



Practical or theoretical persistence?: The investigation of (f)actors influencing students' persistence at three levels

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Abstract

Higher educational dropout is a major education policy issue that can be influenced by several factors. In addition to the family background, it is necessary to mention the motivation for further education as an individual factor which has a complex effect. Another possible individual cause can be the attractiveness of the labor market. Due to the ratio of students dropping out of higher education in Hungary, it can be suspected that students' intensive work contributes to weaker learning outcomes, resulting dropout finally. In this context, however, the decisive role of the different work values and working attitudes is also unquestionable. Other institutional factors

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such as the country of the institution or the type of financing of the training cannot be ignored as well. Accordingly, in our research, we investigated individual, institutional, and sociodemographic factors affecting persistence through the TESCEE 2015 ($N = 2015$) database. Factors influencing persistence were measured by linear regression analysis with the application of two-sample t -test to measure the between-group differences. Regarding socio-demographic factors, the father's educational level showed a significant impact on a negative while the mother's employment in a positive way, furthermore, gender presented a trend effect. Institutional factors by themselves are not remarkable; however, some individual factor can increase their impact. At the individual level, the significant effect of career office membership and work values could be detected. Our results can contribute to the recognition of the relationships behind the high ratio of dropout and the identification of factors that can promote persistence, which can support to reduce the dropout ratio at a national and international level.

Keywords: persistence, dropout, student employment, work values, learning motivation

Introduction

Nowadays, the ratio of employment is increasing among university students. They are allocating more time and resource to incorporate work into their daily routines. Employment while studying at the university is outstanding regarding future benefits; however, the present cannot be ignored at all. To become a graduate trainee, it is indispensable to acquire a qualification. Can this be accomplished when students are working and learning simultaneously? Initially, the representatives of the institutions considered work as a risk factor while more and more training started to consider it as an essential complementary step. Student employment can often be interpreted as a risk factor that strengthens social inequalities and also increases the risk of dropout by keeping students away from embedding into the university culture and community (Darmody & Smyth, 2008; Perna, 2012; Riggert, Boyle, Petrosko, Ash, & Rude-Parkins, 2006; Stiburek, Vlk, & Svec, 2017). However, some research claim that work has a positive effect on oral communication skills, teamwork; furthermore, it improves time management skills and students can expand their relationships and familiarity (Beerkens, Mägi, & Lill, 2011; Neill, Mulholland, Ross, & Leckey, 2004; Sanchez-Gelabert, Figueroa, & Elias, 2017). In addition, many forms of employment may even increase academic achievement and sometimes can even reduce inequality (Perna, 2012; Pusztai, 2011). The focus of our present research was on examining the various factors affecting persistence, investigating this phenomenon through the TESCEE 2015 ($N = 2015$) international database.

Student employment

The EUROSTUDENT VI (Maseviciute, Saukeckiene, & Ozolincute, 2018), which examines tertiary students in 28 European countries, states that 39% of students in Hungary work regularly during the semester and the ratio is similar in the neighboring countries (Figure 1).

