



Global University Entrepreneurial Spirit Students' Survey

# Entrepreneurship intentions and activity of students in Hungary

Global University Entrepreneurial Spirit Student's Survey 2016

National Report

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## 1. Summary

Small and medium-sized enterprises (SMEs) are of high importance to economic growth (Blanchflower, 2000; Carree et al., 2002; Carree & Thurik, 2010), primarily through their favourable effects on knowledge spillover (Acs et al., 2005). Also, they play a significant role in innovation (Papanek et al., 2009). As early as 1980s small-sized enterprises started to play an outstanding role in lowering the rate of unemployment, which had considerably increased due to downsizing and restructuring activities in large companies (Audretsch & Thurik, 2001).

Currently, decision-makers are also attempting to seek solutions for the problem of unemployment which grew considerably during the financial crisis of 2008 and the following economic recession. They believe that entrepreneurship as a career opportunity can be a viable solution also to youth employment. That is why encouraging entrepreneurship and promoting entrepreneurial activities are considered to be high priority issues.

The aim of the GUESSS research, which started in 2003, was to analyse students' entrepreneurial intentions and formulate recommendations on entrepreneurship to decision makers. This issue is still topical, since an increasing number of higher education institutions are participating in this project. In 2016 over 122,000 student responses were received from 50 countries. In Hungary higher education institutions with over 1,000 students received the questionnaire and 8,766 responses were filled in. This study investigates students' career expectations after graduation and five years thereafter, their preferences related to choice of work and their expectations regarding future working conditions.

The key findings of this study are as follows:

- Students studying in higher education in Hungary intended to work as employees after graduation (86.1%) and exhibited low entrepreneurial intentions. However, as for five years after graduation, the attractiveness of the employee status decreased and entrepreneurial intentions increased among students (36.4%).
- The survey data showed significant differences in entrepreneurial intentions across gender. Female students exhibited lower entrepreneurial intentions irrespective of time.
- There are also significant differences by fields of study. Economics and business students were the most open to entrepreneurship and students of social sciences were the least open to this.
- Family was a determining factor in entrepreneurship. Family business background influenced students' entrepreneurial intentions, since respondents raised in a business environment were more likely to undertake risks and additional responsibilities related to starting up a company.
- The services provided by universities and the entrepreneurial university ecosystem in general significantly contributed to the increase in entrepreneurial intentions of students.
- The changing character of the younger generation of students requires the application of new communication methods and new practises not only in education,

but also within firms in order to enhance knowledge transfer and to improve the quality of work.

According to researchers investigating future, the current labour market has already witnessed a number of major changes and will demand new skill sets in the future. Future skills demand will significantly depend on the types of jobs to be performed and new working conditions. The demand for making the labour market more flexible is increasing both among firms and employees. A possible way of making employment more flexible is to further promote entrepreneurship and self-employment. Entrepreneurial intentions of Hungarian students are currently lower than their international peers'. Perhaps, students of today will have a predetermined labour market status. Thus, the enhancement of entrepreneurial intentions should be an economic policy priority.

The economic policy should attempt to update the regulatory framework for entrepreneurship. In addition, education policy makers need to tailor their programs to the changed characteristics the new generation of students and elaborate new knowledge-transfer solutions, which are more practical-oriented. Students, who do not intend to pursue entrepreneurial careers, are less interested in entrepreneurship programmes and courses. Consequently, it would be worth considering increasing the number of economic and financial courses to students who have different majors.



## **2. The GUESSS research methodology**

The GUESSS research project started in 2003 and is coordinated by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG).

### ***Aim of the Research***

The international research project GUESSS (Global University Entrepreneurial Spirit Students' Survey) investigates entrepreneurial intentions and activities of students. In order to have a better understanding of the start-up process, the survey explores the career intentions of students both immediately after graduation and several years later, examines families' and students' own businesses and investigates their future entrepreneurial visions. Using a systematic and long-term analysis, it helps identify the processes and factors that can be decisive in entrepreneurial intentions.

The primary aim of this research is to identify the individual motives and personal background traits that significantly affect the process of entrepreneurship. The study makes it possible to analyse the impact of cultural and institutional factors on start-up activities. Within the framework of the research, it is also possible to identify the types of services and programmes that higher educational institutions offer to students to support the students' entrepreneurial intentions and the ways to create an entrepreneur-friendly environment. Due to the international character of the research, the surveyed universities can be compared at both national and international levels.

### ***Surveys***

The survey is conducted every second year. The first survey was conducted in 2003 with the participation of two countries. Since then the international character of the survey has grown and the circle of countries and universities participating in the research has constantly been expanding (Table 1.). In 2016 as many as 50 countries joined the project and 122,509 students answered the questionnaire. In Hungary only the institutions where over 1,000 students studied were selected for the survey. Finally, 9,367 Hungarian students filled in the questionnaire, and 8,766 answers were suitable for analysis.

The questionnaire provides an opportunity to follow particular changes across time, and to understand the underlying factors. Moreover, with the growing numbers of participating universities and countries, there is more room for geographical comparisons.

