

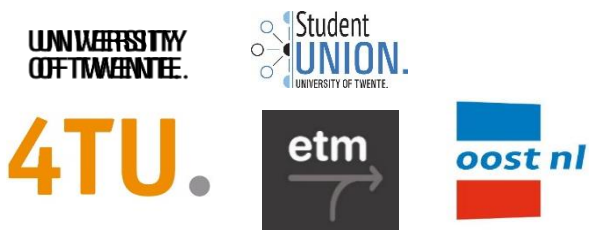


Global University Entrepreneurial Spirit Students' Survey



Global University Entrepreneurial Spirit Student' Survey  
National Report for The Netherlands 2020-2021

GUESSS NL '21 Partners



International Project Partner



# Colofon

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## **About the Entrepreneurship and Technology Management Group at the University Twente**

ETM is the department at the faculty of Behavioural, Management and Social sciences at the University of Twente that provides research, education, and impact in technology-based innovation and entrepreneurship. ETM is leading in research based on engaged scholarship from an interdisciplinary perspective, and we are at the forefront of educational development. Together with our partners, we play a vital role in the University Twente entrepreneurial ecosystem, the 4TU/ECIU network, and the Dutch higher education landscape on entrepreneurship and innovation topics. For more information about ETM, please visit <https://www.utwente.nl/en/bms/etm/etm/>

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Scene from UTwente Design Lab

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## Foreword

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### **Steps ahead [or just simply: Foreword]**

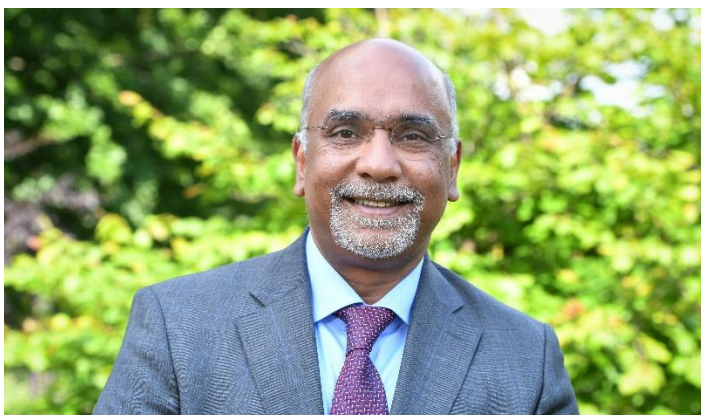
The idea of ordering meals online came at a moment when many people didn't really have a clue about the potential of the internet yet. A student came up with that, in his small attic room in Twente. Today, Just Eat Takeaway is active in over 20 countries. Or, look at the bicycles with the eye-catching blue front tires. You see them in over 70 cities, these 'Swapfiets' bikes. Students from Delft started this bicycle membership plan, with a few dozens of bikes. Today, they have over 200,000 customers. These are just a few examples of Dutch students with an entrepreneurial mindset. More and more of our students have this entrepreneurial 'spirit', like it says in the abbreviation GUESSS. The survey results that are now presented to you show that the share of Dutch students starting their own company has doubled since the previous edition in 2013. That is quite impressive and something to be proud of. What we also see is that many student startups have clear ideas on a sustainable society. They truly take their responsibility.

You could ask the question: what is our role as universities in this? I am convinced that it is not just about what we can teach these students, and how we can spark and stimulate their entrepreneurial spirit. It is also about what we can learn from them! How do they see the future, what risks are they willing to take, what support do they need, what type of education and skills? The classic learning model, which is about developing academic skills, already includes more elements of taking initiative and stepping forward, translating ideas into business models. Still, most probably, some students are always a step ahead of us. Which is great, actually. Together with them, we will be able to create valuable ecosystems that support their ideas and make them a success. An important dimension is asking how we can include cultural aspects in these support systems, to make them more inclusive and enhance the diversity among student startups. As GUESSS is a global survey, it is also a great international network tool to learn from approaches in other countries and take student entrepreneurship to an even higher level.

Prof.dr. Vinod Subramaniam

President

University of Twente



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# 1. Introduction

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Student entrepreneurship is essential. Entrepreneurial student ventures are already addressing today's and future challenges with innovative solutions. Many more plan to start their venture a few years after graduation and become tomorrow's entrepreneurs. Thus, student entrepreneurs shape the world we will live in.

Mapping how many students pursue and intend to pursue entrepreneurship creates a crucial foundation for educators, policy-makers, academics, and others. This is the aim of GUESSS (Global University Entrepreneurial Spirit Students' Survey). Second, GUESSS addresses key antecedents towards intention and behavior, based on the Theory of Planned Behavior (TPB) (Ajzen, 1991; Ajzen, 2002; Kautonen et al., 2013): attitude toward the behavior, subjective norms, and perceived behavioral control. Finally, GUESSS measures additional antecedents on the personal level (for example, personal motives, demographics) and the closer (family) and broader (university) context. Through its global scale, GUESSS can also take the cultural embeddedness of student entrepreneurship into account.

The GUESSS project began in 2003 with the participation of two countries. In 2021, in its 9<sup>th</sup> edition, responses of more than 265,000 students from 58 countries were collected. Hence, GUESSS has developed into one of the most significant data sources on student entrepreneurship. In the Netherlands, 28 educational institutions participated, and approximately 700 students completed the survey.

## 2. Results

### 2.1 Institutes of Higher Education and respondents

The population was students from 28 Institutes of Higher Education (IHE; universities and polytechnic universities) in the Netherlands. 11 IHE participated via an institutional representative. Data were collected with an online questionnaire. This online questionnaire was distributed by the institutional representatives and by representatives of student associations between May 2021 and July 2021. Students were reached via electronic learning environments, mailing lists, and social media. We made sure the outreach was GDPR compliant. Two weeks after the initial mailing, the representatives were asked to send out a reminder to their students. Another two weeks later, we asked for a second reminder. To motivate student participation, a gift voucher raffle was offered. The following table indicates the Dutch educational institutions and the number of respondents that participated in the survey.

