

The Entrepreneurial Career Intentions and Behavior of Irish University Students



Entrepreneurial and Career Intentions and Behaviour of Students attending Irish Higher Educational Institutes



Executive Summary Introduction to the GUESSS IRELAND 2019 Report

The GUESSS (Global University Entrepreneurial Spirit Students' Survey) project is a global research initiative designed to examine the entrepreneurial intentions and activities of students at university. The survey was conducted between September and November 2018, involving 54 countries and over 208,600 students. In the Irish study, the responses of 1,459 students were collected across the country. The data was released to the national team in August of 2019 for analysis. The majority of responses (88%) came from six Higher Education Institutions (HEI's): Dublin City University, Letterkenny Institute of Technology, NUI Maynooth, University of Limerick, University College Cork and Dublin Institute of Technology/Technological University.

Student respondent age ranged from 19 to 54 years old, with the sample predominantly between the ages of 20 and 24. There was quite an even gender split in the sample, with 719 male students (49.7%) and 729 (50.3%) female students. For the sample group who provided information on nationality, 78.7% (1,148) indicated they were Irish. The largest share of students stated their field of study was business/management (N=1,044, 71.6%). Additionally, 42.1% (N=613) of students considered they had not yet completed an entrepreneurship course or module.

What are the career choice intentions of students in Ireland?

Directly after university, most students would like to become an employee in a large or medium-sized business. The least popular career option for graduates was business succession (taking over a family or other business). When asked to consider their career five years after university, the most popular career was entrepreneur (33%, n=478). There was an increase of 30.8% on the number considering the entrepreneurial career immediately after graduation. The option of succession rose in the career intentions of students five years on, however the career option of working as an employee in a non-profit organisation was low at both stages. Comparing with the 16/17 and 18/19 Global dataset, it is noted that the rates of intended succession in Ireland is lower than the global average. In both the 2016/17 and 18/19 instances, the Irish sample noted higher numbers of students opting to be an employee immediately after graduation than the global average.

What is the student attitude to entrepreneurship?

The majority of students indicated that they are not currently trying to start their own businesses/become selfemployed, and are not currently involved in their own businesses/are self-employed. Students display a favorable attitude for entrepreneurship, with male students reporting a marginally higher sense of satisfaction derived from the role of entrepreneur. Students considered that their social circle would be very positive about such a career choice, with close family recorded as the highest "very positive" grouping. In considering their entrepreneurial skills, students reported a highest perceived competence in "being a leader and communicator" but lowest in "identifying new business opportunities" and "creating new products and services". When asked if their university encouraged students to engage in entrepreneurial activities, the majority of the sample agreed to some extent (69.1%). Considering entrepreneurship education, students indicated that the most common method for delivering a course in entrepreneurship education was through lectures, followed by guest speakers and teamwork. The use of hackathons is noted to have increase since the 2016/17 report, while business plans and workshops appeared to be less popular.

What do we know about aspiring student entrepreneurs in Ireland?

A number of students considered that they would like to set up a company and were actively considering it. Of the 75 students (N=75) who responded to this question, 47% saw it becoming their main occupation, 17% did not and 33% were unsure. When asked about previous experience, 65.4% of the sample (of 78 students) noted that they have not created any other business, while 34.6% (n=27) had. In terms of timing, 33% of these nascent student entrepreneurs noted their intention to start within the first 6 months, 28.2% mentioned they plan to do it between 7-12 months. 30.8% of the respondents mentioned that they plan to start their business in 19-24 months. Many had discussed the business idea with their potential customers, collected market information about the market and competitors, and drafted a business plan.

What do we know about active student entrepreneurs in Ireland?

From the sample of the Irish study, fifty students (n=50) noted they were currently involved in their own venture (i.e. were active entrepreneurs). Of the student entrepreneur respondents, 27% wanted this business to become their main occupation following graduation. The majority of the sample (56%) did not want it to be their main occupation and 17% did not know yet. When asked about the start-up team, 58% (n=29) noted that they were the sole founder of the company.

What are Irish students' intentions for family business succession?