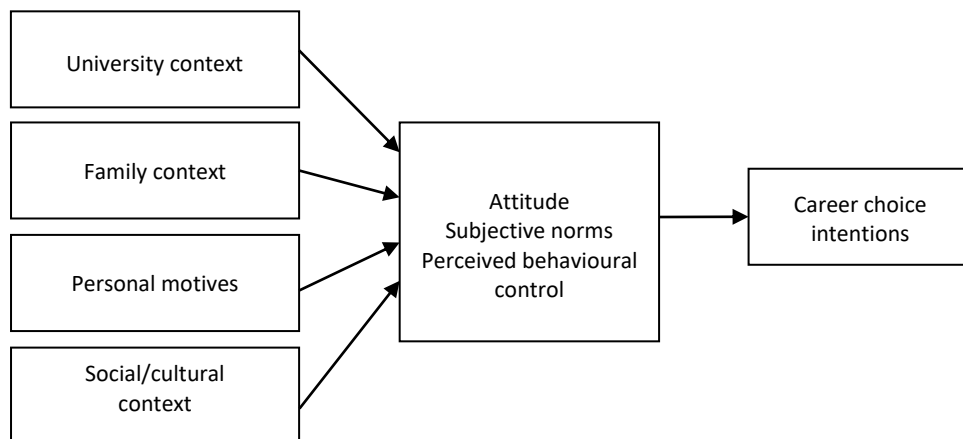
**Table 1. Participants of the surveys between 2003 and 2013**

Year	Number of countries	Number of students	Title of the research
2003	2	N/D	START
2004	2	5,000	International Survey on Collegiate Entrepreneurship (ISCE)
2006	14	37,000	International Survey on Collegiate Entrepreneurship (ISCE)
2008	19	63,000	Global Entrepreneurial Spirit Students' Survey (GUESSS)
2011	26	93,000	Global Entrepreneurial Spirit Students' Survey (GUESSS)
2013	34	109,000	Global Entrepreneurial Spirit Students' Survey (GUESSS)
2016	50	122,509	Global Entrepreneurial Spirit Students' Survey (GUESSS)

Source: <http://www.guesssurvey.org>

### ***Theoretical Framework of the Research***

The theoretical framework of the GUESSS research is based on Ajzen's Theory of Planned Behaviour (Ajzen 1991) (Figure 1.)



**Figure 1. Theoretical framework of GUESSS 2013/2014**

Source: Sieger et al. 2014

One of the main ideas of Ajzen's Theory is the difference between intentions and behaviours. If there is a serious entrepreneurial intention, it does not necessarily mean that the entrepreneurial activity will be pursued and an enterprise will be set up. Intentions depend on the attitudes towards behaviour, subjective norms and the perceived behavioural control. Actual pursued activities cannot be expected without serious intentions. Objective factors such as available financial resources and opened-up opportunities (money, time, etc.)

that are required for carrying out intentions also influence business activities. These factors are termed as actual control in the revised Ajzen's Theory model (Ajzen, 2006). According to this model, there is a direct positive relationship between the entrepreneurial attitude and the willingness to start up a business. The more favourable a person's attitude toward entrepreneurship is, the stronger the intention to run an enterprise is. A supporting social environment is also nourishing for entrepreneurial intentions. Thus, the more positively the individual's environment reacts to his entrepreneurial intention, the more likely he will show willingness to start up his own business.

The third factor, the perceived control over events, has also a direct influence on the individual's intention to start up an enterprise, and can also have a significant effect on his behaviour. The impact of the perceived behavioural control on intentions and actions is twofold. Firstly, the more an individual feels that he is in control of his surroundings, the more likely he is to be in favour of starting up his own venture. Secondly, self-efficacy also has a positive effect on entrepreneurial spirit. The more the person feels that he has acquired the appropriate skills and knowledge to start up an enterprise, the more likely he is to think that his own business can be launched.

Also, the individual's personality, family background, macro- or microenvironment and the higher educational institution the individual attended significantly influence the factors listed above. Higher education plays a considerable role in knowledge and skills transfer needed for starting and running a successful business, in enhancing entrepreneurial intentions and in mitigating negative factors (unfavourable financial situation, disadvantaged family background, etc.) Apart from testing the factors in the Ajzen model, the questionnaire also focuses on these variables.

### **3. Short Introduction to the Database of 2016**

The database contains responses of 8,766 students studying in Hungarian higher education institutions.

Besides the most important demographic characteristics (gender, age, nationality), this chapter focuses on the composition of respondents by higher education institutions, fields and levels of study. Table 2 shows the distribution of Hungarian respondents by higher institution.

Regarding nationality, 97.3 per cent of the respondents were Hungarian. Foreign students were mostly Slovakian, Romanian, Ukrainian and Serbian.

**Table 2. Distribution of respondents by higher education institution**

Name of the institution	Number of questionnaires	Distribution
Budapest Business School	1289	15,51
Budapest Metropolitan University	5	0,06
Budapest University of Technology and Economics	15	0,18
Corvinus University of Budapest	548	6,59
Dennis Gabor College	109	1,31
Edutus College	1	0,01
Eötvös Loránd University	13	0,16
Eszterházy Károly University Eger Campus	225	2,71
Eszterházy Károly University, Gyöngyös Károly Róbert Campus	84	1,01
John von Neumann University, Kecskemét	133	1,60
John von Neumann University, Szolnok	11	0,13
Károli Gáspár University of the Reformed Church in Hungary	5	0,06
Kodolányi János College	130	1,56
Óbuda University	2	0,02
Pázmány Péter Catholic University	3	0,04
Semmelweis University	843	10,14
Széchenyi István University	1296	15,59
Szent István University	620	7,46
University of Debrecen	3	0,04
University of Dunaújváros	227	2,73
University of Miskolc	851	10,24
University of Nyíregyháza	1	0,01
University of Pannonia	628	7,56
University of Pécs	281	3,38
University of Szeged	945	11,37
University of West Hungary	21	0,25
Other	22	0,26