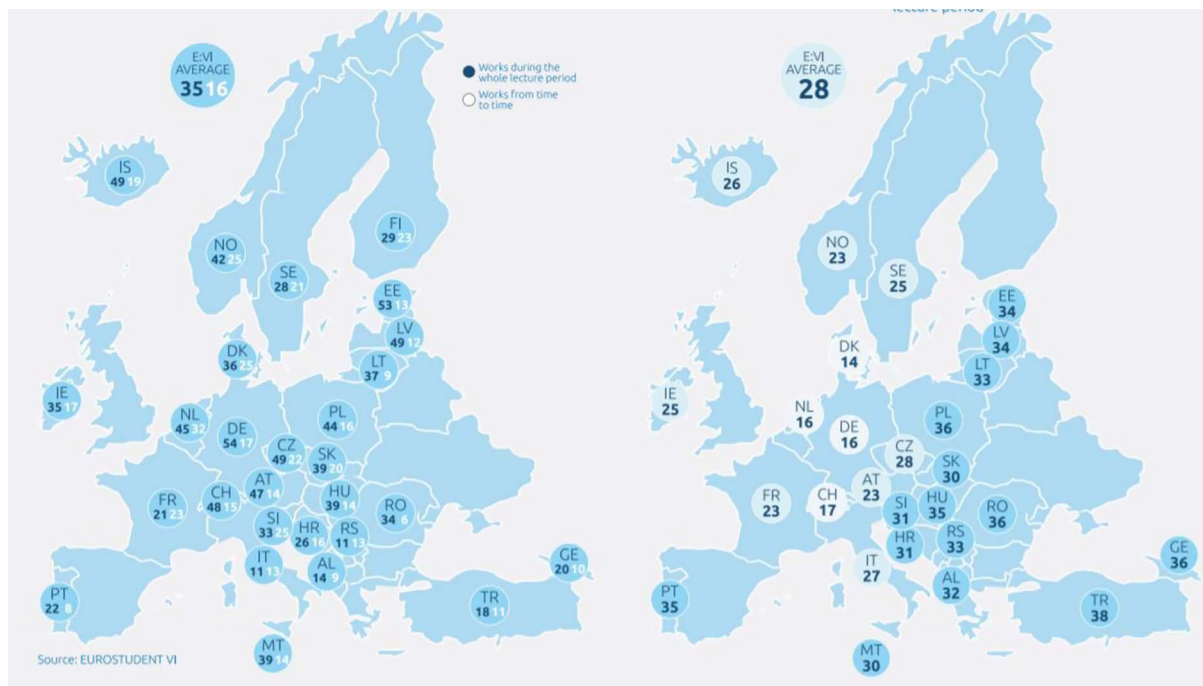


Figure 1. Working during seminars (%) and the average of working hours (%) according to EUROSTUDENT 2018 (Maseviciute et al., 2018)

In Slovakia, 39% of the students work while this ratio is 34% in Romania. The rate of occasional employment is much lower than that of the regular employment in the surveyed countries. Fourteen percent of the Hungarian students have casual work whereas this ratio is 20% in Slovakia 20% and 6% in Romania. This kind of job would be more compatible with higher educational studies as students would be exempted from university obligations. However, this form of work is less common among university students. The answer to the question why they work more during the semester must be searched behind the motivations. On examining the motivation for employment in different countries, it can be said that one of the most common motives is the finance of the tuition fees in the Balkan countries. In countries that support the participation in higher education (e.g., Denmark, Norway, Sweden, Finland, and Malta), students do not have to worry about paying tuition fee, can sustain themselves easier, and can improve their standard of living through work. In the survey, students had to assess four statements regarding the motivation of their paid work. In several countries (Italy, Czech Republic, France, and Georgia), the experience was more important than financial motivations. The primary motivation of students in the surveyed countries is to cover their living costs. Later, most people stated that paid work provides them to take part in higher education and another important motivational factor is work experience.

The least are working due to financially supporting somebody else. The financial reasons for student employment are dominant. A large percentage of working students are employed

for financial reasons; however, gaining experience is very important and highly valued too. The motives for paid work are in connection with the socioeconomic characteristics of students. Earning experience is more important for those whose parents have a higher educational level. Covering daily costs is crucial for those who live separately from their parents, who are older or whose parents have lower-level education. On average, the income of the paid work means less than half of the total budget of the students.

Regarding student employment, not only the frequency and motivation of work are important but also the intensity of work. Curtis and Shani (2002) have pointed out that students who work are more likely to miss the lectures. In three-quarters of the EUROSTUDENT countries, students work intensively, 28 hr per week on average regarding the whole sample. The number of working hours is the highest in Turkey where young people work 38 hr per week. Students work 36 hr in Romania and 35 hr in Hungary.

What is the amount of workload that does not cause a dropout risk? How does the work influence the student's achievement? Employment is a double-edged sword, as employing young people in the labor market can have long-term positive effects. Thus, one can earn income and generate higher revenue that can fulfill the current consumption needs. In addition, we can also mention the investment in the human capital of the future, about the acquisition of experience and the development of "soft skills." Simultaneously, the work encourages students to improve time management and personal efficiency. Long-paid working hours may have unpleasant consequences on the individuals' well-being, including fatigue or disorders caused by stress, injuries, and the lack of balance between work and life (Baffoe-Bonnie, County, & Golden, 2007). While McCoy and Smyth (2004) consider that the dropout rate is higher among students who have a long-term job, Darmody and Smyth (2008) state that the negative impact of part-time work appears only among those students who also have a long-term, permanent work.

