STUDENT ENTREPRENEURSHIP 2021: ESTONIA

GUESSS country report

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GUESSS

Global University Entrepreneurial Spirit Students' Survey

The authors would like to thank every colleague and higher education representative for their assistance and support in organizing the data collection. The authors are also extremely grateful to all the students who participated in the survey. Finally, a sincere thanks goes to Ernst & Young (EY) who has been the international project partner for GUESSS.

SUGGESTED CITATION

Parts, V. & Durst, S. (2021). Student Entrepreneurship in Estonia 2021. Global University Entrepreneurial Spirit Students' Survey National Report. Retrieved from GUESSS Website: http://www.guesssurvey.org/

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INTRODUCTION

GUESSS stands for Global University Entrepreneurial Spirit Students' Survey and is a global research project about the context of student entrepreneurship. The main goal of GUESSS is to generate unique and novel insights into student entrepreneurship in the form of academic and practitioner-oriented output via mapping the entrepreneurial intentions and activity of students as well as the underlying drivers. Data is collected in as many countries as possible every 2-3 years starting from 2003. Estonia first participated in 2008 and then in 2011, 2013, 2016, and 2018. GUESSS is jointly organized and managed by the University of St. Gallen and the University of Bern (both Switzerland).

New ventures created by students have an important economic and social impact (Sieger et al., 2021). Systematic and long-term observation of entrepreneurial intentions and activities of students as well as corresponding influencing factors (i.e. individual motives and preferences; family background; entrepreneurship education and entrepreneurial climate in university) creates value for various stakeholders. The theoretical foundation of GUESSS is the Theory of Planned Behaviour (Ajzen, 1991, 2002). Its underlying argument is that the intention to perform a specific behaviour (i.e. career choice, starting a business) is influenced by three main factors: attitude toward the behaviour, subjective norms, and perceived behavioural control (Sieger et al., 2014). This in turn depends on university context, family background characteristics, personal motives, and sociocultural context. Since a number of students are already in the process of establishing an enterprise or have established it (nascent and active entrepreneurs), the characteristics of these students and their new ventures are also incorporated into the study.

The core of the GUESSS survey is comprised of central panel questions included in all international surveys that cover career choice and entrepreneurial intentions, drivers of entrepreneurial intentions, nascent and active entrepreneurs, and entrepreneurship of parents. In every wave, core questionnaire is supplemented by unique internationally relevant focus questions. The survey is carried out through a web-based questionnaire, which is common for all countries.

The GUESSS 2021 study was conducted in early 2021 in 58 countries, with more than 267'000 students providing complete responses. The Department of Business Administration at the Tallinn University of Technology (TalTech) was responsible for collecting and analysing GUESSS data in Estonia; thus, it represented the country delegate from Estonia

1.1. SAMPLE

The Estonian sample consisted of 406 students, 63% of them females. The mean age of respondents was 28.4 years (SD=9.31) (the youngest student was 18 and oldest one 57 years old). 34% of our respondents were studying business, economics or law (BECL), 31% were STEM students (computer science / IT, engineering, natural sciences, mathematics), 16% studied HASS (humanities/arts and social sciences), 14% medicine or health sciences, and 5% were from other specialties.

Table 1. Sample characteristics

Student population	ESTONIA	GLOBAL
Females	63%	60%
>26 years	60%	73%
31-40 years	27%	14%
41 -… years	13%	13%
Undergraduate (Bachelor level)	72%	79%
Graduate (Master level)	21%	13%
Ph.D.	2%	3%
Other (incl. MBA)	5%	5%

Compared to GUESSS global there are significantly more graduate (Master level) students in the Estonian sample (which explains why there are almost twice as many students aged 31-40 years in Estonian sample compared to global data). In Estonia it is common for graduates to start graduate studies later or to return to university to obtain a second degree in another speciality.

In the academic year 2020/21, 45 259 students (59% females) were enrolled in 18 higher education institutions in Estonia (61% of them bachelor students, 26% master students, and 5% doctoral students). Students from ten universities and colleges participated in this survey (Table 2). It appears that out of three largest universities in Estonia students of Tallinn University and University of Tartu are significantly under-represented in the sample, and proportionally more business schools (EEUAS, EBS), art and technology students (from TTK University of Applied Sciences) as well students from Health Care colleges participated. Therefore, the dataset will not allow conclusions about the student population in Estonia, but is probably reflecting primarily its entrepreneurial part.

62% of our respondents were Estonians, 5% Russians, and 12% from countries close to Estonia (i.e., Belarus, Finland, Latvia, and Ukraine). 15% the of students (n=61) completed the survey in English and 70% of them marked their nationality as "Other" (i.e. not from neighbouring countries). 31% of the foreign students were graduate students, and 57% undergraduates. 43% of the foreign students studied business / management

and 21% computer sciences / IT. One fourth of the foreign students come from TalTech, 25% from EEUAS, and 20% study in EBS.

Table 2. Student population by school and gender

Higher Education Institutions	Male (n)	In	Total[1] (n)	Sample %	Student population in Estonia
Estonian Entrepreneurship University of Applied Sciences (EEUAS)	29	40	70	17.2%	3.6%
Estonian Academy of Arts (EAA)	4	26	32	7.9%	2.7%
Estonian Academy of Music and Theatre (EAMT)	3	13	16	3.9%	1.2%
Estonian Business School (EBS)	8	18	27	6.7%	2.4%
TTK University of Applied Sciences	27	36	63	15.5%	6.5%
Tallinn University of Technology (TalTech)	42	38	83	20.4%	21.8%
Tallinn Health Care College	3	22	25	6.2%	3.5%
Tallinn University	6	14	21	5.2%	15.7%
Tartu Health Care College	4	27	31	7.6%	2.6%
University of Tartu	15	22	38	9.4%	29.7%
TOTAL	141	256	406	100%	100%

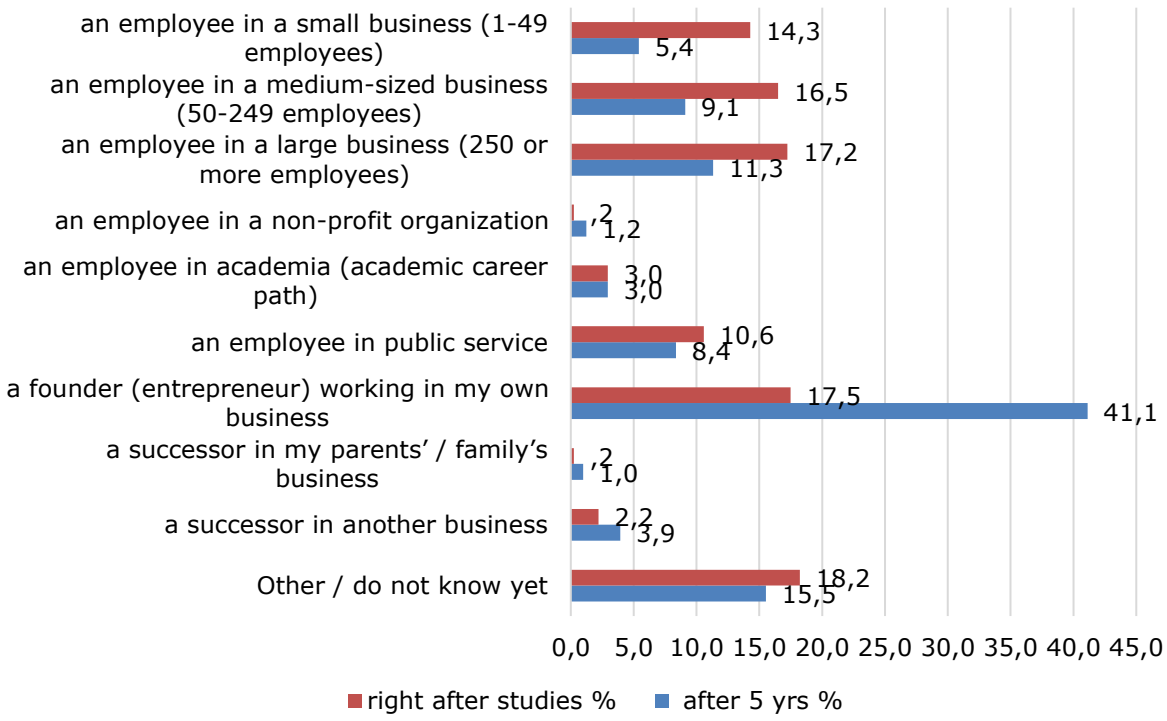
[1] Total does not always equal sum of males and females as seven respondents either left this question unanswered or choose the option „other".