	Population (approx.)	Responses	Response rate
Delft University	26,000	19	0.0073
Eindhoven University of Technology	13,500	19	0.0014
Erasmus University Rotterdam	39,000	87	0.0022
Leiden University	32,800	31	0.0095
Nyenrode Business University	8,000	36	0.0045
Saxion Hogescholen	26,000	30	0.0011
Tilburg University	19,500	62	0.0032
University of Twente	12,500	321	0.0257
Wittenborg University of Applied Sciences	1,000	42	0.0420
Other	N/A	66	N/A
Total	N/A	713	N/A

**Table 1. Participating IHE in the 2021 Dutch survey**

The other IHE without a dedicated institutional representative and/or respondent numbers below 15 include Amsterdam University of Applied Sciences, ArtEz University of the Arts, Breda University of Applied Sciences, Fontys University of Applied Sciences, HAN University of Applied Sciences, Hanze University of Applied Sciences, INHolland University of Applied Sciences, Maastricht University, Radboud University, University of Amsterdam, University of Applied Sciences Leiden, University of Applied Sciences Utrecht, University of Groningen, Utrecht University, Van Hal Larenstein, Wageningen University, Windesheim University of Applied Sciences, Zuyd University of Applied Sciences.

## 2.2 Demographic information

Regarding personal demographics, the average age of students who participated in the 2021 national survey is about 23 years (median), representing the age median in Dutch Higher education. The share of male to female respondents is balanced (50,9% and 48,1%, and 0,7% with “other / prefer not to say”), which is similar to the gender distribution in Dutch Higher education (45% m / 55% f). The majority of students (66,2%) have Dutch nationality. This is less than the value reported in the 2013/14 report (84%) but similar to the national distribution.

In terms of study demographics, we report 46,1% undergraduate students (bachelor level), 47% graduate students (master level), and 6,9% other (e.g., Ph.D., MBA). The 2021/22 survey thus reports more graduate students than the 2013/14 study (was 17%) and more than their national share (31%).

In terms of study direction, GUESSS uses four categories: Business, Economics, and Law (BECL, 58,5% of the respondents), Natural Sciences and Medicine (NSM, 32,7%), Social Sciences (SSC, 3,2%), and “Other” which includes the survey “other” category plus “Art, Science of Art” (8,8%). Compared to the 2013/14 survey, we report more BECL (was 34,9%), about the same share of NSM (was 31%) and “other” (was 9,3%), and less SSC (was 24,8%). Compared to the national distribution, we report more BECL (30%), about the same share of NSM (34%), and less SSC+Other (35%).

	BECL	NSM	SSC	Other
Delft University		47,4		52,5
Eindhoven University of Technology	10,5	84,2	5,3	
Erasmus University Rotterdam	98,8		1,1	
Leiden University	87,1		12,9	
Nyenrode Business University	80,6	11,1	5,6	2,8
Saxion Hogescholen	73,3	6,7		20
Tilburg University	93,5	3,2	1,6	1,6
University of Twente	36,8	54,8	3,1	5,3
Wittenborg University of Applied Sciences	95,2			4,8
Other	68,6	22,9	3,8	4,8

**Table 2.** Share of BECL, NSM, SSC, and other study directions of the 2021 respondents (in %)

## 2.3 Career choice intentions / entrepreneurial intentions

A key goal of GUESSS is to identify which career options students want to pursue after their studies. Either right after, or as a long-term career plan. The following figure (Figure 1) reports what the students in the Dutch sample want to be right after completing their studies (gray bars) and five years later (green bars). The first six options refer to options in paid employment. The last three represent entrepreneurial careers. We compare the 2020/21 results with the results from the 2013/14 study.

The respondents state that after their studies, the most popular employment option is an employee at a large firm. This contrasts with the 2013/14 responses, where small firm employment was the most preferred option. In addition, becoming a founder was a popular option in this survey, with more than double the share of respondents from the previous study.

Five years after their studies, working in paid employment seems to become less attractive, with its steepest drop in career intentions for small and medium-sized firms. On the other hand, the interest in entrepreneurship almost triples to about 33% of the respondents stating that they want to work as an entrepreneur. We see a similar development from right after studies to five years after studies in the 2013/14 survey.

