Factors of Choosing Specializations in Higher Education Institutions of the Hungarian-Romanian Cross-Border Region

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Abstract: The aim of the paper is to examine the decisions of students from the Hungarian-Romanian Cross-Border Region to pursue higher education and to choose a career, correlated with the individual and social motivational context. Larger higher education institutions (HEIs) attract more likely students from intellectual families, with high socio-economic status, those who have more friends, speak several languages, have material values; continuing education and university choice are influenced by the mobility factor and by following a model. The factors that are relevant in the choice of specialization at smaller HEIs are: the number of spoken languages, a disadvantaged background and gender. Students who are females, who come from rural areas and who have post-material values tend to choose humanities as their specialization, while students with a high mobility factor and high education level of the father will more likely choose sciences. The results could be efficiently used in the development of higher education in the field of practice, policy and research or in career counselling. Also, they enrich the results of empirical research related to the recruitment mechanisms of cross-border higher education institutions and young students.

Keywords: *specialization choice; Higher Education Institutions; Hungarian-Romanian Cross-Border Region.*

Cuvinte-cheie: *alegerea specializării; învățământ superior; Regiunea transfrontalieră România–Ungaria.*

Introduction

Decision on pursuing higher education and choosing specialization reflect one of youth's major interests and expectations regarding their future on the labor market.

The goal of this paper was to explore the correlations between different factors that influence students' decisions in the choice of higher education institutions (HEIs) and specialization within academic institutions from the Hungarian-Romanian Cross-Border Region (N = 2,120). The research also has a practical importance because, through it, HEIs may have access to expertise about young candidates, about the 'profile' of young people entering university; nonetheless, young people who face career decisions may gain a broader view of educational opportunities and of the offer of various universities and colleges.

The empirical data used in this article was extracted from the data collected in 2012 for the HERD ('Higher Education for Social Cohesion – Cooperative Research and Development in a Cross-border Area')[1] research project. The project focused on the higher education institutions from the Romania-Hungary cross-border area (HERD, 2012). The common research topic applies to

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a relatively large geographic area, and it is determined by the region's similar history: the region is relatively uniform in terms of socio-economic and educational status, but in the past decades, not only did it have a peripheral position, but social inequality, cultural diversity, territorial fragmentation and the general level of distrust have developed to such an extent that made it difficult to respond to the emerging opportunities and challenges.

Scholarly literature

Most researches report that career path aspirations differentiate according to young people's social situation (Mehboob, Shah and Bhutto, 2012; Eccles et al., 2004; Hossler and Stage, 1992; Martinez and Klopott, 2005; Sandefur, Meier and Campbell, 2006; Boudon, 1981; Bourdieu, 1998; Bourdieu and Passeron, 1990; Coleman, 1998; Andorka and Simkus, 1983; Ferge, 1972; Pusztai, 2004; Róbert, 2000). It is therefore important to examine students' registered social status when they enter the higher education system. While in the case of students coming from lower social strata, the proportion of parents with HE is smaller, and lower education is probably associated with a lower socio-economic status, enrolment into lower prestige programs offers these students the opportunity to achieve intergenerational mobility. According to the consistent results of the scientific literature, youth with lower social status have a different career habitus than those whose parents have a degree certificate (Csata, Dániel, Kiss, Sólyom and Ruszuly, 2009).

Despite of the expansion of higher education, the privileged groups have preserved their advantages when entering post-secondary education and this falls in line with research results concluding that the expansion of higher education has not wiped out the inequalities of opportunities. As Hatos (2011) shows, inequalities in accessing higher education institutions are persistent and increase evenly, in relation to social class. The decision to pursue education at tertiary level is inevitably linked to the aspirations of young people in terms of career and the direction of the social mobility in the future. Becoming an intellectual seems to be a possible solution for upward social mobility, for obtaining a social status; graduating from higher education is, for many, a kind of guarantee for the future.

Existing costs and financial support influence students in their decision-making process; nevertheless, students with a lower socio-economic background, who belong to the under-represented population have more pressing problems than that (Stewart and Post, 1990). Academic standards – e. g. programs offered by the higher education institution – are related to student perceptions of success following the completion of studies, and it often has the greatest impact on the selection phase (Chapman, 1981; Hossler, Braxton and Coopersmith, 1989). Location (proximity of residence) has a moderate impact on institution selection (Chapman, 1981; Kellaris and Kellaris Jr, 1988), and it is usually correlated with other institution features.