1. CAREER CHOICE INTENTIONS

Almost 19% of all students intend to be an entrepreneur directly after their studies (incl. 2.4% seeing themselves as successors in their parents` business or another business), compared to ca. 45 percent of students thinking about an entrepreneurial career path 5 years later. Thus, entrepreneurial intentions (i.e. planning to create a new business) more than double between these two points in time demonstrating not only the attractiveness of an entrepreneurial career for students but also that the time in between is used to try something different first.

Compared to GUESSS global results, there are significantly more students in Estonia in 2021 seeing themselves as entrepreneurs (both founders and successors) after 5 years (46% in Estonia vs. 35% worldwide).

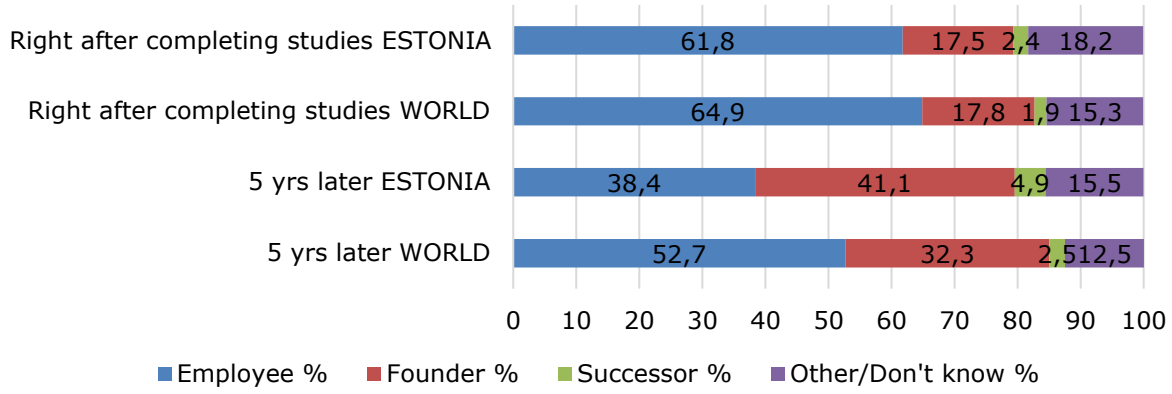
Figure 1. Career choice intentions after graduation and 5 years later



When forming four career groups (employee, founder, successor, other), we see a clear pattern that is very stable across GUESSS waves (Sieger et al., 2016, 2019, 2021); students prefer organizational employment directly after studies, and then many of them plan to switch to an entrepreneurial career path within the next 5 years (Figure 2). When comparing the career plans of local and foreign students, there was no difference in how they see their future right after graduation and 5 years later.

The vast majority (82%) of direct intentional founders (entrepreneurs right after completing studies) intend to continue working in their own business after 5 years (9% of them see themselves as successors). 36% of direct intentional founders have self-employed parents.

Figure 2. Four career paths, Estonia vs GUESSS Global



The Gender gap found in GUESSS surveys worldwide (Sieger et al., 2019, 2021) – i.e., the shares of active, nascent, and intentional entrepreneurs being consistently smaller among females – also applies to Estonia. 28.6% of males and 16% of females see themselves as entrepreneurs right after completing their studies and 57% of males and 42% of females plan to choose an entrepreneurial career after 5 years. However, comparing the career plans of undergraduates and graduate students we can see that (Table 3) (1) there is equal share of male and female master level students willing to be entrepreneurs right after studies and 5 years later, but (2) significantly more male bachelor students are thinking about entrepreneurial career both in near and a bit further future.

Table 3. Students with entrepreneurial career plans by gender and study level

Entrepreneurial career path	Right after studies		5 years after graduation	
	Male	Female	Male	Female
Bachelor students	32%	14%	60%	41%
Master students	23%	23%	45%	47%

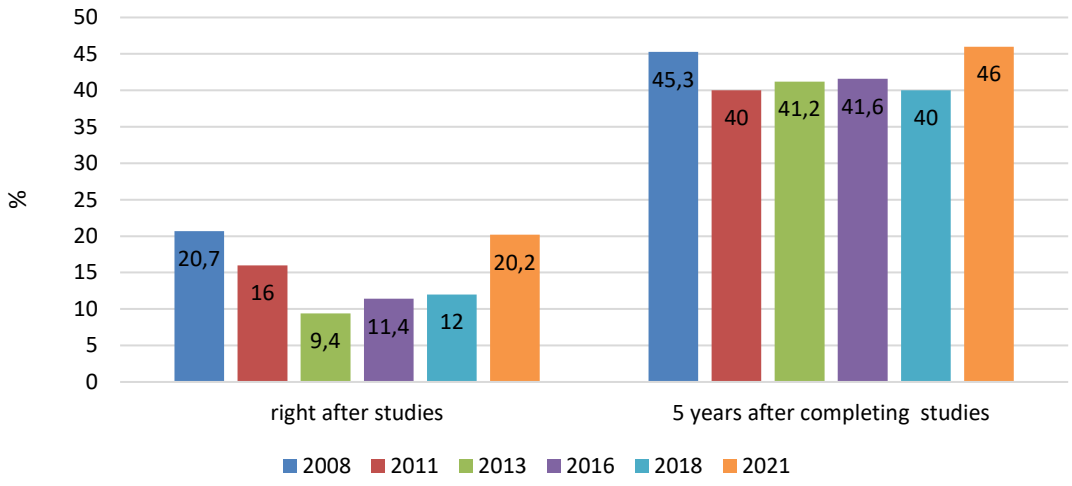
18% of female students and 24% of males reported being active entrepreneurs. Significantly fewer female students (21%) are currently in the process of starting their own business while 38% of male respondents reported being nascent entrepreneurs.

A longitudinal look at the students' entrepreneurial career intentions (as a founder or successor) (Figure 3) across five survey waves demonstrates remarkable stability in terms of choosing entrepreneurial career path 5 years after studies: 40-46% respondents are reporting such intentions.