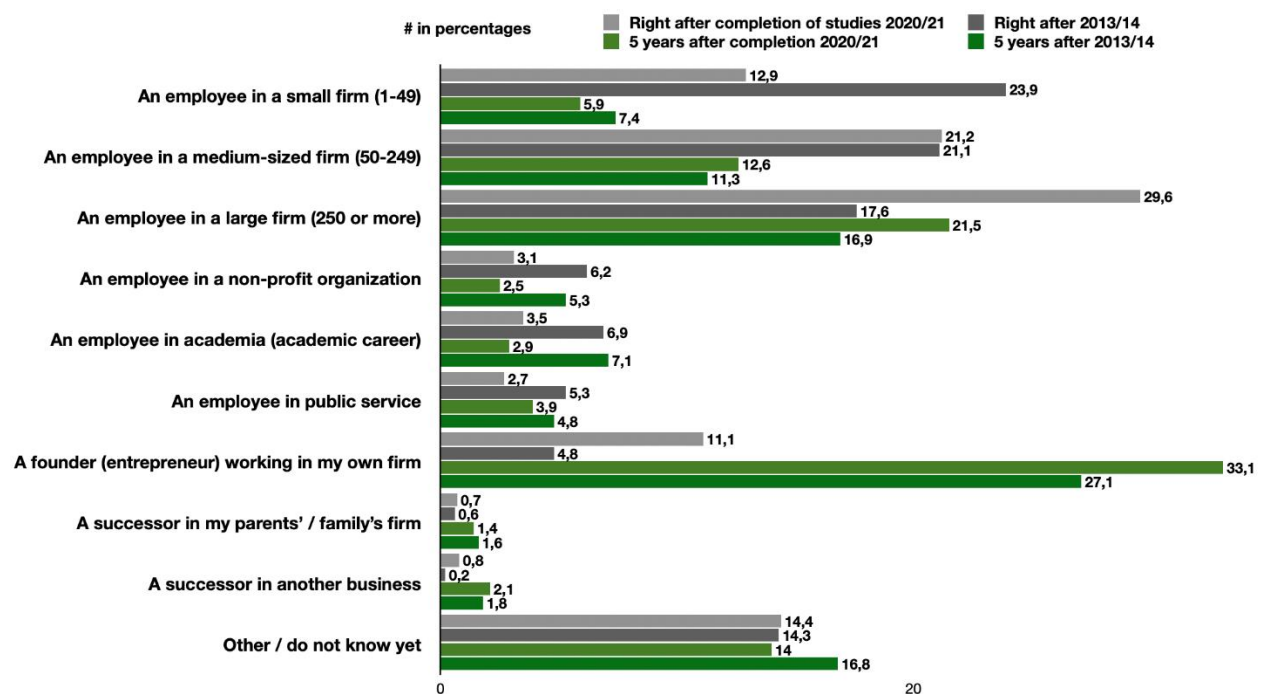


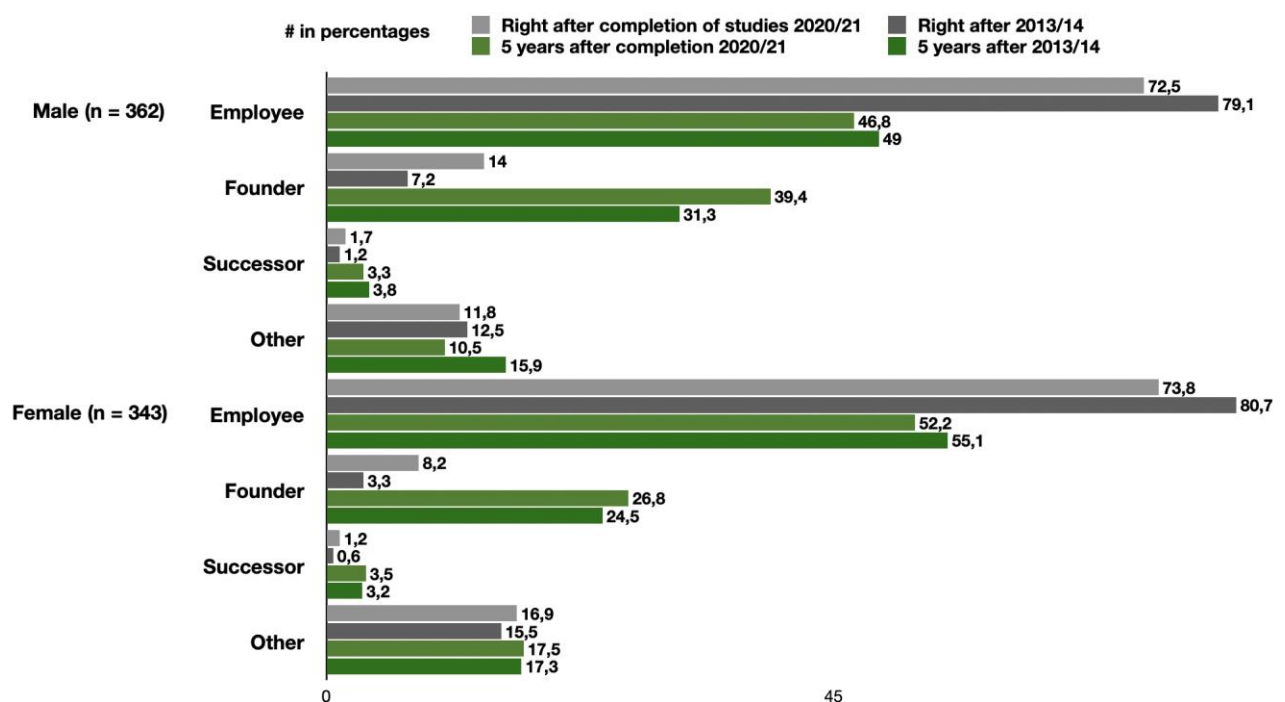
Figure 1. Respondents' preferred career intentions.

Source for the 2013/14 data: Karali et al. (2014).



We now aggregate students' career choice intentions into four broad categories: employees,<sup>1</sup> founders, successors, and others. We use these aggregations to investigate current and future career choices over gender and study direction differences.

Male respondents are more likely to want to become entrepreneurs directly after completing their studies than female respondents (14% compared to 8,2%). For both respondent groups, founding as a career choice increases after five years. The increase is similar for both groups (male with a factor of about 2,8; female by about 3,2). Compared to the previous study, similar patterns emerge. Only in 2013/14, the share of females who wanted to become entrepreneurs right after the study was much lower (3% compared to 8,2%). Still, the 5-year increase was much more substantial. Hence, there are few differences between 2020/21 and 2013/14 in the share of female respondents who want to become entrepreneurs five years after graduation.



**Figure 2. Career choice intentions of male and female respondents, right after and 5 years after completing their studies, compared between the current and the 2013/14 study.**

