I intend to carry out my research through the analysis of primary research tools, i.e. the database produced as a result of the questionnaire survey.
3. It was my research goal to explore the aspects of students' choice of institution. In carrying out the analysis, I intend to use both primary and secondary research tools: among the former I want to analyze the data publicly available and collected with the help of the questionnaire, while in the latter I plan to synthesize the available literature.

4. It was my research goal to answer the question whether students at higher education levels (MSc, PhD training) take higher education rankings more into account when choosing an institution? In order to answer this question, I plan to use primary research tools, i.e. I plan to analyze the answers in the surveyed database.
5. It was my research goal to answer the question of whether all students who study at the university they had originally intended to and are satisfied with the quality of their education would recommend their higher education institution to others as well. To answer this question, I plan to use primary and secondary research tools. I would like to explore the literature on the question, and I also plan to analyze the responses to the questionnaire.
6. It was my research goal to answer the question of which factors play a role in student satisfaction with training and their future recommendation of the institution: the quality of training or the quality of other services? In order to decide the question, I plan to use primary research tools, which also means the analysis of the answers received to the questionnaire.
7. It was also my research goal to create a complex model of the factors influencing or affecting the internationalization of higher education. According to my plans, I will use both primary and secondary research tools in my research, as in addition to the technical literature, I will also perform the analysis of primary data sources during modelling.

After exploring the literature and defining the research questions and goals, I also created the hypotheses of my doctoral dissertation, which are the following:

1. The acquisition of a scholarship available in the Stipendium Hungaricum program is important for the further study of lower-income students in Hungary (YERAVDEKAR – TIWARI (2014a), HAUSCHILDT et al. (2015), IVANOVA (2016), KRATZ – NETZ (2016), MALOTA (2016), ZÁDORI (2017), HANGYÁL – KASZA (2018), KATONA – TRAUTMAN (2018)).
2. The scholarship available within the framework of the Stipendium Hungaricum program is suitable for compensating for the phenomenon also supported by the literature, according to which participation in full-time graduate mobility is more strongly influenced by students' financial situation than their knowledge (YERAVDEKAR – TIWARI (2014a), HAUSCHILDT et al. (2015), IVANOVA (2016), KRATZ – NETZ (2016), MALOTA (2016), ZÁDORI (2017), HANGYÁL – KASZA (2018), KATONA – TRAUTMAN (2018)).

3. The quality of training and the quality of learning support services are crucial for the choice of higher education institutions for students, and thus for the selection of international further education destinations (HENNIG-THURAU et al. (2001), HELGESEN – NESSET (2007), DE ARAUJO et al. (2012), AZMAT et al. (2013), BREZIS – SOUERI (2013), ROGA et al., (2015), ANNAMDEVULA – BELLAMKONDA (2016)).
4. Among those pursuing studies at higher levels of education, certain factors related to cost sensitivity are more likely to have an impact on institution choice (LANGERNÉ RÉDEI (2009), YERAVDEKAR – TIWARI (2014a), KRATZ – NETZ (2016), HRUBOS (2017); LANNERT (2018)).

I will verify or refute the hypotheses meaning the basis of the research published in the doctoral dissertation based on the literature review and on my empirical research outcomes.

## **2. LITERATURE REVIEW**

### **2.1. Significance, causes, tendencies and concept of internationalization of higher education**

By the 21st century, the higher education market has become international, i.e. the Hungarian higher education system and institutions must be examined in an international comparison. In Hungary, the internationalization of higher education is still booming, which is in line with global trends. Since the turn of the millennium, an increasing number of foreign students studying within the framework of diploma mobility have mostly borne the cost of their education themselves, which makes it less possible for social equality and justice to emerge. The positive effects of a better social background on international student mobility are highlighted by HAUSCHILDT et al. (2015) as well as KRATZ – NETZ (2016). According to UNESCO (2020a) data, in the case of Hungary, the number of students coming from abroad exceeds the number of Hungarian students studying abroad in full-time courses, with 28,628 incoming and 12,275 outgoing students. According to BERÁCS (2017), the Hungarian education system is still attractive to foreigners. While BARAKONYI (2010), after analysing strategic documents, even doubted that Hungarian higher education institutions had realized that they had to carry out their activities in international competition, the December 2016 version of the document “Graduation in Higher Education” makes it clear that Hungarian higher education should prepare students for the international labour market (GOVERNMENT OF HUNGARY, 2016).

One of the most important conditions for the admission of foreign students was that the European (including Hungarian) higher education systems provide measurable and interpretable qualifications on a global level. According to KARSETH – SOLBREKKE (2016), with the creation of the European Higher Education Area, this condition is met, as the system allows for transit. The value of diplomas issued in the European Union is further enhanced by the principle of mutual recognition and unrestricted use of educational qualifications (SZOLÁR, 2009).

KEHM – TEICHLER (2007) mentions examples for the content of the internationalization of higher education as the mobility of teacher-researchers and students; the interactions between national higher education systems; the internationalization of the content and topics of teaching, learning and research; institutional strategies for internationalization; knowledge transfer; cases of international cooperation and competition; and the existence of national and supranational

policies on the international dimension of higher education. According to KAHN – AGNEW (2016), despite the process of internationalization, education systems are still influenced in many respects by their national affiliation.

The number of foreign students studying in Hungary is increasing, which is also in line with the government's goal of raising the level of internationalization in higher education. According to the student feedback presented by HRUBOS (2019), financial burdens, lack of information, problems related to the integration of foreign studies at home and the absence of family and friends continue to hamper mobility.

Several reasons for the internationalization of higher education are known. Of course, these factors appear not only at one reason but may also reinforce other points of view (KNIGHT, 2007). KNIGHT's (2003) concept has developed a broad consensus on the correctness and social utility of research-academic reasons or the necessity of economic motivators. At the national level, KNIGHT (2007) attaches increasing importance and impact to the development of human resources, the spread of strategic alliances, social, institutional, socio-cultural, economic and commercial development, as well as mutual understanding. At the institutional level, the development of the teaching staff and students, the strengthening of international visibility and recognition, the spread of the application of international standards, the increase of quality, the formation of international alliances, the production of increasing knowledge and economic benefits can be highlighted of the impacts with increasing significance. HERNECZKY et al. (2010), and KISS – KÖMÍVES (2016) complemented these factors with the positive effects on improving the language skills of students studying abroad and their consequences for the labour market.

Other aspects of the internationalization of higher education are also known: in addition to teacher and student mobility and the organizational units set up to serve it, the use of international, foreign textbooks, notes and articles is also included (PAUL, 2009). The internationalization of higher education presupposes the establishment of inter-institutional networks, which, as a result of their joint work, can launch either double degree or joint degree programs (YERAVDEKAR – TIWARI, 2014a). Overall, the process of internationalization of higher education is a complex phenomenon that may have different effects in native and non-native English-speaking countries. In English-speaking countries, foreigners appear among students and teachers of courses in the original language of instruction during international enrolment. In the case of non-native English-speaking countries, the course must be started in a foreign language in order to make it available to foreigners. Using the definitions and conceptual elements described earlier, I intend to develop a comprehensive definition of the



internationalization of higher education. In my opinion, the internationalization of higher education can be defined as follows: *a process based on the decision of the higher education institution or system in the framework of its autonomy, induced by academic, social and economic goals, often lasting several years or decades, and framed by other means of accreditation and quality assurance; placing education and research in an international context while preserving, disseminating and elevating the specificities of the institution or system to an intercultural environment. In the process, international teacher, researcher and student mobility is becoming increasingly important, and the increasing social capital and the acquired knowledge transferred transcend the boundaries of a given higher education institution or system and have an impact on both the sending and host economies.*

## **2.2. Applicants' models of choosing an institution**

As a result of the internationalization of higher education, institutions have become internationally comparable, competing with each other at the international level. According to SIMÕES – SOARES (2010), in line with the economic models, students want to maximize their benefits by choosing an institution while minimizing their risks and expenditures in decision-making. The weakness of economic theories is that they do not calculate at all with an approach other than rationality.