The influence of parents, teachers and friends is decisive, since they constitute an important network for the individuals. There is no consensus in scientific literature when it comes to decide which factor has the most significant role in the decision-making process. The school's overall influence seems to decrease, at least in the cases of families whose social capital does not include the school, and therefore it has no significant impact on students and their parents. Some of the authors explain this influence with social status and regard the maternal influence on further learning decisions as a determining element, especially in the case of female students and within families with a lower status (Coleman, 1998; Pusztai, 2004).

As a consequence of the poor socio-economic background of the families and the socialization context, there is a lack of general and specific trust of the youth in different types of institutions; the first generation of intellectuals have less social capital than other groups of young people (Ferenczi, 2003).

Addi-Raccah and Ayalon (2008) have highlighted that the educational experience of Israeli students constituted a transition point between the socio-demographic features and the enrolment into post-secondary education, meaning that graduates from socially privileged schools were able to use their degree certificates more to their advantage, thus reducing the impact of the social background regarding their performances in secondary education. On the other hand, studies have also pointed out that the success culture of those schools with a more prestigious social make-up presses the graduates to obtain post-secondary degrees, even if they have achieved modest high school results (Rumberger and Palardy, 2005). Besides the school profile, other important factors regarding participation in HE are the educational track (students from theoretical and technical schools are more likely to continue education than vocational school graduates who rather seek employment), followed by the place of residence (town residents are more likely to continue their studies than students from rural areas), and by gender (the gender difference is reflected in the intention regarding university enrolment: female students tend to apply to university to a greater extent than their male peers, because the latter would rather be employed after graduating from high school).

Although the proportion of female students in higher education exceeds that of the male students, it still is a major target for European countries to increase the number of women with higher education (HE). A clear indication for this tendency is that in the ranking lists of some international HEIs, gender proportion aspects are treated as a high priority.

In recent decades, there has been a radical change regarding the proportion of women among students participating in higher education. Women today participate on a greater extent at all levels of higher education, and the process of feminization of higher education is noticeable both in Romania and in Hungary ever since the 1980s-1990s.

Nevertheless, it is important to keep in mind that upon examination of the gender ratio one notices significant differences between the individual educational areas. Although segregational tendencies by degree courses are continually declining, an analysis of gender ratio by fields of study reveals significant differences: while in areas like technologies and informatics the proportion of women continues to be very low, in educational areas like the humanities, teacher training, medicine and health sciences, and social sciences, it is much higher. This tendency can also be seen as a border line between typically feminine and masculine careers.

In what the choice of specialization is concerned, individual preferences, the availability of information and the socio-economic background of the family can play an important role. The specific factors that influence the choice of specialization are approached by a large number of studies (Pappu, 2004; DeMarie and Aloise-Young, 2003; Francisco, Noland and Kelly, 2003; Kimweli et al., 1999; LaBarbera and Simonoff, 1999). Some authors place the relationship between specialization choice and particular demographical factors in the center of their discourse (DelVecchio and Honeycutt, 2002; Galotti, 1999; Lackland and De Lisi, 2001; Malgwi, Howe and Burnaby, 2005). Others emphasize on the most common sources of information and influence: people, events and the media. Thus, parental influence seems to affect the choice of profession, while a genuine interest in the subject mostly determines the choice of specialization, followed by the parents' job and the

recommendations of friends, relatives, counsellors (Adams, Pryor and Adams, 1994).

Data shows that the effect of parents' occupation and socio-economic status is stronger on choosing business majors than in other non-business cases. The characteristics of the future workplace seem to shape the choice of specialization, be it financial (Adams et al., 1994) or other aspects, such as autonomy, prestige, the quality of life (Collins and Giordani, 2003). Berger (1988) points out that students are less influenced by initial income levels in the field when choosing specialization, and more by the expected income associated with due occupations (Montmarquette et al., 2002).

In most industrialized countries, males and females take biased decisions, which are often reflected in a worse position in the labor market for women. Family background may influence specialization choice (Noè and Galeazzi, 2012), while the model of De Dios Jiménez and Salas-Velasco (de Dios Jiménez and Salas-Velasco, 2000) also takes into account learning abilities, social background, family income and employment outlook. Beggs, Bantham and Taylor (2008) identified the following significant factors regarding specialization choice: higher compatibility with students' interests, workplace characteristics and specialization characteristics; meanwhile, they proved that information, psycho-social benefits and financial considerations were less important.