In the survey made in 2018, it was also examined how the negative effects of work can appear in the students' life. Approximately 7% of students have discontinued their studies for at least 1 year. The Hungarian data are in accordance with the EUROSTUDENT average. In Romania, 5% of the university students have interrupted their studies while the lowest ratio could be experienced in Slovakia with 2%. A quarter of students interrupting the current training indicated that they had been passivized due to workplace reasons. Most of the students referred to the lack of motivation (31%) and financial difficulties (27%). In particular, students less than 30 years of age, males, and master (MA) students interrupted their studies and those who work more intensively compared to other students. In Hungary, 29% of students breaking their studies referred to workplace reasons, whereas only 20% of the students mentioned this reason in other countries.

EUROSTUDENT 2018 survey also reveals that student mobility is also highly influenced by student work during higher educational studies. The possible loss of paid work means the biggest obstacle that hinders working students, especially those who work intensively (over 20 hr a week), from continuing their studies abroad. Seventy percent of students in Hungary and Slovakia do not spend a shorter time abroad due to the loss of their job, whereas this ratio is almost 50% in Romania.

The choice of the institution can also be a further risk of dropout. According to Krezel and Krezel (2017), social factors such as institutional communication (printed brochures, advertisements, and web pages), parenting and parental background, family status, peer relationship, or social media have a significant impact on the students' motivation for institutional choice (see Avery & Hoxby, 2004; Perna & Titus, 2004; Veloutsou, Lewis, & Paton, 2004), but even on the dropout.

Work values in higher education

Work plays a crucial role in the survival of civilization. Work values can be influenced by several factors. This progress can be divided into two phases: the first cycle is pre-employment socialization, whereas the second one is related to the work experience. In the first period, mainly the family, the parents' occupational status, the schools and organizations, the media, and peer groups have a major impact on the development of work value of the youth. The second phase is often based on the previous phase, but some contradictions can be experienced between the first and the second stages as a result of certain influencing factors (starting a family, gifts, or opportunities).

Work socialization has intrinsic (internal) and extrinsic (external) motivational elements. Extrinsic motivation includes regular wage, good working conditions, and holidays. In this category, the focus lies on the instrumental nature of the work rather than on its own value. In contrast, intrinsic work values can be grabbed from the post-material side, so developmental opportunities, challenges, and performance principles can be motivational (Ester, Braun, & Vinken, 2006). Bocsi (2015) investigated work values among higher educational students through cluster and factor analysis. Both intrinsic and extrinsic motivational factors play an important role in the various faculties and their combination can be observed. Regarding the work values of the student, the extrinsic and intrinsic motivational forces cannot be separated. Regarding employment, students considered the elements of subsistence as the most important and their greatest lack could be seen in the field of effective work considerations.

The role of the national identity and the minority identity can be significant in terms of work values. Based on the Hungarian Youth 2012 database, Bocsi and Csokai (2015) compared the work values of Roma and non-Roma young people in Hungary. According to

their research results, it can be said that Roma youth prefer extrinsic motivational forces. Through a regression analysis, sociodemographic background variables (gender, parents' educational level, marital status, having children, financial status, age, and working in a full-time job) have also been measured, according to which the different attitudes roots not only in a particular economic or educational situation, but they also can be explained with special cultural codes. In this way, a difference can be seen in the case of cross-border students too. Besides altruistic working attitudes, career-centeredness and need for independence are likely for students living in the Southland. On the other hand, altruism, experience-centeredness, and relationship orientation play an important role in employment in Transylvania and in the Partium. Subcarpathian students are attracted to independent work in an independent and informal way, whereas in Upper Hungary (Felvidek), the independent and flexible work concept is characteristic. The students of East Hungary can be described with an experience and career-oriented approach above the average (Bocsi, Fenyves, & Markos, 2017; Pusztai & Markus, 2017).

