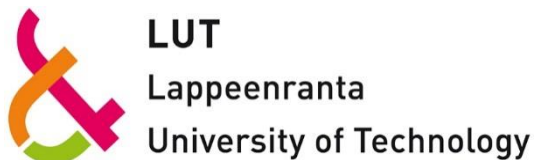




**GLOBAL UNIVERSITY ENTREPRENEURIAL SPIRIT STUDENTS'
SURVEY**

National Report 2016 FINLAND

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Preface

Student entrepreneurship is booming and along with the boom, also interest for student entrepreneurship has awakened. The Global University Entrepreneurship Student Spirit Survey GUESSS focuses on student entrepreneurship. This is now the fourth time when Finland is participating the GUESSS survey. The first one took place year 2006, and later on studies were carried out in 2008 and 2011. This GUESSS report highlights the state of the art of student entrepreneurship in Finland in 2016.

We express our gratitude to all those students that spent their time answering our questions. Furthermore, the active participation of Finnish HEIs is decisive for the success of student surveys. The Global team of GUESSS has operated as the core for the survey design, data purification and project management. Finally, Ernst & Young (EY) has been the international project partner for GUESSS. Our sincere thanks!

National and international GUESSS reports can be found at:
<http://www.guesssurvey.org/publications>

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1 INTRODUCTION

Entrepreneurship continues to grow in popularity among university students. It has become a serious choice for students that consider their career options and who make choices about their study directions and subjects. This trend has been dominant for the last ten years and is growing stronger and influential. This development could be explained in many ways:

- 1) change in common attitudes towards entrepreneurship. The supporting climate and culture for entrepreneurship are influential for the growth of entrepreneurial intentions.
- 2) entrepreneurship education. Entrepreneurship education has been included in the curriculum of Finnish general education since 1994. From that perspective, practically all present HEI students have been affected by entrepreneurship education.
- 3) the visibility of entrepreneurial role models. The new forms of media have strongly supported the visibility of entrepreneurial success stories. That is, the prominent self-made people are living proofs that it can be done.
- 4) changing work and career prospects. Changing professions and changing careers many times during one's working life has become normal at the same time the possibilities for having a 'traditional career' have grown weaker.
- 5) digitalization. Along with the digitalization and new ICT-tools, the initial capital requirements for establishing a business have dropped dramatically. As a result from this, students have engaged into entrepreneurial projects.

At present in Finland, student entrepreneurship has already important implications on the national entrepreneurship policy. It has also been recognized in the indicators measuring the impact of higher education, as well as it has become one of the most important tools for renewing regional competitiveness.

1.1 Aim and purpose of the report

This report highlights the overall picture of the current student entrepreneurship in Finland. Doing this, it

- provides a systematic and long term analysis of the development of entrepreneurial intentions among Finnish students;
- analyses some of the background factors determining the level of intention; and
- evaluates the role of the entrepreneurial education and climate offered by the HEI on the level of entrepreneurial activities.

1.2 The GUESSS project: key information

GUESSS is a global project, with 50 countries participating. The project started in 2002, the second survey took place in 2004, the third in 2006, fourth 2008 and fifth in 2011. Year 2016, 122 509 students responded in the GUESSS questionnaire. So far, Finland has taken part in the GUESSS study four times: 2006, 2008, 2011 and now in 2016. In this report we highlight the results of the GUESSS survey in Finland. The survey was undertaken during the spring 2016. GUESSS 2016 survey measured the entrepreneurial intentions of Finnish university students.

In Finland, Lappeenranta University of Technology has been responsible for the collection of the data and the country report. February 2016 an invitation letter was sent to all Finnish HEIs, to president of the HEIs or contact person for entrepreneurship. Later on, the survey link was opened and the contact persons was contacted and provided with information which they could forward to students. The survey opened in the beginning of April 2016 and the responses were asked by mid-May. Moreover, a reminder email was sent to contact persons in the end of April.

The Finnish GUESSS team includes Professor Timo Pihkala (LUT), Director of Entrepreneurship Education Elena Ruskovaara (LUT) and Research Director Ulla Hytti (University of Turku).

2 DEMOGRAPHIC INFORMATION ABOUT THE SAMPLE

For the survey, all Finnish HEIs were contacted. Altogether, there are 14 universities and 24 universities of applied sciences in Finland. The results suggest that only some of the HEIs succeeded to participate in the survey with a significant number of respondents. The data contains respondents from 15 different universities or universities of applied sciences. The most impressive participation came from the cities of Turku, Lappeenranta, Jyväskylä and Lahti. On the other hand, the large HEIs operative in Helsinki metropolitan area showed minimal interest in the survey.