In the survey, 32.8% (n=478) students noted their parents were self-employed or were owners of a business. 22.2% of the students indicated that their father was self-employed and 18.5% of fathers owned the majority share of a business. Notably, less students indicated that their mother was self-employed (3.8%) or a majority owner of a business (3.2%) in comparison to fathers. Students were asked to indicate in how many years they may expect take over the family business. Responses varied from 1 year (1.6%), between 2-5 years (5.3%), and over 5 (18.3%). However, 74.3% of this category (n=335) indicated that they do not intend on taking over their parents' business. That is, in our sample, 74.3% of the children of business owners/founders do not intend to engage in family business succession.

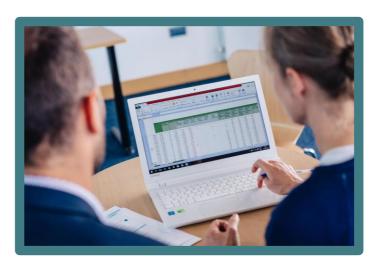


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Acknowledgements

The GUESSS Ireland team consisting of Dr. Roisin Lyons and Dr. Eric Clinton would like to offer our sincere gratitude to Enterprise Ireland for their sponsorship of the Ireland National Report. The Irish GUESSS team would like to thank all the students who participated in our survey and the institutions that disseminated the survey to their students on our behalf. We thank our colleagues on the international GUESSS team (led by Prof. Dr. Philipp Sieger), who undertook the global research study.

Thanks also to Mehmet Ali Erul, Mohd Obaidullah; Mirza Saad Beg; Kavish Gakkhar, Maram Aldawood, Claire McGuire, Agransh Anand, Ann Mary George, Piyush Prakash, Vagish Bhardwaj Namrata Lalitkumar Rohith Pogazhendhi Ray & Zita Harris who helped us in creating the report.

To find out more about the report, or participate in the 2021 survey collection, please contact roisin.lyons@dcu.ie.

The International GUESSS project: Key information

The GUESSS (Global University Entrepreneurial Spirit Students' Survey) project is a global research initiative designed to examine the entrepreneurial intentions and activities of students at university. The main goals of the GUESSS project relate to:

- 1. *The start-up process:* GUESSS helps to systematically record the founding intention and activity of students on a long-term basis, and makes a temporal and geographical comparison possible (panel study).
- 2. *The University:* GUESSS offers a temporal and geographical comparison providing universities with insight into the organization of entrepreneurship (e.g. in the form of entrepreneurship courses, founding climate, infrastructure, etc.).
- **3.** *The Individual:* GUESSS allows for a temporal and geographical comparison of individual-based characteristics that influence the founding intention and activity of students. The survey is conducted every two years.

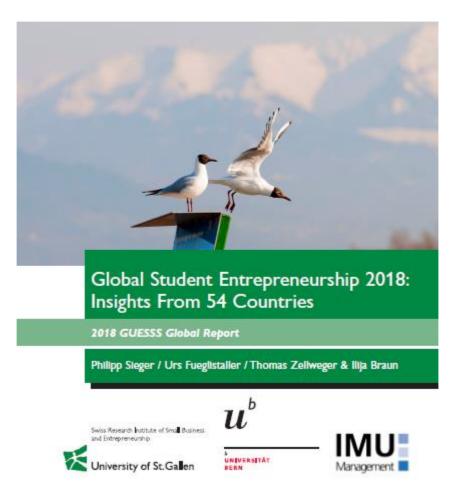
The international project was developed by Prof. Dr. Philipp Sieger, Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen. Every 2–3 years, a global data collection effort takes place and has previously been conducted seven times (2003, 2004, 2006, 2008, 2011, 2014, 2016, and 2018).

In 2018, 54 countries participated in GUESSS. This led to a dataset with more than 208,600 completed responses from students from more than 1,000 universities. For every participating country, one national team coordinates data collection in that country. There have been numerous resulting academic articles and reports, which have disseminated knowledge relating to family firm progression, career choice and entrepreneurial intentionality. GUESSS data has been used for several publications in leading international academic journals such as Journal of Business Venturing (JBV) and Entrepreneurship Theory & Practice (ETP). Impact in practice is generated through numerous international and national project reports, as well as policy recommendations and action.