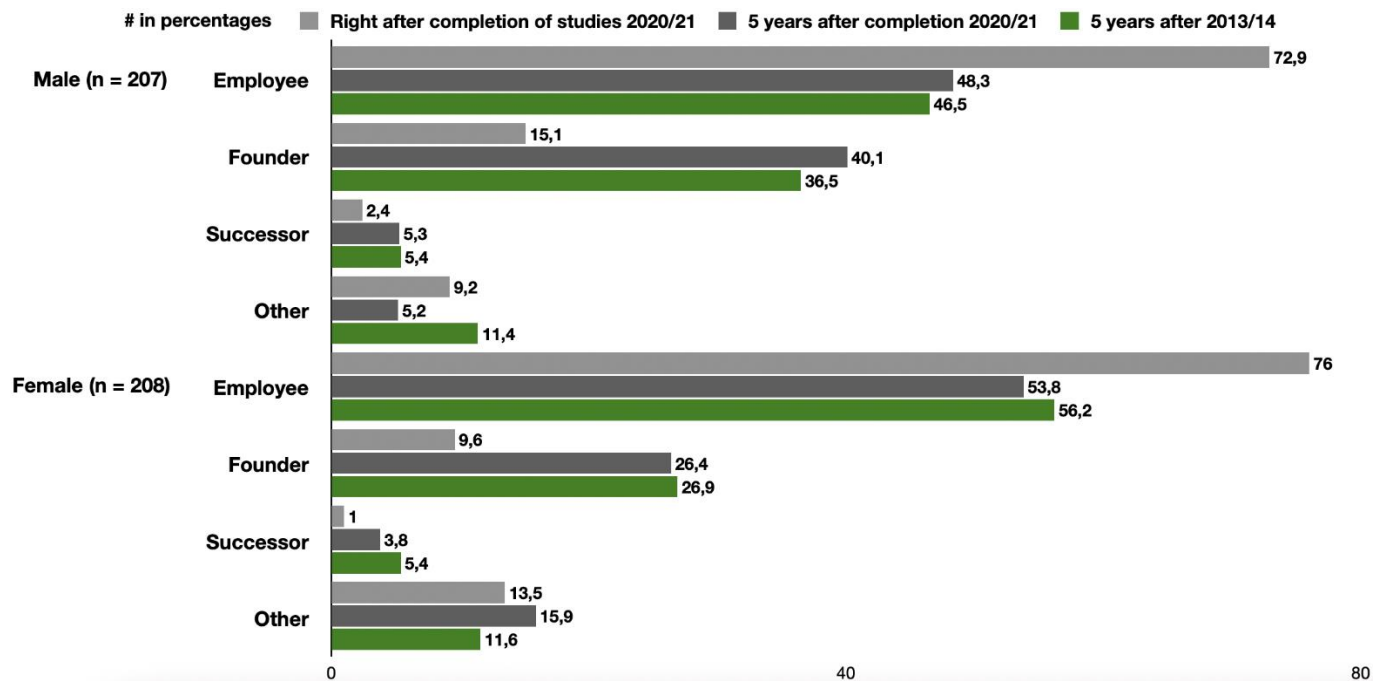
The gender category "other/prefer not to say" was given by five respondents, which was too low for further analysis. The sample size refers to the 2020/21 survey.

Source for the 2013/14 data: Karali et al. (2014).

<sup>1</sup> This category includes employees at SME and large companies, non-profit, academic careers and public service careers.

To further examine the differences between males and females, we look into their career choice intentions separated by their field of study (BECL, NSM, SSC).

Male BECL students' response share of entrepreneurship as a career choice increases by a factor of 2,65. This value is 2,75 for female NSM student respondents. After completion, male NSM students are 1,57 times more likely to choose entrepreneurship as their career choice than female respondents. Five years after completion, male respondents are 1,51 times more likely to choose entrepreneurship as their preferred career choice.

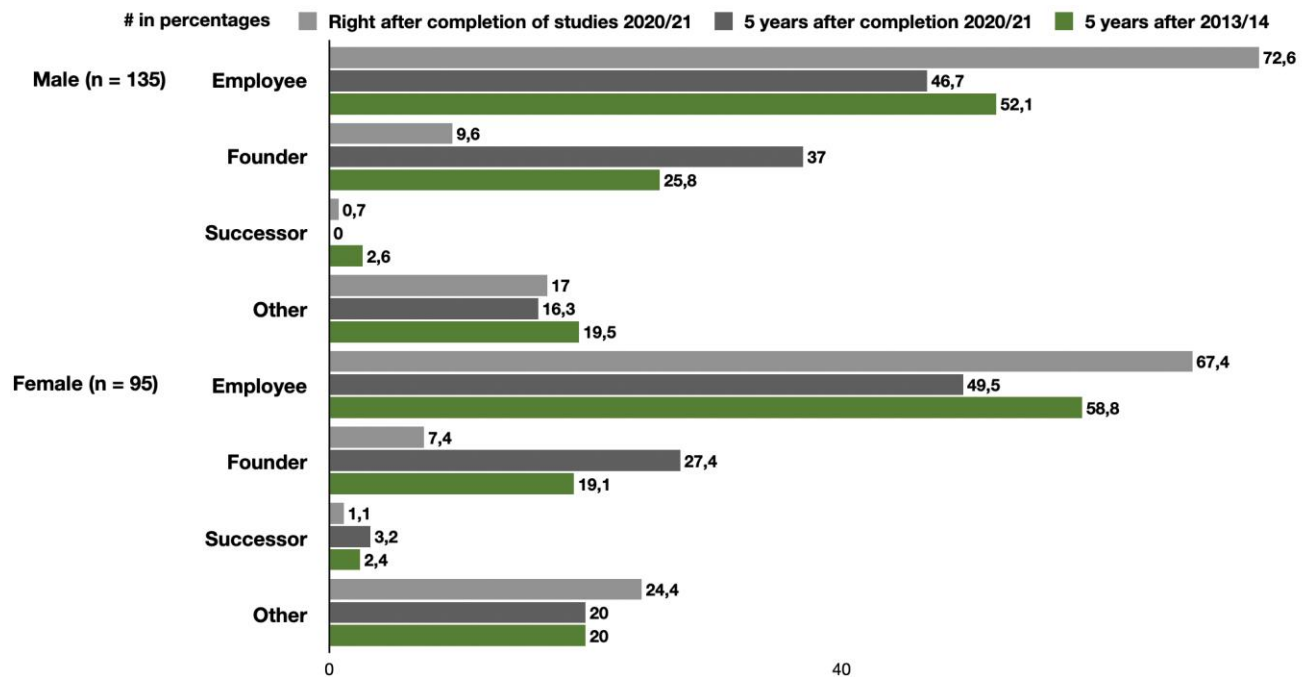


**Figure 3.** Career choice intentions of male and female BECL respondents, right after and five years after completing their studies, compared the current and the 2013/14 study.

The sample size refers to the 2020/21 survey.