The Finnish survey received 532 full responses. Table 1 presents the distribution of respondents according to their study place.

Table 1: Universities and universities of applied sciences represented in the sample

	N	%
University of Turku	200	37,6
Lappeenranta University of Technology	118	22,2
Åbo Akademi	46	8,6
University of Jyväskylä	44	8,3
Lahti university of applied sciences	32	6,0
Seinäjäki university of applied sciences	27	5,1
Yrkeshögskolan Novia	21	3,9
University of Lapland	17	3,2
Metropolia university of applied sciences	8	1,1
University of Oulu	5	0,9
Häme university of applied sciences	4	0,8
Aalto university	3	0,6
Haaga-Helia university of applied sciences	3	0,6
University of Helsinki	2	0,4
University of Vaasa	2	0,4
Others	2	0,4
	532	100,0

Even if the response from different HEIs was not very high, the respondent profile matches very well with the Finnish student population. Table 2 shows that women were slightly more active in responding than men, with 54% and 45% shares, respectively. This corresponds extremely well to the overall situation among Finnish university students. According to the

recent statistics, 45% of Finnish HEI students them are men and 55% are women (Statistics Finland, 2016).

Also in terms of age, the data matches very well with the student population. Table 2 shows that the largest age group is 25-29 years with 32% of respondents, while the age groups of 22-24 and 36 or more have roughly the same shares with 23% of respondents. According to the recent student survey by Finnish Ministry of Education and Culture (Opetus- ja kulttuuriministeriö, 2014), in Finland, the average university student and foreign student is 26 years old, whereas the average universities of applied science student is 25 years.

Table 2: Descriptive statistics of the respondents (n 532)

Respondents		N	%
Gender	Men	241	45,3
	Women	289	54,3
	no response	2	0,4
Age	19- 21	45	8,5
	22-24	123	23,1
	25-29	153	32,7
	30-35	68	12,8
	36 or more	118	22,2
Nationality	Finnish	467	87,8
	Russian	12	2,3
	German	4	0,8
	Swedish	1	0,2
	Other	44	8,3
	No response	1	0,2
		532	100%

Table 2 further shows that the distribution of different nationalities follows the Finnish university students' profile. The vast majority or 88% have Finnish nationality while the rest 12% come from abroad. The low number of responses can relate to number of reasons. One reason may be that the questionnaire of the study was in English to ensure the access of the foreign students. It seems that the study failed to meet its target in inviting the foreign students to participate actively. At the same time, it may have cut down the Finnish students' willingness to participate, as some of the issues dealt with in the questionnaire requires good management of English.

3 CAREER CHOICE INTENTIONS AND ENTREPRENEURIAL INTENTIONS

3.1 General overview

Students' occupational preferences guide their educational choices and they also play a major role as the motivators for the studies. Traditionally, Finnish university studies have prepared students for their careers in public service or employees in the private sector. On the other hand, an entrepreneurial career has not been the students' primary choice. From this perspective the occupational preferences in the Finnish survey are as expected – the large majority of the respondents prefer a traditional career as an employee. As table 3 shows, immediately after studies about 80% of the students prefer to become employees, while about 10% prefer entrepreneurship, and roughly 8% do not know yet.

The attractiveness of different organization types seems interesting. Small businesses, medium sized businesses, large businesses and public service all receive rather similar interest with 15-19%. In the earlier Finnish GUESSS surveys the attractiveness of SMEs (1-249 employees) has been 44,0% (2006), 52,3% (2008) and 39,1% (2011). In year 2016 only 34% of students prefer SMEs, which indicates a steady and continued decline. Similarly, the attractiveness of large businesses is in decline with 15,2% preferring the employment in large businesses. In the survey 2011 the corresponding share was 23,9%. One reason for the decline may be the rise of the new non-profit sector. The current and growing interest on more sustainable and ethical businesses has been noticed as the introduction of socially oriented and non-profit businesses. However, non-profit movement does not fully explain the shift. It seems that in the big picture there is a transfer of interest from private employment to public and academic sectors. Finding employment in the public sector and the academia have increased their shares dramatically. From the 2011 survey the share of students opting for academic career path has tripled. This line of development may be a convenient choice for present students. That is, selecting an academic career could raise the possibility of getting a job, raise the expectations of future earnings and simultaneously postpone the need to enter the job market immediately after graduation.