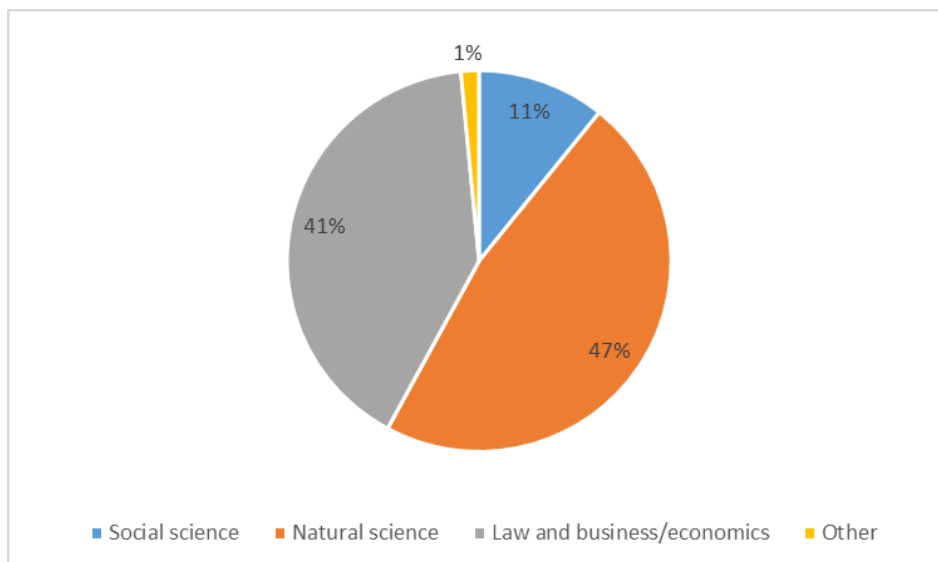
Source: authors

### *Distribution by Field of Study and Level of Study*

As for the field of study, 40.6 per cent of the respondents studied law or business and economics. 47.1 per cent of them studied natural sciences, and the remaining ratio of students studied social sciences.<sup>1</sup>

<sup>1</sup> Social sciences: Arts / Humanities (e.g., linguistics, cultural studies, religion, philosophy, history); Science of art (e.g., art, design, dramatics, music); Social sciences (e.g., psychology, politics, educational science)

Natural sciences: Engineering (incl. computer sciences and architecture); Human medicine / health sciences; Mathematics and natural sciences; Aricultural science



**Figure 2. Distribution by fields of study**

Source: authors

**Table 3. Distribution by levels of education**

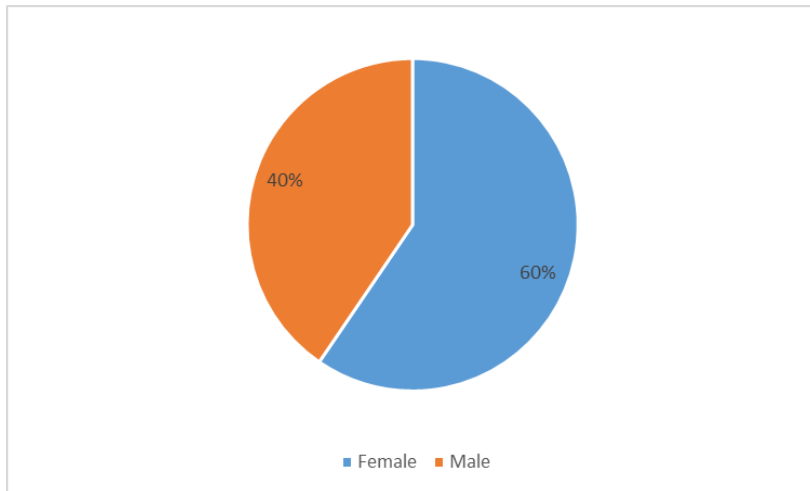
	Frequency	Per cent
Undergraduate (Bachelor)	6316	72.1
Graduate (Master)	1347	15.4
Other (e.g., PhD, MBA)	1052	12.0
seen, but not answered	51	0.6
Total	8766	100.0

Source: authors

The vast majority of respondents were BSc students (72.1 per cent), while the MSc students amounted to 15.4 per cent.

#### *Distribution by Gender*

Regarding the respondents' gender, the sample contains a larger female ratio (59.55 per cent). The male-female ratio reflects the gender characteristics of Hungarian higher education.



**Figure 3. Distribution of Respondents by Gender**

Source: authors

### *Age Profile*

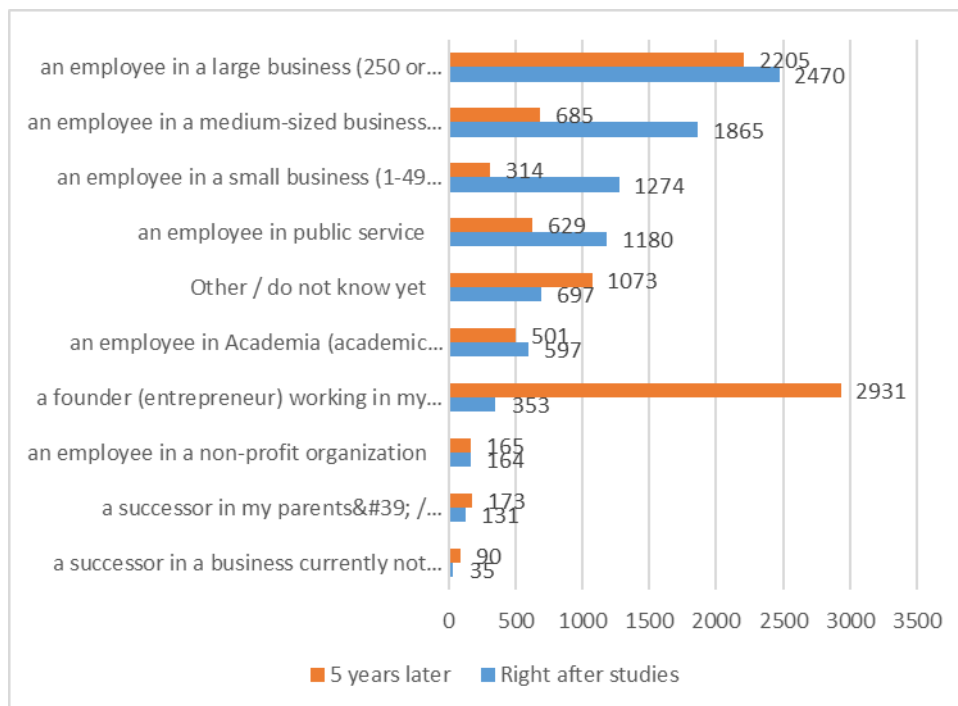
About 7.38 per cent of all respondents were born in 1980 or earlier. In addition, 75.86 per cent were born after 1990 and were younger than 26 when filling out the questionnaire.