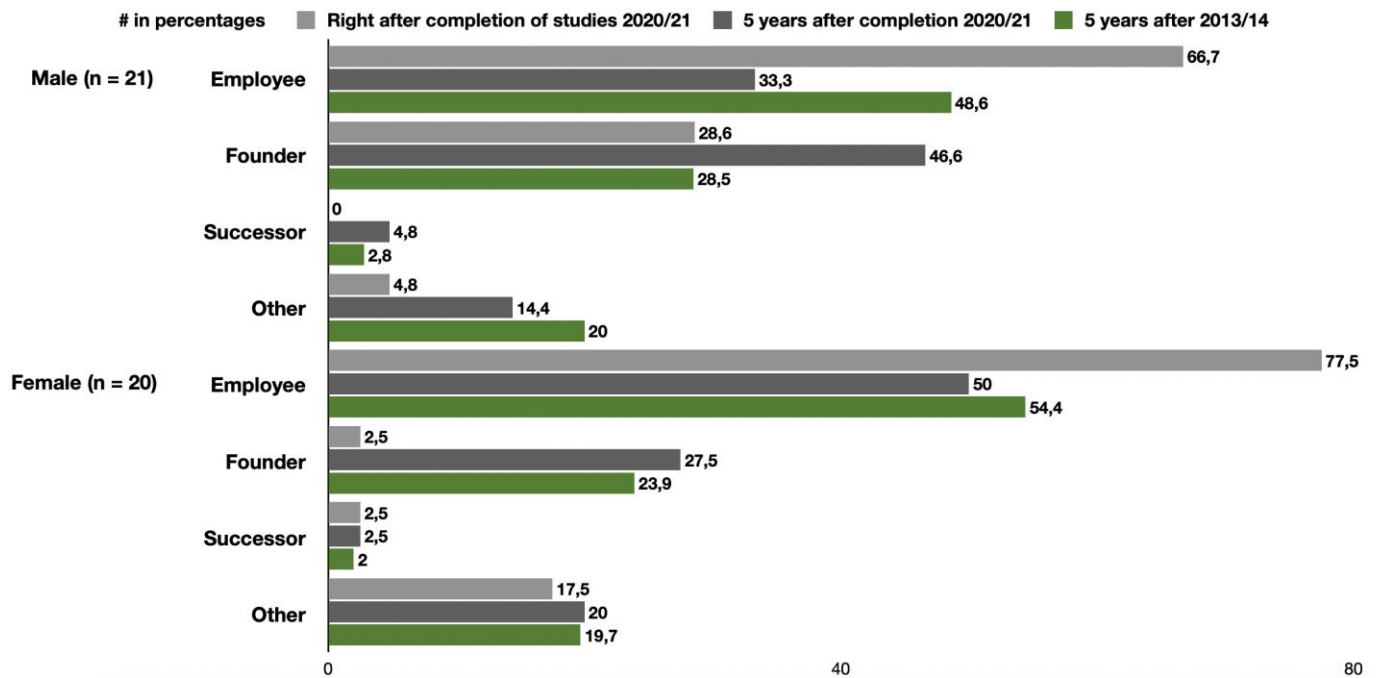
The sample size refers to the 2020/21 survey. Source for the 2013/14 data: Karali et al. (2014).

Male NSM students' response share of entrepreneurship as a career choice increases by a factor of 3,85. This value is 3,70 for female NSM student respondents. After completion, male NSM students are 1,29 times more likely to choose entrepreneurship as their career choice than female respondents. Five years after completion, male respondents are 1,35 times more likely to choose entrepreneurship as their preferred career choice. So, a founders' gap between NSM students and BECL students is present. If students' intentions become a reality five years after study, the gap increases slightly.



**Figure 4.** Career choice intentions of male and female NSM respondents, right after and five years after completing their studies, compared the current and the 2013/14 study.

The sample size refers to the 2020/21 survey. Source for the 2013/14 data: Karali et al. (2014).



**Figure 5.** Career choice intentions of male and female SSC and other (SSC+O) respondents, right after and five years after completing their studies, compared the current and the 2013/14 study.

The sample size refers to the 2020/21 survey. For 2013/14: SSC students. Source for the 2013/14 data: Karali et al. (2014).

The increase in entrepreneurship intentions after five years is also visible for SSC+O students. Unfortunately, the case numbers are too low to interpret meaningful differences between male and female respondents.

### 3. Drivers of entrepreneurial intention

#### 3.1 Entrepreneurial Intention

To measure students' general entrepreneurial intentions, respondents indicate their level of agreement on six statements (Liñán and Chen, 2009). Sample items are "My professional goal is to become an entrepreneur" or "I will make every effort to start and run my own firm." Students reported their entrepreneurial intentions on a scale from 1 (strongly disagree) to 7 (strongly agree). An aggregated entrepreneurial intention measure was calculated as the mean of all six answers. This measure has a mean of 3.43. BECL students (n=310) have a mean of 3.56, NSM the lowest value of 3.22, and SSC+O of 3.45.

The overall value of entrepreneurial intention seems to be lower than in the 2013/14 report. This finding appears to be at odds with the higher reported entrepreneurial career aspirations (see section 2.2. of this report). A reason may be that those respondents who intend to create their venture are more likely to have already done so than the 2013/14 survey respondents.

	All / Male / Female	BECL / Male / Female	NSM / Male / Female	SSC+O / Male / Female
n	534 / 248 / 282	310 / 137 / 173	181 / 101 / 80	40 / 10 / 29
Entrepreneurial intention	3.44 / 3.51 / 3.39	3.56 / 3.67 / 3.48	3.22 / 3.27 / 3.20	3.45 / 3.78 / 3.34

**Table 3. Entrepreneurial intention**

### 3.2 The university context

Entrepreneurship education seems to have a positive relationship with entrepreneurial intention (Martínez-Gregorio et al., 2021). This is why the study asked about whether students took entrepreneurship-related courses during their studies.

The 2020/21 study reports that 25,5% took at least an elective or compulsory course (2013/14: 29%). In particular, it seems that the share of respondents that chose entrepreneurship as an elective has proliferated (was: 8,5%). Hence, the percentage of students who reported not taking any entrepreneurship course dropped from 66,6% to 39,6%.

Overall, NSM students are least likely to take any type of entrepreneurship education. BECL students are most likely to take any part in entrepreneurship education. Overall, male students are more likely to select entrepreneurship courses. Across gender and study directions, NSM women seem least likely to take any entrepreneurship education.