Table 3: Students' occupational preferences immediately after studies (%)

	2006	2008	2011	2016
an employee in a small business (1-49 employees)				15,0
an employee in a medium-sized business (50-249 employees)	44,0*	52,3*	39,1*	19,0
an employee in a large business (250 or more employees)	14,3	17,3	23,9	15,2
an employee in a non-profit organization**				4,5
an employee in Academia (academic career path)	1,7	1,0	3,7	11,5
an employee in public service	4,3	4,3	6,4	16,0
a founder (entrepreneur) working in my own business	5,1	5,1	3,0	9,8
a successor in my parents' / family's business	1,7	2,0	1,3	0,4
a successor in a business currently not controlled by my family	1,5	2,9	3,1	0,4
Other / do not know yet	14,2	6,0	11,2	8,3

* The Small and medium sized businesses together

** The non-profit organization were not included in earlier surveys

While the attractiveness of traditional careers seems to be in decline, entrepreneurship continues steady growth. Compared to the earlier GUESSS surveys, the share of students intending to become entrepreneurs immediately after studies has grown two-three times. This result is well in line with some other studies about students' entrepreneurial intentions. Also based on the recent GEM study it was found out that individuals with at least a post-secondary degree perceive opportunities for entrepreneurship more often than their less educated counterparts (see table 4). Even if Finns are far from their counterparts in Baltic countries, the younger generations today are more active in entrepreneurship than the older generations. (Suomalainen et al., 2016)

Table 4: Early-stage entrepreneurial activity by age in selected member states in 2015 (as % of population in each age group) (Suomalainen et al., 2016)

Country	18–24	25–34	35–44	45–54	55–64	Total
Estonia	14.7	21.5	17.1	7.3	4.6	13.1
Finland	5.2	8.6	9.7	5.2	4.4	6.6
Germany	4.6	6.3	5.0	5.4	2.0	4.7
Latvia	16.0	22.3	17.6	9.6	4.2	14.1
Sweden	5.6	9.3	7.3	7.0	6.0	7.2
United Kingdom	3.9	7.3	8.9	7.9	5.4	6.9
<i>Average (EU)</i>	<i>7.5</i>	<i>10.7</i>	<i>9.7</i>	<i>7.1</i>	<i>4.3</i>	<i>8.0</i>

The students' career expectations seem to develop considerably during the first five years after studies (see table 5). It seems that the students' aspirations to stay as employees drop from 80%

to 52%. The 30% shift is directed from private sector employee positions to academic and public careers and entrepreneurship. The attractiveness of SMEs seems to be stable at 16%, while the share of large businesses drops from 21% to 13%. It is likely that the financial difficulties during the recent years that especially the large businesses have reported is now highlighted in the survey results. For a few years, practically all net jobs are created in SMEs and the large business sector is losing jobs. On the other hand, the both academic career and public sector career have more than doubled their shares. This development could be understood as the risk-avoiding choices.

Table 5: Students' occupational preferences after 5 years

	2006	2008	2011	2016
an employee in a small business (1-49 employees)				6,0
an employee in a medium-sized business (50-249 employees)	17,3*	29,5*	15,2*	10,2
an employee in a large business (250 or more employees)	12,6	16,8	21,4	13,2
an employee in a non-profit organization**				4,5
an employee in Academia (academic career path)	1,3	1,7	3,4	8,1
an employee in public service	3,6	3,6	4,0	10,5
a founder (entrepreneur) working in my own business	16,1	20,1	20,1	30,8
a successor in my parents' / family's business	3,5	2,7	2,4	0,4
a successor in a business currently not controlled by my family	3,5	6,3	2,2	1,7
Other / do not know yet	17,3	6,5	15,8	14,7

* The Small and medium sized businesses together

** The non-profit organization were not included in earlier surveys

In table 5, the share of intending entrepreneurs grows significantly. In 2006, entrepreneurship was still in par with employment within SME sector and employment within large businesses. Since 2006, the level of entrepreneurial intentions has doubled. It seems that entrepreneurship is by far the most attractive career option for students with 31% share. Earlier studies support this finding. For example, according to a recent study focusing on the Finnish citizens' basic values (Sutinen et al, 2015), 34% of Finns are interested in, in some stage of their life, establishing one's own business. Moreover, amongst 25 to 34 year-old Finns, the figure is as high as 45% (Sutinen et al, 2015).