The GUESSS data collected internationally is disseminated via a series of individual national reports and one integrated international report. The report herein pertains to the results obtained from the study undertaken in Ireland in 2018. The global GUESSS report was released in summer 2019.

International Report 2018/19





Principle Researchers:

Prof. Philipp Sieger University of Bern / GUESSS Project Manager Prof. Urs Fueglistaller & Prof. Thomas Zellweger - University of St.Gallen (KMU-HSG / CFB-HSG) Members of the GUESSS Supervisory Board

Key Findings of International Report 2018–19

One report. More than 208,000 students from more than 3,000 universities and 54 countries. The key findings are briefly summarised below.

Regarding students' (entrepreneurial) career choice intentions

- 9.0 percent of all students intend to be an entrepreneur directly after studies.
- 34.7 percent plan to be entrepreneurs 5 years after completion of studies.
- A central pattern is "first employee, then entrepreneur".
- Creating a business does not automatically mean that the founders will be entrepreneurs forever.
- The share of intentional entrepreneurs differs considerably across countries, with developing and particularly Latin American countries exhibiting the highest numbers.

Regarding influencing factors

- The university context plays a very important role. Entrepreneurship education and the entrepreneurial climate are key determinants of entrepreneurial intentions and activities.
- Field of study is crucial as well. The general patterns observed across countries remain stable when looking at business and management students only.
- We observe a gender gap with regard to entrepreneurship. Surprisingly, the gap is comparably small in rather male-dominated study fields.
- Working in a startup as an employee seems to boost own entrepreneurial intentions and activities.
- Entrepreneurial parents are helpful for offspring's entrepreneurship. Ideally, both parents are entrepreneurs.

Other important findings

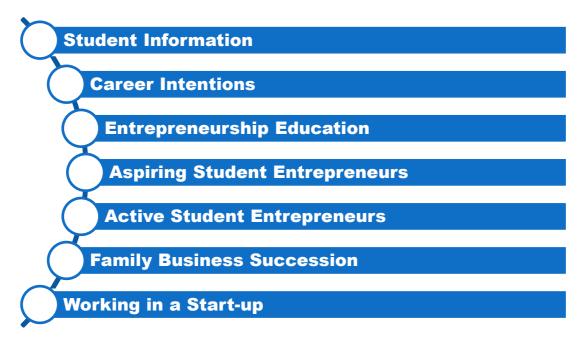
- Entrepreneurial intentions fluctuate over time, with a stable positive trend since 2013 (after a drop between 2011 and 2013).
- Many nascent entrepreneurs have not made too much progress in the founding process yet.
- Founding teams are of crucial relevance for both nascent and active founders. Only around one third of all firms have been created without a co-founder.
- The ventures run by the students are mostly very young and very small. Still, the entrepreneurs are rather happy with their performance.



Ernst and Young (EY) is the global research partner for the GUESSS Research Project

GUESSS Study - Ireland 2018/2019

The international data study was conducted between September and November of 2018. For the Irish study, Dr. Roisin Lyons through a number of participating universities disseminated the online survey across the country. In Ireland 1,408 students completed the survey. In addition, a post-test addition of 50 responses were added from a parallel study in another Irish third level institution, bringing the sample size to 1,459. The data was released to the national team in August of 2019 for analysis at the national level.



Entrepreneurial and Career Intentions and Behaviour of Students attending Irish Higher Educational Institutes



1. Student Information

1.1 Age and Gender of students

Student respondent age ranged from 19 to 54 years old, but were predominantly between 20 and 24. There was quite an even gender split in the sample, with 719 male students (49.7%) and 729 (50.3%) female students.

