



Entrepreneurship intentions and activities of students in Hungary

Global University Entrepreneurial Spirit Student's
Survey 2018

National Report

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Summary

The entrepreneurial process plays a crucial role both in economic growth and job creation. As early as 1980s small-sized enterprises started to play an outstanding role in lowering the rate of unemployment, which had substantially increased as a result of downsizing and restructuring activities in major companies at that time (Audretsch & Thurik, 2001). Decision-makers made considerable efforts in seeking solutions for easing unemployment which further grew during the financial crisis of 2008 and the economic recession that followed. Encouraging entrepreneurship takes a central place in innovation policy (OECD, 2010). Also, the changing labour market resulting from the latest technological trends requires entrepreneurial human capital.

Almost all international organizations deal with the issue of entrepreneurship and seek ways how to increase entrepreneurial activities of young people. The Missing Entrepreneurs (OECD / EU 2015), jointly published by the OECD and the European Union, summarizes key economic policy recommendations with the aim to encourage entrepreneurship among young people (as well as among women and the elderly). The Entrepreneurship 2020 Action Plan identified three areas of intervention. The first is the enhancement of education and training, with the emphasis on developing an entrepreneurial environment and setting role models. Higher education institutions are expected to go beyond mere knowledge transfer. According to the action plan, they must become entrepreneurial in the future.

Young people's entrepreneurship differs from other age groups'. The research conducted by GEM (Global Entrepreneurship Monitor) found that this young-age group is 1.6 times more likely to become entrepreneurs than the older generation (Schot et al., 2015). Both the proportion of actual start-ups among young entrepreneurs and the survival rate of their companies are lower than those of older generations' (OECD 2015). The surviving companies are more growth-oriented (Schrör, 2006). Higher education graduates establish their enterprises in higher value-added sectors (e.g. high-tech industries) and invest a higher amount of initial capital (Richert-Schiller, 1994, citing Lüthje-Franke, 2002).

This paper focuses only on students studying in higher education institutions despite the fact that they make up only a special subset of the youth population. In 2018, the Hungarian questionnaire was sent to all higher education institutions offering training to over 1000 students and 9,667 valid responses from 19 institutions were received.

Key findings:

1. The majority of young people currently studying in Hungarian higher education institutions intended to work as employees after graduation (84.9%), and entrepreneurship was not really attractive to them. Five years after graduation the attractiveness of the employee status decreased and entrepreneurial intentions increased to 40.7% among students.
2. Women, irrespective of time, had lower entrepreneurial intentions and preferred working in the public sector to finding employment in the corporate sector.
3. Economics and business students were most open to starting a business of their own. Whereas students of social sciences were the least willing to becoming entrepreneurs. Entrepreneurship education and the universities' entrepreneurial environment in general had a stimulating effect on students' start-up ideas.
4. Family entrepreneurial experiences had a positive impact on students' business start-up plans. Students who grew up in an entrepreneurial environment were more likely to undertake risks and additional responsibilities related to starting up a company.
5. A significant proportion of young entrepreneurs currently in business are self-employed and many consider their business as a financial source for their studies and do not plan to pursue it after graduation.

The intention to start a business is low among Hungarian students, which compares unfavourably with other countries. Young people's career prospects lag behind the real labour market situation. Also, future trends further erode the utopia of well-paid multinational jobs. Both companies and employees have a growing demand for flexible labour market solutions. In addition, the sharing economy and digital platforms are playing an increasingly important role in the economy since they create new markets, produce new job opportunities and are forecast to have a major societal impact. As a result, those who are now at school may no longer be able to influence their labour market status.

Economic policy of governments influences young people's preparedness and successful entrepreneurial processes since they shape the framework conditions for entrepreneurship. Also, education can promote start-up processes by developing specially tailored curricula and methodological innovations. Students, who do not intend to pursue entrepreneurial careers, are less interested in entrepreneurship programmes and courses. Thus, it would be worthwhile to increase the number of business and financial subjects among the students who do not go to school primarily for this purpose. Additionally, secondary schools should also include in their curricular the development of entrepreneurial attributes, knowledge and competencies that enable students to explore business opportunities and are required for starting their own ventures.

The GUESSS research

The GUESSS (Global University Entrepreneurial Spirit Students' Survey), which has been running since 2003, is organized and managed through a cooperation of the University of St.Gallen and the University of Bern (both Switzerland). In Hungary, the tasks related to research (data collection, analyses, dissemination) are coordinated by Dr. Szilveszter Farkas, college professor at the Budapest University of Economics and Dr. Andrea S. Gubik, associate professor at the University of Miskolc.