Opting for direct entrepreneurial career shows significant decline following the 2008 survey –in 2011 and 2013 and which is attributed to the aftermath of the economic downturn that started in 2008. In spring 2021, however, the share of students – ca. 1/5 -interested in

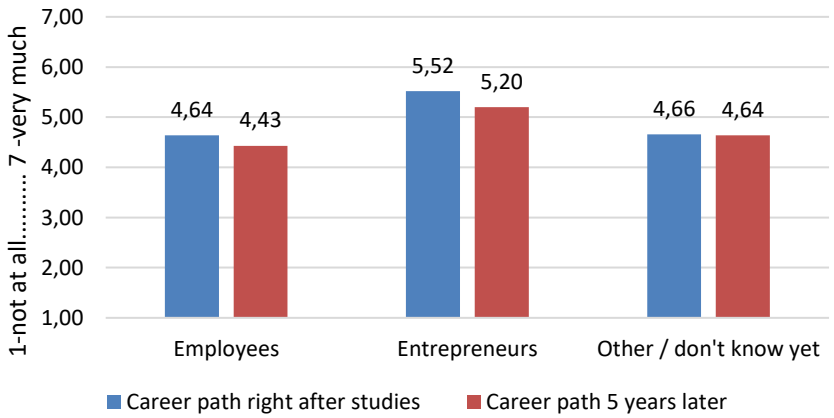
taking on an entrepreneurial career path right after completing their studies has almost reached the same level again as 13 years ago.

Figure 3. Entrepreneurial career path, Estonia 2008-2021



Concerning actual entrepreneurial activities, it appears that 20% of students have already created their own business or are self-employed, and 26% of students are currently trying to start their business (8.4% of the latter are already self-employed /run their own business). The respective GUESSS global numbers are 10.8% and 28.4%, indicating that there are significantly more active student entrepreneurs in Estonia compared to other countries. However, the share of nascent entrepreneurs in Estonia is at the same level as that of GUESSS global.

Figure 4. Willingness to take risks in employment



According to previous studies showing entrepreneurs to be more risk prone than managers and other employees (e.g., Macko & Tyszka, 2009), we compared the willingness of students to take risks in the world of work and employment based on their favourite career path right after studies and 5 years later (Figure 4). It can be seen that students seeing themselves as entrepreneurs in the future score higher than students preferring employee

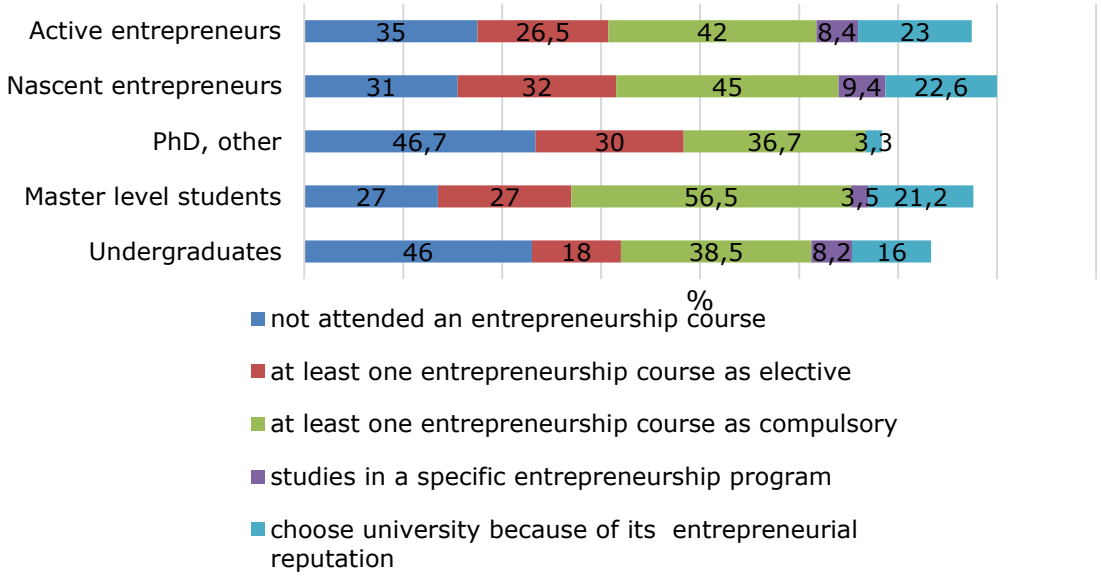
career path or doing something else than work after studies (travelling, family, etc.). As expected, both active and nascent entrepreneurs are more ready to take risks compared to non-entrepreneurs (respective average scores are 5.37, 5.35, and 4.64).

2. DRIVERS OF ENTREPRENEURIAL INTENTIONS

2.1. UNIVERSITY CONTEXT

Of all the respondents, 42% had not attended any entrepreneurship course, 42% had attended at least one compulsory course, and 21% had attended at least one elective course (multiple responses were possible). Compared to all other countries where 53.3% of students have not had contact with entrepreneurial education and 19.6% have studied entrepreneurship as compulsory, entrepreneurship education seems to be more widespread among Estonian students.

Figure 5. Participation in entrepreneurship education



As can be seen in Figure 5, circa 1/3 of nascent or active entrepreneurs have not attended any entrepreneurship course so far. More than 1/5 of the active entrepreneurs (23%) admit choosing university because of its entrepreneurial orientation. Depending on the level of study, 36-56% of students have attended at least one compulsory entrepreneurship course.

In accordance with GUESSS global results (Sieger et al., 2021), also in Estonia there are more nascent and active student entrepreneurs among business/management and science of art (art, design, dramatics, music) students. The percentage of students who already run their own business or are currently in the process of establishing their venture is highest in business schools (i.e., EEUAS, EBS) and academies that offer higher education in art sciences (Table 4).

Table 4. Share of nascent and active entrepreneurs by school

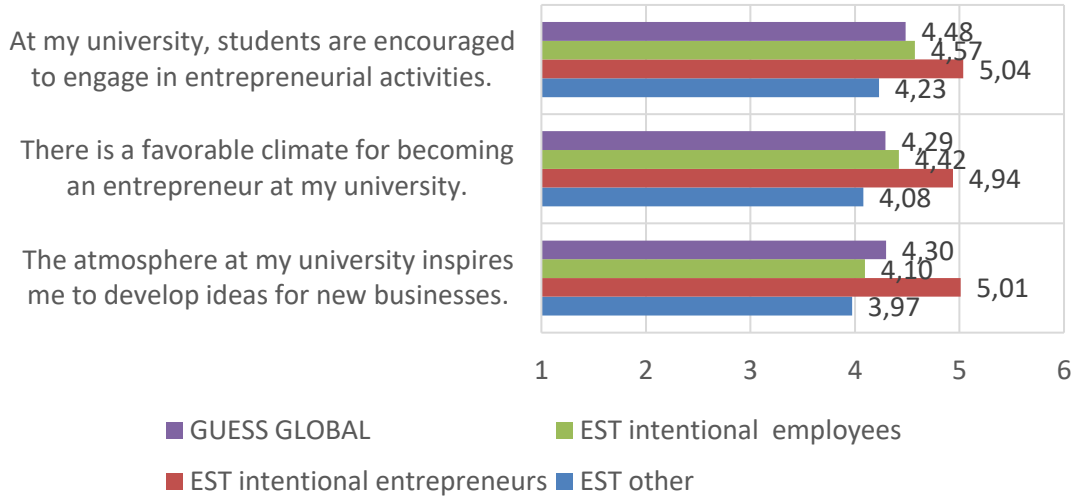
Higher Education Institution	Nascent	Active
Estonian Entrepreneurship University of Applied Sciences (EEUAS)	34.3%	30.0%
Estonian Academy of Arts (EAA)	40.6%	18.8%
Estonian Academy of Music and Theatre (EAMT)	12.5%	31.3%
Estonian Business School (EBS)	55.6%	33.3%
TTK University of Applied Sciences	22.2%	20.6%
Tallinn University of Technology	26.5%	19.3%
Tallinn Health Care College	12.0%	4.0%
Tallinn University	4.8%	23.8%
Tartu Health Care College	6.5%	12.9%
University of Tartu	26.3%	7.9%
TOTAL	26.1%	20.4%