## 4. Career Choice intentions

In Question 3 students were asked about their career aspirations after graduation. The responses to this question and to its additional variable computed from the original question and containing four attributes (Employee, Founder, Successor, Other<sup>2</sup>) highlighted the differences in career aspirations arising from three partially significant variables. They are as follows: gender, fields of study and family business background. Figure 4 shows different career-choice intentions of students.

A significant proportion of students (5,609 students, 64 per cent) reported that they intended to work either for a large or a small and medium-sized company. They preferred working for a large company. Public service employment was also attractive among respondents. All in all, 86.1 per cent of the students intended to become employees after graduation.

When asked about the situation five years after graduation, the attractiveness of employee status decreased and the appealing force of business life increased (to 36.4 per cent). The responses revealed that students wanted to gain experience as employees first and start a business of their own afterwards.



**Figure 4. Career aspirations right after graduation and five years after studies**  
(Number of students)

Source: authors, N=8766.

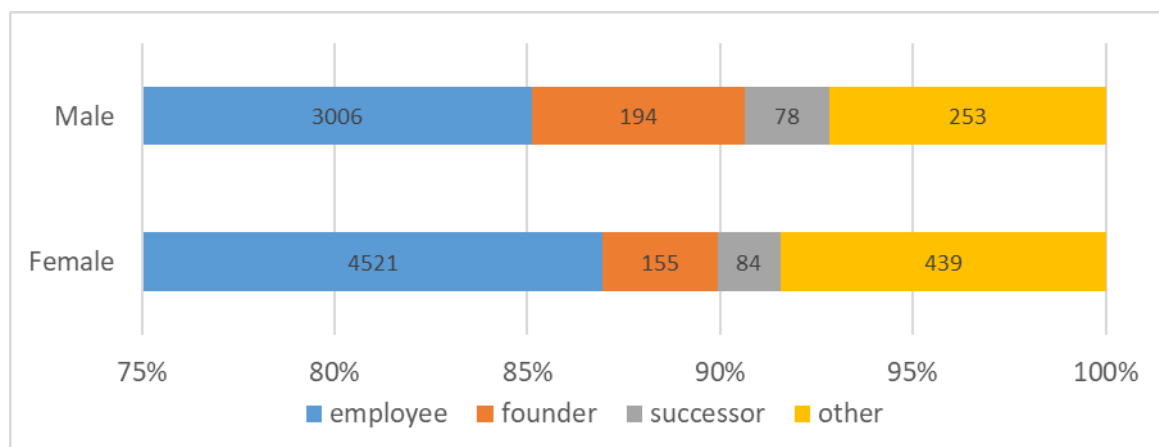
<sup>2</sup> Employee: in a small firm (1-49 employees); in a medium-sized firm (50-249 employees); in a large firm (250 or more employees); in a non-profit organization; in academia (academic career path); in public service. Founder: working in my own firm. Successor: in my parents'/family's firm; in a firm currently not controlled by my family. Other: Other / do not know yet.

## Differences by Gender

Gender significantly influenced the career-choice intention of students. Figure 5 and Figure 6 show the differences in career-choice intentions of the respondents by gender. The data clearly show that there was no change in gender variations regarding career-choice intentions right after studies or five years later:

- Almost the same ratio of women would like to work as employees as men (87 per cent in case of women and 85,1 in case of men). However, women preferred working in the civil service sector and for large companies (This preference remained hidden in Figure 6 and Figure 7 because of the aggregated data). The civil sector's ratio (sum of an employee in a non-profit organization, in Academia and in public service answers) in case of women amounted to 26.2 per cent, in case of men this ratio accounted to 16.2 per cent right after studies.
- Women's intention to found a business of their own or to take over a firm lags behind that of men, independently of the time horizon.
- More female respondents indicated 'other' or 'do not know' than men, which can probably be explained by traditional gender roles played by women and men in a family and by the larger ratio of women since women usually give higher priority to (future) family than to professional lives or careers.

The responses showed that the attractiveness of the employee status decreased and the appealing force of business life increased in both genders five years after graduation. The ratio of students who chose the 'other' option increased, especially among women. Five years after completing their studies, many women will have reached the age when they may be thinking of having children<sup>3</sup>.

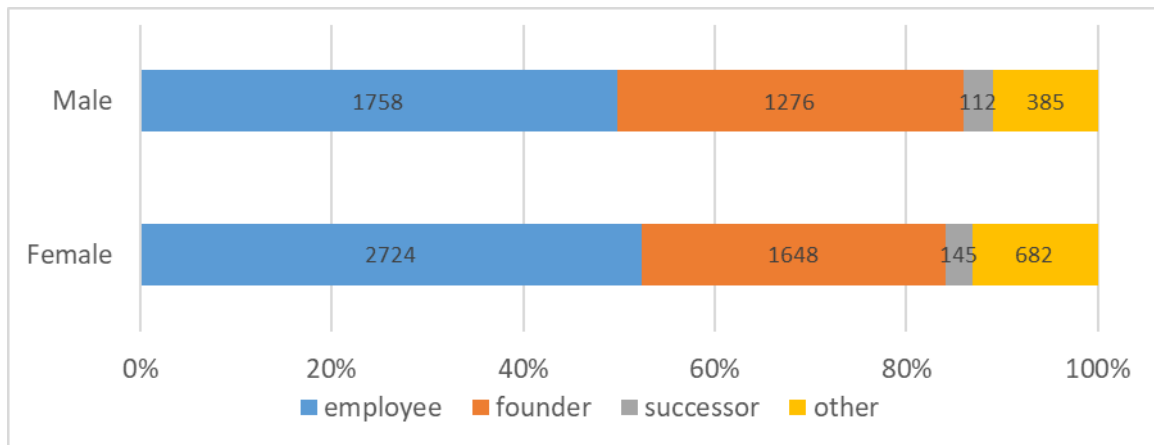


**Figure 5. Career aspirations right after studies by gender (%)**

Source: authors

<sup>3</sup> The average age of mothers at the birth of their first child among women with a degree amounted to 30.9 in Hungary in 2010.