TABLE 1. AGE OF RESPONDENTS									
Age (years)	Frequency	%							
<20	20	1.4							
20-24	1113	76							
25-30	137	9							
31-39	48	3							
40+	28	2							
Total	1,354	100							
Missing	105								
Total	1459								

 TABLE 1: AGE OF RESPONDENTS

1.2 Nationality and Marital Status

The student sample were predominantly (95.9%) single or unmarried. For the sample group who provided information on nationality, 78.7% (1,148) indicated they were Irish.

Nationality	Frequency	%
Irish	1148	78.7
Spanish	19	1.3
French	32	2.2
German	35	2.4
British	11	.8
Chinese	17	1.2
Other	138	9.5
Total	1400	96.0
System	59	4.0
	1459	100.0

TABLE 2: NATIONALITY OF RESPONDENTS

1.3 Educational information

The majority of responses (88%) came from six HEI's: Dublin City University (N=877, 60.1%), Letterkenny Institute of Technology (N=191, 13.1%), NUI Maynooth (N=121, 8.3%), University of Limerick (N=94, 6.4%), University College Cork (N=51, 3.5%) and Dublin Institute of Technology/Technological University (N=38, 2.6%).

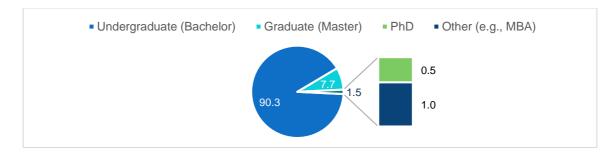


FIGURE 1: LEVEL OF EDUCATION OF RESPONDENTS

In line with the age range of the student respondents, the vast majority (N=1318, 90.3%) were enrolled in undergraduate courses. Postgraduate masters students accounted for 113 or 7.7% of the sample, and PhD students accounted for 0.5% (N=8) of the respondents. Fourteen students noted enrollment in 'other' programmes of study (e.g. MBA).

	Frequency	Percent
2009	1	0.1
2012	2	0.1
2013	7	0.5
2014	35	2.4
2015	385	26.4
2016	160	11.0
2017	117	8.0
2018	682	46.7
Total	1389	95.2

TABLE 3: YEAR OF ENROLLMENT

Students were asked to state the year they enrolled in their studies (Table 3). Over 57% of student respondents started their studies in or after 2017. The majority of students indicated that they were full time students (N=1,328, 91%) with only 5.5% (80 students), noting they are engaged in formal work in parallel to their studies. Of the sample, 8.4% or 123 students were international exchange students in the study. Students were also asked to state their degree or programme discipline within their university. The largest share of students stated their field of study was business/management (N=1,044, 71.6%).

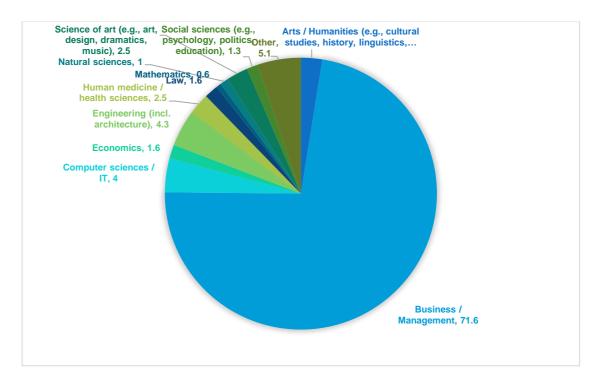


FIGURE 2: PROGRAMME OF STUDY

2. Student Career Choice Intentions

Students were asked their career plans for the future; focusing on what they intend to pursue immediately after graduation and where they could see themselves working five years following graduation. Of the sample who responded (N=1,408), the results indicated some large changes in student short term and medium term career intentions.

As seen in Table 4, directly after university the highest number of students (N=479) would like to become an employee in a large business with 250 or more employees (34.02%). The next favorable option is to be an employee in a medium-sized business (N=329, 23.37%), while the least popular career option for intending graduates is succession in either a family business (0.78%, N=11) or another business (0.43%, N=6). It is notable that becoming an employee in public service decreased to 4.47% (N=63) when compared to the 11.8% of the 2016 Ireland GUESSS study, perhaps due to a perceived scarcity of permanent jobs in public sector.