3.2 Factors explaining entrepreneurial intentions

The career choices were analyzed according to the students' background. Table 6 shows the comparison between Finnish students and students with foreign nationality. It seems that

foreign students rate entrepreneurship immediately after studies somewhat less attractive than Finnish students. This may reflect their lack of networks and limited social capital in Finland making it difficult to consider an entrepreneurial career in Finland immediately after the studies. However interestingly, while entrepreneurship grows in popularity for Finnish students almost threefold, it seems even more interesting for foreign students, with 47% of foreign students wanting to become entrepreneurs after five years. This development could be understood as the process of integration into the Finnish society. For foreign students, starting a business right after graduation could require extensive resources. Instead, first effectively integrating and establishing themselves to Finnish culture and business life would be necessary for successful entrepreneurship. After five years this process would be successfully passed. Moreover, the role of networks seems to gain ground in entrepreneurship discussions, and therefore, the foreign students might think that the next coming years after graduation is for networking and later on for establishing one's own business.

Table 6: Students' occupational preferences depending their nationality %

	Finnish		Foreign	
	Directly	5 years	Directly	5 Years
Employee	80,9	53,7	83,1	43,1
Founder	10,5	28,5	4,6	47,7
Successor	0,9	2,1	0,0	1,5
Other	7,7	15,6	12,3	7,7

The career options were analyzed also according to the students' gender. Table 7 shows the comparison between male students and female students. It seems that female students rate entrepreneurship immediately after studies decisively less attractive than male students. The difference is rather large – only 5% of female students report entrepreneurial intention immediately after studies, while almost 16% of men intend to become entrepreneurs. The gender gap is well-identified in other studies as well, for example in the GEM report (Suomalainen et al., 2016). In Finland, the share of female early-stage entrepreneurs is 4,2% as opposed to 8,9% of men who are engaged in early-stage entrepreneurship. Men are also more active in established business ownership than women. The share of female established business owners is 6,1% while simultaneously 14,2% of men are established business owners in Finland. (Suomalainen et al., 2016) The reasons for this difference may be versatile. However, it is likely that female students consider entrepreneurship riskier than their male colleagues. Especially for women choosing an entrepreneurial career has important implications in terms of weakened social policy benefits that are often related to family and children. Thus the personal and social risks are higher for women than for men. In the GEM report the results suggest that the fear of

failure is higher among women than among men (Suomalainen et al., 2016). But it is necessary to exert caution when offering gender-based individualistic explanations for lower entrepreneurial activity rates for women. Research has documented several structural reasons for this such as gendered educational and occupational choices that are related to attractiveness of entrepreneurship for women and men (Ahl and Nelson, 2010).

For male students the share of intending entrepreneurs more than doubles after five years, to 35%. This figure is remarkably high. However, for women the attractiveness of entrepreneurship rises also dramatically, with 27% of women intending to be entrepreneur after five years. It seems that the first five years after graduation are very significant for female entrepreneurship. Liles (1974) suggested that for selecting the entrepreneurial career, there is a special period of free choice that is associated with gaining experience in working life and saving initial capital for the forthcoming start-up. If Lyles' hypothesis would concern women especially, can't be tested in this context. However, we suggest that this finding should be studied further.

Table 7: Intentional founders by gender %

	Directly	After 5 years
Men	15,8	35,3
Women	4,8	27,0

Traditionally, having entrepreneurial parents has been one of the best indicators to predict the entrepreneurial career. In this present study, analyzing intentions from this perspective brings out interesting results. Based on research, role models are important in entrepreneurship. The role of paternal role models is emphasized for example in a study by van Auken et al (2006). They demonstrate that the majority of students both in Mexico and the United States report their father to be the most important role model (about 62% of respondents compared to 7-10% naming their mother as the most important role model). Table 8 presents the levels of entrepreneurship intention for those students whose parents are entrepreneurs. For comparison, we added the level of intention of all respondents in the table. It seems that especially father's entrepreneurship is associated with student's entrepreneurial intentions. That is, compared to all respondents, for those students who have an entrepreneurial father the level of intention is more than two times stronger. On the other hand, mother's entrepreneurship seems to lower students' entrepreneurship, the level of intentions drop to 5,8%. In cases that student's both parents are entrepreneurs, the level of intention is roughly the same as for all respondents.

Bosma et al (2012) provide some preliminary evidence that entrepreneurs and their role models tend to resemble each other in terms of the characteristics that facilitate role identification

including gender. Thus, when male students are more active in their entrepreneurial intentions, it is strengthened by the male role model, i.e. father. In a study by Chlosta et al (2012) it was discovered that the personality of the offspring – i.e. their openness - is an important factor in explaining why some children choose to join the family business while others do not. The more open the individual, the weaker the effect of parental and paternal role models. The study, however, showed that the effect of paternal role models depends on the openness of those individuals, whereas the effect of maternal role models does not. Thus our findings related to previous research that suggest the effects of paternal and maternal role models on entrepreneurial intentions may diverge.