The research of Epstein et al. (2013) showed that when students entered a program primarily due to external motivating factors, by the end of the program internal motivation (e.g. relationship building, performance and self-achievement, etc.) strengthened up. We can assume, therefore, that the choice of a specialization is a long-term life decision, which relies on comprehensive decision-making, especially if we take into consideration the time and resources dedicated to it. In addition, there are students who recognize the fact that themselves or other students they know choose academic majors on less rational grounds (Beggs et al., 2008).

Starting from Hatos's model (2012), Bernath (2015) expands it, by introducing new factors in the explanatory model: 'objective factors of social context have an indirect influence and are important in students' choice of specialization at smaller HEIs: the number of spoken languages and a disadvantaged background exceed the influence of the financial situation or parents' level of education; however, the effects of gender cannot be ignored. The introduction of value systems and learning attitudes in building the model have proven to be successful, given that they made it possible to shape different patterns of specialization choice.' (Bernath, 2015)

Goal and target group of the study

Our study aims at modelling the patterns of choice of specialization in higher education institutions that belong to a region with common history crossed by the Romanian-Hungarian border, an area that partially covers the Partium geographical area – Oradea, Debrecen and Nyíregyháza. The three neighboring counties, Bihor – Hajdú-Bihar – Szabolcs-Szatmár-Bereg, share several similarities: all three locations are peripheral in their respective countries, and for this reason, until the separating nature of the border used to dominate, all three had been considered disadvantaged regions. Another goal of the study was to go further into detail and explore and highlight the significant factors that influence the choice of specialization, broken down to types of institutions.

A sub-sample of 2,120 students which fit the conditions and objectives set out in our investigation was extracted from the complete HERD database, which included students from many other institutions, and as well as Master's degree students. As a result,

our paper focuses on Bachelor's degree students, out of which 35.5% are males and 64.5% females, who study at five institutions of higher education. The vast majority of respondents is registered at the University of Debrecen (N = 886; 33.1% men, 66.9% women), 565 students at the University of Oradea (40.1–59.9%), 400 at the Partium Christian University (32.9–67.1%), 125 respondents at the Emanuel University from Oradea (of whom 43.2% men and 56.8% women) and 144 students at the College of Nyíregyháza (31.9% men, 68.1% women). The breakdown of respondents by educational track and HEI indicates that the majority of the students from all five HEIs graduated from high school, while around a quarter went to technical secondary school and less than 5% went to vocational high school.

Explanatory model of specialization choice

The explanation of the correlations of specialization choice was performed by creating a logistic regression model on the entire sample. Due to the fact that only three out of the five institutions from our study offer specializations in all or most fields, the disciplines originally grouped into three categories were re-coded into two during the first regression analysis for simplification, i.e. humanities and sciences.

The explanatory variables used in the regression model are: gender (female), trust, ethical, father's education level, residence (rural), the mobility factor, post-material values, awards in classes 1–8, friends, parental support, spoken foreign languages and cases of disadvantage. The used reference category is science, so we analyzed how these variables make science to be more likely chosen by students of the five higher education institutions.

Table 1: Explanatory factors of specialization choice – logistical regression

Humanities	**B**	**S.E.**	**Wald**	**Df**	**Sig.**	**Exp(B)**
female	**0.47**	**0.12**	**14.39**	**1**	**0.00**	**1.60**
trust	**0.01**	**0.02**	**0.42**	**1**	**0.52**	**1.01**
ethical	0.00	0.01	0.01	1	0.92	1.00
father's education level	**−0.11**	**0.02**	**18.65**	**1**	**0.00**	**0.90**
rural	**0.38**	**0.13**	**8.64**	**1**	**0.00**	**1.46**
the mobility factor	**−0.15**	**0.06**	**6.80**	**1**	**0.01**	**0.86**
post-material values	**0.16**	**0.06**	**7.03**	**1**	**0.01**	**1.17**
awards in classes 1–8	0.05	0.05	1.05	1	0.31	1.05
number of friends	−0.01	0.02	0.36	1	0.55	0.99
parental support	0.00	0.02	0.00	1	0.95	1.00
spoken foreign languages	**−0.20**	**0.08**	**6.17**	**1**	**0.01**	**0.82**
cases of disadvantage	−0.05	0.06	0.79	1	0.38	0.95
Constant	0.99	0.43	5.22	1	0.02	2.70
Category of reference: science LR = 64.18(df = 12) $p < 0.001$ Nagelkerke $R^2 = 0.063$ Method: enter, step 1						

We have found several significant correlations, as resulting from the table above. While in the case of those respondents who are women, live in rural areas and/or identify themselves with post-material values there is a higher likelihood to continue studies in the field of humanities, the unit increase of the mobility factor and of the father's education level brings about a higher probability to opt for science.