In contrast to economic theories, sociological models for obtaining status deal with the individual and social effects that influence applicants' career and institutional choice decisions. The weakness of sociological models is that they focus exclusively on the social effects that influence decision-making (AYDIN, 2013; CSUKA – BANÁSZ 2014). The combined models created by combining the two groups of models already described analyze rational decision-making in the context of social impacts (SIMÕES – SOARES, 2010). These three-, five-, or multi-level models analyze the decision-making of applicants. Combined models analyze the demographic environment of further education, cultural impacts, supportive attitudes of teachers, and additional social, economic, and educational policy aspects (AYDIN, 2013).

Models with a marketing approach not only take into account economic and social circumstances when analysing decisions to choose between institutions, but take consumer choice models influenced by internal and external conditions as a basis (AYDIN, 2013).

## **2.3. The Hungarian higher education system in the light of statistical data**

The number of students studying in different levels of educational institutions, the total population of the country and the number of live births are the statistical data, which can be

analysed and, in addition to drawing conclusions about the current situation, we can also make estimates for the future. According to the Central Statistical Office (2020), the population of Hungary has been on a declining trend since the 1980s, reaching less than 10 million since 2011 (CSO, 2020a). The number of live births has also decreased significantly, despite some slight fluctuations, according to the Central Statistical Office (2020). Less than 100,000 children were born per year since 1997 (CSO, 2020b). Accordingly, due to the decrease in the number of children in Hungary, the training capacity of Hungarian higher education institutions can only be used to an optimal extent with international students.

The number of students in higher education is fundamentally influenced by the number of secondary school students in the country who study and pass the school leaving exam. The number of secondary school students in the 2018/2019 school year was 494,000 (CSO, 2020c). The number of students who pass the final examination in a given year is of paramount importance for the functioning of higher education. In Hungary, there have never been more than 100,000 students passing the school leaving exam in a given grade. The number of graduates in the 2018/2019 school year was 69,000 (CSO, 2020c). Examining the number of graduates and estimating it for the future is also a key issue for the internationalization of higher education. According to the data of the Central Statistical Office (2020b; 2020c), in the last thirteen years, i.e. between 2019 and 2007, an average of 63.04% of those born 18 years earlier passed the school leaving examination as full-time students. By 2034, calculated with the average graduation rate of the last good decade, we can expect an average of 55,000-62,000 full-time students taking the school leaving exam each year (Own calculation based on CSO, 2020b and CSO 2020c).

According to the latest data report of the Office of Education (2018), a total of 247,008 students studied in Hungary in the 2017/2018 school year, while according to the Central Statistical Office (2020c) the total number of students was 283,000 in the same school year and 281,000 in the 2018/2019 school year. The decrease in the number of students per lecturer allows the re-establishment of the classical master-student relationship in higher education (KŐMÍVES et al., 2014), which was also set as a clear goal in the higher education strategy (GOVERNMENT OF HUNGARY, 2016). The operation and management of higher education institutions is also significantly hampered by the decrease in the number of students (KŐMÍVES et al., 2017). Admitting foreign students to higher education in a given country can be an excellent solution to this situation, but it also can pose certain challenges to the higher education system in the country concerned.

In the autumn semester of the 2017/2018 school year, a total of 32,309 foreign students were studying in Hungary, of which 116 were in higher education, 15,625 were in BSc and 4,520 were in MSc training, while 10,259 took part in undivided MSc training. 300 students studied in professional further education training and there were 1489 foreign doctoral students for PhD or DLA training (EDUCATION OFFICE, 2018). In 2017, the studies of 5,148 people were financed by the Stipendium Hungaricum program, of which only 393 people studied in Hungarian (HANGYÁL – KASZA, 2018). According to UNESCO (2020b) data, the total number of foreign students studying in Hungary was slightly lower, totalling 28,628.

According to the data reports of the CENTRAL STATISTICAL OFFICE and the OFFICE OF EDUCATION (2018), foreigners came to Hungary to study from a total of 161 countries. There was a total of 64 countries in the autumn semester of the 2017/2018 academic year, from which at least 50 students came to Hungary to study. In order to observe the changes in the number of foreign students potentially enrolled in Hungarian schools, it is worth examining the extent of outward student mobility in the most common sending countries in recent years. According to UNESCO (2018c – 2018v), the structure of secondary education systems in the homes of foreign students studying in Hungary is very diverse, but secondary school training typically ends at the age of 17-19. There are significant differences in the number of high school students in terms of their home countries: the fewest (383,000) students' study in secondary schools in Norway, while the highest number of them (176.5 million) study in secondary schools in India. The demographic prospects are optimal in the countries from which a large number of students came to Hungary, as the population of all home countries is growing except Japan, Italy and Spain (UNESCO, 2018c-2018v). Overall, therefore, Hungarian higher education can continue to build successfully on the home countries of current students - provided that the students studying here are satisfied with their training, which improves the reputation for Hungarian higher education globally.

I also wanted to examine the fields of study of foreign students in Hungary. According to the OECD (2017; 2018; 2019), the majority of foreign students studying in Hungary study in the field of medicine and health sciences. In addition, engineering, the humanities, the social sciences, and economics and law account for a significant share of the international student body. The Tempus Public Foundation (2018) also publishes the number of students receiving Stipendium Hungaricum scholarships by department. The data show that the number of Stipendium Hungaricum scholarship students studying in accredited courses in the field of economics and its border areas has increased. These tendencies support the growing international student interest in the studied discipline.

### **3. MATERIAL AND METHODS**

#### **3.1. Databases and methods used for secondary research**

During the statistical data collection of the secondary research, the Central Statistical Office, the Education Office and the Tempus Public Foundation were the sources of the Hungarian educational data. The source of international statistics is the relevant OECD and UNESCO data reports. I explored my literature with the help of the University and International Library of the University of Debrecen, GOOGLE SCHOLAR, ECONBIZ.DE and MATARKA.

#### **3.2. Circumstances of primary research and background of its analysis**

During primary research, I conducted quantitative research in which I performed the analysis of the quantified data. The primary research is based on the self-compiled questionnaire, which contained 79 main questions, and a total of 148 questions together with the sub-questions and was written in English. I chose to examine the different levels of economics training because, based on the literature review, significant internationalization processes have taken place in this field. The main purpose of the questionnaire is to explore the demographic and socio-cultural background of foreign students, their motivation and satisfaction with education, the motivating factors influencing the choice of the country and institution of education, and to ask students about their opinions on possible future directions of education. Part of the questionnaire deals with the social integration of students and their needs.

In line with the above objectives, the questionnaire included both closed and open questions. Within the closed question, I used scale questions and the Likert scale. The questionnaire is self-compiled, however, the issues raised largely follow the circumstances examined in the context of the literature review. I compiled the questionnaire from six topics. The first topic included general questions that focus on language skills in addition to demographics. The second group of questions focus on issues related to studies, as well as training funding and pre-training. In the third part of the questionnaire, I explored the living conditions of foreign students in Hungary, including their income. In the fourth block, I asked questions about why the respondents chose Hungary as the place of their studies. The fifth topic focused on the experience they gained during their studies in Hungary. In the last topic, I asked questions about postgraduate plans, and I expected insights into the development of education in an open question.