Research Objectives

GUESSS investigates entrepreneurial intentions and activities of students by employing a questionnaire survey. In order to gain a deeper understanding of the business start-up processes, the survey targets students' career intentions after graduation and a few years after studies, the most important characteristics of families' and students' own businesses, as well as the processes and factors that may be decisive in starting a business. Thus, individual motives and personal characteristics, as well as the impact of cultural and institutional factors, including the role the higher education environment play in shaping students' entrepreneurial intentions and activities are fundamental to investigate.

Surveys

The research, which began in 2003 with the participation of two countries, has gradually become one of the most significant data sources on the topic. In 2018, at the 8th data collection, responses of 208,000 students from 54 countries were collected. In 2018, 9667 valid questionnaires were received in Hungary.

As a result of the repetitive surveys and continuous feedback, changes across time can also be analysed. Since Hungary joined the research in 2006, the results of more than 10 years can be compared. With the growing numbers of participating countries and universities, geographical comparisons can also be possible.

In the course of the research all Hungarian higher education institutions where the number of students exceeded 1,000 were contacted. They were asked to send the survey call to their students via their Neptun systems. There were some institutions that addressed their students through other channels (e.g. student facebook page).

Results

A brief presentation of 2018 database

The database contains 9,667 students' responses. Before presenting the results, the database based on differences in higher education institutions, fields of study, gender, and age structure are briefly presented. Table 1 shows the distribution of participants in Hungary by the respondents' higher education institution.

Table 1: Distribution of GUESSS 2018 Survey Participants by Higher Education Institution

Name of the higher education institution	Number of questionnaires	Distribution	Response rate
Corvinus University of Budapest	100	1.0	0.8
Budapest Business School	975	10.1	6.4
Budapest University of Technology and Economics	1,763	18.2	8.0
University of Debrecen	764	7.9	2.9
University of Dunaújváros	75	0.8	4.8
Eötvös Loránd University	1,809	18.7	6.2
Eszterhazy Karoly University	135	1.4	1.8
Kaposvár University	23	0.2	0.8
University of Miskolc	764	7.9	8.3
John von Neumann University	42	0.4	1.1
University of Nyíregyháza	90	0.9	2.5
Óbuda University	456	4.7	4.0
University of Pannonia	72	0.7	1.2
Pázmány Péter Catholic University	189	2.0	2.3
University of Pécs	1,102	11.4	5.5
Semmelweis University	208	2.2	1.9
Széchenyi István University	832	8.6	6.8
University of Szeged	130	1.3	0.6
Milton Friedman University	105	1.1	8.1
Other	33	0.3	
Total	9,667	100.0	4.3

Source: own elaboration

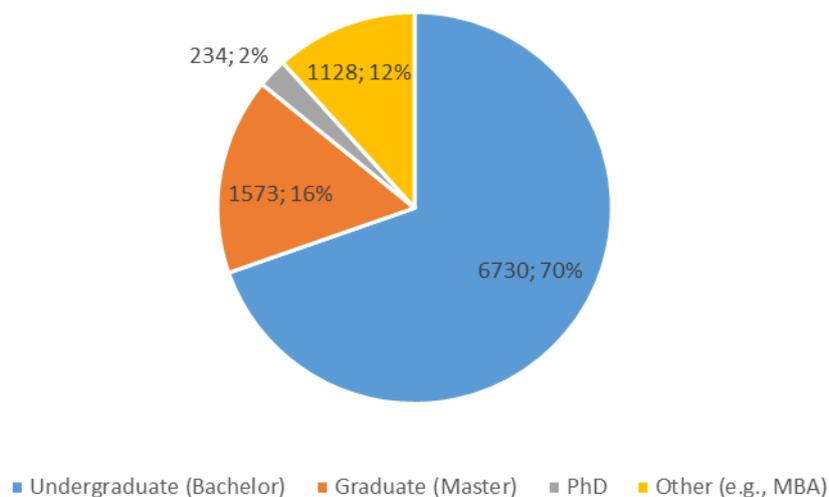
About 22.3% of respondents studied engineering, 22.2% of students studied business and management and economics. Computer sciences/IT students represented 9.3% and Arts/Humanities students accounted for 8.4%. The sample of students in medicine, health sciences and social sciences amounted to 8.3%.