	-	t after dies	5 year	Change	
I want to be	N	%	N	%	
1. an employee in a small business (1-49 employees)	275	19.53	74	5.26	14.28%
2. an employee in a medium-sized business (50-249 employees)	329	23.37	150	10.65	12.71%
3. an employee in a large business (250 or more employees)	479	34.02	304	21.59	12.43%
4. an employee in a non-profit organization	25	1.78	32	2.27	0.50%
5. an employee in academia (academic career path)	41	2.91	58	4.12	1.21%
6. an employee in public service	63	4.47	78	5.54	1.07%
7. a founder (entrepreneur) working in my own business	44	3.13	478	33.95	30.82%
8. a successor in my parents'/family's business	11	0.78	25	1.78	0.99%
9. a successor in another business	6	0.43	80	5.68	5.26%
10. Other / do not know yet	135	9.59	129	9.16	0.43%

TABLE 4: CAREER INTENTIONS OF RESPONDENTS (POST-GRADUATION AND FIVE YEARS POST-GRADUATION).

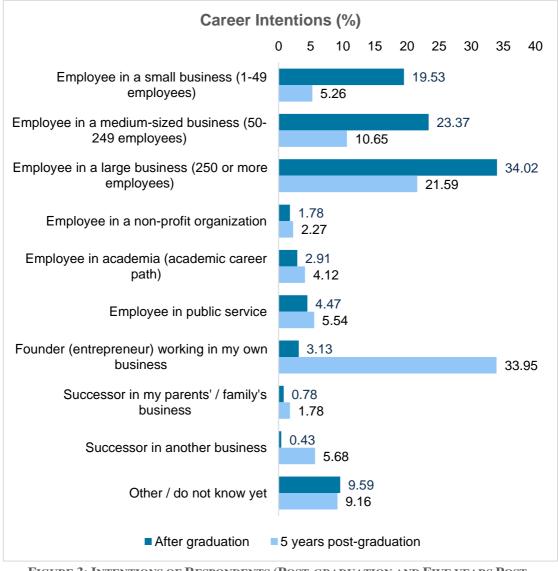


FIGURE 3: INTENTIONS OF RESPONDENTS (POST-GRADUATION AND FIVE YEARS POST-GRADUATION)

Considering the students' intended career ambitions five years after graduation, a number of changes can be seen. The most popular career option (33.95% or N=478) from student responses at this stage is to be a founder (entrepreneur. This is an increase of 30.8% on the number considering the career immediately after graduation. A drop of 14.3%, 12.7% and 12.4% was noted in the students who felt they would like to work in a small, medium and large business respectively. The option of founding their own business rose marginally in the career intentions of students five years on. The career option of working as an employee in a non-profit organisation was low at both stages (1.8% after graduation, 2.3% five years later).

In order to compare these results, the career intentions of the Irish sample were studied against the average of the previous survey GUESSS collection (2016/17) in Ireland, and globally. The career options were grouped into four categories – employee, founder, successor and other. As seen in Table 5 below, in all

examinations, the employee to entrepreneur trend was noticed again. The average 'founder' percentage was found to be an average of 8.8% of the international student sample directly after graduating college. However, 5 years after finishing university level education, 38.2% of the student sample intended to be entrepreneurs. Comparing with the 16/17 and 18/19 Global dataset, it is noted that the rates of intended succession in Ireland is lower than the global average. In both the 2016/17 and 18/19 instances, the Irish sample noted higher numbers of students opting to be an employee immediately after graduation than the global average.