During the preparation of the survey, I selected four higher education institutions, which are located east of the Danube, in the northern part of Hungary. In addition to being located in rural

areas, they offer economics training in English. These institutions were the University of Debrecen, the Eszterházy Károly University, the University of Miskolc and the Szent István University. All respondents were active BSc, MSc and doctoral students in the field of economics and doctoral students in the field of management and organizational sciences. Data collection took place between February and June 2019. Participation in the questionnaire was voluntary and anonymous. I asked the students involved in the primary research to fill in the questionnaire in person or with the help of others. The questionnaire was also sent to the examined institutions in online form. Of the nearly 700 questionnaires sent to the institutions, 314 were sent back. After proper screening and selection, a total of 282 questionnaires from the electronic and paper-based questionnaires could be analysed. Measured against the total number of questionnaires sent out, the willingness to respond was 40%. The summary basic data of the student sample undertaking to complete the questionnaire are presented in Table 1.

**Table 1. Summary table of questionnaire background variables**

<b>Distribution of respondents by gender (n=279)</b>	<b>Number of people</b>	<b>%</b>
Female	128	45,9
Male	151	54,1
<b>Distribution of respondents by country group (n=281)</b>	<b>Number of people</b>	<b>%</b>
Asia	122	43,4
Middle East and North Africa	62	22,1
Africa	31	11,0
Other	66	23,5
<b>Distribution of respondents by level of education (n=282)</b>	<b>Number of people</b>	<b>%</b>
BSc/BA	139	49,3
MSc/MA	93	33,0
PhD	50	17,7

Source: Own data (2019)

Based on the data provided by the Office of Education (2018), I also examined the total number of foreign students studying in the higher education institutions included in the study, and compared the data on student number to the composition of the sample by institution and level of education (*Table 2*).

**Table 2. Total number of foreign students and distribution by level of education in the economics courses of the four examined institutions**

	BSc (number of students)		MSc (number of students)		Doctoral training (number of students)		Total (number of students)	Sample %	Sample total (number of students)
	Total	Sample	Total	Sample	Total	Sample			
DE GTK	264	114	80	35	24	20	368	46	169
EKE GTK	40	8	51	26	0	0	91	37	34
ME GTK	22	0	40	30	9	1	71	44	31
SZIE GTK	70	16	61	2	53	29	184	26	47
Total (n.)	<b>396</b>	<b>138</b>	<b>232</b>	<b>93</b>	<b>86</b>	<b>50</b>	<b>714</b>		<b>281</b>
Ratio (%)	<b>55</b>	<b>49</b>	<b>32</b>	<b>33</b>	<b>12</b>	<b>18</b>	<b>100</b>	<b>39</b>	<b>100</b>

Source: Own edition based on the data provided by the Office of Education (2018) and own data (2019)

The sample achieved a very high completion rate compared to the general population, as at least one in four students was included in the sample for all institutions, while in the case of the Universities of Miskolc and Debrecen, almost every second international student undertook to answer. Based on the results, the composition of the sample corresponds approximately to the student composition of the four examined higher education institutions in the case of foreign language courses. Data processing was performed using SPSS for Windows 20.0. In addition to the mean calculations, I also performed significance tests with the Chi-square test. Of the groups of background variables, I characterized only those between which there were significant differences. I was also able to characterize the closeness of the significant relationships by the Cramer V index. Based on the analysed data, I obtained loose values (lower than 0.4). I examine the extent of significant relations within the crosstabs with the adjusted standardized residual. If the value obtained is 2 and above, the relationships are significant. For the scale-type questions, I used the possibilities provided by the ANOVA indicator. In addition, I examined the results of the questionnaire with factor analysis in order to explore the correlations and form latent groups. The results of the factor analysis provided the basis for performing the cluster analysis. The analysis cannot be considered representative, conclusions and suggestions can be drawn from the respondents' point of view, therefore my study can be considered exploratory.

## **4. RESULTS AND THEIR EVALUATION**

### **4.1. Analysis of sociodemographic data**

After cleaning up the available database, 281 of the 282 evaluable questionnaires contained information on the nationality of the respondent. The foreign students studying in the field of economics at the four higher education institutions examined and sampled mostly come from Asia and Africa, which partly contradicts the data provided by the Office of Education (2018) and UNESCO (2020b) on Hungary. Regarding the age distribution of the sample, it can be stated that almost two thirds of the students completing the questionnaire were between the ages of 18 and 25, of whom 100 (35.6%) were 18-21 years old, and 87 respondents (31.0%) were 22-25 years old. A further 56 people (19.9%) belonged to the 26-30 age group, 22 of respondents (7.8%) were 31-35 years old, and 16 people (5.7%) belonged to the 36-year-old or older age group.

In the survey, I also asked respondents about the method of paying the tuition fee, and the source of the tuition fee. 274 people gave a substantive answer to the question about the source of tuition fees. 173 of the respondents (62.3%) continue their studies in Hungary with the support of the Stipendium Hungaricum scholarship program. This form of scholarship is of key importance for the enrolment of foreign students. 86 respondents (30.9%) finance their studies in Hungary themselves or with the help of their families, 8 (2.9%) are supported by a scholarship from their home country and 3 (1.1%) are funded by an EU-based scholarship while 2 more people (0.7%) study in Hungary with the help of an intergovernmental scholarship and 2 people (0.7%) cover the costs of their training from other sources.

### **4.2. Analysis of issues related to living conditions in Hungary**

The aim of this subchapter is to provide an insight into the living conditions of the students in the sample by analysing the answers to the questions concerning the living conditions of the foreign students studying in Hungary. The results presented in this subsection are related to the examination of the following hypothesis and objective:

*H1: The acquisition of a scholarship available in the Stipendium Hungaricum program is important for the further education of lower-income students in Hungary.*

*H2: The scholarship available within the framework of the Stipendium Hungaricum program is suitable for compensating for the phenomenon i.e. participation in full-time graduate mobility is more strongly influenced by students' financial situation than their knowledge.*

Quality of life is significantly determined by how much income students live on each year. A total of 271 students answered this question, 98 of whom were unable or unwilling to declare their average annual income. More than half of the students in the sample (95 respondents) stated that their average annual income was less than € 5,000. 62 people indicated an income between 5,000 and 10,000 euros, and 15 students in the sample reported an average annual income of more than 10,000 euros. In the context of the income category, I also examined whether students complete their studies in self-funded training or as a scholarship holder. 86 people study in a self-funded form, and 186 people as some kind of scholarship holder, 173 of whom enjoy the support of the Stipendium Hungaricum program. The cross-tabulation analysis performed between the income category and the way of covering the tuition fee shows a significant correlation. It can be stated that almost 90% of the students belonging to the lower income category have Stipendium Hungaricum or other scholarship holders. In the case of those belonging to the higher income category, only 54% of the respondents have Stipendium Hungaricum or other scholarship. *Based on the results, it can be said that my assumption, i.e. the acquisition of a scholarship available in the Stipendium Hungaricum program was important for the further education of lower income students in Hungary, was confirmed. The literature addresses in detail the question of how full-time training mobility is accessible for different groups. It is generally stated that, in graduate mobility programs, talent-based access is less prevalent, and it is rather the financial situation of the applicants which determines whether they can get involved in the training of a foreign institution. This problem can be remedied by the Stipendium Hungaricum scholarship program and other scholarship programs, as with their help, even those living in poorer financial conditions can get a chance to continue their studies abroad.*