In the following, we analyze these correlations by types of institutions, as well.

Choice of specialization in larger universities (the case of the University of Debrecen and the University of Oradea)

Following the more general correlation from above, we aimed to get a more detailed picture regarding the choice of specialization. Consequently, we included the data available to us in the analysis and we examined the extent to which the explanatory variables applied in the models above determine specialization choice on both sub-samples (first on the larger, then, on the smaller higher education institutions).

Given the fact that the educational offer of the two larger HEIs is fairly similar, we examined whether there are identifiable differentiating features of the choice of specialization in their case. The table below presents the educational offer of these two higher education institutions.

Table 2: Ratio of respondents from the University of Debrecen and the University of Oradea in the HERD sample by specialization (N)

Specializations	University of Debrecen	University of Oradea	Total
Humanities and arts (history, philosophy, theology, arts)	53	95	148
Health sciences (medical, pharmaceutical)	208	67	275
Social sciences (sociology, political science, social work, psychology…)	33	25	58
Economics and business administration	151	49	200
Law and public administration	114	41	155
Natural sciences (biology, chemistry, mathematics, IT, physics, geography)	120	41	161
Architecture and building industry	76	43	119
Education and physical education	62	27	89
Agricultural and environmental studies	17	102	119
Engineering	52	75	127
Total	**886**	**565**	**1451**

The total number of respondents from the two institutions in our sample is 1451, 886 learning at the University of Debrecen and 565 at the University of Oradea. In both cases, most students study health sciences (including medical and pharmaceutical training), economics and business administration, law and public administration, natural sciences (specializations: biology, chemistry, mathematics, informatics, physics, geography), as well as humanities and arts (history, philosophy, theology and arts). Among the students

of the University of Oradea, there is a particularly high number of students enrolled in environmental studies and in engineering. We examined the explanatory factors of specialization choice with multinomial logistic regression analysis. We choose the likelihood to apply for humanities as a reference category. In the following table (Table 3), we present the likelihood quotients of enrolment in a particular specialization, separately for the ten specializations included in the analysis.[2]

Table 3: The explanatory variables of choice of specialization in larger higher education institutions

Specializations	**Explanatory variables**	**Sig.**	**Exp(B)**
Health sciences (medical, pharmaceutical)	high-school awards	0.002	0.719
	household endowment	0.000	1.235
	parental support	0.010	1.140
Social sciences (sociology, political science, social work, psychology…)	female	0.034	2.748
	father's education	0.000	0.741
	high-school awards	0.015	0.630
	household endowment	0.023	1.222
Economics and business administration	father's education	0.002	0.850
	household endowment	0.001	1.220
Law and public administration	rural	0.013	2.167
	household endowment	0.000	1.286
	parental support	0.023	1.140
	lack of ethics	0.061	0.950
	trust	0.013	0.903
Natural sciences (biology, chemistry, mathematics, IT, physics, geography)	rural	0.000	3.241
	father's education	0.007	0.857
	household endowment	0.000	1.266
	number of spoken foreign languages	0.000	0.449
	lack of ethics	0.001	0.902
	trust	0.031	0.914
Architecture and building industry	female	0.021	0.515
	household endowment	0.001	1.236
	lack of ethics	0.017	0.934
	trust	0.046	1.088
Education and physical education	female	0.004	3.228
	father's education	0.000	0.753
	high-school awards	0.001	0.573
	household endowment	0.003	1.248
	number of spoken foreign languages	0.047	0.646
	lack of ethics	0.004	0.895
Agricultural and environmental studies	rural	0.000	5.235
	number of spoken foreign languages	0.004	0.526
	lack of ethics	0.058	1.052
	trust	0.001	0.851
Engineering	female	0.000	0.165
	father's education	0.019	0.874
	trust	0.033	0.913
Category of reference: humanities LR = 447,46 (df = 90) $p < 0.001$, Nagelkerke $R^2 = 0.328$, Method: enter, step 1			

In the explanatory model of specialization choice, the household endowment is positively linked to the preference of any field of study other than humanities (including the fields of history, philosophy, theology and art). That is, the group of students with better socio-economic indicators are less likely to choose humanities.