How entrepreneurial the students perceive the university environment to be is also important (Sieger et al., 2021). Students were asked to indicate the extent to which they agree with three statements[3] (1=not at all, 7=very much) describing entrepreneurial climate in university (see Figure 6). The global average of these items is 4.4, which is slightly above the neutral point of the 1-7 scale, and the Estonian average is 4.7. Hence, there is room for improvement in Estonia as well as on a general level.

We compared perceptions of entrepreneurial climate in university among three career groups in Estonia and GUESSS global. It appears that entrepreneurially oriented students in Estonia perceive university environment more favourably in terms of entrepreneurial atmosphere in all three aspects, and students with unclear or postponed professional aspirations do not feel university encourages them to be entrepreneurial.

[3] Based on Franke and Lüthje (2004)

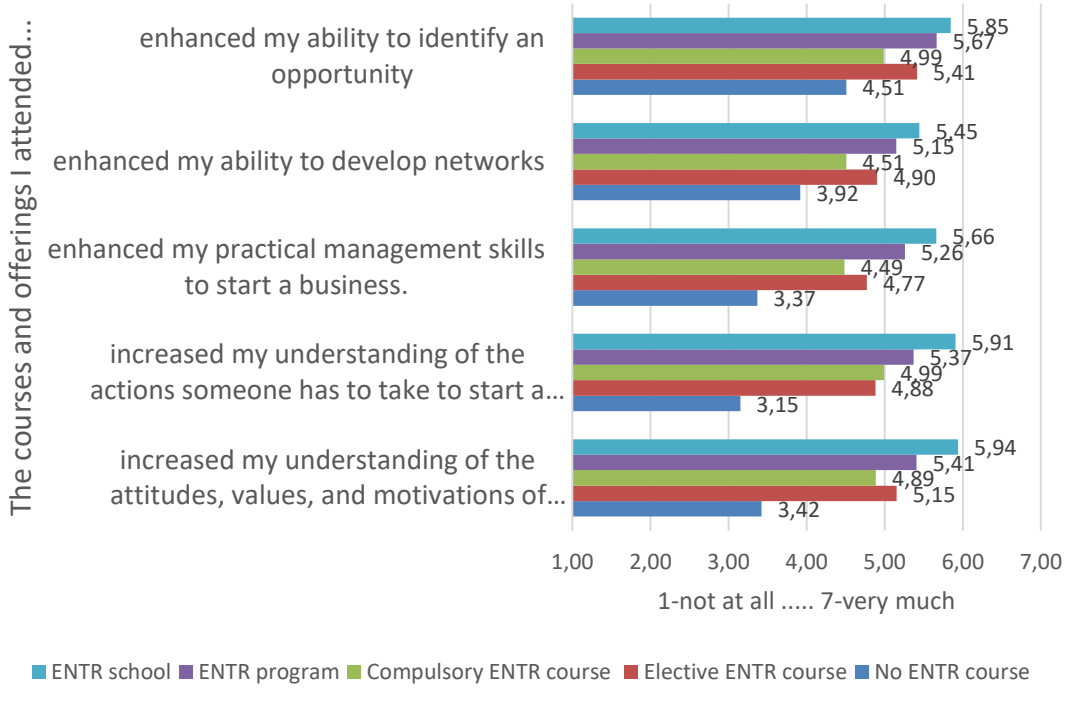
Figure 6. University environment



When asked about the educational content delivered in terms of how much it supports the ability of students to engage in entrepreneurship (1=not at all, 7=very much) the highest ratings are given to all aspects by students enrolled in schools with strong entrepreneurial reputation or studying in specific entrepreneurship programs (Figure 7).

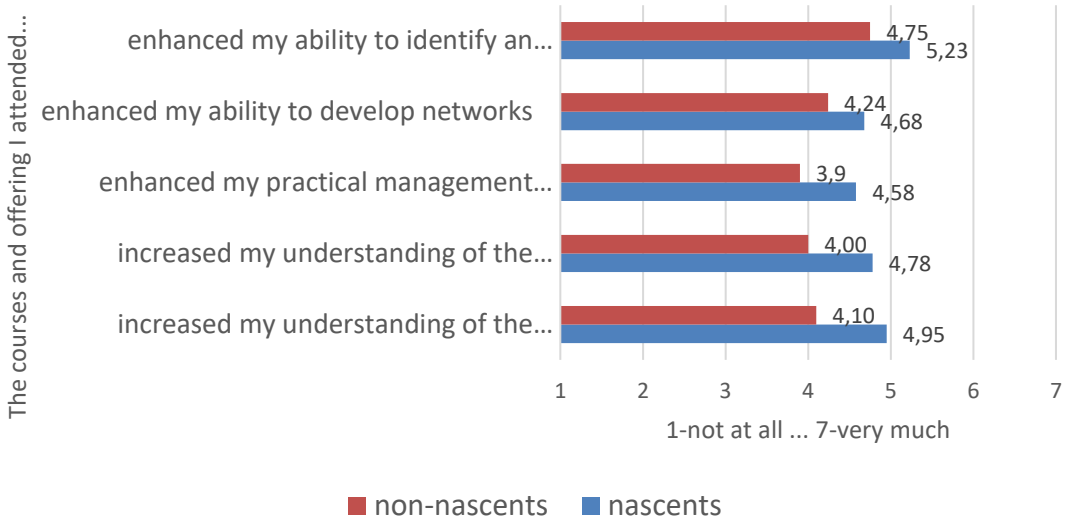
When comparing the ratings given by students studying entrepreneurship as compulsory versus elective, it appeared that the latter rate significantly increased the role of entrepreneurship education in increasing the ability to recognize opportunities and develop networks. Altogether, average scores of four items out of five regarding the effectiveness of entrepreneurship courses are different depending on whether it was mandatory or elective.

Figure 7. Program learning by type of program



Compared to all other respondents, active student entrepreneurs rated significantly higher that courses and offering they attended in school developed practical management skills one needs to start a business (average score of five items respectively 3,97 and 4,5). Also, as can be seen from Figure 8, nascent entrepreneurs evaluated all study content designed to develop their entrepreneurship competence significantly higher compared to non-nascent entrepreneurs.

Figure 8. Program learning, nascents vs others



2.2. INDIVIDUAL PREFERENCES AND SUBJECTIVE NORMS

Looking at how competent students consider themselves on different tasks relevant for successful entrepreneurship, it appears that the entrepreneurial self-efficacy of Estonian students is below average and significantly lower compared to the global results of GUESSS (Figure 9).