Students' quality of life and sense of well-being is significantly affected by how often they can visit their home country. Based on the answers received (n = 276), 106 people travel to their home country once a year during the training. Members of the second largest group (94 people) travel to their homeland twice a year. Of the sample examined, 41 students do not travel home at all during the training period, while 15 students travel home more than twice a year. One of the questions in the questionnaire was whether students would like to travel home more often. In this case, 275 evaluable responses were received from the students in the study, 34 of whom could not or did not want to answer the question, while only 71 of the other 241 students did not want to return home several times, and the other 170 would travel home more often if they could. Based on the 204 responses received, the majority of students answering the question, 35.1% (99 people), do not travel home more often because they do not have enough money to



travel. 29.1% (82 people) do not travel home more often due to their university activities, while nine people due to the conditions prevailing in their country. Two people do not travel home due to visa problems and five people do not visit home more often for other reasons, and another seven people could not or did not want to answer the question.

In addition, I also examined *whether there is a correlation between the declared annual income and the number of home visits*. To examine this, I performed a cross-tabulation analysis, but I used aggregations for each variable. Based on the results, it can be concluded that there is a significant correlation between the annual income and the frequency of traveling home. In the case of low income, it is significantly more common for students not to travel home and it is significantly less common for them to travel home once a year, while in the case of the higher income category, one trip per year is significantly more frequent and the number of those not traveling home during the training is significantly lower. However, this is a thought-provoking result, as it suggests that those with lower income travel home more often than those with higher annual income, even if this correlation is not significant. If the frequency of trips home is examined according to the place of residence of the spouse and the child, no significant correlation is found, but it can be seen that students whose family members do not live in Hungary travel home more often. Since it was shown that traveling home also depends on income, I examined the relationship between the number of trips home, the location of the spouse and child, and income using multivariate linear regression. The result thus obtained also confirms that there is no relationship between income and the number of trips home. *For this reason, my hypothesis that students with families are more willing to travel more often or want to travel more frequently, has been confirmed. Based on the results, it can be concluded that these students are still unable to travel home more often, as it is primarily a function of income.*

In connection with living conditions, I examined *whether students like to stay in Hungary*. According to the results of the analysis, there is a significant correlation between the different home countries. Of the respondents ( $n = 267$ ), 176 people had a positive response, while 91 people stated that they do not like to stay in Hungary. I did not find a significant correlation in relation to gender. Examining the question according to marital status, the number of positive responses was even more decisive, but in this case there was no significant difference between the marital status of the respondents. In the case of students from Africa, it can be stated that they are significantly less likely to stay in Hungary. Citizens of other categories of European, American and post-Soviet countries prefer to stay in Hungary even if no significant relationship could be observed.

Preservation of national cultural heritage is of great importance for the maintenance of students' personal identity during the course. The largest group of students in the sample stated that they can easily preserve their culture and also like to stay in Hungary.

### **4.3. Results of characteristics related to studies and choosing an institution**

#### ***4.3.1. Analysis of the characteristics of the respondents related to choosing an institution***

By conducting the study, my aim is to explore the aspects of students' choice of institution. According to the literature, various recommendations are also of great importance in the choice of the institution and the country. As a first step, I examined the factors on the basis of which students chose the particular university. Based on the survey, nearly half of the students decided on the given university based on recommendations. At the same time, the proportion of students who decided to choose the given institution without recommendations is not negligible either. When asked, the majority of students reported that they took into account the international perception of their place of study to some extent when choosing an institution. Based on the analysis of the responses received, students selected an institution from among truly competitive higher education institutions during the admission process. Based on the results of the study, the University of Debrecen has significantly more students who chose the institution on the basis of some recommendation, while the University of Miskolc and the Károly Eszterházy University have significantly fewer such students in the sample. Based on the results received, while students were able to select more than one option, the largest group of 98 people is students who have not been recommended Hungary by anyone as a place for further education. The second most significant group (66 people) was recommended the given institution by their friends, 55 people by their families, and 53 people by a person who graduated there. In addition to the recommendations, the role of higher education rankings and websites listing foreign scholarships is also decisive. The role of social media, the websites of Hungarian universities and international educational exhibitions is significantly smaller in terms of choosing an institution.

In the following, I also examined the process of choosing a higher education institution according to the higher education rankings. The majority of students have started their studies in Hungary as a result of some kind of recommendation. *Based on the obtained results, the opinion of students who have previously studied in the given country is decisive in the aspects of students' choice of institution, but the evaluation of higher education rankings is also significant.* When examining the higher education rankings according to the level of education, no significant correlation was found between the level at which the given student is and whether

this student had checked any higher education rankings before the admission procedure. *Thus, my hypothesis that students at higher education levels (MSc, PhD training) take higher education rankings more into account when choosing an institution has not been substantiated. It can be seen that the role of higher education rankings is important, but there is no difference according to training levels.*

In order to check the dominant role of recommendations, a question was included as to whether the respondent would recommend the institution in which he / she is studying. The results show a significant correlation with the opinion on the quality of education at the university. *Consequently, my hypothesis was confirmed that students who study at the university they had originally intended to and are satisfied with the quality of the training would recommend their higher education institution to others as well. This is very beneficial for higher education institutions because, as previous analyses have shown, the recommendations of previously graduated students have an impact on applicants' choice of institution.*

#### **4.3.2. Analysis of respondents' characteristics related to their studies**

Students in the sample are generally satisfied with the level of training that each institution provides for them. In the remaining part of the chapter, I examined the responses to several questions that were included in the questionnaire as a function of the level of satisfaction. In addition to recommendation, international reputation also plays an important role for students. If this factor is compared with students' satisfaction with the training, we find a significant correlation, which means a clear positive feedback for the student and, of course, for the institution. I also found a significant correlation between the quality of education and the choice of course. Students who are able to pursue their studies in the field they desire are satisfied with the quality of the training.

One of the most important issues in the internationalization of higher education is how smoothly the transfer of information can take place in a multicultural environment. It is a positive result that there is a significant correlation between the quality of education and the language skills expected of teachers. In addition to teachers' language skills, the students who fill out the questionnaire also consider the level of their theoretical and practical knowledge to be important. Again, there was a significant correlation between the quality of training and the theoretical and practical knowledge of the teachers. Studies have also shown that, on the basis of further aspects, *students who study at the university they had originally intended to and are satisfied with the quality of their training would recommend this institution to others as well.*

#### 4.4. Development results

The students involved in the study were able to express their opinions on the issues raised in connection with the development mainly through multiple-choice questions and the Likert-scale, however, in order to accurately explore their opinions, I included several open-ended questions in the questionnaire. In this chapter, I examine the following hypothesis:

*H3: The quality of training and the quality of learning support services are crucial for students' choice of higher education institutions, and thus for the selection of international further education destinations.*

Several of the answers to the open questions suggested to develop the English language skills of teachers, the staff working in the administration and other university service sectors, people who do not have a contract with the institutions but still play a key role in students' lives, and finally Hungarian students. The students involved in the study made several suggestions regarding *the possible modification of the trainings*. Some of them suggest methodological changes in education, while others formulate possible directions for changes in vocational internships. The students in the examined sample would prefer to strengthen the practical nature of the trainings, and they expressed a need for internships and the adaptation to the labour market.