The likelihood of choosing health sciences increases 1.23 times with the unit increase of household endowment, and 1.14 times with the unit increase of parental support – the reference category is humanities. The choice of social sciences is 2.74 times higher in the case of women and 1.22 times higher with the unit increase of the household endowment. The choice of economics and business administration specializations is 1.22 times higher with the unit increase of household endowment. The likelihood to apply for law and public administration specialization is increased by a rural background 2.16 times, the increase of household endowment 1.28 times, while parental support, 1.14 times. Choosing natural sciences is made 3.24 times more likely by the rural background, while by the unit increase of household endowment, only 1.26 times. The likelihood to choose architecture and building industry is made more probable 1.23 times by the unit increase of household endowment, and 1.08 times by trust. Women are 3.22 more likely to apply to education and physical education specializations, while the unit increase of household endowment makes the choice of education and physical education 1.24 more probable. The likelihood of choice of agricultural and environmental studies is increased 5.23 times by the rural background, while the lack of ethics by 1.05 times. In every case we chose the likelihood to apply for humanities as reference category.

The effects of the motivational factors have been analyzed in the case of the above mentioned specializations separately from the effects of the socio-economic background. The model did not indicate one of the motivational factors of further education as significant, that of the role of intellectual motives. The other factors explain a varying degree of probability from the point of view of further education at the different specializations.

Table 4: The likelihood of choice of different specializations in correlation with the factors of further education at the University of Oradea and the University of Debrecen – multinomial logistic regression

Specializations	The factors of further education (significant ExpB)					
	The mobility factor	**The factor of pursuing patterns**	**The factor of intellectual motives**	**The factor of contextual motives**	**The factor of relationship building**	**The factor of youth transition**
Health sciences (medical, pharmaceutical)			1.249			0.655
Economics and business administration	1.821	1.268				0.734
Law and public administration	1.858					0.730
Natural sciences		0.940	1.230	1.342	0.760	
Architecture and building industry	1.428					0.614
Education and physical education				0.712		

Specializations	The factors of further education (significant ExpB)					
	The mobility factor	The factor of pursuing patterns	The factor of intellectual motives	The factor of contextual motives	The factor of relationship building	The factor of youth transition
Agricultural and environmental studies	1.429			0.695		0.726
Engineering	1.977			1.522	0.766	
Category of reference: humanities LR = 226.61 (df = 54) $p < 0.001$ Nagelkerke $R^2 = 0.170$ Method: enter, step 1						

The likelihood of choice of different specializations of the students learning at the University of Oradea and the University of Debrecen was examined using multinomial logistic regression analysis, taking into consideration the factors of continuing education. For more clarity, we included only the significant explanatory factors in the table (Table 4). On this basis, we can see that with humanities as reference category, the factor of intellectual motives explains 1.24 times more likely the application to a health science faculty. Choosing economics is explained by the factor of mobility and pursuing patterns (i.e. the influence of significant others): the students prefer this specialization 1.82 and 1.26 times, respectively, over humanities. In applying to law and public administration, architecture, agricultural and environmental studies, as well as engineering, the factor of mobility is one of the most significant explanatory factors. The choice of an engineering specialization includes the factor of contextual motives as a significant explanatory factor, the students are 1.52 times more likely to prefer this program over humanities. Applying to natural sciences is made probable by the intellectual and contextual motives: the students are 1.23, and 1.34, respectively more likely to choose this specialization over humanities.

Thus, in the case of the University of Oradea and the University of Debrecen, the most significant explanatory factors among the indicators of socio-economic background is the endowment of the parents' household, parental support, gender, the level of education of the father, the type of settlement, as well as the number of awards received in high-school. The factors of mobility, pursuing patterns and that of intellectual motives make the choice of health sciences, economics, law, natural sciences and engineering more probable. The factor of contextual motives is significant in applying to engineering and natural sciences specializations. Choosing humanities is made more likely by contextual motives, relationship building and the factor of age change. In our analysis, these factors have outlined several tendencies regarding specialization choice, the reasons of which should be more thoroughly investigated.