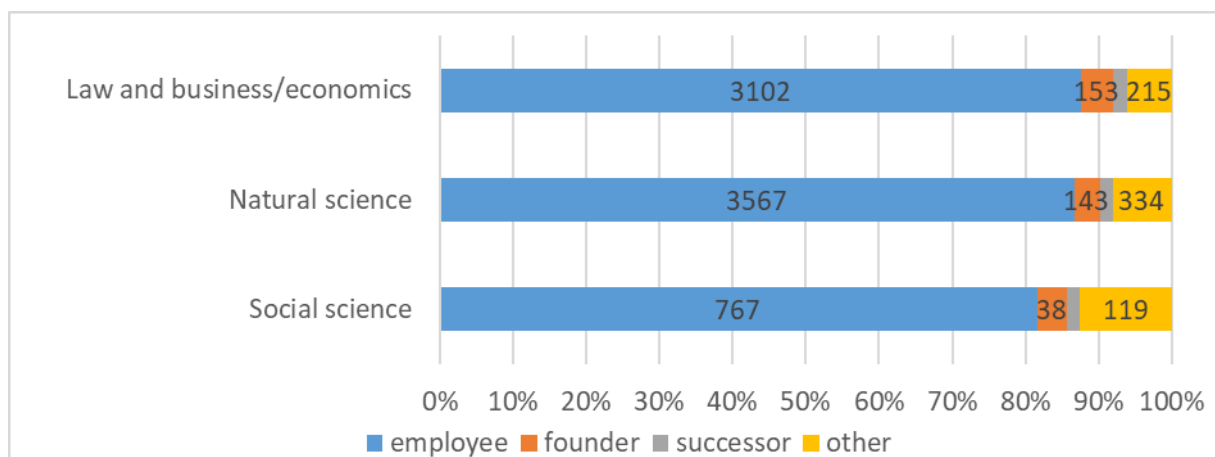


**Figure 6. Career aspirations five years after studies by gender (%)**

Source: authors

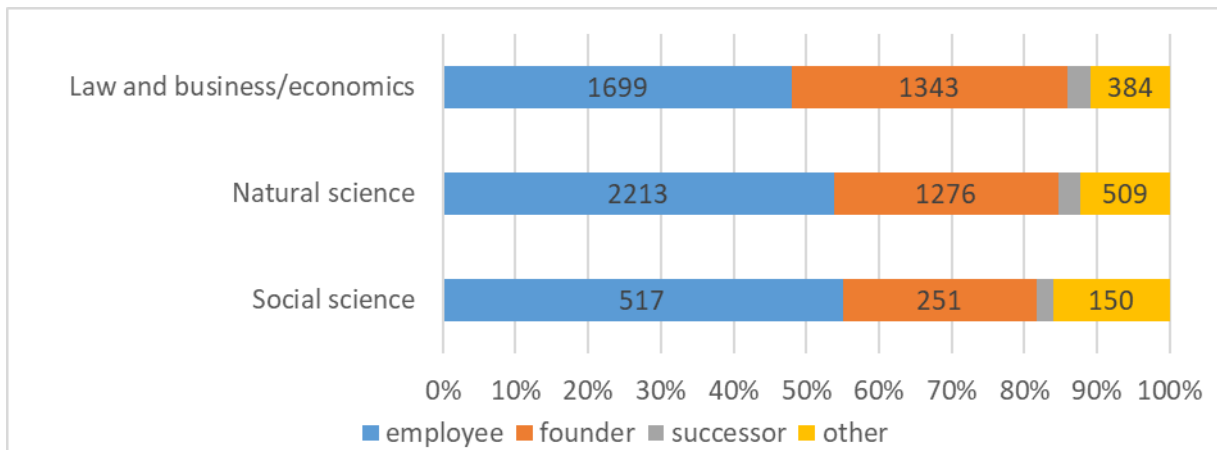
### ***Differences by Fields of Study***

The analysis of the career aspirations by fields of study revealed that the ratio of students who did not chose professional careers or the ratio of students having no clear intentions was significantly higher in social sciences compared to those studying business and economics and well as natural sciences irrespective of the time horizon. (See Figure 7 and Figure 8). This may be explained by poor employment rates, low wages and unclear career paths in these areas. Surprisingly, the ratio of respondents who preferred working as employees right after studies was the highest among law and business/economics students. Also, an entrepreneurial career is the most attractive among these students. This result overlaps with recent research findings about Polish students' entrepreneurial intention (Wach, Wojciechowski, 2016).