				Employee	Founder	Successor	Other
2018/19	IRL	Graduate	N	1212	44	17	135
			%	86.08	3.13	1.21	9.59
2018/19	IRL	+5 Years	N	696	478	105	129
			%	49.43	33.95	7.46	9.16
18/19	GLOBAL	Graduate	%	79	9	2.5	9.5
18/19	GLOBAL	+5 Years	%	50.5	34.7	4.2	10.6
16/17	IRL	Graduate	%	83.6	4.2	1.1	11
16/17	IRL	+5 Years	%	54.3	27.4	5.1	13.2
16/17	GLOBAL	Graduate	%	80.3	8.8	2.7	8.2
16/17	GLOBAL	+5 Years	%	46.6	38.2	4.8	10.3

TABLE 5: CAREER INTENTIONS IRELAND 2018/19 VERSUS GLOBAL GUESSS AVERAGE 2016/17

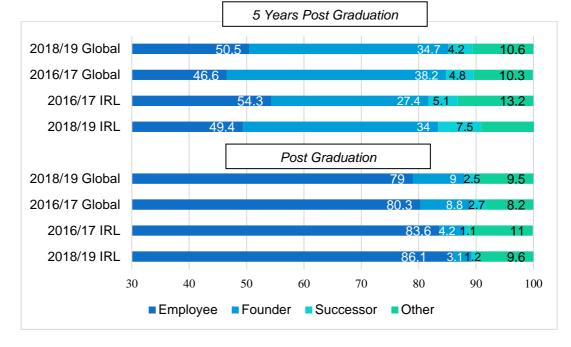


FIGURE 4: CAREER INTENTIONS – IRELAND VERSUS GLOBAL (16/17 AND 18/19)

3. Intentions towards Entrepreneurship

3.1 Entrepreneurial Intentions of Students

Students were presented with a number of statements relating to their entrepreneurial intentions. A total of 897 students responded to this set of questions. As seen in Table 6, many students were uncertain about their specific entrepreneurial intentions.

	Strongly Disagree	Disagree	Somewhat disagree	Uncertain	Somewhat agree	Agree	Strongly Agree
I am ready to do anything to be an entrepreneur.	14.47	14.97	17.52	22.37	16.61	8.88	5.18
My professional goal is to become an entrepreneur.	15.19	14.53	17.34	17.67	15.19	11.64	8.42
I will make every effort to start and run my own business.	13.91	13.49	17.63	17.72	16.64	10.18	10.43
I am determined to create a business in the future.	12.88	12.30	14.95	20.31	15.19	12.80	11.56
I have very seriously thought of starting a business.	14.31	13.15	15.63	15.38	15.30	14.31	11.91
I have the strong intention to start a business someday.	13.74	13.25	13.49	15.98	15.07	13.74	14.74

TABLE 6: ENTREPRENEURIAL INTENTIONS OF STUDENTS

3.2 Intentions to Found a Business by Field of Study

A comparison was drawn between students' field of study and student intentions (directly after graduation and five years after graduation). Five years after graduation, students of the Science of Art (including art, design, music etc.) had the highest intentions towards founding their own business in proportion to the sample group who responded (61%). Students of business/management entrepreneurial intentions were 32% higher 5 years' post-graduation, moving from 28 students intending on entrepreneurship post-graduation to 366 five years following their university degree.

TABLE 7: ENTREPRENEURIAL INTENTIONS BY DISCIPLINE

		ht after ng studies	5 years finishing	
	N	%	N	%
Arts / Humanities (e.g., cultural studies, history,	1	3%	10	28%
linguistics, philosophy, religion)				
Business / Management	28	3%	366	35%
Computer sciences / IT	4	7%	8	14%
Economics	1	4%	7	30%
Engineering (incl. architecture)	1	2%	22	35%
Human medicine / health sciences	0	0%	7	19%
Law	1	4%	5	21%
Mathematics	2	22%	2	22%
Natural sciences	0	0%	2	14%
Science of art (e.g., art, design, dramatics, music)	3	8%	22	61%
Social sciences (e.g., psychology, politics, ed)	0	0%	2	11%
Other	2	3%	19	26%

3.3 Share of Aspiring (Nascent) and Active entrepreneurs

Students were asked: 1) Are you currently trying to start your own business/to become self-employed? 2) Are you already running your own business/are you already self-employed? (N=1,446). As can be seen in Table 8, 87.6% (N=1,266) of students indicated that they are not currently trying to start their own businesses/become self-employed, and 95.85% (N=1,386) are not currently involved in their own businesses/are self-employed. Those that responded 'Yes' to either question will be explored in more detail in later sections of this report.