Figure 10 depicts the relationship between participation in entrepreneurial education and students' entrepreneurial personality (entrepreneurial self-efficacy, entrepreneurial intentions and entrepreneurial attitudes). We can see that students from schools with stronger entrepreneurial reputation or studying in a specific entrepreneurial program see themselves as more entrepreneurially competent (higher entrepreneurial self-efficacy), and more determined to start an entrepreneurial career (higher entrepreneurial intention and attitude). Students studying entrepreneurship as a compulsory score lowest on two characteristics of entrepreneurial personality (intention, attitude) out of three. Only those who have never attended an entrepreneurship course have a lower score on the entrepreneurial self-efficacy scale, which was expected.

Figure 9. Entrepreneurial self-efficacy

Taken together, the pattern in Figure 10 indicates that both compulsory and elective entrepreneurship courses are not magic wands that increase students' entrepreneurial intentions and attitudes – entrepreneurial intention and attitude of students who do not participate in entrepreneurship education or take respective courses as electives are on the same level. The entrepreneurial attitude of students enrolled in a specific program of entrepreneurship does not differ from that of those who do not attend any entrepreneurship course or take at least one course as an elective.

Rather, it seems to be that students already interested in an entrepreneurial career (higher entrepreneurial intention) self-select into entrepreneurship-focused studies, and although being an entrepreneur is attractive for many students, it is not the first career choice, as previously stated.

Figure 10. Entrepreneurial personality characteristics

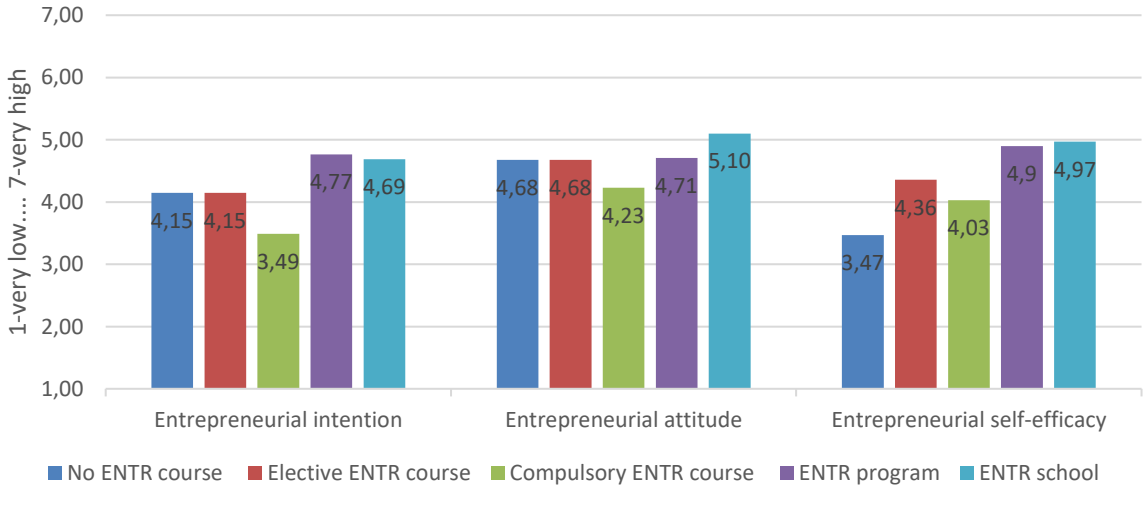
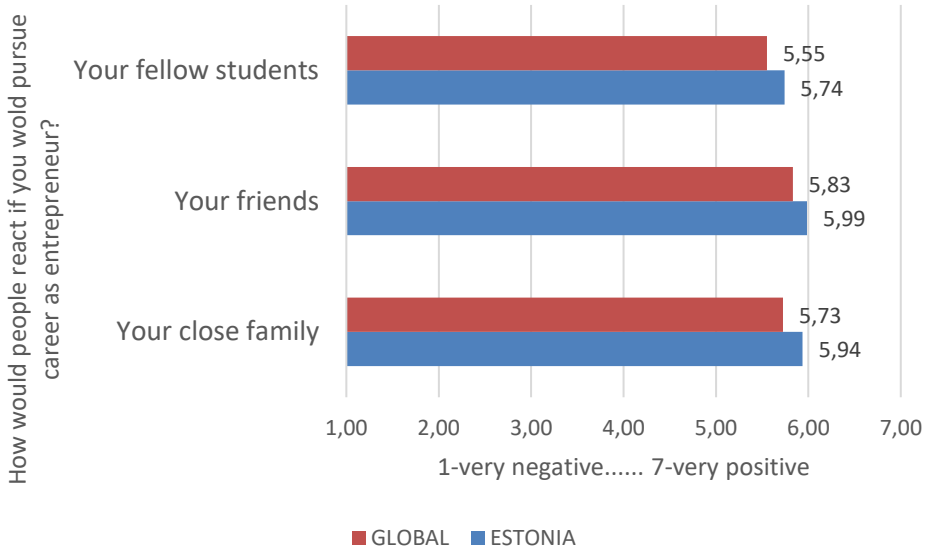


Figure 11. Subjective norms



Subjective norms refer to the belief about whether most people approve or disapprove of the behaviour. It relates to a person's beliefs about whether peers and people of importance to the person - like friends and family members - think he or she should engage in the behaviour.

It appears that friends and family are perceived to strongly support the entrepreneurial career path in Estonia and worldwide (Figure 11). However, both nascent and active entrepreneurs rated supporting attitude of their fellow students, friends and family significantly higher (average score 6,2) than non-entrepreneurs (average score 5,8)[4].

[4] t=2,604 p=0.01

3. NASCENT ENTREPRENEURS

The share of nascent entrepreneurs in Estonia (n=72) is significantly smaller (18%) compared to GUESSS global in 2021 (28.4%), and a bit smaller than in the 2018 sample (22%) and in the 2016 sample (22%). Almost one fourth of nascent entrepreneurs in Estonia (23.6%) are serial entrepreneurs (globally it is 15%), and there are somewhat more female serial entrepreneurs (27%) compared to male students (19%). Students in Estonia have been significantly less active in recognizing opportunities in the pandemic to create businesses; 8% of the nascents have created their new business due to the pandemic, while globally the respective share of students is 22%.

Half of the nascent entrepreneurs see their new business as main occupation after graduation, and approximately half intends to complete the founding process during their studies or right after. There are much less nascent student entrepreneurs in Estonia who do not know / have not decided yet whether their future is related to the venture they are establishing (15% in Estonia versus 30% globally). Majority of nascent entrepreneurs prefer increasing the value of their business as much as possible to maintaining maximum ownership and control (70% in Estonia and 63% globally). The emergence of around 1/3 of start-ups (35%) is related to university.