Table 8: Share of intentional founders depending on parents' entrepreneurship %

	Directly	After 5 years
All respondents	9,8	30,8
Father is an entrepreneur	19,2	16,5
Mother is an entrepreneur	5,8	10,4
Both parents are entrepreneurs	11,5	14,6

Table 8 further shows the comparison about the level of intention 5 years after graduation. Interestingly, the parents' entrepreneurship seems to have a significant decreasing effect on the students' entrepreneurial intentions. Furthermore, the parents' effect seems to be mixed – the father's effect is weaker after five years while mother's effect doubles in five years. Altogether, our results suggest that parent's background as an important determinant for student entrepreneurship is not self-evident but rather may have contrary effects to the phenomenon than previously thought. For example, van Auken et al (2006) investigate the activities that the role model might engage in and study their influence on respondents. Largely the activities that were more passive from the perspective of the student were generally less influential than activities that demanded interaction between the student and role model. Hence, there is a considerable need for understanding better these dynamics that our findings also highlight. The effect of time and the changes in importance of different role models is one such area meriting further study.

4 DRIVERS OF ENTREPRENEURIAL INTENTIONS

In this section we analyze some of the possible drivers for students' entrepreneurial intentions. These aspects are related to the university context and the student's psychological characteristics.

4.1 University context

To understand the relationship between entrepreneurship education in the universities and the students' entrepreneurship intentions, we analyze the students' attendance to different entrepreneurship offerings. The availability of entrepreneurship education within universities has risen fast in Finland, and this development can be identified in the results. According to recent study by Finnish Ministry of Education and Culture (2016), Finnish HEIs provide entrepreneurship-related training and courses widely. That is, almost all Finnish HEIs organize at least some individual courses about entrepreneurship. For students, there may be both elective and compulsory courses about entrepreneurship, and some students may have chosen a specific program on entrepreneurship. Table 9 shows that roughly 52% of the respondents have not taken any entrepreneurship education in the university. On the other hand, 21% of respondents have taken an elective entrepreneurship course, 25% report that they have participated a compulsory course and almost 12% are participating a specific program on entrepreneurship.

Table 9: Attendance of entrepreneurship offerings %

	%
I have not attended a course on entrepreneurship so far	52,1
I have attended at least one entrepreneurship course as elective	21,4
I have attended at least one entrepreneurship course as compulsory	25,4
<u>I am studying in a specific program on entrepreneurship</u>	<u>11,7</u>

Table 10 shows that entrepreneurship education in HEIs seems to be associated with the students' entrepreneurial intentions. Of the students reporting not to have participated in entrepreneurship education so far only 7,6% report entrepreneurial intentions and 21% of them intend to be entrepreneurs after five years. On the other hand, of the students that have taken either an elective or a compulsory course on entrepreneurship roughly 10–13% report entrepreneurial intentions immediately after studies, and for students taken an elective course, almost 47% report entrepreneurial intentions after five years. Finally, students that have elected a specific program on entrepreneurship seem to form a special group. A total of 24% of the

group seek to become entrepreneurs right after studies and almost 55% intend to be entrepreneurs after five years. Interestingly, the percentages seem to triple when comparing the students' responses between "immediately" and "5 years after graduation".

Table 10: Entrepreneurship education of intentional founders%

	Immediately	5 years
I have not attended a course on entrepreneurship so far	7,6	21,1
I have attended at least one entrepreneurship course as elective	13,3	46,9
I have attended at least one entrepreneurship course as compulsory	10,4	38,8
I am studying in a specific program on entrepreneurship	24,2	54,8

While it seems that entrepreneurship education offered in HEIs has a positive effect on the students' entrepreneurial intentions, the next table highlights the more precise entrepreneurial skills derived from university education. The results in table 11 suggest that in overall, all students regard the learning in HEIs beneficial for entrepreneurship. However, there is a systematic difference between the students with an entrepreneurial intention and those students aiming for a traditional career. The difference is rather large in all but one item. In terms of practical management skills, both groups seem to rate the usefulness of courses rather similar.

Table 11: The value of learning for entrepreneurship (n 529)

<i>The courses and offerings I attended...</i>	Founders (52)	Employees (430)
...enhanced my ability to identify an opportunity	5,02	3,97
...enhanced my ability to develop networks	4,63	4,18
...increased my understanding of the attitudes, values and motivations of entrepreneurs	4,43	3,66
...increased my understanding of the actions someone has to take to start a business	4,29	3,45
...enhanced my practical management skills in order to start a business	3,90	3,52

Table 12 below presents the results from a comparison between intentional founders and employees in regard to the students' perception of the university culture. On the scale 1-7, all students rate the university culture positive and supportive to develop new ideas and becoming an entrepreneur. However, it seems that those students intending to engage in entrepreneurship after studies consider the university culture more positive than those aspiring a career of an employee. The finding concerns all three measures about the university culture. These findings show that there are multiple ways universities can support student entrepreneurship. Building

an entrepreneurial atmosphere, communicating about the desirability of student entrepreneurship and encouraging students to take entrepreneurial careers seem to have an effect on the students' choices.