	Are you currently try business/to becom	ing to start your own ne self-employed?	Are you already running your o business?		
-	Number	%	Number	%	
Yes	180	12.45%	60	4.15%	
No	1266	87.55%	1386	95.85%	
Total	1446	100%	1446	100%	

TABLE 9: GENDER AND START-UP STAGE

TABLE 8: ACTIVE AND NASCENT ENTREPRENEURS IN SAMPLE

ſ		ntly trying to stat /become self-em	Are you already running your o business/are you already self employed			
Г	Male	Male Female		Male	Female	Total
No	584	672	1,256	678	698	1,376
Yes	130	49	179	23	36	59
Total	714	721	1,435	701	734	1,435

3.4 Attitudes and Perceptions of Entrepreneurship

When asked to consider entrepreneurship and being an entrepreneur, students were asked to rate the questions from one (not at all) to seven (very much). Table 10 shows these results when split by gender. This table shows that students answered in largely the same format, with male students reporting a marginally higher sense of satisfaction derived from the role of the entrepreneur.

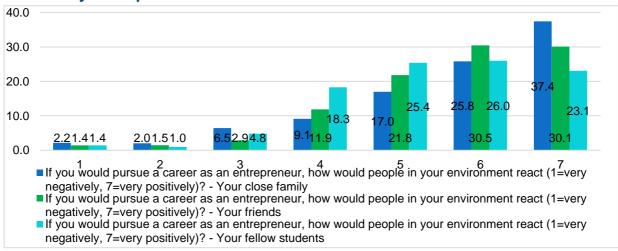
		1	2	3	4	5	6	7	Total
Being an entrepreneur implies more advantages than disadvantages to me.	Male	25	37	58	155	139	95	52	561
	Female	30	47	104	180	129	96	58	644
A career as entrepreneur is	Male	34	45	74	103	137	98	72	563
attractive for me.	Female	53	68	85	116	154	99	67	642
If I had the opportunity and	Male	21	29	45	91	128	124	124	562
resources, I would become an entrepreneur.	Female	48	41	54	114	139	130	118	644
Being an entrepreneur	Male	19	26	54	107	121	127	107	561
would entail great satisfactions for me	Female	44	43	69	121	133	122	109	641
Among various options, I	Male	39	45	83	112	105	101	76	561
would rather become an entrepreneur	Female	79	80	90	135	105	88	66	643

TABLE 10: ATTITUDES TO ENTREPRENEURSHIP BY GENDER

Entrepreneurial Self-Efficacy (ESE) is based on an individual's belief in their own capability to attain success and manage challenging goals during the new venture creation. The scale consists of items relating to an individual's perception of their own ability to do certain entrepreneurial tasks. As shown in Table 11, the student sample noted the highest perceived competence in "being a leader and communicator" but the lowest in "identifying new business opportunities" and "creating new products and services".

	Identifying new business opportunitie s	Creating new products and services	Managing innovation within a firm	Being a leader and commun icator	Building up a professional network	Commerciali sing a new idea or development	Successf ully managing a business
very low competence	4.54%	4.54%	3.89%	2.00%	2.81%	3.88%	4.23%
pretty low competence	6.19%	8.75%	6.37%	2.33%	4.87%	7.19%	4.97%
rather low competence	14.53%	16.52%	13.49%	6.48%	12.72%	12.23%	10.27%
equal	25.85%	27.09%	23.76%	14.71%	21.14%	24.21%	19.80%
rather high competence	29.15%	26.59%	27.07%	26.02%	27.75%	27.02%	25.93%
pretty high competence	14.53%	12.14%	18.87%	30.34%	19.74%	18.35%	22.20%
very high competence	5.20%	4.38%	6.54%	18.12%	10.98%	7.11%	12.59%

TABLE 11: ENTREPRENEURIAL SELF-EFFICACY



3.5 Society Perceptions

FIGURE 5: REACTIONS TO PURSUIT OF ENTREPRENEURSHIP

A factor, which can affect the choice to become an entrepreneur, is the reaction of the ecosystem surrounding the individual. Considering this aspect, the student sample were asked, "If you would pursue a career as an entrepreneur, how would people in your environment react?" on a scale from one (very negatively) to seven (very positively). They were asked to record the perceived reactions of close family, friends and fellow students. As shown in Figure 5, students considered that all would be very positive about such a career choice, with close family recorded as the highest very positive grouping.