I have / am ...	All / Male / Female	BECL / Male / Female	NSM / Male / Female	SSC+O / Male / Female
not attended a course on entrepreneurship.	39,6 / 32,0 / 47,2	33,6 / 25,1 / 41,8	48,5 / 42,2 / 55,8	46,0 / 33,3 / 55,0
attended at least one entrepreneurship course as an elective.	25,45 / 30,6 / 18,7	27,8 / 33,3 / 22,6	19,3 / 25,9 / 10,5	22,2 / 33,3 / 17,5
attended at least one entrepreneurship course a compulsory part.	35,7 / 38,6 / 33,5	39,8 / 43,5 / 36,5	31,3 / 31,9 / 31,6	23,8 / 28,6 / 22,5
studying in a specific program on entrepreneurship.	15,1 / 16,0 / 14,6	20,1 / 22,2 / 18,3	7,7 / 7,4 / 8,4	9,5 / 9,5 / 10,0

**Table 4.** % of respondents involvement in entrepreneurship education.

For those who took entrepreneurship education, we asked to what extent entrepreneurship education helped increase knowledge and ability of entrepreneurship. Based on Souitaris et al. (2007), the average of a five item-scale (1: not at all – 7: very much) was used. For example, a sample item is: “The courses and offerings I attended... - increased my understanding of the actions someone has to take to start a business.” For this analysis, we selected only those students that took at least one entrepreneurship education offer.

Overall, entrepreneurship education seems to be effective. Compared to the 2013/14 study, the effectiveness has increased (was: 3.72). It seems most effective for NSM students. Entrepreneurship education appears to be most effective for female NSM students and least effective for female BECL students (see also Maresch et al., 2016).

	All / Male / Female	BECL / Male / Female	NSM / Male / Female	SSC+O / Male / Female
n	431 / 247 / 181	277 / 155 / 121	120 / 78 / 42	33 / 14 / 18
Learning from eship programs	4.44 / 4.88 / 4.39	4.57 / 4.97 / 4.10	4.94 / 4.83 / 5.13	4.65 / 4.74 / 4.62

**Table 5.** Learning from the entrepreneurship program

The university environment influences student entrepreneurship. Therefore, GUESSS investigates, next to entrepreneurship education, the entrepreneurial atmosphere of universities. Based on a scale by Geissler (2012), the average of a three item-scale (1: not at all – 7: very much) was used. A sample item is: “The atmosphere at my university inspires me to develop ideas for new businesses.”

With an average of 4.90, the university climate is generally judged as positive. Compared to the 2013/14 study, this increases by almost one point (from 3.96). NSM students appear to find it most positive. Gender differences in university climate perception are slight, and mixed. NSM female student respondents find the university climate most supportive. SSC+O female student respondents find it least supportive.

	All / Male / Female	BECL / Male / Female	NSM / Male / Female	SSC+O / Male / Female
University climate	4.90 / 4.93 / 4.88	4.70 / 4.70 / 4.69	5.26 / 5.20 / 5.38	4.89 / 5.33 / 4.66

**Table 6. University entrepreneurial climate perceptions**

Because parents' occupations may influence students' entrepreneurial intention (Palmer et al., 2021), we analyzed if parent entrepreneurship and student career aspirations may be related. We found that respondents with self-employed parents are about 40% more likely to start their venture (43% right after, 37% after five years). Male respondents are more likely to be entrepreneurially influenced when at least one of their parents is an entrepreneur than female respondents. 40% of female respondents with mothers who are entrepreneurs want to become entrepreneurs themselves versus 28% of female entrepreneurs whose father is an entrepreneur. The influence of mother entrepreneurs corresponds with the findings from Hoffmann et al. (2014).

		Employee	Founder	Successor	Other / No plans
Right after studies	No self-employed parents (n = 422)	75,15	8,8	1,2	14,9
	Self-employed parents (n = 105)	69,5	12,6	2,0	15,9
5 years after studies	No self-employed parents (n = 422)	54,4	28,4	1,9	15,2
	Self-employed parents (n = 105)	44,4	39,1	2,6	13,9

**Table 7.** Self-employed parents and career ambitions

		Employee	Founder	Successor	Other / No plans
Right after studies	No self-employed parents (n = 245)	73,9	13,1	1,2	11,8
	Self-employed parents (n = 63)	63,5	17,5	3,2	15,9
5 years after studies	No self-employed parents (n = 245)	48,6	36,7	2,9	11,8
	Self-employed parents (n = 63)	36,5	52,4	1,6	9,5

**Table 8.** Self-employed parents and career ambitions: male respondents

		Employee	Founder	Successor	Other / No plans
Right after studies	No self-employed parents (n = 205)	76,1	5,8	0,5	17,6
	Self-employed parents (n = 76)	71,1	7,9	2,6	18,4
5 years after studies	No self-employed parents (n = 205)	57,7	22,9	2,0	17,6
	Self-employed parents (n = 76)	50,0	28,9	3,9	17,1

**Table 9.** Self-employed parents and career ambitions: female respondents



A key influence of students' entrepreneurial intentions is how close peers would react if an entrepreneurial career were to be pursued. Therefore, we ask how families, friends, and fellow students would perceive a respondent pursuing an entrepreneurial career. The responses were in a scale (Liñán and Chen, 2009) from 1 (very negatively) to 7 (very positively). The closer social environment seems very supportive (5.77), similar to the 2013/14 survey result. Male and female respondents report a similar level of support.

	All respondents	Male respondents	Female respondents
	<b>n = 705</b>	<b>n = 363</b>	<b>n = 342</b>
<b>All</b>	<b>5.80</b>	<b>5.78</b>	<b>5.84</b>
<b>Friends</b>	<b>5.97</b>	<b>5.96</b>	<b>5.99</b>
<b>Close family</b>	<b>5.69</b>	<b>5.64</b>	<b>5.77</b>
<b>Fellow students</b>	<b>5.77</b>	<b>5.77</b>	<b>5.77</b>

**Table 10.** Social support for an entrepreneurial career

### 3.3 Nascent entrepreneurs

Nascent entrepreneurs are those students who are currently in the process of setting up a venture. We asked: “Are you currently trying to start your own business / to become self-employed? A total of 152 students (about 21%) are currently trying to start a business. This is about twice the share than in the 2013/14 sample. BECL respondents account for about 55% of the respondents, NSM for 32%, and SSC+O for about 13%. This distribution corresponds approximately to the respondents’ distribution over the study areas. The share of male to female respondents in BECL and NSM is about 2/3 to 1/3, increasing the percentage of female respondents from the last survey.