Table 2: Distribution of GUESSS 2018 Survey Participants by field of study

	Frequency	Percent	Valid Percent	Cumulative Percent
Arts / Humanities (e.g., cultural studies, history, linguistics, philosophy, religion)	811	8.4	8.4	8.4
Business / Management	1,019	10.5	10.6	19.0
Computer sciences / IT	901	9.3	9.3	28.3
Economics	1,130	11.7	11.7	40.0
Engineering (incl. architecture)	2,153	22.3	22.3	62.4
Human medicine / health sciences	798	8.3	8.3	70.6
Law	597	6.2	6.2	76.8
Mathematics	66	0.7	0.7	77.5
Natural sciences	623	6.4	6.5	84.0
Science of art (e.g., art, design, dramatics, music)	65	0.7	0.7	84.6
Social sciences (e.g., psychology, politics, education)	801	8.3	8.3	92.9
Other	680	7.0	7.1	100.0
Total	9,644	99.8	100.0	
No answer	23	0.2		
Total	9,667	100.0		

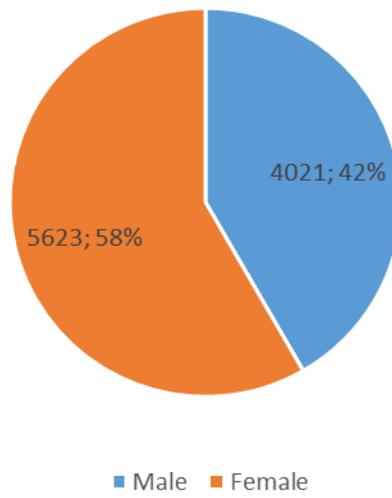
Source: own elaboration

The vast majority of respondents (70%) attended BSc level studies. The proportion of MSc students in the sample was much lower (16%). Regarding the respondents' gender, the sample contained a larger female ratio (58.2%). The male-female composition reflects the gender composition of Hungarian higher education.



Source: own elaboration, N=9667.

Figure 1: Distribution by levels of education



Source: own elaboration, N=9667

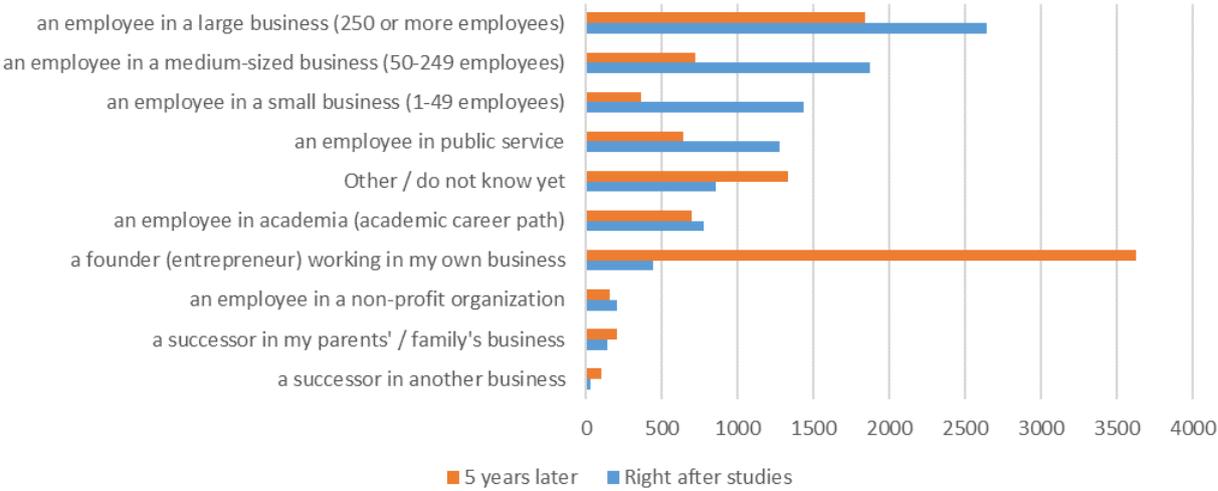
Figure 2: Distribution of Respondents by Gender

Aspects of career choice

In Question 2 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) 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 3 clearly illustrates the distinctive differences in future intentions. A significant proportion of students wanted to find a job with a large company or small and medium-sized company immediately after graduation, and preferred to be employed by a large company. The public sector was also an attractive. Overall, 84.9 percent of the students intended to become employees after graduation.

Five years after graduation, the attractiveness of employee status diminished in favour of entrepreneurial career (as founders or followers). The responses revealed that students wanted to gain experience as employees first and start a business of their own afterwards.