Persistence

Persistence refers to the student's commitment to his/her study and to the educational institution. In contrast to dropping out, persistence has a positive meaning (Simpson, 2003). Dropout is always a negative outcome, suggesting that the student interrupts his/her studies and leaves the higher education institution without achieving the degree (Szemerszki, 2018; Miskolczi, Barsony, & Kiraly, 2018). Conversely, persistence is one of the activities that the student takes to successfully complete the studies. Accordingly, persistence is an indicator of academic achievement. The theoretical frame for most of the research on persistence and dropout is provided by Tinto's (1987) model. This suggests that persistence is the result of the student's scientific and social integration. Tinto's model helps in studying the relationship between the student, the faculty, and the persistence in several areas of education even far from traditional forms such as correspondence training or distance learning. According to Tinto's theory, mentoring programs support students to integrate into the society as well.

Research Questions

For the analysis, a database of an international survey collecting the data of students of higher educational institutions from four countries (Hungary, Romania, Ukraine, and Serbia) was applied (TESCEE 2015, $N = 2015$). The number of participants was created proportionately to the students' number of the institutes and faculties during the planning of the sample, thus on the second class of BA and second class of executive education 20%, on the first class of MA, and the fourth class of executive education 50% of the sample were planned. Strata constructing of the teacher students and other departments was done. The random selection of these groups guaranteed the effectiveness of the

randomization (Pusztai, Bocsi, & Cegledi, 2016). Concerning the normal distribution of the data, linear regression was applied to measure the impact of the different variables, two-sample *t*-tests were applied for measuring the differences between the groups, and factor analysis was used to categorize the work values.

Our research questions were the following:

- What kinds of impacts have the social background variables on persistence?
- What is the impact of the aspirations toward learning and working abroad on persistence?
- What is the impact of further education motivation on persistence?
- What are the effects of the different work values on persistence?

Our dependent variable in the research was persistence thus the commitment to studies. Its components were the following: university research group membership, National Scientific Students' Associations Conference essay and/or poster, lecture or poster presentation on a conference, demonstrator commission, scientific publication, merit scholarship, educational grants, intermediate-level complex language exam, advanced-level complex language exam, own creation (e.g., program, application, invention, and artistic work), award of a talent development program of a university/college, membership of a talent development program of a university/college, scientific scholarship, and republic scholarship. Independent variables included the different social background variables (gender, country of the institution, educational level and employment of the parents, and objective and subjective financial situations) and the type of the finance of the training as an institutional variable. To measure the objective financial status, a new variable was first created by merging the capitals listed in the questionnaire and then converting the prepared scale into a dummy variable, where two groups were created so the group of students with capital above the average and those with capital below the average. In addition, as individual variables, the plan of learning or working abroad, career office membership, professional curriculum vitae (CV) in both Hungarian and foreign languages, external and internal motivation, and the different working attitudes were applied.

External and internal motivational factors were created by expert scaling. The following statements were determined as external motivation: "to find a profitable job," "to have a better chance of reaching a leadership position," "to join the labor market quickly," "do not have to work yet," "to follow the family pattern," "to follow my friends' example," "to accept the advice of my parents or my teachers," and "do not have to pay a tuition fee." The statements of internal motivation were the following: "to have a recognized profession," "to increase my knowledge," "to extend relationships," and "to learn in my mother tongue." Similarly to the objective capital, in the case of motivation, a combined

Table 1. The results of the factor analysis during the categorization of the working attitudes (TESCEE 2015, N = 2015)

	Social	Individualist	Deliberate careerist	Bureaucrat
Work gives the opportunity to help others	0.703			
Work is useful for my close community and for the society	0.665			
Work requires responsible	0.646			
To meet with people	0.563	-0.209		
To be able to work as a member of a team	0.524			
Work should be performance-oriented	0.464			
Most decisions can be taken individually	0.422			-0.333
Colleagues should be friendly and helpful	0.373	-0.313		
Work should be hectic and diverse	0.356	-0.216		
Workplace should have a good climate		-0.912		
Work should be interesting		-0.676		
Work should provide success	0.221	-0.590		
Work should be secure (small chance of dismissal is low)			0.693	
Work should provide a high salary			0.691	
Work should provide good opportunities for promotion			0.657	
Where it is free to decide when to work				-0.707
Work should not be arduous				-0.491

scale was transformed into a dummy variable. Motivation in and below the average level and motivation above the average have been separated regarding both external and internal motivations.