The next topic is the issue of *financial background during the studies*, which affects students in many ways, including tuition fees, scholarships, and working during studies. Based on the frequency of mentions, the housing conditions should definitely be addressed. In relation to the dormitories, proposals were made regarding their location, level of comfort, accessibility, and the composition of the students accommodated there. In connection with the apartment rent, students also formulated several suggestions and problems, for example, about the amount of the rent. Extracurricular activities and leisure opportunities are very important for the students in the examined sample.

In addition to the number and nature of *leisure opportunities*, the students also formulated a much more serious topic: the elimination of racism. In several cases, the respondents complained that they were discriminated against due to their lack of knowledge of the Hungarian language, which - for example, in the case of refusal of hospital care - could have serious or even tragic consequences.

*As a result of the study, I found that students are more likely to recommend their higher education institution on the basis of their satisfaction with the quality of education, however, the services used in everyday life also have a significant effect on the recommendations. At the*

*same time, due to the mass appearance of foreign students, the service sector is also starting to adjust to expectations. In addition, students are very active in passing on the acquired good practices among themselves, helping each other with tips and advice. In practice, this means that, while higher education institutions cannot ignore the availability and quality of other services, they can obtain student recommendations primarily as a result of high-quality educational activity.*

#### **4.5 Results of factor and cluster analysis**

In order to explore the more complicated correlations between the opinions expressed by the students in the examined sample in the case of different questions, I also performed a factor analysis of the examined sample. With this study I wish to substantiate the following hypotheses:

*H3: The quality of training and the quality of learning support services are crucial for students' choice of higher education institutions, and thus for the selection of international further education destinations.*

*H4: Among those pursuing studies at higher levels of education, certain factors related to cost sensitivity are more likely to have an impact on the choice of institution.* The results of the factor analysis are shown in *Table 3*.

As a result of the analysis, I was able to develop a total of five factors, which I intend to present below. The factors include questions that showed the opinion of the students in the sample on a Likert scale from 1 to 6, where 1 meant that the respondent did not agree with the statement at all or did not feel the given circumstance to be characteristic for themselves at all, while 6 meant that they felt the given statement completely true to themselves and fully agreed with the question. A value of 0 in each case meant that the respondent was unable or unwilling to answer that question.

**Table 3. Factor analysis based on the received student questionnaires (n=208)**

<b>Question</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Factor 1. Quality and effectiveness of training</b>	<b>Factor 2. International recognition</b>	<b>Factor 3. Library</b>	<b>Factor 4. Love of the country</b>	<b>Factor 5. Cost sensitivity</b>
How much did your practical knowledge develop during the training?	4,07	1,388	0,88				
How much did your theoretical knowledge develop during the training?	4,03	1,377	0,84				
How advanced have your problem-solving techniques developed during the training?	4,34	1,455	0,634				
How well did your English language skills develop during the training?	3,93	1,733	0,593				
Opinion on the quality of education at the university	4,14	1,261	0,591				
I am satisfied with the flow of information at the university in general	4,04	1,422	0,519				
I believe that the scientific standard of Hungarian universities is high	3,76	1,259	0,367				
My decision to continue my education was influenced by the fact that I would be a recognized person with a foreign degree in my country	4,08	1,521		0,736			
My decision to continue my studies was influenced by the fact that Hungarian degrees are accepted in other EU member states	4,46	1,516		0,702			
People with doctoral degrees or diplomas issued by EU Member States are recognized in my country	4,14	1,696		0,676			
My decision to continue my studies was influenced by the level of theoretical and practical knowledge of Hungarian university lecturers	3,96	1,492		0,582			
The support provided by the Stipendium Hungaricum scholarship program was key in making my decision to continue my studies	4,14	2,028		0,538			
My decision to continue my studies was influenced by the English skills of Hungarian university lecturers	3,78	1,705		0,468			
I am satisfied with the availability of compulsory study materials in the university library	3,71	1,558			0,799		
I am satisfied with the availability of additional English language literature in the university library	3,5	1,671			0,779		
Overall, I am satisfied with the university library	3,92	1,538			0,737		

I am satisfied with my general experience with Hungary and the Hungarian people	4,16	1,438				0,754	
I like to stay in Hungary	4,18	1,423				0,705	
I think the Hungarian people are helpful	4,01	1,648				0,627	
My decision to continue my studies was influenced by the average tuition fee in Hungary	3,27	1,814					0,894
My decision to continue my education was influenced by the average price level of educational services in Hungary	3,54	1,736					0,805
My decision to continue my education was influenced by the average price level of goods and services in Hungary	3,96	1,402					0,573
Own value			3,527	2,837	2,412	2,349	2,071
Explained variance (%)			16,032	12,897	10,963	10,675	9,412
Cronbach's Alpha			0,873	0,791	0,898	0,786	0,841

Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization. Cronbach's Alpha total: 0,908. KMO: 0,866. Chi-square: 2711,936. df: 231.  $p < 0,001$  Communality: 0.401- 0.859. Cumulated variance: 59.979%

Source: Own survey (2019)

I summarized the first factor as the “*Quality and effectiveness of training*”. This factor was largely determined by questions about the development of practical and theoretical knowledge gained during the training, clearly related to the effectiveness of the training. The second factor was named “*International recognition*”. This factor was most strongly determined by the statements about the recognition of foreign diplomas in the sending country and the recognition of Hungarian diplomas in the member states of the European Union. I refer to the third factor as the “*Library*” factor. Among the key issues in terms of the quality of education and learning support, this factor was mostly determined by the statement about the availability of compulsory curricula. The fourth factor was named “*Love of the country*”, because the involved statements measured the relationship of the foreign students in the sample to the host country and its citizens. Accordingly, the social nature of this fourth factor is dominant. The fifth factor was named “*Cost sensitivity*”, which was mostly determined by the statement examining the effect of the average level of tuition fees in Hungary on further education.

After the formation of the factors, I arranged them in a cluster and revealed the characteristics of each group and the closeness of the correlations between them. During the analysis, I wanted to present the factors along two additional factors. For this reason, I chose to perform the two-step cluster analysis. As a first step, I wanted to know the level of education (BSc, MSc, doctoral) of the respondents belonging to the given group. In addition, I examined whether the students in the sample would recommend to others to pursue their studies in Hungary. The results of the cluster analysis are presented in *Table 4*. I was able to create a total of four clusters.

One of these clusters was rejected students, while the other three clusters are made up of students from different levels of education who would recommend studying in Hungary to others.

A total of 41 people was admitted to the first, “Refusing cluster,” 23 of whom are studying for a BSc degree and 14 for an MSc degree, while another 4 are pursuing doctoral studies. Their common feature is that they would not recommend to others to study in Hungary, or they could not or did not want to form an opinion on this issue. These students are characterized by cost sensitivity alone, but not to a significant extent, which led me to conclude that these students are presumably living in more difficult financial circumstances. Students in the cluster are particularly dissatisfied with the first factor regarding the quality and effectiveness of training and the second factor about international recognition. Rejecting students were also strongly against the statements classified in the factor related to their love of Hungary.