**Figure 7. Career aspirations right after graduation by fields of study (%)**

Source: authors



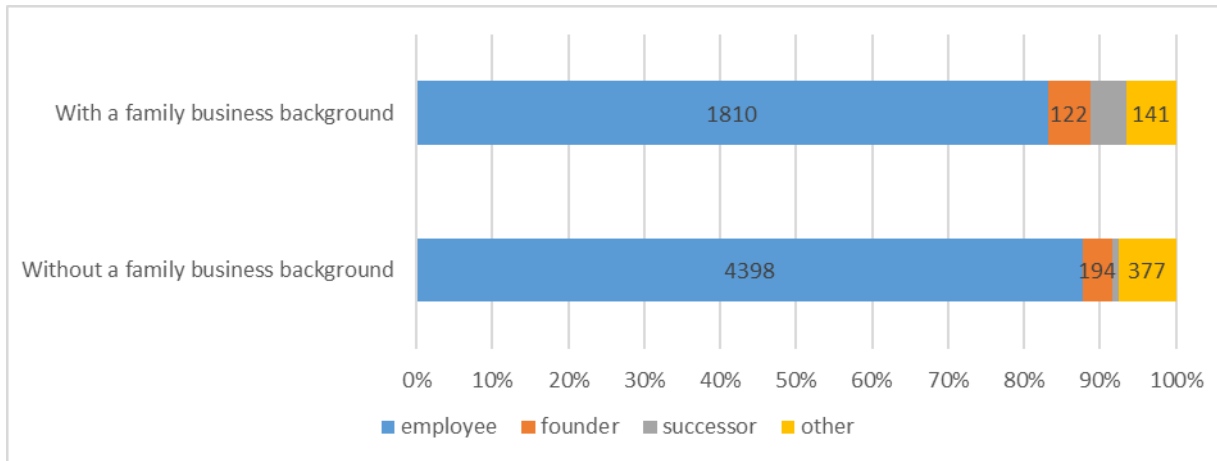
**Figure 8. Career aspirations five years after graduation by fields of study (%)**

Source: authors

Behind the apparent data match, there are characteristic differences that the aggregated data fail to show. These differences stem from the judgement of corporate employment status by training areas. Students of social sciences preferred the career of a public servant (48.2 per cent right after studies and 35.3 after 5 years), whereas law and economics/business students favoured employment in a company (the ratio of public employment is only 12.3 right after graduation and 8.4 five years later). This difference in preferences remained even five years after graduation, despite the fact that the ratio of those who intended to start or take over a company increased in all three fields of study.

### ***Family business background***

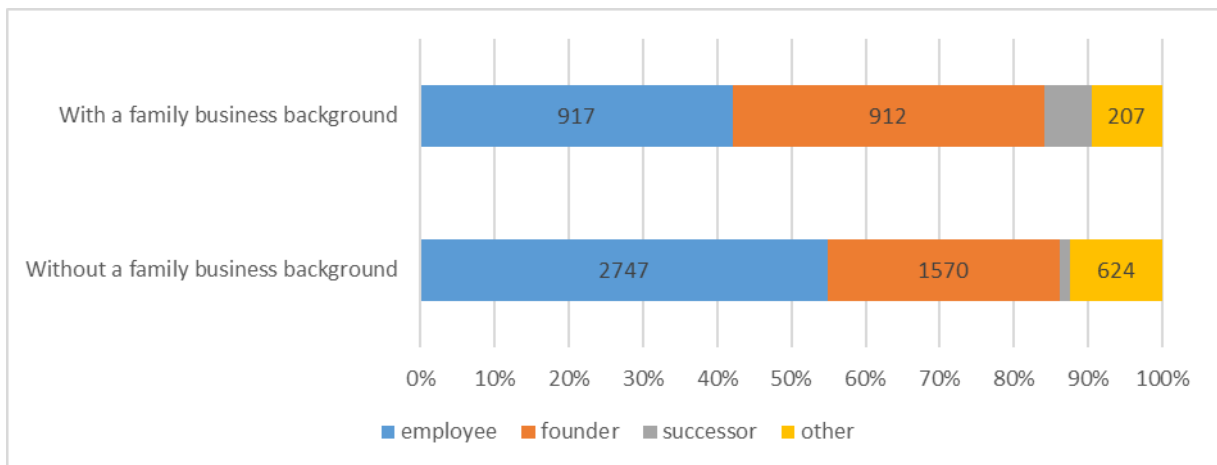
The family business background also shaped career aspirations and business start-ups. The survey results showed that business experience of parents had the greatest impact on the respondents' career aspirations. Figure 9 and Figure 10 illustrate career aspirations by parents' business background. The term 'parents' business background' referred to a state in which one parent (or both) was self-employed or had a majority stake in a business at the time when the survey was conducted. If a student came from a family that had no previous business experience, his chances of favouring employee status over being an entrepreneur increased. Also, this fact enhances the possibility of uncertainty ('do not know') in future career plans.



**Figure 9. Career aspirations right after studies by family business background (%)**

Source: authors

The results of the survey revealed that a family business background increased the probability of respondents' becoming an entrepreneur, either as a founder or as a successor, irrespective of time horizon. The lack of such experience increase not only the probability of employment preferences, but also the respondents' uncertainty regarding their career choice intentions ('other/do not know').



**Figure 10. Career aspirations five years after studies by family business background (%)**

Source: authors

As for five years after studies, the intention of becoming an entrepreneur increased even among students without a family business background. However, the family background greatly influenced the respondents' career aspirations five years after studies, and the difference between the two groups remained the same as right after studies.

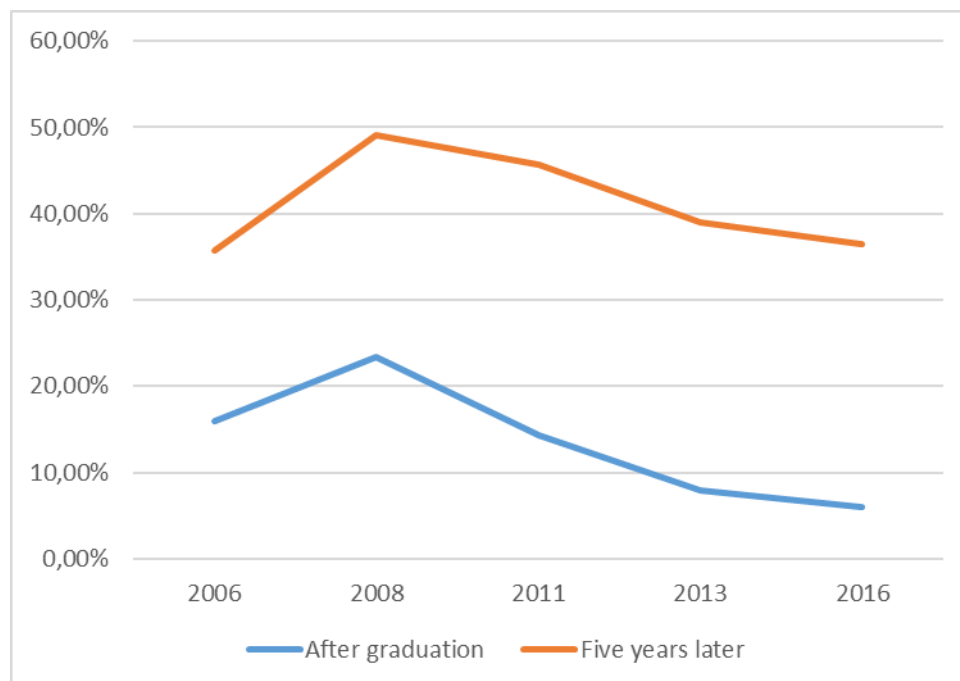
## 5. Changes in career motives over the last years