	All / M / F	BECL / M / F	NSM / M / F	SSC+O / M / F
<b>Number of nascent entrepreneurs</b>	<b>152 / 97 / 55</b>	<b>86 / 56 / 30</b>	<b>47 / 32 / 15</b>	<b>19 / 9 / 9 / +1</b>
<b>M / F ratio</b>	<b>64 / 36</b>	<b>65 / 35</b>	<b>68 / 32</b>	<b>47 / 47</b>

**Table 11. Number and shares of nascent entrepreneur respondents**

Even though starting a business next to the studies is time-consuming, 35% of the respondents plan to complete the founding process during their studies, and another 17,5% right after studies. About ¼ of the respondents plan to start up until two years after completing their studies, and about 1/5 do not know when they will complete the founding process.

- For most respondents, the venture is supposed to become the main occupation after graduation (39%). However, 22% take the venture as a side occupation, and others are not yet sure.
- About 23% of the nascent entrepreneur respondents state that they have created a venture before.
- About 43% state that the start-up- project emerged from the university context (9,2%: from a course, 33,7% related in other ways to the university).
- The dominant sectors that the nascent entrepreneurs want to found are ICT(12,6%) and trade (10,7%), reflecting the 2013/14 survey results.

Table 12 shows different start-up activities and the percentage of nascent entrepreneurs who already finalized them. Again, we differ between male and female entrepreneurs. Most common for both groups are the “soft steps” of collecting and discussing information. On most categories, male and female entrepreneurs are equally represented. However, nascent female entrepreneurs seem less likely to have started product development and inquired into external funding. This may be a function of differences in the particular type of business that they pursue.

Activity	%Total	Male	Female
Collected information about markets and competitors	51,4	54,5	47,2
Discussed product or business ideas with potential consumers	65,0	68,2	61,1
Written a business plan	39,8	40,9	38,9
Started product/service development	35,0	40,9	25,0
Started marketing or promotion efforts	17,5	15,2	22,2
Purchased material, equipment or machinery	18,4	18,2	19,4
Attempted to obtain external funding	14,6	19,7	5,4
Applied for a patent, copyright, or trademark	1,9	3,0	0,0
Registered the business	8,7	10,6	5,6
Sold product or service	8,7	9,1	8,3
None of the above done so far	15,5	10,6	25,0

n = 103; male = 66; female = 36

**Table 12.** Share of respondents who reported to have performed specific start-up activities

Most nascent entrepreneurs start with a team (56,7%) with one co-founder (41,7% of the total). The team entrepreneurs seek majority ownership (62%) and co-create their business with fellow students (51,7% versus 48,3% with co-founders that are not students). When respondents start by themselves, they argue that they did not yet look for a co-founder but may do so in the future (42,9% of solo founders) or report that their venture idea is the type of self-employment that does not need a co-founder (33,3%).

### 3.4 Active entrepreneurs

Active entrepreneurs are those students who are already running and owning a venture. We asked: "Are you already running your own business / are you already self-employed?" A total of 74 students (about 10,3%) consider themselves active entrepreneurs. This is a bit less than twice the 2013/14 sample (6%). BECL respondents account for about 70% of the respondents, NSM for 17%, and SSC+O for about 12%. BECL founders are thus overrepresented compared to their distribution among students. The share of males to female respondents in BECL is about 2/3 to 1/3, which shows an increase in the percentage of female respondents from the last survey. For NSM founders, only 15% are female, which is a decrease (was: 30%) from the previous GUESSS-NL survey.

	All / M / F	BECL / M / F	NSM / M / F	SSC+O / M / F
<b>Number of nascent entrepreneurs</b>	<b>74 / 47 / 30</b>	<b>52 / 33 / 19</b>	<b>13 / 11 / 2</b>	<b>9 / 3 / 6</b>
<b>M / F ratio</b>	<b>64 / 36</b>	<b>63 / 37</b>	<b>85 / 15</b>	<b>33 / 66</b>

**Table 13. Number and shares of nascent entrepreneur respondents**

- Most ventures were founded 2019 (20,3%), 2020 (31,9%) and 2021 (14,5%).
- Most ventures are microenterprises, with 0 (37,7%), 1 (28,4), or 2 (10,4%) employees.
- Most entrepreneurs are majority owners (66,7%).
- 27,5% of the entrepreneurs claim that their business should become their primary source of income after studies. This is somewhat less optimistic than what the nascent entrepreneurs report.

The founders' social identity (Gruber and Fauchart, 2011) describes the primary social motivation, the basis for self-evaluation, and the frame of reference concerning whom the entrepreneur provides value for: for himself (darwinian), for specific others (communitarians), or unspecified others (missionaries). The differentiation in social identities highlights that entrepreneurs can have different goals than profit maximization. Based on the items of Sieger et al. (2016), we calculated aggregated social identity scores as the mean of all six answers per social identity category.

The results show that, on average, the entrepreneurs score high on the social identity constructs (4.86, 4.86, and 4.64, respectively). BECL respondents tend to score highest on all dimensions, indicating that they have a pronounced social identity. Females are, on average, not less but more Darwinian than male respondents.

	All / M / F	BECL / M / F	NSM / M / F	SSC+O / M / F
<b>Darwinian</b>	4.86 / 4.76 / 5.05	5.03 / 4.90 / 5.28	4.25 / 4.20 / 4.50	4.72 / 5.06 / 4.53
<b>Communitarian</b>	4.86 / 4.89 / 4.77	5.02 / 4.92 / 5.23	4.36 / 4.52 / 3.58	4.58 / 5.89 / 3.80
<b>Missionary</b>	4.64 / 4.47 / 4.98	4.70 / 4.45 / 5.23	4.52 / 4.33 / 5.50	4.45 / 5.22 / 4.00

all = 69; m = 46, f = 23 / BECL all = 49, m = 33, f = 16 / NSM all = 12, m = 10, f = 2 / SSC+O all = 8, m = 3, f = 5

**Table 14. Founders' social identity across gender and education directions**

Founders work hard to build and grow their ventures. Therefore, we assessed whether founders are “obsessively driven to work excessively hard” (Schaufeli et al., 2009, p. 321). Based on the items of Schaufeli et al. (2009), we calculated an aggregated workaholism score as the mean of all ten answers (ranging from 1 to 7) to the workaholism items.