**Table 4. Cluster analysis based on factors by level of education and in terms of recommending studying in Hungary (n=208)**

			Refusing	Recomm. BSc	Recomm. MSc	Recomm. PhD	Combined
	Quality and effectiveness of training	Factor value mean	-0,33712	0,071362	-0,05586	0,322252	0
	International recognition	Factor value mean	-0,47171	0,02067	0,029465	0,436295	0
	Library	Factor value mean	-0,06005	0,168628	-0,116	-0,07977	0
	Positive image of Hungary	Factor value mean	-0,39974	-0,01903	0,211	0,14923	0
	Cost sensitivity	Factor value mean	0,045457	0,052044	-0,01884	-0,12212	0
Level of studies	BA/BSc training	Freq.	23	72	0	0	95
		%	24,20%	75,80%	0,00%	0,00%	100,00%
	MA/MSc training	Freq.	14	0	58	0	72
		%	19,40%	0,00%	80,60%	0,00%	100,00%
	PhD/DLA	Freq.	4	0	0	37	41
		%	9,80%	0,00%	0,00%	90,20%	100,00%
Would you recommend others to study in Hungary?	No / I don't know	Freq.	41	0	0	0	41
		%	100,00%	0,00%	0,00%	0,00%	100,00%
	Yes	Freq.	0	72	58	37	167
		%	0,00%	43,10%	34,70%	22,20%	100,00%

Source: Own survey (2019)

A common feature of the students in the next three clusters is that they would recommend Hungary to others as a destination for further education. Among these respondents, I classified



the BSc students into the second cluster. The commitment of students listed here to the quality of education is indicated by their interest and satisfaction with the library. In addition, they are characterized by a stronger-than-average cost sensitivity, and the first factor concerning the quality and effectiveness of the training is also important to them.

The third cluster included MSc students who would recommend further education in Hungary to others. It is characteristic of the students in this cluster that they achieved a very strong result in the factor related to the love of Hungary, i.e. these students like to stay in Hungary. It is also their common feature that they are very dissatisfied with the library factor, but they would not advise others against starting their studies in Hungary.

The fourth cluster included satisfied doctoral students who would recommend Hungary as a destination for further studies to others. The PhD students in the cluster included in the examined sample pay special attention to the quality and effectiveness of the training, as well as to the international reputation of the training. The doctoral students of this cluster are less eager to stay in Hungary and are less cost-sensitive.

Based on the studies performed and the results revealed, it can be concluded that the students in the sample pay special attention to all circumstances related to the effectiveness of the learning process, the quality of education and the international recognition of the training. University services such as the library have a significant impact on the students in the sample. At the same time, it can also be seen that integration, as well as the love of Hungary and Hungarians are also important aspects of the study. At the same time, institutions need to pay close attention to social issues in order to increase the satisfaction of cost-sensitive students. *Consequently, as a result of the performed analyses, I was able to conclude again that the quality of training and the quality of other services also have a significant effect on satisfaction, and, as a result, on recommendations. At the same time, I could not substantiate my hypothesis that students with higher levels of education would have a higher cost sensitivity, as the opposite trend can be observed as a result of the conducted analyses: students with lower levels of education are more cost sensitive.*

#### **4.6. A complex model of factors influencing or affecting the internationalization of higher education**

The internationalization of higher education is a complex process that affects both the higher education institution, the host state (and the sending state), and the international environment. The impact is multifaceted, as not only internationalization affects these systems, but these systems themselves also have an impact on the process of internationalization of higher

education. The effects of internationalization within a higher education institution can be divided into several subcategories. The range of effects depends on the aspect from which internationalization is examined. Its impact is very extensive even if it is limited to the longer-term or short-term mobility of students in higher education. In addition, if this phenomenon is analysed in a broader context, the range of effects also expands considerably (*Figure 1*).

The first and most important circle, which will be influenced by the process of internationalization within the higher education institution, will be the scope of education at the given university. If the higher education institution operates in a non-English-speaking region, the process of internationalization will also be more complex. Practice-oriented operation is a general expectation in connection with training in higher education. In international trainings, educators should use an international focus when compiling the curriculum (e.g. in the form of exercises).

A multicultural approach must be taken into account when organizing training. The educational activity is required to be in line with the needs of the market. It is also necessary to adapt international educational good practices in order to improve the effectiveness of training in higher education institutions.

Expectations regarding teachers' mobility have a dual meaning. University lecturers involved in international education may also have mobility experience, networking capital and multicultural work experience.

The next group that interacts with the internationalization of higher education is the range of services, including a number of activities that directly support the education in the higher education institution, while others tend to have an impact on the daily lives of students. In the case of “joint degree” courses, students can complete the courses of two institutions in parallel. Similarly, in connection with the organization of trainings, co-operation for research and development activities carried out by higher education institutions should be emphasized. Student satisfaction can also be influenced by the mentoring programs, applications, and library services available at the host institution.

The services used by students in their daily lives generally have a serious impact on foreigners' experiences of the university, city, and the country. Such is the issue of housing, which is linked to higher education institutions through dormitories. The exclusive use of the Hungarian language in the case of outdoor programmes may make it more difficult to organize leisure events in Hungary. Various sports events are a separate group within leisure activities. In this

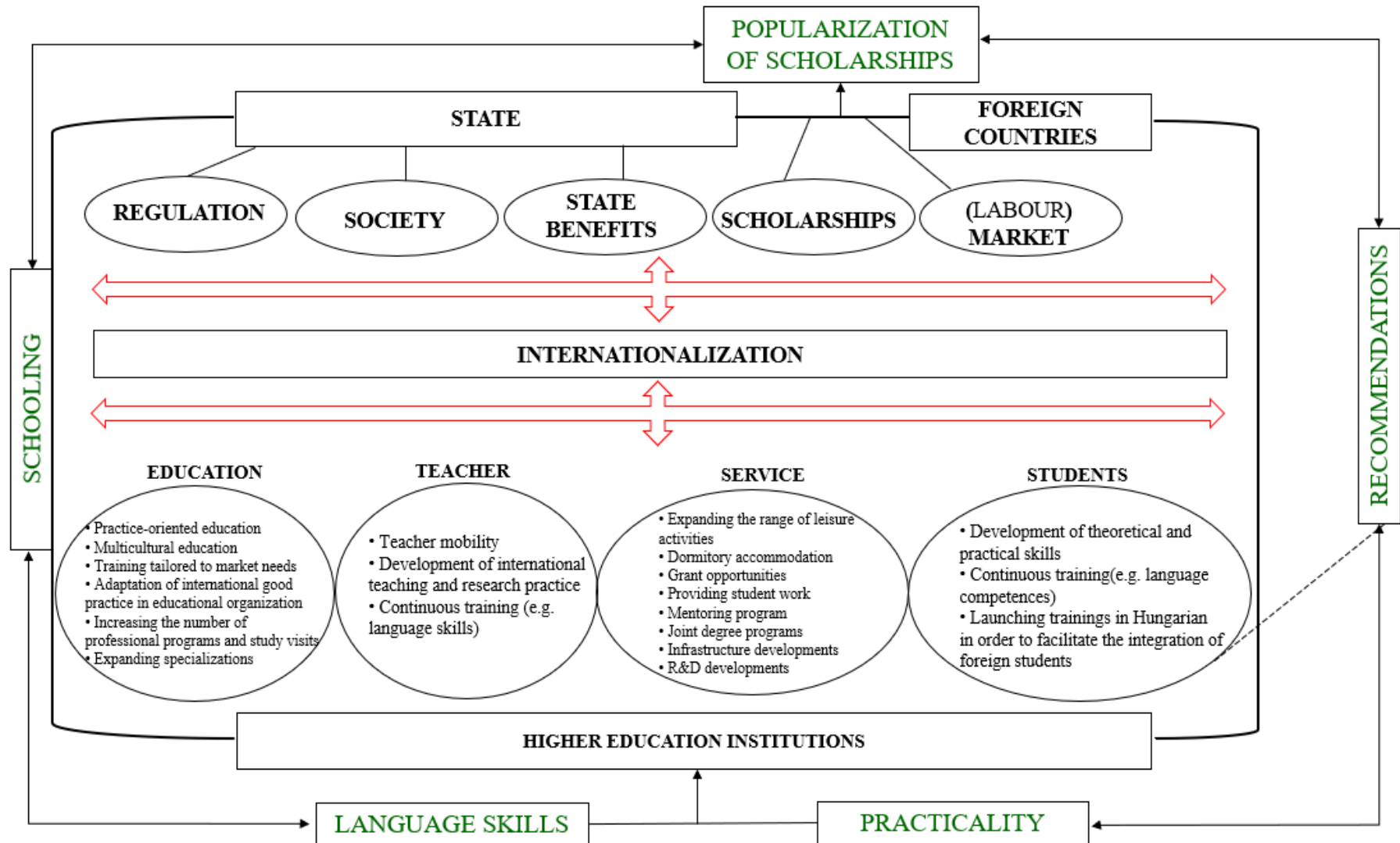
field, the offer of Hungarian higher education institutions is also competitive in international comparison.