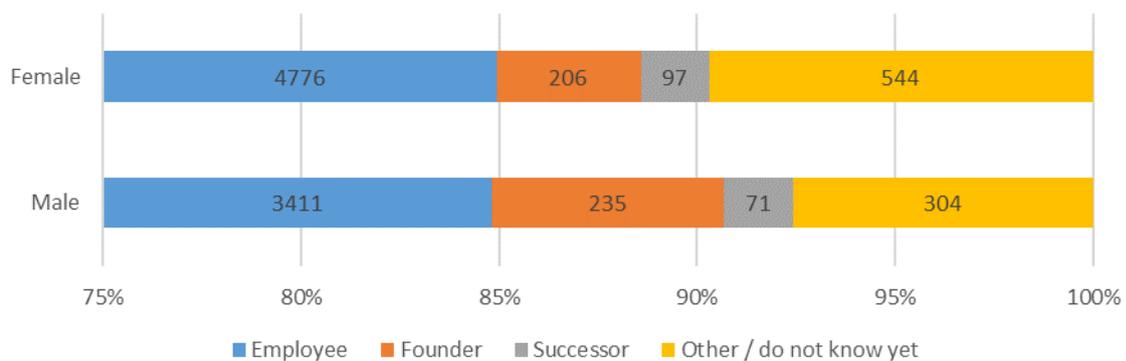


Source: own elaboration, N=9667

Figure 3 Career aspirations right after graduation and five years after studies (Number of students)

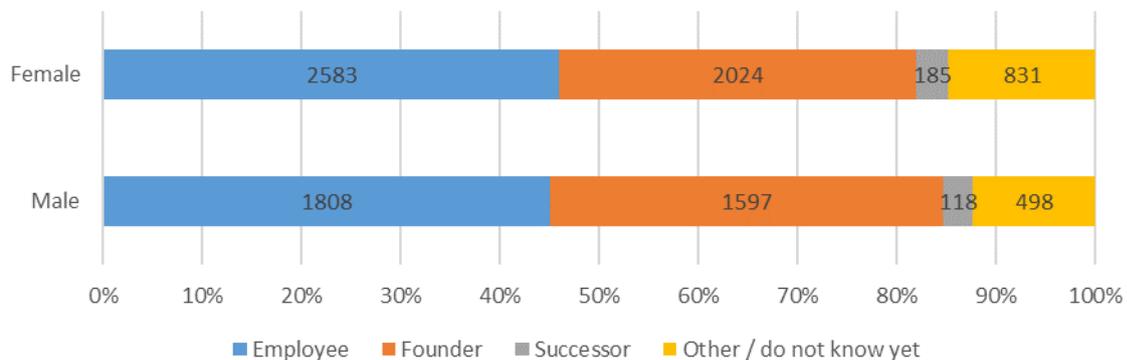
Differences in responses by gender

The respondents' gender had a significant effect on the development of career goals. Irrespective of the time line, women showed lower entrepreneurial intentions than men. More women than men indicated a different / do not know answer. Although there were no significant differences between female's and male's responses in terms of being an employee, male respondents were more willing to work in a large company (39.5%), compared to women (26.9%). The employment in the public sector was also attractive among female respondents (20.2%). As for the five-years-after-graduation figures, the attractiveness of the employee career decreased and the entrepreneurial carrier became more attractive among all respondents regardless of gender.



Source: own elaboration, N=9667

Figure 4: Gender differences in career plans immediately after graduation



Source: own elaboration, N=9667

Figure 5: Gender differences in career plans 5 years after graduation

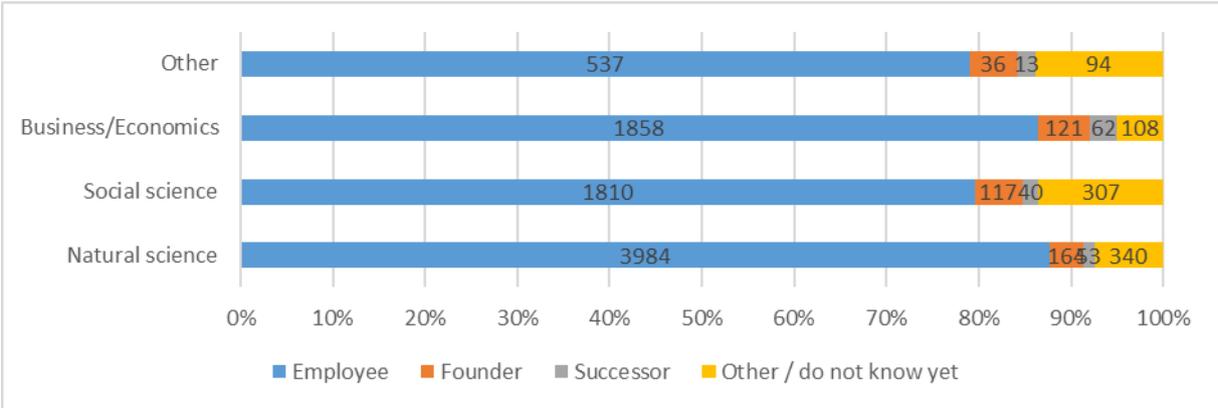
Differences in responses by fields of study

The analysis of the career aspirations by fields of study revealed that the ratio of students who did not choose professional careers or the ratio of students having no clear intentions was significantly higher among majors in social sciences compared to those studying business and economics as well as natural sciences irrespective of the time horizon. (See Figure 6 and Figure7).