To create the working attitudes, factor analysis was applied (maximum likelihood method with Varimax rotation, cumulative variance is 30.92%, KMO: 0.894), according to which four working attitudes could be categorized entitled social, individualist, deliberate careerist, and bureaucrat. Table 1 introduces the basis of our categorization.

Results

To measure the effect of the different variables, multistep linear regression analysis was applied (Table 2). In the first four models, the effects of the social background variables (gender, country of the institution, parents' educational level and employment status, and objective and subjective financial status) were measured. In our fifth model, we

Table 2. The results of the linear regression analysis (TESCEE 2015, N = 2015)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Gender	.186	.183	.129	.129	.130	.101	.098	-.018
Cross-border institution		.078	.188	.188	.189	.133	.112	.027
Father's educational level			.336***	.345***	.359***	.249**	.271**	.330***
Mother's educational level			.075	.080	.072	.129	.122	.151
Father's occupational status			.129	.143	.131	.097	.082	.028
Mother's occupational status			.210*	.227*	.221*	.171	.155	.117
Objective financial status				-.044	-.037	-.063	-.064	-.062
Subjective financial status				-.027	-.029	-.061	-.072	-.121
Type of finance					.058	.109	.131	.230*
Plan of living/working abroad						.132	.145	.088
Career office membership						.133	.127	.187
Hungarian CV						.166	.167	.163
Foreign language CV						.190	.191	.194
External motivation							-.017	.004
Internal motivation							-.081	-.093
Social working attitude								-.179
Individualist working attitude								.189
Deliberate careerist working attitude								.064
Bureaucrat working attitude								-.361***
Constant	.000	.000	.003	.003	.041	.223	.162	.163
R ²	.035	.041	.220	.223	.226	.339	.344	.434

Note. CV: curriculum vitae. Codes of the involved variables: male = 1; Hungarian institution = 1; father has a university/college certificate = 1; mother has a university/college certificate = 1; father is employed = 1; mother is employed = 1; objective financial status above average = 1; subjective financial status above average = 1; duty of paying tuition fee = 1; plan of work abroad = 1; career office membership = 1; Hungarian CV = 1; Foreign language CV = 1; external motivation above average = 1; internal motivation above average = 1; social working attitude above average = 1; individualist working attitude above average = 1; deliberate careerist working attitude above average = 1; bureaucrat working attitude above average = 1.

* $p < .05$. ** $p < .01$. *** $p < .001$.

introduced the financing form of the training as an institutional variable. Finally, through three further models, we analyzed the role of foreign aspirations, higher educational learning motivation, and the role of working attitudes as individual variables.

During the introduction of our models, we first summarize the results of the two-sample t -tests. As the second step, we compare their results to the results of the linear regression to see whether the connections disappeared or they still exist.

In our first model, we examined the effects of gender. The two-sample *t*-test did not show any significant difference ($p = .444$), the mean of the persistence among women was 4.75 points ($SD = 2.46$) and 4.85 points among males ($SD = 2.98$). Based on the results of the linear regression analysis, this gender difference does not have a significant impact ($p = .080$); however, a positive effect can be measured at a tendency level for the advantage of the males.

In our second model, we examined the impact of the country of the higher educational institution. According to the *t*-test, the mean of the persistence of students studying in Hungary is 4.46 points ($SD = 2.62$), whereas that of students studying in cross-border institutions is 5.13 points ($SD = 2.59$). The difference between the two groups is significant ($p < .001$). The stronger engagement of students of cross-border institutions who learn in their mother tongue thus in Hungarian can be explained by the narrower possibility for choosing an institution and the more intensive Hungarian identity (Csernicsko & Soos, 2002; Gereben, 2005; Joo, 2017; Molnar & Orosz, 2007; Markus, 2014; Marton, 2015). However, the impact of the country of the higher education institution on persistence was not significant ($p = .464$) in the second model of the linear regression.