Table 5. Characteristics of start-ups

Start-ups and nascent entrepreneurship	ESTONIA	GLOBAL
Share of nascent entrepreneurs	18%	28,4%
Created another business before	23,6%	15%
Established business due to COVID-19	8,3%	22,1%
- **wants this business to be main occupation after graduation**	51%	47,3%
- **does not want this business to be main occupation**	15%	22,2%
- **don't know yet whether this business will become an occupation**	15%	30,5%
Start-up emerged from a university course	9,8%	13,5%
Start-up emergence related to university	24,6%	18,5%
Start up largely independent from university	65,6%	68%
- Complete the founding process during studies	33%	29,5%

Start-ups and nascent entrepreneurship	ESTONIA	GLOBAL
- **Completes founding process right after studies**	14%	23,0%
- **Completes founding up to 2 years after graduation**	22%	21,6%
- **Does not know yet when founding process is completed**	31%	26%
Majority owner (51-100%)	70%	60%
Owns 50%	20%	29%
Minority owner (0-49%)	10%	11%

The majority of students (over 80%) worldwide and in Estonia creates a new venture either alone or with one co-founder, and owns majority owners of shares. Circa 1/3 of nascent entrepreneurs among students starts a business with a relative and ca. one fourth with a fellow student. Taking into account the companionship when establishing your own business, pattern is the same in Estonia and worldwide: ca. 40% of students' businesses are created in collaboration with relatives, and ca. 40-50% with fellow students.

Equal share of male and female nascent entrepreneurs has one female co-founder (56% males and 53% females), and 68% of female nascents establish their business in cooperation with 1-3 women.

Table 6. Characteristics of entrepreneurial teams

Entrepreneurial team	ESTONIA	WORLD
no co-founders (only oneself)	49%	54%
one co-founder	32%	28%
two co-founders	11%	11%
three or more co-founders	8%	7,0%
- **no co-founder is relative**	60%	56%
- **one co-founder is relative**	35%	31%
- **two or more co-founders are relatives**	5%	14%

Entrepreneurial team	ESTONIA	WORLD
no co-owner is fellow student	62%	59%
one co-owner is fellow student	27%	24%
two or more co-owners are fellow students	11%	17%

The main reason behind establishing a new venture alone is creating a type of self-employment where no co-founder is needed (51% of nascents) and there is almost an equal amount of nascents either not wanting a co-founder (14%) or thinking about finding one in the future (16%). A marginal share of nascent entrepreneurs (6%) are struggling with founding suitable co-founders, and 11% have some other reasons for starting business on their own.

The pattern of gestation activities is similar worldwide: ca. 1/3 of the nascents have done some market research, ca. 20% have prepared a business plan and discussed their business idea with customers, and 15-17% have not started action yet. As a bit less than ¼ of Estonian nascent entrepreneurs have started developing their product or service we conclude that majority of nascent entrepreneurs (3/4) are in early stages of the process of establishing new venture (Table 7).

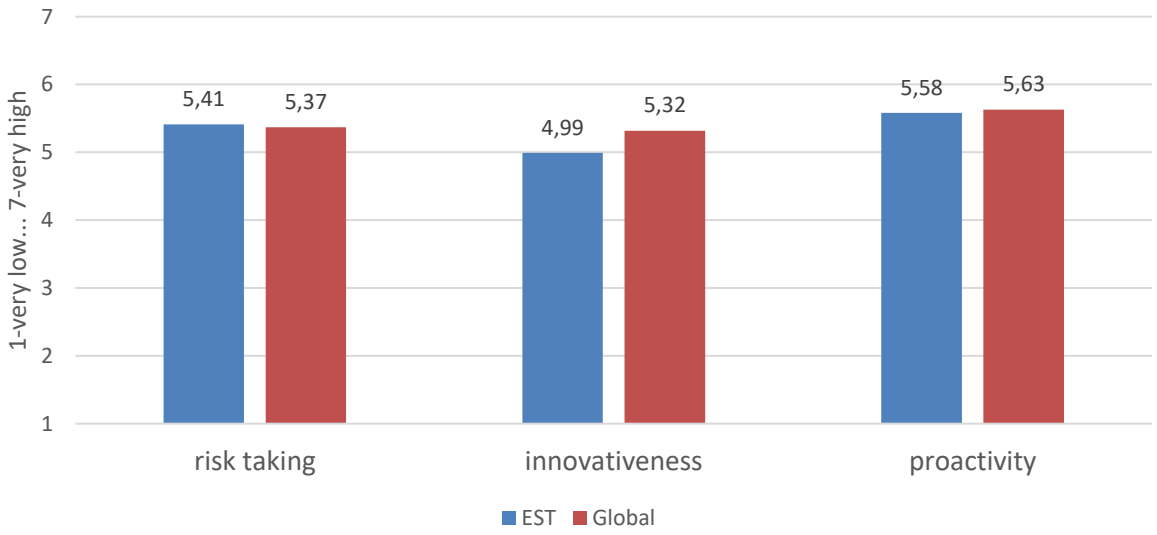
Table 7. Gestation activities of nascent entrepreneurs

Gestation activities	Estonia	Global
discussed product or business idea with customers	20%	22%
collected information about markets or competitors	40%	31%
written a business plan	21%	22%
started product/service development	24%	17%
started marketing or promotion efforts	9%	12%
purchased material, equipment or machinery for the business	11%	11%
attempted to obtain external funding	4%	8%
applied for a patent, copyright or trademark	1%	3%

Gestation activities	Estonia	Global
registered the business	8%	4%
sold product or service	8%	13%
did nothing of the mentioned activities	15%	17%

Entrepreneurial orientation is an important construct used extensively in entrepreneurship literature as it has been shown to influence firm performance, profitability, growth, and product innovation (Bolton & Lane, 2012). Entrepreneurial orientation is described by a set of three to five behaviours, and three of these - innovativeness, risk-taking and proactiveness - are used in the majority of the EO research (ibid.).

Figure 12. Individual entrepreneurial orientation



As can be seen from Figure 12, nascent student entrepreneurs worldwide are very similar in terms of taking risks and being proactive when starting their new business. However, Estonian students have rated their approach to establishing a business as less innovative than fellow students in other countries.

4. ACTIVE ENTREPRENEURS

Active entrepreneurs are those students who are already running and owning a venture. A total of 83 students (about 20.4%) consider themselves active entrepreneurs which is significantly more than in 2018 sample (13%) and 2016 sample (13%) in Estonia. 38% of active entrepreneurs are serial entrepreneurs (created another business before). Five students created their business because of the Covid-19 implications.

Table 8. Demographics of active entrepreneurs

Active entrepreneurs		Estonia	GLOBAL
	% of students	20,4%	10,8%
Has created another business before		38.3%	
Gender	Female	55,4%	52,0%
	Male	41,0%	47,1%
Age	up to 26 years	34,2%	67,8%
	27 - 35 years	25,0%	18,6%
	36+ years	40,8%	13,6%
Level of studies	Under-graduate (Bachelor)	55,4%	76,8%
	Graduate (Master)	33,7%	12,0%
	Other (PhD, MBA)	10,8%	10,9%

As can be seen from Table 8, circa 1/3 of the active entrepreneurs are 20-26 years old in Estonia and 41% are aged 36+ years. The latter is different from other countries surveyed where the majority of active entrepreneurs (67.8%) are up to 26 years old bachelor level students. In Estonia, many people continue their higher education studies in older age (ca. 1/3 of active entrepreneurs in our sample are enrolled in Master level programs) which probably explains the remarkably higher proportion of active entrepreneurs of 36+ years in Estonian sample. Almost a third of Estonian active entrepreneurs (31.3%) have entrepreneurial parents, predominantly father (17%).