The choice of being an employee after graduation is the highest among students majoring in natural sciences (87.7%), followed by the economics/business students (86.5%).

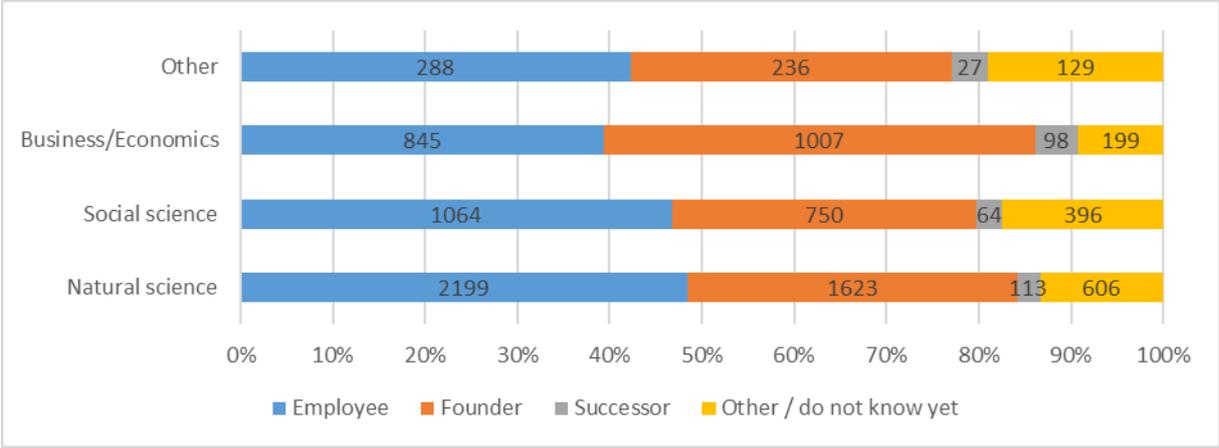
As for entrepreneurship (as a founder), the proportion of students preferring working as entrepreneurs was the highest (5.6%) among business and economics students. Social science respondents amounted to 5.1%. At the same time, arts students (e.g. art, design, theatre, music) are worth highlighting since their entrepreneurial intentions were extremely high (4.8% in average).

Five years after studies, the proportion of respondents who were planning to start their own business increased in each of the study fields, with the highest rate in the economic/business field (46.9%).



Source: own elaboration, N=9667

Figure 6. Career aspirations right after graduation by fields of study (%)



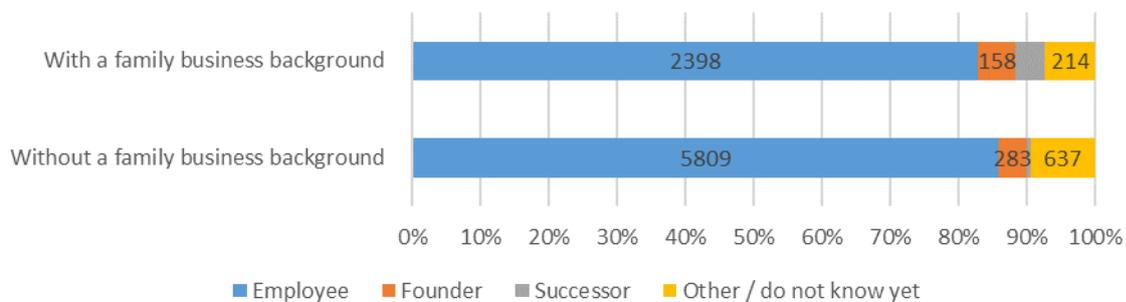
Source: own elaboration, N=9667

Figure 7 Career aspirations five years after graduation by fields of study (%)

Differences in responses by 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 8 and Figure 9 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.

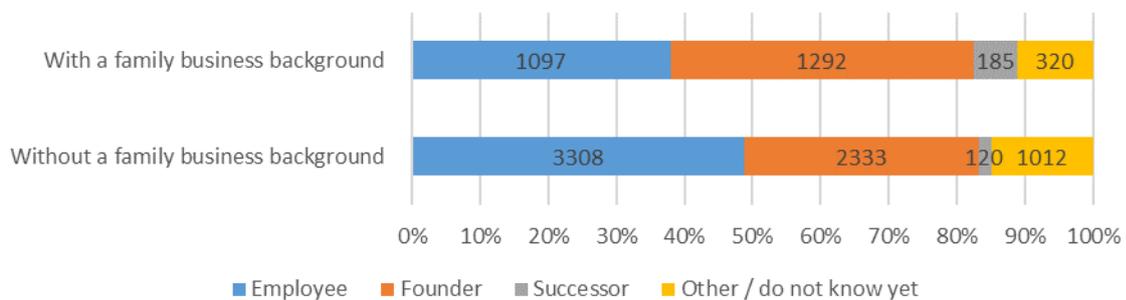
Regardless of the time line, family business experiences increased the chances of becoming an entrepreneur, both as a founder and a follower. Lack of experience increased not only the likelihood of employee preference but also the respondent's uncertainty about their future career ("Other / Don't Know" response rate).