In our third model, the effect of the parents' educational level and their employment status were measured. Based on the two-sample *t*-test, it can be stated that the level of persistence of students having a graduate father was 4.81 points ($SD = 2.5$), whereas the mean of the children of non-graduate fathers was 5.12 points ($SD = 2.68$), showing a significant difference between the two groups ($p = 0.044$). In the case of a father, the lack of higher educational certificate is presumably a negative sample for the students, encouraging them to study in higher education. Previously, it could be claimed on the basis of the Hungarian Youth Research that while the proportion of higher education students whose father does not have a tertiary degree is increasing, the ratio of the children of fathers with a tertiary level certificate is decreasing (Bauer & Szabo, 2005). The average of the students with a graduate mother was 5.34 points ($SD = 2.82$), whereas the average of the children of non-graduate mothers was 4.65 points ($SD = 2.44$), and the difference between the two groups is significant ($p < .001$). Previous literature reviews also confirm that the children of graduate mothers are more engaged and motivated (Pusztai, 2015). The mean point of students whose mother was employed was 4.85 ($SD = 2.56$), whereas those having an unemployed mother had 4.94 points on average ($SD = 2.50$), although the difference is not significant ($p = .535$). With regard to the mother's educational level, the mean of the children of the graduated mothers was 5.18 points ($SD = 2.75$), whereas the mean score of those having a mother without a higher educational degree was 4.63 points ($SD = 2.43$), measuring a significant difference between the two groups ($p < .001$). Concerning the father's employment status, the mean

of students having an unemployed father was 4.81 points ($SD = 2.50$), whereas those whose father was employed reached 5.12 points on average ($SD = 2.68$). The difference between the two groups was significant ($p = .044$). Based on the results of the linear regression, the father's educational level was significant ($p = .002$), having a positive impact on persistence, which stayed significant after the involvement of the individual and institutional variables as well. In addition, the mother's occupational status showed a significantly positive effect ($p = .045$); however, this disappeared with the involvement of the individual variables. The effect of the mother's educational level ($p = .487$) and the father's employment ($p = .202$) was not significant. This result is similar to that of Hungarian and international studies (e.g., Bauer & Szabo, 2005; Pusztai, 2015). However, it is partly surprising because some of our previous studies showed the positive effect of the mother's educational level (e.g., Bocsi, 2015; Pusztai, 2015).

In our fourth model, the effect of further demographic background variables was investigated through the analysis of the possible changes caused by the subjective and objective financial status. In the t -test, the mean of the persistence of students who could be described with an objective financial status above the average had 4.85 points ($SD = 2.53$), whereas the mean of those who can be characterized with an objective financial status below the average was 4.55 points ($SD = 2.75$). The difference between the two groups was significant ($p = .010$). In the case of the subjective financial situation, we could state that the students having a subjective financial status above the average had a higher persistence with 5.01 points on average ($SD = 2.62$), whereas those above the average subjective financial status had a lower persistence with 4.81 points ($SD = 2.43$), although the difference is not outstanding ($p = .096$). However, based on linear regression, it can be concluded that none of the mentioned variables had a significant impact on persistence (objective financial status: $p = .694$; subjective financial status: $p = .804$). The explanation of the results can be the reason that the pattern of the parents can have a stronger impact on persistence and motivation compared to the financial resources (Morvai, 2015).

In our fifth model, we investigated the effect of the type of financing as an institutional variable. The mean persistence of students learning in state-funded education was 4.87 points ($SD = 2.62$), whereas the mean of those who must pay a tuition-fee was 4.15 points ($SD = 2.31$) and the difference between the two groups was significant ($p < .001$). Regarding the results of the linear regression, we could conclude that the type of financing does not have a significant impact on persistence ($p = .585$) even with the involvement of the variables related to foreign aspirations (working/living abroad, career office membership, CV in Hungarian and/or foreign languages; $p = .301$) or the motivational factors ($p = .254$). However, after including working attitudes, its impact became

significantly positive ($p = .047$). This effect is not surprising as students learning in self-paid education are more committed to the training (Engler, 2016; Kiss, 2015).