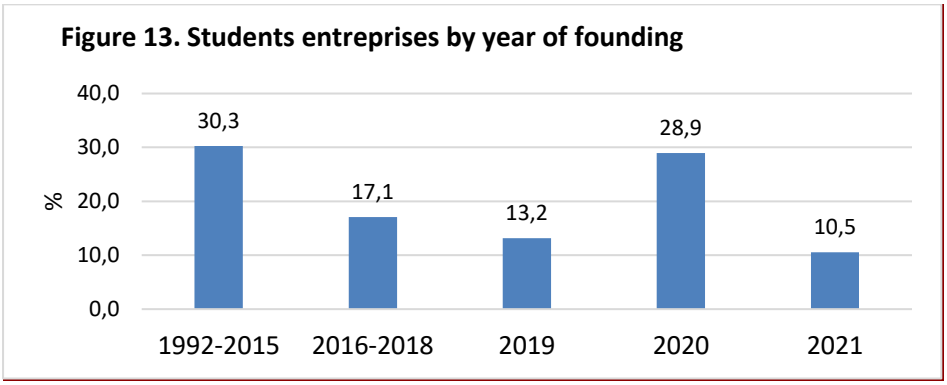
The largest share of active entrepreneurs (35%) comes from business/management students followed by engineering (16%) and computer science/IT students (14.5%). Compared to GUESSS global, proportionally more active entrepreneurs have their background in computer sciences /IT or study science of art in Estonia (Table 9).

Table 9. Active entrepreneurs by field of study

Main field of study	Estonia	GLOBAL
Arts / Humanities	6.0%	6.9%
Business / Management	34.9%	28.0%
Computer sciences / IT	14.5%	4.3%
Economics	6.0%	6.3%
Engineering (incl. architecture)	15.7%	16.0%
Human medicine / health sciences	6.0%	7%
Natural sciences	1.2%	3%
Science of art (e.g., art, design, dramatics, music)	10.8%	2.3%
Social sciences (e.g., psychology, politics, education)	2.4%	10.9%
Other	2.4%	9.1%

Circa 40% of established companies of students are newly founded ones; they were founded in 2020 or 2021, but there is a significant proportion (30%) of firms founded 5 years ago or earlier (Figure 13).

Figure 13. Students entreprises by year of founding



Similar to GUESSS global, circa one fourth of the students´ enterprises are one-man businesses, ca. 1/3 of the businesses have one employee and ca. 40% have two or more employees. Most students (67%) are majority owners, and ca. 1/3 plans to continue working in his/her established venture after graduation. More than half of (56%) of student entrepreneurs are solo-owners, and 24% have one co-owner which is different from GUESSS global where 37% of students' ventures have no co-owners. 31% of the active

student entrepreneurs in Estonia share ownership with one or more relatives, while co-ownership with fellow student(s) is rare (8.4%). In GUESSS global, 22% of active entrepreneurs have fellow students as co-owners and 50% share ownership with relatives (Table 10).

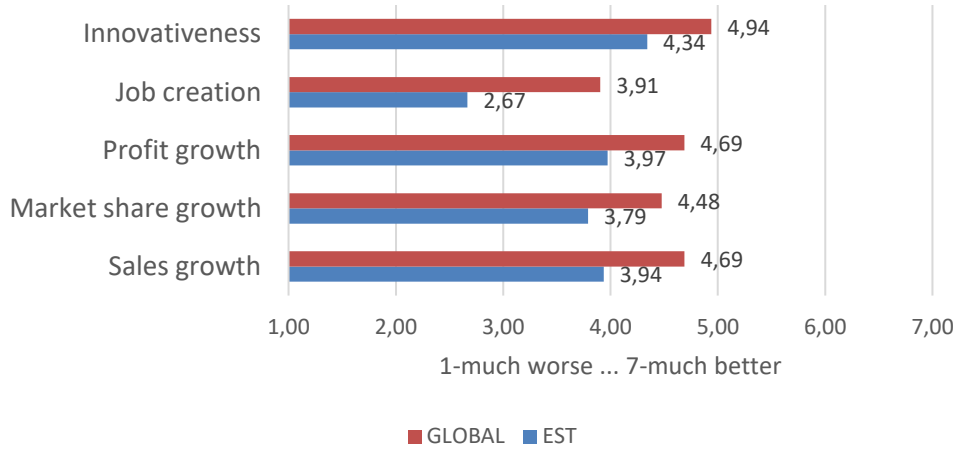
Table 10. Characteristics of students' ventures

Dimension	ESTONIA	GLOBAL
solo-entrepreneurs (zero employees)	25%	28%
one employee	37%	31%
two or more employees	37%	42%
majority owner	67%	58%
owns 50%	15%	21%
minority owner	19%	22%
wants this business to be main occupation after graduation	38%	36%
does not want this business to be main occupation	26%	30%
don't know yet if this business becomes main occupation	36%	34%

The existing entrepreneurs were also asked to rate the performance of their company compared to competitors in the five dimensions depicted in Figure 14. As can be seen, GUESSS global results over-perform Estonian sample in all dimensions; student entrepreneurs around the world estimate the success of their company slightly higher than average regarding innovativeness, growth of profit, sales and market share.

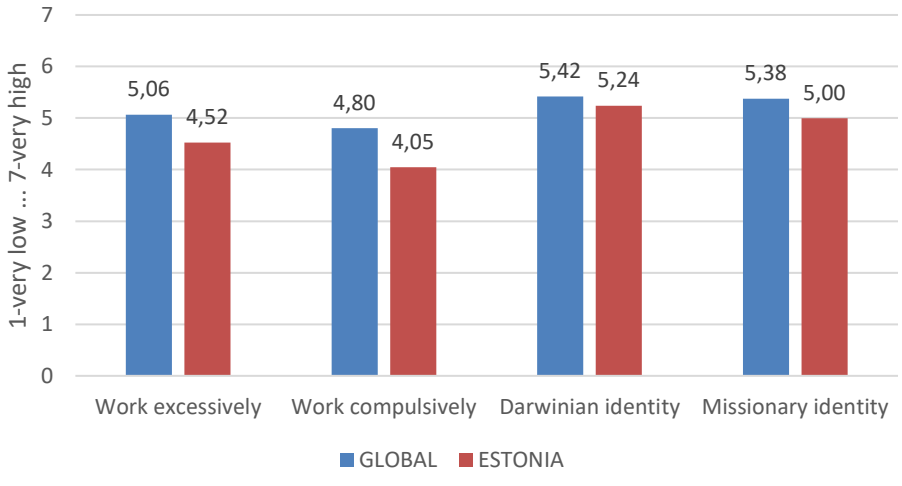
Estonian entrepreneurs rate themselves significantly below average what concerns creating new jobs, and around average in sales, market share and profit growth as well as innovativeness compared to their competitors since the beginning of establishing their company.

Figure 14. Entreprise performance ratings compared to competitors



When asked about their behaviour as an entrepreneur, we can see from Figure 15 that students generally see themselves as working pretty hard: excessive work is characterized as racing against the clock, keeping all irons in the fire, doing several things at the same time. Compulsively working means feeling obliged to work hard even when work is not enjoyable and feeling guilty when not working. Taken together, Estonian entrepreneurs have rated themselves as less workaholics compared to their fellow entrepreneurs in other countries.