Source: own elaboration, N=9667

Figure 8: Career aspirations right after studies by family business background (%)

After five years, those without a family entrepreneurial background also have a greater intention of starting their own business, but the entrepreneurial-non-entrepreneurial background preserves the divergences in career ideas immediately after graduation.



Source: own elaboration, N=8766

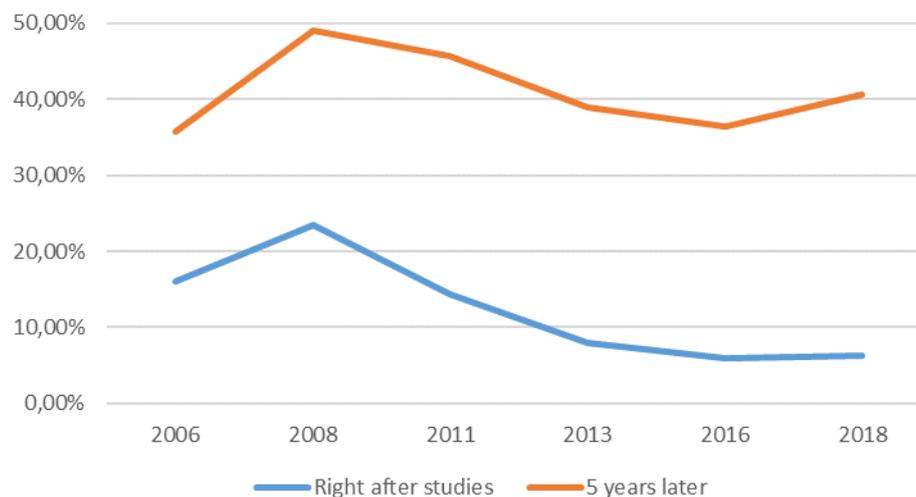
Figure 9: Career aspirations five years after studies by family business background (%)

Changes in career motives over the last years

Each of the five surveys conducted so far has included questions about career plans, in order to investigate how student perceptions have changed over the last 12 years.

Figure 10 illustrates that students had different career plans immediately after completing their tertiary education and a few years later. Five years after graduation, the proportion of those considering an entrepreneurial career was significantly higher than the immediate aftermath. This may indicate that students first wanted to gain professional experience and plan to start their own business afterwards.

Another interesting phenomenon was how the attractiveness of an entrepreneurial career from survey to survey changed. In 2006, 16% of the students surveyed planned to start their own business after graduation. Five years later, nearly 36% wanted to become an entrepreneur. In 2008, entrepreneurial willingness increased significantly. Subsequently, in 2011 and 2013, a serious decline in entrepreneurial vision was observed most likely due to the crisis. In 2016, the proportion of people planning a business after graduation was far below previous years (5.9%), while in 2018 the ratio slightly improved. The proportion of respondents who were willing to establish a business 5 years after graduation exceeded the one measured in 2006 and continued to grow further in 2018.