In our sixth model, the investigation of the aspirations toward living and working abroad was carried out. The mean of the persistence of students with the plan of studying and working abroad was 4.90 points ($SD = 2.60$), whereas the mean of those without this plan was 4.86 points ($SD = 2.57$); however, there is no significant difference between the two groups ($p = .775$). The mean of the persistence of students who are members of a career office was 5.81 points ($SD = 3.26$), whereas the mean of non-members was 5.56 points ($SD = 2.74$), although the difference between the two groups was not significant ($p = .585$). The persistence of students having a Hungarian CV was 5.80 on average ($SD = 2.84$), whereas the mean of those without a Hungarian CV was 3.94 points ($SD = 2.15$), pointing out a significant difference between the groups ($p < .001$). Furthermore, the mean point of students with a foreign language CV was 6.21 ($SD = 2.95$), whereas the mean of those without a foreign language CV was 4.25 points ($SD = 2.33$), showing an outstanding difference between the two groups in this case as well ($p < .001$). Regarding the results of the linear regression, however, no significant effect could be detected for any of the mentioned variables (studying/working plan abroad: $p = .100$; career office membership: $p = .188$; CV in Hungarian: $p = .150$; foreign language CV: $p = .105$), although a tendentious positive effect of career office membership can be seen after the involvement of working attitudes ($p = .063$). The explanation for this can be that students who are more engaged are more active, future-oriented, and they usually plan their future more consciously, which can lead to career membership. Career offices also offer practical places and jobs for students that are connected to their profession. Previous research has also claimed that working on the campus can increase the student's participation and integration into the life of the institution (Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1998). Students working at a university or campus are more engaged and have a closer relationship with the university compared to those who do not work (Umbach, Padgett, & Pascarella, 2012).

In our seventh model, we measured the effect of the external and internal motivational factors regarding further education. The mean of the persistence of students who can be described with external motivation above the average was 5.10 points ($SD = 2.59$), whereas the mean of those having the level of external motivation below the average was 4.85 points ($SD = 2.51$), showing an outstanding difference ($p = .055$). Regarding internal motivation, it can be said that the mean of having internal motivation above the average was 4.91 points ($SD = 2.56$), whereas those with that below the average reached 5.08 points on average ($SD = 2.64$); however, the difference between the two groups was not significant ($p = .181$). During the linear regression, none of the two variables demonstrated a significant impact (external motivation: $p = .884$; internal motivation:

$p = .471$). We can state that the value/role of the higher educational degree has changed in the labor market because the companies and employers tend to carry out their special internal training. For example, the transformation of the labor market has reshaped the system of skills required from the youth, and as a result, teaching methods and curricula slowly become restructured (Pusztai et al., 2016).

Finally, our eighth model contains the impact assessment of the four work values. In the two-sample *t*-test, students who can be described with social attitudes above the average reached 5.10 points on average ($SD = 2.51$), whereas the mean of those with social attitudes below the average was 4.98 points ($SD = 2.61$), the difference between the two groups was not significant ($p = .399$). Regarding individualist work value, students above the average scored 4.91 points on average ($SD = 2.58$), whereas those below the average reached 5.14 points ($SD = 2.54$), but the difference was not significant ($p = .104$). Concerning deliberate careerist work value, students above the average had 5.13 points ($SD = 2.67$), whereas those below the average had 4.94 points ($SD = 2.44$), showing no significant difference ($p = .178$). Finally, in the case of bureaucratic working attitudes, it can be seen that students who can be characterized with this value above the average reached 5.15 points on average ($SD = 2.51$), whereas those having this below the average scored 4.91 points ($SD = 2.61$), with a tendentious difference ($p = .082$). According to the results of the linear regression, only the effect of the bureaucratic work value showed a significant effect in the negative direction ($p = .008$), whereas in the case of the social ($p = .191$), individualist ($p = .210$), and deliberate careerist values ($p = .642$), no outstanding effect could be pointed out. Based on the bureaucratic factor, we can hypothesize that the lack of responsibility and autonomy has a negative influence on persistence (Kuslits, 2015).

Conclusions

In the past decades, significant changes could be experienced in higher education. The private service sector is continuously expanding while the support of the state is decreasing. This increases the competition in higher education where students themselves also became “customers” (Altbach, Reisberg, & Rumbley, 2009).