Figure 15. Experiences as an entrepreneur



A person's self-concept is assumed to influence the type of entrepreneurial firm they create (Sieger et al., 2016). Fauchart and Gruber (2011) argued that firm founders tend to recognize and pursue those opportunities that are compatible with their self-concept, and in the process of creating new firms they tend to act in an identity-relevant manner.

Entrepreneurs with Darwinian identity focus on themselves and tend to prioritize the achievement of self-centered goals. They tend to search for opportunities that will result in personal gains or benefits and consider competition as their primary reference in the social space. Their self-worth derives from acting or behaving in ways that are congruent with a professional "business-school" approach to management (Fauchart & Gruber, 2011).

For entrepreneurs with a missionary identity, the locus of self-definition is "Impersonal We" (Sieger et al., 2016) as their primary reference in the social space is society as a whole. Missionaries derive their self-worth from enacting their sense of responsibility into their social spheres and political vision. As a result, Missionaries try to achieve a better world and identify the opportunities that are promising in terms of cultivating social causes they believe in (ibid.).

As can be seen in Figure 15, there is not much difference globally in how much active entrepreneurs identify themselves as Darwinians or Missionary in their approach to managing and creating the enterprise. That is, both identities (doing business well and creating social value) are equally important, and Estonian entrepreneurs have quite similar motivations and goals.

Family-to-business support has an emotional and instrumental dimension. Both of them are important for active entrepreneurs as they often have multiple roles to reconcile. As can be seen from Figure 16, student entrepreneurs estimate emotional support from family members rather highly but not extremely strong. Estonian respondents disagree more that the family does not really listen to them when talking about their business.

Figure 16. Emotional support

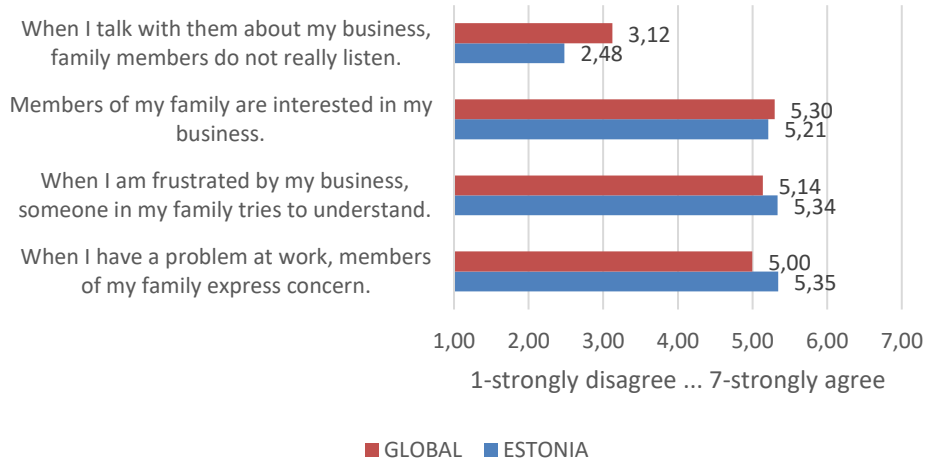


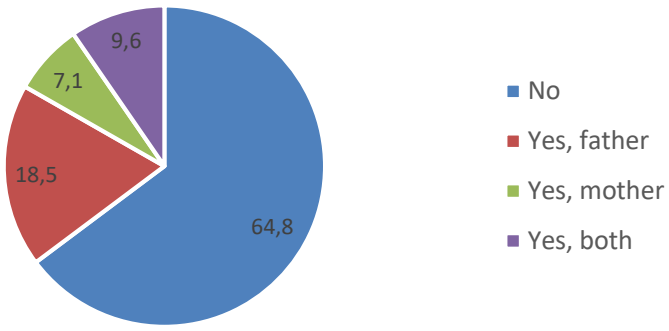
Figure 17. Instrumental support

Estonian respondents have rated practical-instrumental support from family members remarkably lower compared to their counterparts in other countries (Figure 17). Altogether Estonian responses are around scale average indicating that there is not much involvement of family in their business whereas students from other countries seem to get more practical help or support from their closest relatives / family members.

5. ENTREPRENEURSHIP OF PARENTS

Circa 1/3 of our respondents had self-employed parents (Figure 18), and it is twice as often the father than the mother being self-employed. 10% of the parents are not majority owners in their business while 91.5% of the companies are managed by owner parent(s).

Figure 18. Are your parents self-employed?



32% of the parents' businesses have no or one employee, 35% have 2-5 employees, 26% have 6-20 employees, and 7% have 30-150 employees.

12% of the students have a personal ownership stake in parents' business, and 40% considers this business as a "family business". 48% of the students have worked for their parents' business.

The venture of students is mostly established in a different industry than their parents' business – only 15% student entrepreneurs are active on the same market/industry whereas 92% do not have relevant transactions between the two businesses. Out of 26 cases in which an active student entrepreneur has an entrepreneurial parent, the latter holds ownership stake in the student's venture.

It was also found that there is a very low intention to be the successor of the family business in Estonia - more than 80% of the respondents disagreed with that idea.

SUMMARY

The main findings of the GUESSS study in Estonia are as follows:

Students prefer to start as employees but want to become founders of their venture after some time: 19% of all respondents intend to be an entrepreneur directly after studies, and 46% are thinking about entrepreneurial career path 5 years later.

An equal share of male and female master level students plans an entrepreneurial career right after studies (23%) and 5 years later (46%). Among bachelor level students there are significantly more male students than female students thinking about an entrepreneurial career.

20% of students have already created their own business or are self-employed, and 26% of students are currently trying to start their business. 18% of the female students and 24% of the male students are active entrepreneurs already whereas 21% of female students and 38% of male respondents are nascent entrepreneurs.

Most nascent and active entrepreneurs have participated in entrepreneurship education (attended compulsory or elective courses or studied as respective program). 83% of the master level students have been involved in entrepreneurship education.

Entrepreneurially oriented students perceive the university environment more favourably in terms of entrepreneurial atmosphere. They also evaluate all study content designed to develop entrepreneurship competence significantly higher compared to the not self-employed students or nascent entrepreneurs. Friends and family are perceived to strongly support the entrepreneurial career path.

Almost one fourth of nascents are serial entrepreneurs, and 8% of the nascents recognized Covid-19 as an opportunity to start businesses (globally the respective percentage was 22).

49% of the students' start-ups have no co-founder, and 32% have one co-founder. One third of the emergent start-ups are in some way related to university. Half of the nascents see their new business as main occupation after graduation.

The pattern of gestation activities is similar worldwide: ca. 1/3 of nascents have done some market research, ca 20% have prepared a business plan and discussed their business idea with customers, and 15-17% have not started action yet.

35% of the active entrepreneurs comes from business/management students, 16% study engineering and 14.5% computer science/IT. Similar to GUESSS global, ca. 1/4 of the students´ enterprises are one-man businesses, ca. 1/3 of the businesses have one employee and ca. 40% have two or more employees.

Student entrepreneurs rate themselves significantly below average what concerns creating new jobs, and around average in sales, market share and profit growth as well as innovativeness compared to their competitors since the beginning of establishing their company.

Circa 1/3 of the respondents have parents who can act as entrepreneurial role models (i.e., self-employed parents), but less than 20% of potential successors intend to continue the business of their parents.

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