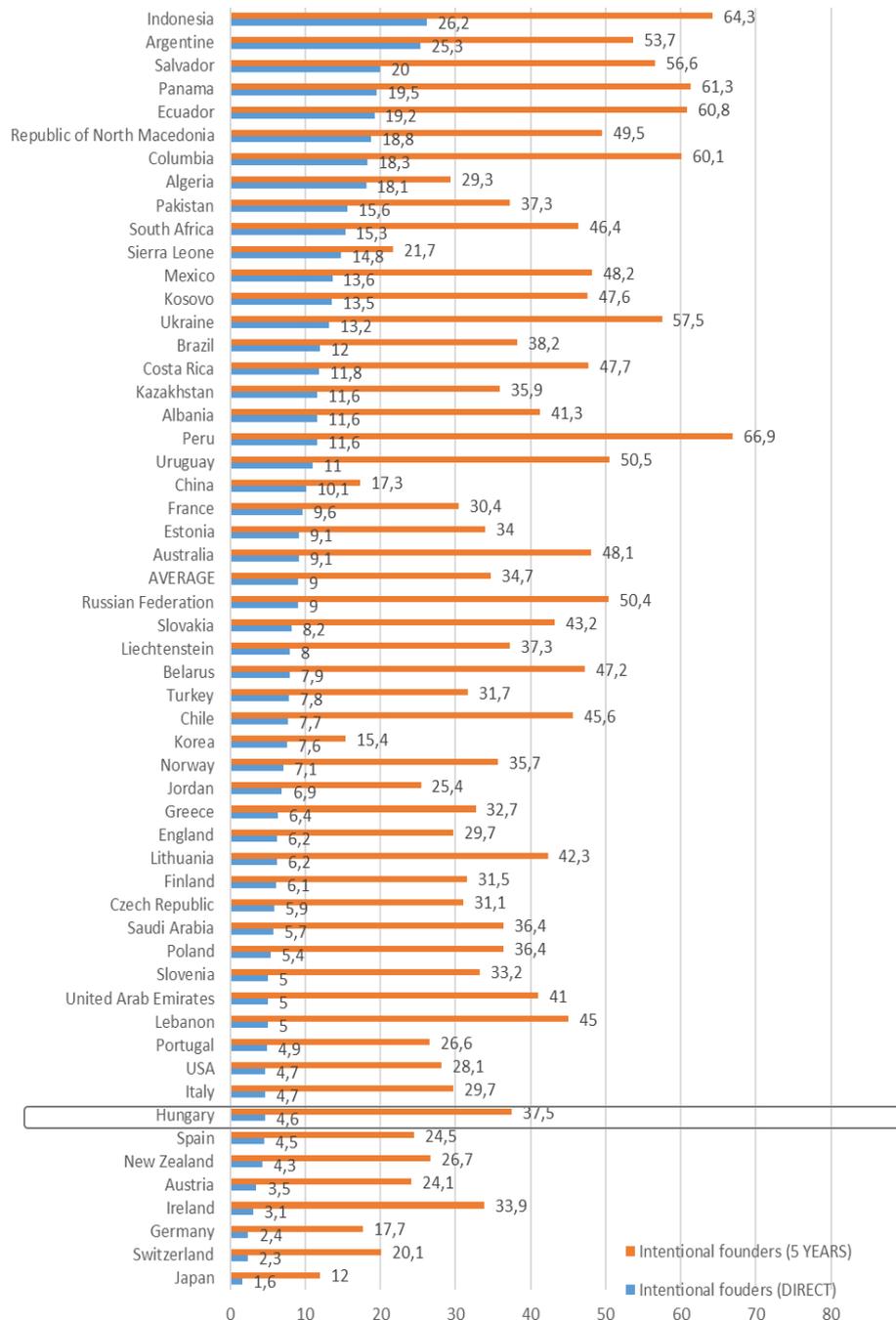


Source: own elaboration

Figure 10: Entrepreneurial Career Plans 2006-2018

Hungarian entrepreneurial intentions in an international comparison

Hungarian students' entrepreneurial intentions are low in an international comparison. Visegrad countries (Czech Republic, Slovakia, Poland) and most EU Member States have a higher entrepreneurial spirit.



Source: own elaboration

Figure 11: The proportion of respondents' entrepreneurial intentions in an international comparison

Youth entrepreneurship

In the sample 5.1% of the respondents (497 students) indicated that they ran a business of their own. Over 25% of the respondents running their own businesses were nascent entrepreneurs and had established their businesses in the year when the survey was conducted (2018) (Table 3). The rate of enterprises that were 3 years old or younger amounted to almost 60%. Since a major part of enterprises were new or established not long ago, the students did not have much experience.

Table 3: Student enterprises by year of establishment

	N	%
2009 or earlier	88	18.1
2010	12	2.5
2011	12	2.5
2012	19	3.9
2013	20	4.1
2014	21	4.3
2015	36	7.4
2016	55	11.3
2017	97	20.0
2018	125	25.8
Total	485	100.0

Source: own elaboration

More than half of the students running their own businesses were self-employed, 44.7% owned micro enterprises and 2.5% had small-sized enterprises.

Table 4 shows the distribution of students' enterprises by activity areas and company size. Self-employed students most frequently mentioned other categories (16.4%), financial services (including banking, insurance, investment, real estate) (15.%) and education and training (10.9%). Micro enterprises are mainly active in other fields (14.7%), financial services (13.8%) and information technology (IT)/communications (12%). Of the 12 small companies, 3 operated in trade and 3 operated in other services, and another 2 were in manufacturing and other services.