The internationalization of higher education depends to a large extent on the students themselves. A significant proportion of students do not continue their studies in their mother tongue, and the level of preparation varies considerably from student to student. Higher education institutions should provide continuous training opportunities for their students in order to develop their language skills. The development of students' theoretical and practical skills is also of paramount importance.

The other two environments surrounding the internationalization of higher education that have a significant impact are the state and the rest of the world, i.e., the international community. Among the tasks of the state, the regulatory function stands out. In the field of the internationalization of higher education, the state can have an impact not only with education legislation in the narrow sense of the word, but also with legislation in other areas. Through the range of state benefits, the state is able to influence which institutions and to what extent they can internationalize. The third system of the state that has an impact on the internationalization of higher education is society itself. Foreign students studying in higher education come across the Hungarian society, the economy and the various organizations dealing with them in many forms.

The state and foreign actors are able to jointly influence scholarship schemes and the market. In the majority of cases, the scholarship holder is a state or an international organization. The importance of the Stipendium Hungaricum Scholarship is outstanding from the point of view of Hungary and the examined sample. The internationalization of higher education also affects many aspects of the market. Some of these aspects appear in the labour market, with graduates typically taking up work in their home country or in a third country. Citizens of the increasing internationalized higher education also generate a myriad of other consumption forms that bring economic benefits to the host countries (*Figure 1*).

Figure 1. A complex diagram of internationalization



Source: own construction (2020)

## 5. CONCLUSIONS AND RECOMMENDATIONS

As a result of my secondary data exploration, including my literature analysis and statistical data processing, I formulated the basic findings of the primary research. The internationalization of higher education, although a continuous process since the founding of medieval universities, has not been uniformly defined so far. With all this in mind, I have created my own definition of the internationalization of higher education by synthesizing the perspectives of the resources explored. I examined the most important demographic data of Hungary, which are related to the operation of higher education. In view of the declining number of children in Hungary, the number of students the Hungarian higher education system is built to function with cannot be maintained exclusively from Hungarian sources. Based on the demographic data of the home countries of the largest number of foreign students studying in Hungary, the number of students coming from these countries can be maintained or even increased. In view of all these findings, it is recommended to maintain the trend of internationalization of the Hungarian higher education in the future as well.

Among the student sample examined in the framework of the primary research, the number of students with a low declared income was particularly high, and the majority of the sample is supported by some kind of scholarship - generally it is Stipendium Hungaricum. Based on the declared incomes, the majority of students would not have the opportunity to pay the tuition fees of the Hungarian courses on their own, i.e. these students would lose their further education opportunities by terminating the scholarship program. Consequently, it is highly recommended to maintain the scholarship available within the framework of the Stipendium Hungaricum program in the future.

The analysis of the examined sample also showed that it is recommended to pay very close attention to the mental health of students. Maintaining and expanding psychological assistance to students is strongly recommended. In addition, it is expedient to support student communities organized on a national-cultural basis.

My suggestions based on the results of secondary and primary research are as follows:

- The students in the sample are very sensitive to the quality of the training in terms of the expertise of the teachers and their communication skills in foreign languages. From the organizational aspect of education, it is recommended to increase the practicality of trainings, as the satisfaction of the students can be increased this way

- It is recommended to increase the quality and accessibility of services provided by higher education institutions. Students place great emphasis on the functioning of learning support services. In addition, it is suggested to increase the quality of services that affect social and quality of life. As student satisfaction increases, students are more willing to recommend their institution, which can contribute to the enrolment activity and thus create sustainable institutions.
- Most students choose a country and institution based on information from websites listing international scholarships. Students' family members and friends, former students, as well as higher education rankings, have an important role in making decisions related to further education, i.e. these forums can be used to increase the effectiveness of enrolment.
- The EU validity of Hungarian diplomas is a competitive advantage for higher education as a whole, therefore, its maintenance and strong emphasis is recommended. In addition, students usually associate high training quality and low cost of living in connection with their studies in Hungary.
- Based on the analysis of the examined sample, it is recommended for higher education institutions to continue more active and proactive communication with the social actors, organizations and service providers with whom international students come into contact in their daily lives.

Based on the listed results, I confirmed the hypotheses of the doctoral dissertation in three cases, and in one case I rejected it as follows:

H1: *The acquisition of a scholarship available in the Stipendium Hungaricum program is important for the further education of lower-income students in Hungary.* I confirmed the hypothesis based on the literature review and synthesis, as well as the analysis performed in the framework of the primary research, with regard to the examined sample.

H2: *The scholarship available within the framework of the Stipendium Hungaricum program is suitable for compensating for the phenomenon also supported by the literature, according to which participation in full-time graduate mobility is more strongly influenced by students' financial situation than their knowledge.* I confirmed the hypothesis based on the literature review and synthesis, as well as the analysis performed in the framework of the primary research, with regard to the examined sample.

H3: *The quality of training and the quality of learning support services are crucial for the choice of higher education institutions for students, and thus for the selection of international further education destinations.* I confirmed the hypothesis based on the literature review and synthesis, as well as the analysis performed in the framework of the primary research, with regard to the examined sample.

H4: *Among those pursuing studies at higher levels of education, certain factors related to cost sensitivity are more likely to have an impact on institution choice.* I rejected the hypothesis based on the literature review and synthesis, as well as the analysis performed in the framework of the primary research, with regard to the examined sample. As a result of the performed analyses, cost sensitivity is more often observed in the case of students at lower levels of education.

## 6. MAIN FINDINGS OF THE DISSERTATION, NEW AND NOVEL RESULTS

1. I have created a definition of the internationalization of higher education as follows: *It is a process based on the decision of the higher education institution or system, induced by academic, social and economic goals, often lasting several years or decades, and framed by other means of accreditation and quality assurance; placing education and research in an international context while preserving, disseminating and elevating the specificities of the institution or system to an intercultural environment. In the process, international teacher, researcher and student mobility is becoming increasingly important, and the knowledge and research results transferred transcend the boundaries of a given higher education institution or system and have an impact on both the sending and host economies.*
2. Creating a complex model of the factors influencing or affecting the internationalization of higher education.
3. The obtained research results confirm that higher education rankings, as well as recommendations from friends and family members, have a significant impact on the choice of institutions and countries for students, but the importance of websites listing scholarships to promote international studies is also very high compared to the technical literature sources. It may also be advisable to launch a main website that allows students to find all relevant information for starting their studies in Hungary and obtaining available scholarships.
4. Based on the results of my research, I concluded that the scholarship to be obtained within the framework of the Stipendium Hungaricum program is suitable for creating opportunities for talented students coming from more difficult financial circumstances to continue their studies in Hungary. For this reason, the scholarship is suitable to compensate for the disadvantages caused by the socio-family background in the field of full-time student mobility.
5. The quality of training and the quality of other learning support services are crucial for international students when choosing a higher education institution. In addition to the expertise and practical knowledge of the lecturers, the quality of the training also includes their language skills, as well as the EU recognition of Hungarian diplomas and the



international reputation of EU and Hungarian qualifications in relation to the attractiveness of the Hungarian higher education system. In addition, students' satisfaction with the quality of education increases their willingness to recommend these institutions to other students.