Table 12: The university entrepreneurial culture/climate (n 529) (scale 1-7)

	Founders (52)	Employees (430)
The atmosphere at my university inspires me to develop ideas for new businesses.	4,71	3,89
There is a favorable climate for becoming an entrepreneur at my university.	4,81	4,15
At my university, students are encouraged to engage in entrepreneurial activities.	4,69	4,11

4.2 Locus of control, attitude, and entrepreneurial self-efficacy

Attitudes, locus of control and self-efficacy reflect the person's psychological stance towards his/her own abilities to guide his/her own life. Based on the theory of planned behavior (Ajzen, 2002), the person's behavioral control, norms and attitudes affect the person's level of intentions towards certain types of behavior. Earlier studies suggest that respondents that operate as entrepreneurs score high on various entrepreneurial dimensions. For example, they score higher on locus of control and being able to influence their own life and future. Not surprisingly they also score high on entrepreneurial returns: they view entrepreneurship in a positive light and source of satisfaction, and prefer it as a career option. This fits well with the profile of academic entrepreneurship and entrepreneurship among the HEI graduates in Finland. Becoming an entrepreneur is mainly influenced by the opportunities available and necessity-driven entrepreneurship driven by lack of other alternatives remains rare (Suomalainen et al., 2016).

In this survey, we analyze the role of locus of control, attitude and self-efficacy on the entrepreneurial intention (see Table 14). It seems that in terms of psychological stance towards entrepreneurship, all respondents score rather high. However, the results suggest that there is a large and systematic difference between those student having entrepreneurial intention to start a business and those of intending to be employees. The comparison suggests that the intentional founders consider entrepreneurship significantly more attractive and satisfactory than their colleagues intending to become employees. These results suggest that the students' attitudes, norms and behavioral control are associated with their level of entrepreneurial intentions.

Furthermore, it seems that the entrepreneurial intentions reported by the respondents seems to be opportunity-driven rather than necessity-based.

Table 14: Locus of control, attitude, and entrepreneurial self-efficacy (n 454) (scale 1-7)

	Founders	Employees
If I had the opportunity and resources, I would become an entrepreneur	6,40	4,23
Being an entrepreneur would entail great satisfactions for me	6,16	3,77
A career as entrepreneur is attractive for me	6,16	3,73
Among various options, I would rather become an entrepreneur	5,80	3,32
I am usually able to protect my personal interests	5,72	4,98
Being an entrepreneur implies more advantages than disadvantages to me	5,64	3,76
When I make plans, I am almost certain to make them work	5,33	5,12
I can pretty much determine what will happen in my life	5,28	4,27

The students were asked about the perception of their personal skills and competences related to creating and running a business. In table 15 below the results suggest that there are systematic differences in the skills between founder students and employee students. It seems that in overall, the students reporting entrepreneurial intentions score higher in all listed entrepreneurial skills. We suggest that this difference may stem from the different educational choice that the students have made. Earlier in this report (Table 11) we showed that the intentional founders have participated in entrepreneurship education more than their colleagues. In other words, students that demonstrate entrepreneurial intentions when enrolling to the university may be more inclined to develop entrepreneurial skills during the university studies, and thus enroll for the studies and acquire these skills considered necessary for the entrepreneurial future.

Table 15: Skills among intentional founders and intentional employees (1-7 scale) (immediately)

	Founders	Employees
Identifying new business opportunities	5,84	3,75
Creating new products and services	5,72	3,67
Managing innovation within a firm	5,56	3,75
Being a leader and communicator	5,92	4,68
Building up a professional network	5,32	4,22
Commercializing a new idea or development	5,32	3,73
Successfully managing a business	5,20	3,88

There may be also another explanation for the high self-efficacy of the intentional founders: By using a large sample from population surveys in 18 countries Koellinger et al (2007) found strong evidence that subjective – and often biased – perceptions influence greatly on new

business formation. The strongest factor of an individual's entrepreneurial propensity was found to be whether the individual believes herself to have the sufficient skills, knowledge and ability to start a business. Additionally, the study also found a negative correlation between this entrepreneurial confidence and the survival chances of nascent entrepreneurs across countries.