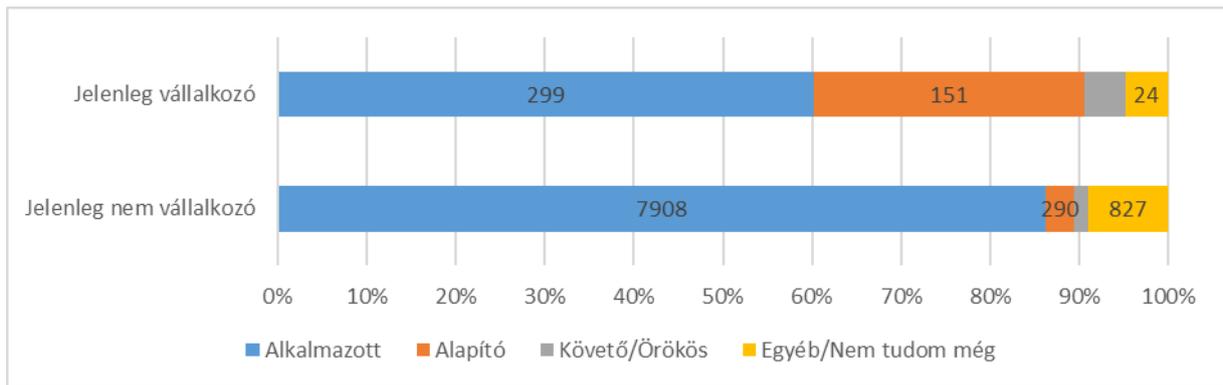
Table 4: Student enterprises by sector and size (%)

	Self-employed		Micro enterprise		Small enterprise	
	N	%	N	%	N	%
Advertising / Design / Marketing	25	9.8	7	3.2	0	0.0
Architecture and engineering activities	9	3.5	11	5.1	1	8.3
Construction industry	9	3.5	17	7.8	0	0.0
Consultancy (HR, law, management, taxes)	13	5.1	13	6.0	0	0.0
Education, training	28	10,9	16	7.4	0	0.0
Financial services (including bank, insurance, investment and real estate)	39	15.2	30	13.8	0	0.0
Human health care, social care	18	7,0	10	4,6	0	0.0
Informatics (IT) / communication (including software and IT services)	23	9.0	26	12.0	1	8.3
Manufacturing industry	0	0.0	2	0.9	2	16.7
Tourism and recreation	19	7.4	8	3.7	0	0.0
Trade (wholesale and retail)	13	5.1	24	11.1	3	25.0
Other services (shipping)	17	6.6	20	9,2	3	25.0
Others	42	16.4	32	14.7	2	16.7
Left unanswered	1	0.4	1	0.5	0	0.0
Total	256	100.0	217	100.0	12	100.0

Source: own elaboration

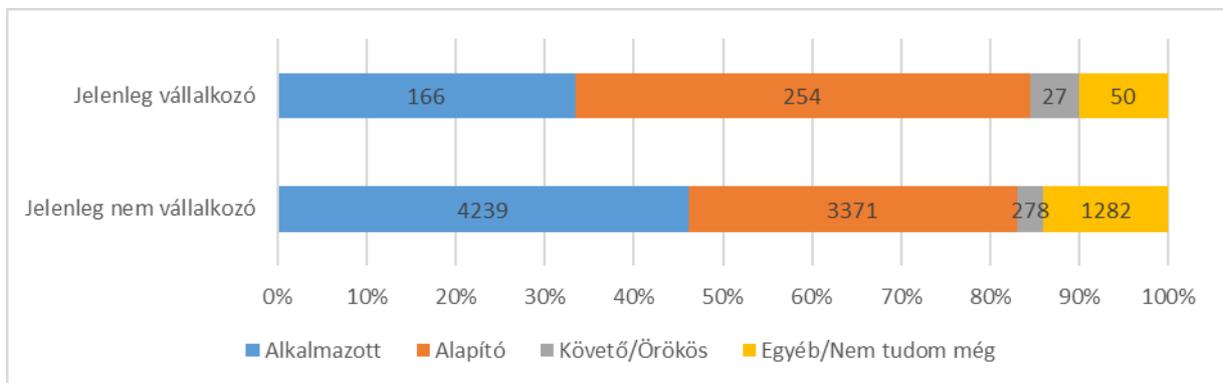
The presence of self-employed students highlights the importance of this group of students. However, self-employed students are less likely to become owners of companies with significant growth potential. The analysis of the activity fields reveals that a part of these enterprises were assumed to be set up for financing students' studies. This assumption is based on the fact that only 33.1% of the surveyed student entrepreneurs planned to continue their entrepreneurial activities after graduation.

However, entrepreneurship can also be useful for those who consider it only as a temporary source of livelihood or as a supplement, as they are necessarily confronted with entrepreneurial tasks, issues, decision-making situations and are generally familiar with entrepreneurship. There is a higher proportion of those planning to start a business in the future and a lower level of uncertainty about their future career among active entrepreneurs than among non-entrepreneurial students (see Figure 12 and Figure 13).



Source: own elaboration

Figure 12: Differences in career plans immediately after graduation by entrepreneurial activity



Source: own elaboration

Figure 13: Differences in career plans five years after studies by entrepreneurial activity

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