The periodic data collection allows monitoring entrepreneurship potential across time. The figure below shows the rate of students with start-up intentions as a percentage of all respondents in the last five databases, which makes the analysis of the last ten years' trend possible.

The figure shows that students have different career plans after graduation and five years later. The ratio of students, who intend to become entrepreneurs five years after graduation is significantly higher than the data related to career intentions immediately after graduation. The responses revealed that students wanted to gain experience as employees first and start a business of their own afterwards.

Also, the results revealed changes in attractiveness of the entrepreneurial career from year to year. In 2006 about 16 percent of respondents intended to run their own business after graduation. Five years later 36 percent of students wanted to become entrepreneurs. A significant increase in entrepreneurial intention was experienced until 2008. After that in 2011 and in 2013 as a response to economic and financial crises, business start-up intentions dramatically dropped.

In 2016 the ratio of students with entrepreneurial intention considerably was lower than in previous years (5,9 percent), but the responses related to intentions five years after graduation exceed the value of 2006.



**Figure 11. Students with start-up intentions as a percentage of all respondents**

Source: authors

Changes in the characteristics of the new generation may have changed career motives of students and contributed to decreasing students' entrepreneurial intentions

This research revealed that a challenging job has become less important for young people. The longed power to make decisions, which became an important motivation in the last years, will not necessarily be achieved within the framework of entrepreneurship (Gubik, Farkas 2016).

## 6. Youth entrepreneurship

### *Main characteristics of the students' enterprises*

In the sample 5.7% of the respondents (500 students) indicated that they ran a business of their own. Over 17% of the respondents running their own businesses were nascent entrepreneurs and had established their businesses in the year when the survey was conducted (2016) (Table 4). The rate of enterprises that were 3 years old or younger amounted to almost 50%. Since a major part of enterprises were new or established not long ago, the students did not have much experience.

**Table 4. Student enterprises by year of establishment**

	Year of establishment	Frequency	%	Valid %	Cumulative %
Valid	2016	72	0,82	17,35	17,35
	2015	66	0,75	15,90	33,25
	2014	64	0,73	15,42	48,67
	2013	38	0,43	9,16	57,83
	2012	29	0,33	6,99	64,82
	2011	49	0,56	11,81	76,63
	2010	4	0,05	0,96	77,59
	2009	15	0,17	3,61	81,20
	2008	12	0,14	2,89	84,10
	2007	9	0,10	2,17	86,27
	2006	5	0,06	1,20	87,47
	2005 and earlier	52	0,59	12,53	100,00
	Total	415	4,73	100,00	
Missing	System	8351	95,27		
Total		8766	100,00		

Source: authors

Almost half of the students running their own businesses were self-employed, 49.3% owned micro enterprises and 4.4% had small-sized enterprises.

**Table 5. Student enterprises by company size**

		Frequency	%	Valid %	Cumulative %
Valid	Self-employed (0 employees)	191	2,18	46,36	46,36
	Micro enterprises (1-9 employees)	203	2,32	49,27	95,63
	Small enterprises (10-49 employees)	18	0,21	4,37	100,00
	Total	412	4,70	100,00	

Missing	System	8354	95,30		
Total		8766	100,00		

Source: authors

Table 6 shows the distribution of students' enterprises by activity areas and company size. The most popular sectors are 'Financial services' (14.6), 'Trade' (14.3%) and 'Information technology (IT) and communication (incl. software & IT services)' (8.7%).

The self-employed students were the most active in 'Financial services (incl. banking, insurance, investment, real estate)' (17.8%).

Most micro-enterprises operated in 'Trade' (17.9%) and 'Financial services (incl. banking, insurance, investment, real estate)' (11.4%). In the sample out of the 18 small-sized enterprises six operated in 'Trade' and three in 'Education and training'.

The high rate of self-employed students indicates how valuable this student group is. However, self-employed students rarely become entrepreneurs who operate ventures with substantial growth rates.

**Table 6. Student enterprises by sector (%)**

	Self-employed	Micro enterprise	Small enterprise
Advertising / Design / Marketing	8,9	3,0	0
Agriculture	4,2	3,0	0
Architecture and Engineering	4,2	4,0	5,6
Construction	1,0	8,5	11,1
Consulting (HR, law, management, tax)	6,3	6,5	0
Education and training	9,9	7,0	0
Financial services (incl. banking, insurance, investment, real estate)	17,8	11,4	5,6
Human health and social work activities	8,9	6,5	0
Information technology (IT) and communication (incl. software & IT services)	8,4	9,5	5,6
Manufacturing	0,5	2,5	11,1
Tourism and leisure	3,7	5,5	5,6
Trade (wholesale/retail)	9,4	17,9	33,3
Other services (e.g., transportation)	8,4	7,5	5,6
Other	7,9	7,0	16,7
left unanswered	0,5	0,5	0
Total	100,0	100,0	100,0

Source: authors

## ***Performance and future plans***

As far as company performance is concerned, 63.2% of entrepreneurs reported that the sales revenues covered the costs of their businesses. They were satisfied with their entrepreneurial career and with the business they were running.