Choice of specialization in smaller higher education institutions

In our sample, there is a total of 669 respondents learning in one of the three smaller higher education institutions. The educational offer of the Partium Christian University and that of the Emanuel University covers three main disciplines: humanities, social sciences and economics. In addition to the above, the College of Nyíregyháza offers training in natural sciences and education, as well as engineering specializations, these having been chosen by 82 respondents from this institution. In order to be able to

compare the patterns of specialization choice, our analysis contains only those specializations that are present in the educational offer of all of these three institutions. The motives of specialization choice are examined for humanities, social sciences as well as economics specializations in the three smaller higher education institutions, analyzing the behavior of 586 respondents.

Table 5: The distribution of the respondents from the Emanuel University, the Partium Christian University and the College of Nyíregyháza in the HERD sample by specialization (N)

	Higher education institutions			
Specializations	**Partium Christian University**	**Emanuel University**	**College of Nyíregyháza**	**Total**
Humanities	164	61	29	254
Social sciences	67	35	4	106
Economics	168	29	29	226
Total	**399**	**125**	**62**	**586**

Most of the respondents studying at one of the three smaller higher education institution have chosen humanities (254) and economics (226), while 106, social sciences. We examined the explanatory factors of specialization choice with multinomial logistic regression analysis in this case as well. Similar to the above, we determined the likelihood of choosing humanities as a reference category, shown in the table below (Table 6), along the quotients of probability to apply for other specializations.

Table 6: The explanatory variables of choice of specialization in smaller higher education institutions

Specialization choice in smaller higher education institutions		**B**	**Std. Error**	**Wald**	**df**	**Sig.**	**Exp(B)**
Social sciences (sociology, political science, social work, psychology…)	Intercept	−1.428	1.328	1.156	1	0.282	
	Rural	−0.199	0.341	0.341	1	0.559	0.819
	Female	**2.098**	**0.467**	**20.142**	**1**	**0.000**	**8.147**
	lack of ethics	0.047	0.045	1.116	1	0.291	1.048
	Trust	0.094	0.052	3.298	1	0.069	1.099
	father's education	−0.016	0.071	0.052	1	0.819	0.984
	high-school awards	−0.051	0.155	0.108	1	0.743	0.950
	number of friends	−0.103	0.065	2.513	1	0.113	0.902
	parental support	−0.128	0.070	3.407	1	0.065	0.880
	number of spoken foreign languages	**−1.3**	**0.288**	**20.401**	**1**	**0.000**	**0.273**
	cases of disadvantage	**0.429**	**0.177**	**5.885**	**1**	**0.015**	**1.535**
Economics	Intercept	−0.447	0.939	0.227	1	0.634	
	Rural	−0.262	0.260	1.014	1	0.314	0.769
	Female	0.004	0.258	0	1	0.988	1.004
	lack of ethics	**0.11**	**0.028**	**15.251**	**1**	**0.000**	**1.116**
	Trust	−0.02	0.035	0.335	1	0.563	0.980
	education of the father	−0.061	0.055	1.222	1	0.269	0.941
	high-school awards	−0.037	0.113	0.108	1	0.743	0.964
	number of friends	0.077	0.048	2.594	1	0.107	1.080
	parental support	−0.011	0.05[3]	0.04	1	0.841	0.989‡
	number of spoken foreign languages	**−0.563**	**0.191**	**8.71**	**1**	**0.003**	**0.570**
	cases of disadvantage	−0.088	0.139	0.401	1	0.527	0.916
Category of refesence: humanities LR = 100,.66 (df = 20) $p < 0.001$; Nagelkerke $R^2 = 0.254$; Method: enter, s|ep 1							

In the model above we had investigated the explanatory factors of specialization choice in the case of smaller higher education institutions, with humanities as reference category. As a significant result of the analysis we found that the likelihood to choose social sciences is 1.53 times higher with the unit increase of the number of disadvantageous situations, and 1.09 times higher with the unit increase of the level of trust. The number of spoken foreign languages, parental support and being a woman increases the probability to choose humanities. The likelihood to choose economics increases 1.11 times due to the lack of ethics, while the unit increase in number of spoken languages makes the choice of humanities more probable.

The decisional motives of specialization choice have been examined in the case of smaller higher education institutions including the factors of values and attitude towards learning. The table below (Table 7) summarizes these results (our reference category is the likelihood to opt for humanities in this case as well).