4.3 The reaction of social network

The students were asked about the social support for their possible entrepreneurial activities. It could be argued that social networks and support play a decisive role in the formation of personal intention to start. Without a possibility to share interests, ideas, development plans, and start-up plans the entrepreneurial venture may lack the essential social capital resources. In overall, it seems that the respondents regard their social network as supportive towards entrepreneurial engagements.

Table 16: Social network support among intentional founders and intentional employees (1-7 scale) (immediately)

	Founder	Employee
Your friends	6,13	5,30
Your fellow students	5,87	5,21
Your close family	5,87	5,05

The results in table 16 suggest that those students with an entrepreneurial intention seem to score systematically higher in all measures. This result can be understood in multiple ways: first, the entrepreneurial students are better in creating supporting networks and social capital. Second, the intentional founders for some reason consider their network more useful than their colleagues. Finally, the intentional founders have selected more entrepreneurial networks and learned about the supporting capacity of the networks for entrepreneurship. On the other hand, the students without entrepreneurial intentions have not spent time in entrepreneurial networks and thereby can't trust in their support.

5 NASCENT AND ACTIVE ENTREPRENEURS

A step towards more concrete entrepreneurial activity is to analyze the level of nascent entrepreneurs among students. Table 17 shows that 19,0% or 101 students report that they are currently trying to start an own business. This figure can be considered rather high and can be seen to reflect the current entrepreneurial spirit in Finnish HEIs.

Table 17: Students currently trying to start an own business/to become self-employed

	No	%	Yes	%
All	430	80,8	101	19,0
Men		41,4		61,4
Women		58,4		37,6
Father is an entrepreneur		18,8		18,8
Mother is an entrepreneur		6,3		8,9
<u>Both parents are entrepreneurs</u>		<u>5,8</u>		<u>16,8</u>

It seems that nascent entrepreneurship in HEIs is dominantly a male phenomenon. Of these students 61% are men and 38% are women. This reflects quite well the overall entrepreneur population. Out of all entrepreneurs about 1/3 is female but this changes with education. Women represent about 40% of all entrepreneurs with a higher education: 15% of all female entrepreneurs have a higher education while the comparative share for male entrepreneurs is 10%. (MEE 2014) The increase in number of graduates from HEIs is already one reason for the increasing interest for entrepreneurship. The traditional career paths for HEI graduates are not able to absorb all graduates and on the other hand the graduates are better equipped to identify and exploit many entrepreneurial opportunities linked to technology and expertise than their less educated counterparts. This was also reflected in the GEM report where individuals with a better educational level were able to see more entrepreneurial opportunities than other people (Suomalainen et al., 2016).

On the other hand, the students' parents' entrepreneurship does not seem to explain but a modest share – only a minority of the nascent entrepreneurs report their parents to be entrepreneurs. In comparison with non-entrepreneurial students the share of entrepreneurial parents seems equal. That means, that their entrepreneurial drive arises from somewhere else than home.

The next table 18 presents the distribution of those students that are currently running their own business at the same time as they are studying. This figure includes the self-employed. Partly due to the students' difficulties of financing their studies, all the more students take part time jobs or select entrepreneurship during their studies. As such dividing student time with work has not been considered optimum for the HEIs, the students or the business. However, due to the rise of the entrepreneurial boom, the picture of student entrepreneurs has changed and it seems that study-time entrepreneurship may support learning outcomes, facilitate employment after graduation and predict entrepreneurial career after graduation (Suomen yrittäjät, 2015). Table 18 shows that altogether 76 or 14,3% of the respondents reported that they have been running a business alongside their studies. Our results suggest that running a business at the same time is becoming more usual. Compared to the Finnish survey 2001, the share of entrepreneurs was 3,8% and during the five years the share of entrepreneurs has grown four times.

Table 18: Students currently running an own business/already self-employed

	No	%	Yes	%
All	456	85,7	76	14,3
Men		42,3		63,2
Women		57,2		36,8
Father is an entrepreneur		17,5		26,3
Mother is an entrepreneur		6,8		7,9
Both parents are entrepreneurs		7,5		10,5

Table 18 further shows that the male dominance in student entrepreneurship prevails also in this analysis. About 63% of the entrepreneurship practicing students are men. This reflects well the existing gender gaps in entrepreneurship discussed earlier. It is also noteworthy that the Student Entrepreneurship Societies that have been launched in most university cities in Finland and that have become important drivers and networks of student and graduate entrepreneurs in many universities and surrounding entrepreneurial ecosystems, also started as predominantly male phenomena. For example, the local student entrepreneurship society in Turku (BoostTurku) self-diagnosed a challenge a few years ago that their events and particularly their accelerator program attracted nearly exclusively male students. By organizing events targeting at female audiences and featuring women entrepreneurs and female business angels they were able to attract more female participants in their events and programs.