The surveyed entrepreneur students had to compare themselves with their competitors. The majority of respondents generally considered that they had similar or moderately better performance than their competitors. When the company sizes were analysed, it turned out that the respondents who owned larger companies compared favourably with their competitors. (Table 7). The weakest performance was reported in case of job creation.

**Table 7. Company performance compared to competitors**

	<b>Mean</b>	<b>Self employed</b>	<b>Micro enterprise</b>	<b>Small enterprise</b>
Making profit	4,35	4,19	4,57	4,22
Sales growth	4,28	4,16	4,43	4,28
Market share growth	4,01	3,84	4,13	4,56
Job creation	3,41	3,07	3,66	4,22

(1=worst, 7=best)

Source: authors

The family business background played a significant role in students' career aspirations (Gubik, 2013, Gubik & Farkas, 2014). In the sample 39.6% of student entrepreneurs had parents or other family members who were entrepreneurs compared with 29,6% of students with non-family business backgrounds. The satisfaction of student entrepreneurs with family business background was higher than those of students without such a background.

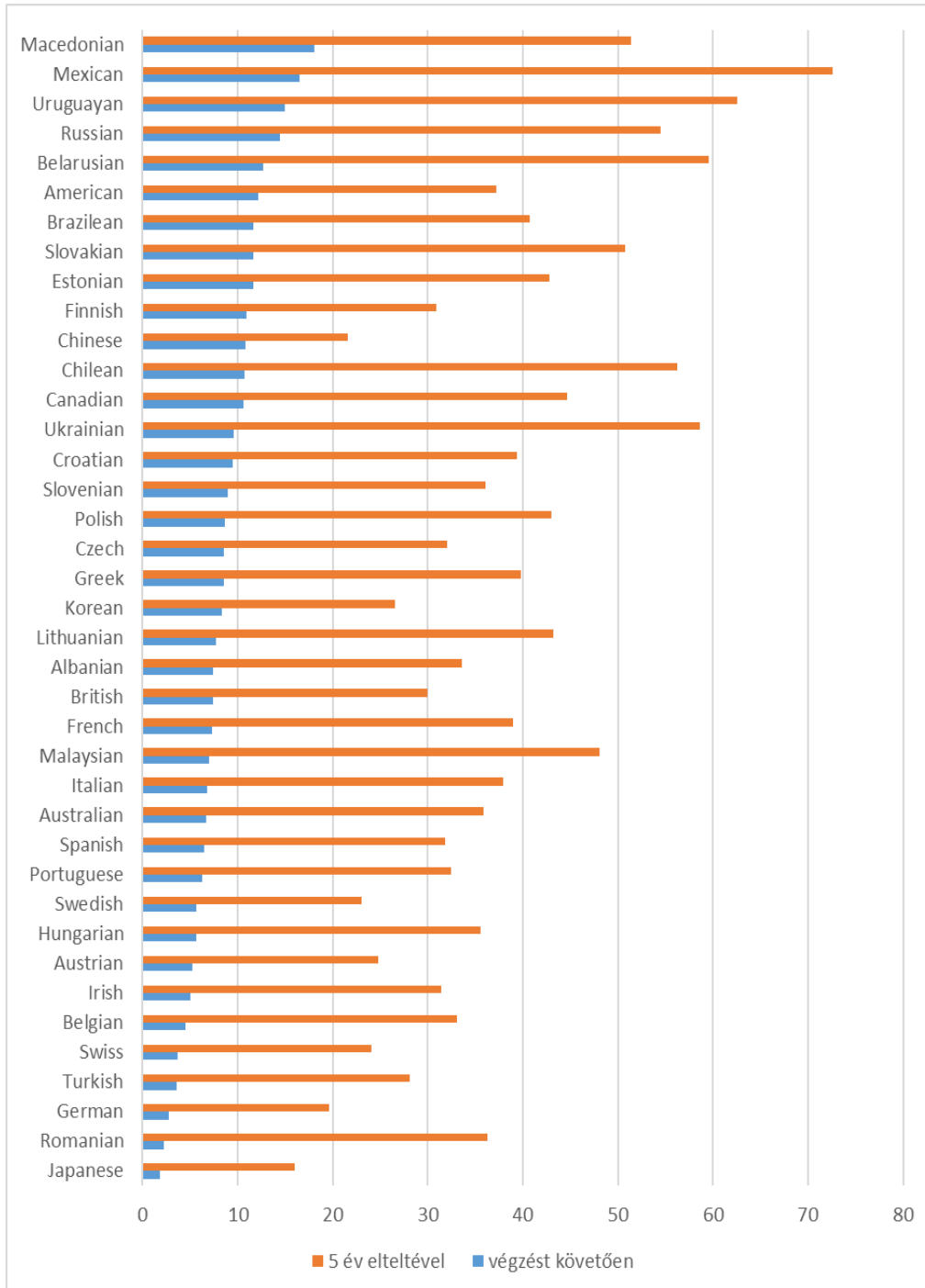
Only 43.6% of respondents considered their current entrepreneurship to become the main occupation after graduation. This ratio was higher among students with family business backgrounds.

As for intentions of active entrepreneurs after graduation, 61% of them intended to work as employees, 6.7% had an intention to work as successors and 29.5% reported that they intended to found a new firm.



## 7. International comparison

Students' entrepreneurial intentions are currently low in Hungary compared to international values. The Visegrad Countries (Czech Republic, Slovakia and Poland) and also the EU member countries have higher values.



**Figure 12. International comparison of entrepreneurial intention**

Own elaboration

The reasons of the experienced differences are manifold. Mazzarol identifies nine elements which may influence entrepreneurship. They are as follows: economic policy, regulatory system and infrastructure, financing, culture, mentor and supporting system, universities, education and training, human capital and local and global markets (Mazzarol, 2014)

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