Table 7: The explanatory variables of choice of different specializations by system of values and attitude towards learning, in smaller higher education institutions

Specialization choice in smaller higher education institutions		**B**	**Std. Error**	**Wald**	**df**	**Sig.**	**Exp(B)**
Social sciences	Intercept	−0.975	0.178	30.118	1	0.000	
	values of the private sector	**−0.379**	**0.174**	**4.742**	**1**	**0.029**	**0.684**
	post-material values	**0.382**	**0.158**	**5.835**	**1**	**0.016**	**1.465**
	material values	0.044	0.172	0.066	1	0.798	1.045
	norm-breaking learning attitude	0.053	0.19	0.077	1	0.782	1.054
	goal-oriented learning attitude	**0.379**	**0.153**	**6.139**	**1**	**0.013**	**1.461**
	norm-following learning attitude	−0.119	0.138	0.742	1	0.389	0.888
Economics	Intercept	0.12	0.121	0.982	1	0.322	
	values of the private sector	−0.267	0.14	3.645	1	0.056	0.766
	post-material values	0.198	0.118	2.822	1	0.093	1.219
	material values	**0.532**	**0.141**	**14.309**	**1**	**0.000**	**1.703**
	norm-breaking learning attitude	**0.346**	**0.141**	**5.988**	**1**	**0.014**	**1.414**
	goal-oriented learning attitude	**−0.446**	**0.117**	**14.495**	**1**	**0.000**	**0.640**
	norm-following learning attitude	−0.161	0.118	1.866	1	0.172	0.852
Category of reference: humanities LR = 96.03 (df =12) $p < 0.001$ Nagelkerke $R^2 = 0.229$ Method: enter, step 1							

The choice of social sciences is explained to a significant extent by the factor of post-material values and of goal-oriented learning attitude: in both cases the likelihood of the students who identify with these values to prefer social sciences to humanities is 1.46 times higher. The likelihood to choose economics is 1.7 times increased by material values, while 1.41 times by norm-breaking learning attitude, thus the likelihood

for an individual to choose economics over humanities is significant in the case of these two value variables. Goal-oriented learning attitude and the values of the private sector have proven to be significant explanatory factors regarding applying for humanities.

Based on our data it seems that in the smaller higher education institutions, specialization choice is more directly affected by the objective factors of social background: increase of the financial status or level of education of the parents – the spoken foreign languages and the number of disadvantaged situations and more determining, but the effects of gender are also present. Including 'values' and the 'attitude towards learning' in the explanatory model has proven to be successful, because the outline of differentiated specialization choice patterns has become possible.

Conclusions

This paper was intended to examine the decision for pursuing higher education and career choice, correlated with the individual and social motivational context.

Larger HEIs (the Universities of Oradea and Debrecen) rather atract students from families of intellectuals (father with higher education level), with high socio-economic status (better equipped households), students who have more friends, speak several languages, possess more material values, whereas continuing education and university choice are correlated with the mobility factor and following the example of significant others. Objective factors of social context have an indirect influence and are important in the choice of specialization at smaller HEIs: the number of spoken languages and the origin from disadvantaged backgrounds of the student exceed the influence of the financial situation or parents' level of education, but the effects of gender cannot be ignored.

The results of the data regarding choosing majors unveil the following situation: while the probability of choosing a field of study related to humanities is high for respondents who are females, who come from rural areas and who have post-material values, the consistent growth of the mobility factor and of the father's education level determines the increase of the probability of choosing majors related to sciences. In the model of major choice, household endowment was related to increasing options for almost all areas, except humanities (history, philosophy, theology and arts).

Understanding students' choices has potential implications for practice, policy and research in the field of higher education. As there is an increasing competition for students among HEIs, a thorough understanding of the processes they use to make institutional selections is actually quite necessary (Bergerson, 2009).

The results presented above can be a pillar for career counseling and institutional development, through the provided information on factors that influence the choice to pursue higher education in a certain field of study, and also serves to enrich the results of empirical research on recruitment mechanisms of cross-border higher education institutions and on young students.

Notes

[1] The HERD research project was completed and financed within the framework of the Hungary–Romania Cross Border Cooperation Programme (HURO/0901/253/2.2.2.). The overall aim of the project was to analyze the role of higher education in strengthening social cohesion. The total size of the sample is 2,728. Further details about the project can be found on the project website – http://unideb.mskszmsz.hu/.

[2] Due to lack of space and for clarity we included only the significant explanatory variables in the table.

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