6. The cost sensitivity of students to study-related expenditures will be lower as a consequence of the increase in the level of training. As a result of the factor analysis performed on the examined sample, I was able to determine a total of five factors. The first factor grouped the students in the sample according to the questions asked about the quality and effectiveness of the training. In the second factor, the organizing principle was international recognition, while in the case of the third, it was the range of library services. The fourth factor was related to the love of Hungary, while the fifth was related to the cost sensitivity of the students in the sample.
7. Based on the results of the factor analysis, a two-stage cluster analysis was performed, based on which I was able to organize the students in the examined sample into a total of four clusters. Only one of these groups, mixed by level of education, would not recommend it to others to study in Hungary, while the three other clusters, separated by level of education, would recommend it to others to start studying in Hungary according to different criteria.
8. In order to improve student satisfaction and reduce the number of conflicts with locals, it is recommended that higher education institutions engage in more effective and proactive communication with the various providers and organizations operating in the student environment. As a result, the external partners involved can be more effectively prepared to receive foreigners, i.e. establishing contact can be smoother.

## 7. SUMMARY

I prepared my doctoral dissertation on the topic of the internationalization of Hungarian higher education. In the course of my research, I paid special attention to accredited courses in the field of management and organizational sciences in the case of four selected rural Hungarian higher education institutions located east of the Danube. The selected institutions were, in alphabetical order, the University of Debrecen, the Eszterházy Károly University, the University of Miskolc and the Szent István University. The field of primary data collection was thus influenced by the above delimitation, however, secondary data collection included extensive synthesizing analysis of Hungarian and international publications related to the topic, as well as the review of relevant Hungarian statistical data reports.

In the literature review of the dissertation, I first dealt with the significance and concept of the topic. I reviewed the Hungarian and international literature related to the concept of the internationalization of higher education and found that there is no uniform, internationally accepted definition of the internationalization of higher education. For this reason, I have created my own concept of the internationalization of higher education by synthesizing literature sources.

In the Material and methods chapter, I summarized the research methods used in the primary and secondary research, as well as the sample examined in the framework of the questionnaire survey. During the secondary research, I examined the most important educational and demographic databases, such as the data reports of the Central Statistical Office, the Education Office, the Tempus Public Foundation and the data sets of major international organizations such as the OECD or UNESCO. My primary data collection was carried out with the help of a self-compiled questionnaire combining the aspects learned during the literature review, the results of which were analysed with several statistical methods, including factor and cluster analysis in addition to descriptive statistical data analysis and cross-tabulation analyses.

Based on the most important sociodemographic markers of the studied sample, the majority of the respondents are male and most – around two thirds of the sample – are under 25 years of age, single and childless. The majority of students in the study sample are from Asia, and there is also a significant number of students from the Middle East and North Africa. Half of the examined sample consisted of BSc students, the rest studied for a master's degree and a smaller part for a doctoral degree. The majority of the examined sample are students of the University of Debrecen, followed by Szent István University, Eszterházy Károly University and the

University of Miskolc, in this particular order. The characteristic feature of the examined sample is that students mostly study in Hungary with the support of some kind of scholarship - the vast majority of them being the Stipendium Hungaricum program - and their income is not high. As a next step, I examined the living conditions of foreign students in Hungary. Here, I placed great emphasis on examining the frequency of travels home. I found that although students with families really want to travel home more often, they usually do not have the opportunity to do so for income reasons. I concluded that obtaining a Stipendium Hungaricum scholarship has a significant impact on the studies of foreign students with lower incomes in Hungary.

In the database created as a result of the primary research, I also examined what factors influence students' choice of institutions. In my survey, the recommendation of family, friends and institutions or former graduates has a big impact. However, the most important source of information needed for further education for the students in the sample were the special websites listing the various foreign scholarships. I also found that there was no detectable correlation between checking and considering higher education rankings and the educational level of students in the sample.

As a next step, I examined the satisfaction of the students with their studies. Student satisfaction depends on a number of factors, including the infrastructural conditions, the satisfaction with the curriculum and the multicultural nature of the training, in addition to the professional and personal characteristics of the instructors. I concluded that, of the students consciously choosing a higher education institution, the proportion of satisfied students is very high, and they are satisfied not only with the quality of the training, but also with the language skills of the teachers. The importance of training quality is prominent in word of mouth advertising.

As a result of the factor and cluster analysis, I developed a factor related to the quality and effectiveness of the training, a factor related to international reputation, a factor related to library services, a factor related to the love of Hungary and a cost sensitivity factor. Based on the factors arranged in the clusters, it can be stated that the vast majority of the students in the examined sample would recommend it to others to pursue their studies in Hungary, the rate of those who would not recommend the country is very low. In addition, it can be seen as a result of the cluster analysis that, based on the examined sample, those studying at different levels of education would recommend it to others to study in Hungary on the basis of different aspects. For this reason, it can be concluded that it is important to recommend the different values of trainings and institutions to the applicants of different levels of education.

From the results of the questionnaires, the conversations conducted during the research, and the synthesized results of my own observations, I compiled a complex diagram that examines the internationalization of higher education in its full spectrum. With the help of this figure, the relationships between the most important actors and factors influencing the process also become transparent, i.e. the domains and method of implementing development proposals can be more easily determined.

The obtained research results can be used in practice for the successful international enrolment activities of Hungarian higher education institutions, and it is worth paying special attention to several circumstances. The first of these is the quality of training. One of the significant advantages of Hungarian diplomas is that, thanks to the country's membership in the European Union, their international acceptance is very strong. The institutions in the sample should continue to place great emphasis on maintaining and further developing the quality of training and the quality of the teaching staff. In this context, special attention should also be paid to the language skills and expertise of teachers, the practicality of training, the strengthening of relations with the user sector - the potential employers of the future - and the quality of services related to education. At the same time, it is very important that the higher education system and institutions maintain the availability of various scholarships for foreign students in the future. The scholarship of the Stipendium Hungaricum program is suitable for remedying social injustices in the field of full-time mobility. In the future, it would be appropriate to increase the level of social integration of international students. Some foreign students face problems in very vulnerable life situations, such as housing, primarily rented housing. To remedy this problem, it may be appropriate to implement real estate developments in higher education institutions interested in internationalization, thereby increasing the dormitory capacity. It is recommended to continue to support all initiatives aimed at creating a more liveable student living environment in institutions. Based on the examined sample, student satisfaction is still not negligible based on future enrolments, however, the most important source of information for the students in the sample are websites that specifically list the availability of international scholarships. Consequently, the emphasized Hungarian institutional presence on such sites must be maintained in the future as well.



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### List of publications related to the dissertation

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