It seems that for these entrepreneurs, the parents' entrepreneurial background plays a modest role. Comparing between the entrepreneurs and the non-entrepreneurs, it seems that their parents' entrepreneurship is more or less equal. However, fathers have some effect on the students' entrepreneurship. Roughly every fourth practicing entrepreneur reported that their father is an entrepreneur. In a general view it seems that student entrepreneurship is not inherited – rather it grows from other sources. These sources may be the e.g. school culture, team formation, entrepreneurship education.

Finally, we analyze the entrepreneurship education of nascent and active entrepreneurs (see table 19). It seems that student entrepreneurs are more active taking entrepreneurship education in their studies. While 51% of the all respondents report not to have studied entrepreneurship, only 31% of nascent and 39% of active entrepreneurial students have not taken entrepreneurship courses. On the other hand, nascent entrepreneurs seem to be the most active students to take entrepreneurship courses – elective or compulsory while active entrepreneurs take them only somewhat more than the respondents in general.

Table 19: Entrepreneurship education of nascent and active entrepreneur students

	all	nascent	active
I have not attended a course on entrepreneurship so far	51,7	31,7	39,5
I have attended at least one entrepreneurship course as elective	21,1	36,6	22,4
I have attended at least one entrepreneurship course as compulsory	25,2	31,7	27,6
<u>I am studying in a specific program on entrepreneurship</u>	<u>11,7</u>	<u>25,7</u>	<u>27,6</u>

6 IMPLICATIONS AND SUMMARY

6.1 Main findings and key messages

The survey results brings new information about the student entrepreneurship in Finland. There seems to be a lot of entrepreneurship in Finnish HEIs. Even if the number of responses stayed rather low, the results give an interesting view on the entrepreneurial activities. The main numbers are as follows:

14,3% of students are currently running a business or are self-employed

19,0% of students are currently preparing a start-up

9,8 % of students are intending to start directly after graduation

30,8% of students are intending to start 5 years after graduation

On the basis of our results, entrepreneurship has become an important part of the HEI student profile. The share of practicing and nascent entrepreneurs is large and that has implications on the organization and contents of the education offered to students. It is likely that these students' expectations are likely to be different than with those not running businesses or starting up. Furthermore, the career expectations of these students are in fast change, as well as they expect their studies to benefit in a different way.

Students' entrepreneurship seems to grow from their own interests, studies, HEI entrepreneurial culture and opportunities rather than the traditional sources. That is, the parents' entrepreneurial background explains only a part of student entrepreneurship. These line of development can be interpreted as a positive sign – the entrepreneurial drive arises from opportunity driven interest rather than necessity to earn one's living.

While student entrepreneurship is a renewing force for HEIs and the economy, it seems to pass on the traditions concerning the division between genders. Student entrepreneurship is predominantly a male phenomenon. New insights are needed to understand, how this line of development could be changed.

6.2 Recommendations

For HEIs: The entrepreneurial student movement challenges HEIs. The entrepreneurial activities are about to change the institutions from inside. This is good news as it means that the education, research and societal interaction are constantly developing and in need to stay up to date. HEIs should be aware of this development, and rather than neglecting the development, notice the opportunities for creating the supporting and facilitating entrepreneurial culture for the students.

For student entrepreneurs: Studying and doing business at the same time form a challenging combination. While it challenges the student, it also provides a unique possibility to engage into entrepreneurial learning. That is, creating new businesses in the HEI platform means the availability of newest research findings, professional guidance and the best opportunities for networking. However, as an entrepreneurial learning opportunity, it may mean that the venturing projects may prove unsuccessful. Assuming the entrepreneurial risk should be made consciously.

For public and regional authorities: Having a HEI in the region means an opportunity for having an entrepreneurship accelerator. The entrepreneurial student need the local, regional, national and international interaction for their ventured to succeed. In terms of entrepreneurship education offerings, the context of the HEIs plays an important role.

For researchers: The fast growth of student entrepreneurship raises a set of new questions to be studied. Among other things, the practicing and nascent student entrepreneurs form an interesting group for further inquiry. They form the basic group for academic entrepreneurship coevolving with the research-based spin-offs. However, they constitute a more autonomous and elusive part of the phenomenon. Additionally, the emergence of the entrepreneurial drive seems to base on other than family background of the students. We encourage new studies about the emergence of entrepreneurial motivation and/or intentions during the studies.

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