The results show that, on average, the entrepreneurs score high on the workaholism scale (4.56). Differences between gender and study directions do not seem to be pronounced. However, the high value for female NSM respondents is challenging to interpret due to its low number of responses.

	All / M / F	BECL / M / F	NSM / M / F	SSC+O / M / F
<b>Workaholism</b>	4.56 / 4.53 / 4.63	4.54 / 4.60 / 4.41	4.30 / 4.11 / 5.25	5.06 / 5.20 / 4.08

all = 69; m = 46, f = 23 / BECL all = 49, m = 33, f = 16 / NSM all = 12, m = 10, f = 2 / SSC+O all = 8, m = 3, f = 5

**Table 15. Founders' workaholism score across gender and education directions**

Compared to their competitors, we assessed if the entrepreneurs were satisfied with their venture performance across several categories (sales growth, market share growth, profit growth, job creation, and innovativeness). We asked, “How do you rate the performance of your company compared to your competitors since its establishment in the following dimensions (1=much worse, 7=much better)?”. Here we report the average of the summed-up subjective performance scale.

Male respondents across all study directions reported a higher degree of subjective performance. Compared between study directions, NSM students report the lowest degree of subjective performance. This may be a concern when a low degree of subjective performance leads an entrepreneur to stop with a venture that could have become a success.

	All / M / F	BECL / M / F	NSM / M / F	SSC+O / M / F
<b>Subjective performance</b>	3.86 / 3.96 / 3.57	4.07 / 4.28 / 3.67	2.50 / 2.68 / 1.60	4.46 / 4.67 / 4.04

all = 71; m = 46, f = 24 / BECL all = 50, m = 33, f = 17 / NSM all = 12, m = 10, f = 2 / SSC+O all = 8, m = 3, f = 5

**Table 16. Founders' subjective performance across gender and education directions**

We have asked whether the student entrepreneurs receive emotional and instrumental support from their families (Eddleston and Powell, 2012). Overall, the respondents' families are supportive. However, there seems to be more emotional than instrumental support. Male respondents tend to receive more emotional support, and female respondents more instrumental support. NSM respondents receive the least support. Female NSM founders even less, but again the response numbers are too low to reach a validated statement.

	All / M / F	BECL / M / F	NSM / M / F	SSC+O / M / F
<b>Emotional support</b>	<b>4.14 / 4.23 / 3.96</b>	<b>4.19 / 4.30 / 3.97</b>	<b>3.63 / 3.73 / 3.13</b>	<b>4.59 / 5.17 / 4.25</b>
<b>Instrumental support</b>	<b>4.05 / 3.95 / 4.14</b>	<b>4.03 / 4.01 / 4.09</b>	<b>3.69 / 3.80 / 3.10</b>	<b>4.69 / 3.87 / 4.72</b>

all = 71; m = 46, f = 24 / BECL all = 50, m = 33, f = 17 / NSM all = 12, m = 10, f = 2 / SSC+O all = 8, m = 3, f = 5

**Table 17. Founders' family support**

### 3.5 Covid and student entrepreneurship

During the study period, the COVID pandemic was affecting the country. Therefore, we asked our respondents if they were worried about the Coronavirus. We used the COVID-rumination scale (Nikolova et al., 2021), a 6-item, 5-step Likert-type scale. With a mean of 2.34, the respondents seem to have little worries. This may be because the survey was conducted mainly in a time of declining case numbers.

Almost a quarter of the nascent entrepreneurs indicate that they have started their entrepreneurial process mainly because of the implications of the COVID pandemic. This shows a resilient reaction towards the epidemic. However, while for some, COVID has inspired entrepreneurial action, for others, COVID worries may have deterred entrepreneurial action. In sum, the overall correlation between COVID rumination and entrepreneurial intention is not significant for our sample. Future research is needed to identify moderators of this relationship.

## 4. Summary

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Finally, we summarize the main findings of the GUESSS study in the Netherlands:

- Regarding general career choice intentions, respondents prefer to start as employees but want to become founders of their venture at a later time. Also other GUESSS studies found this “first employee, then founder” pattern. BECL respondents have stronger entrepreneurial intentions than NSM or SSC+O respondent. Female students show the lowest degree of entrepreneurial intentions across all study directions. However, this gap decreases slightly for BECL and NSM students.
- The university context is regarded as quite supportive (4.9 on a scale of 1 to 7). The vast majority of students had some exposure to entrepreneurship education. For those that did, entrepreneurship education seemed to have been effective.
- The social context matters for entrepreneurial intentions. Respondents with self-employed parents are about 40% more likely to want to become a founder. Close family, friends, and fellow students feel positive about a student wishing to become an entrepreneur (5.8 on a scale of 1 to 7). For active student entrepreneurs, the family provides emotional and instrumental support (4.1 on a scale of 1 to 7).
- 21% of the overall sample are nascent entrepreneurs. More than half of them plan to complete the funding process during or right after their studies. Many have collected and discussed market information, but only a few have already registered their business and made a sale.
- About 10% of the overall sample are active entrepreneurs. These entrepreneurs seek to create value for themselves, for specific or for unspecific others. For nearly a third of the respondents, this business is supposed to become the primary source of income after their studies. The respondents do not seem to be overconfident when they compare their to their competitors' performance.

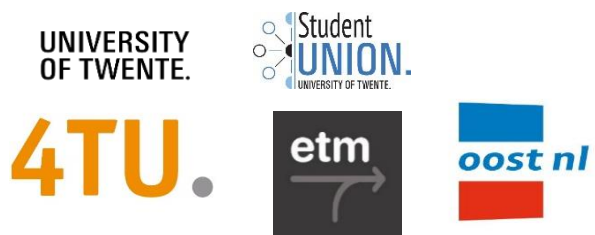


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