In our research, the attention was drawn for the examination of the different individual, institutional, and social factors influencing persistence, investigating the question within an international research. Accordingly, external and internal motivational factors were created at first while the categorization of the different work values of the current sample was done; creating four groups entitled the groups of social, individualist, deliberate careerist, and bureaucratic work values. The impact assessment was performed by linear regression analysis.

Regarding social factors, gender showed only a tendentious positive effect, indicating the higher persistence of men. Concerning educational level, the role of the father was significant while concerning the employment status, the role of the mother showed an outstanding effect. Students whose father does not have a higher educational certificate were significantly more persistent and the same is true for students whose mother is employed. In the case of a father, the lack of a diploma may be considered as a negative sample that increases the persistence of students. Having a mother with a higher educational degree has a similar effect on persistence. Controversially, mother's educational level was not significant although the mean of the persistence was obviously higher among the children of graduate mothers. Similarly, the impact of the father's occupational status was not significant at all, although the difference between the two groups is conspicuous. Regarding financial background, neither objective nor subjective financial status showed a significant impact on persistence, even though the persistence of students who declared a financial status above the average was clearly higher.

Measuring the institutional level, the impact of the country of higher education institution was not significant, although the achievement of students studying in cross-border institutions was higher.

In the background, we can hypothesize the stronger engagement of students learning in cross-border institutions in Hungarian-language training besides their narrower possibilities for choosing the appropriate institution and their more intensive Hungarian identity (Csernicsko & Soos, 2002; Gereben, 2005; Joo, 2017; Molnar & Orosz, 2007). Investigating the impact of financing, we could conclude that it has no significant impact by itself and this is not influenced by foreign aspirations or motivational factors; however, it is significant by taking the working attitudes into account. In this case, accordingly, the persistence of self-paid students was significantly higher; thus, it could be seen that students in paid training were more committed to the completion of the training.

Finally, individual factors were involved, first through the impact assessment of the aspirations of foreign studies and work, i.e., plan of working/studying abroad, career office membership, and the possession of Hungarian and/or foreign language CV. None of the mentioned variables had a significant effect, only a tendentious (but not significant) positive effect could be seen in the case of career office membership by the involvement of the work values. This latter indicates the changed value of the labor market. Concerning motivational factors, it could be concluded that neither internal nor external motivation has a significant impact on persistence, which was also confirmed by the result that no outstanding difference could be detected between students below and above the average motivation. However, we should remark that it can be a frequent situation that this choice is the one and only possible way of further studies in a minority situation. Regarding work

values, the impact of bureaucratic work value was conspicuous as students having this kind of value above the average could be described with a higher level of persistence, while the lack of responsibility and autonomy seems to have a negative impact on persistence.

One of the biggest advantages of our investigation is that we measured the effect of the higher educational institutes, which has hardly been examined (besides the traditionally investigated sociodemographic explanatory factors). The special geographical region where the investigation was made is important to be highlighted. Students were measured from four Central-Eastern European countries in the frame of the study. Participants learning not in Hungary were those Hungarian students living mostly in minority status. They live in a peculiar political and ethnic environment. Almost 200 people were asked, but the number of indigenous minority Hungarian students is lower than the number of those of the majority Hungarian students. Thus, the results cannot be generalized for the students of the other countries because the students have been investigated only in one region neighboring Ukraine and Romania.

On the basis of our results, it can be seen that persistence is influenced by several factors at more levels mentioning that of the social background, the institutional effect, or even the individual level. In our research, we wanted to contribute to the reduction of the dropout ratio through the exploration of the connections and factors supporting persistence. Individual and institutional impacts introduce us that there is no single totally good practice to reduce dropout or to increase persistence. However, at the same time, we can make a significant contribution to the improved academic achievement and the completion of the studies with the assessment of the characteristics of the institution and its students.

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All authors had full access to all data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. KEK contributed to study concept and design, statistical analysis, and study supervision. ARD contributed to study concept and design, statistical analysis, and interpretation of data. ZsK contributed to study concept and design, analysis, and interpretation of data. KP and TSz contributed to study concept and design and interpretation of data. JP contributed to study supervision.

Ethics

The study procedures were carried out in accordance with the Declaration of Helsinki. The Institutional Review Board of the Institute of Educational and Cultural Sciences (University of Debrecen) approved the study.

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