4. Entrepreneurship and Education

4.1 Institutional Support for Entrepreneurship

Students were asked to what extent the atmosphere at their university inspires them to develop ideas for new businesses. The results showed that 58% of the students agreed with the statement to some extent, whereas 20.7% disagreed to varying degrees (See Figure 6 below). When asked if their university encouraged students to engage in entrepreneurial activities, the majority of the sample agreed to some extent (69.1%). Students were also asked if there was a favourable climate for becoming an entrepreneur at their university. The results showed there was significant agreement to some extent among students viewing their university as having a favourable climate for entrepreneurship with 64.8%, whereas 17.3% disagreed to varying degrees.

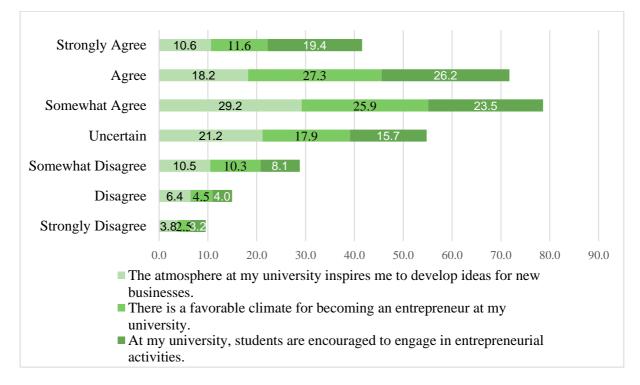


FIGURE 6: University Support for Innovation

4.2 Within Course Development of Entrepreneurial Competencies

The students were asked to what extent they would agree that their studies helped them to develop specific competencies and knowledge relating to entrepreneurship. Students agreed to vary extents with the item 'my course enhances my ability to identify an opportunity' (65.6%) and in their network-building opportunities (57.8%). The item that received the strongest disagreement was 'my course enhanced my practical management skills to start a business' (38.2%).

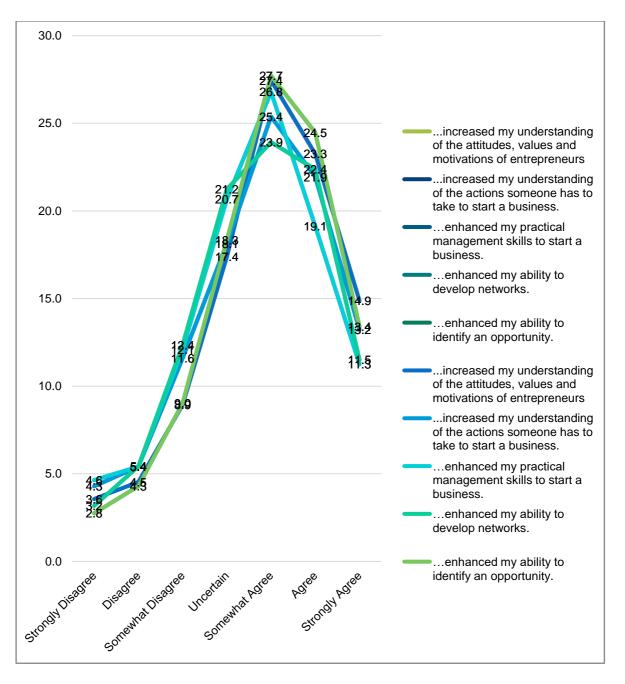


FIGURE 7: Reaction to course offerings

4.3 Students taking Entrepreneurship Related Classes

Table 12 shows the extent to which students in the Irish university context reported to be taking an entrepreneurship course offering (ranging from an optional module to studying it in a specific programme). The results indicate that 42.1% (N=613) of students had not yet taken an entrepreneurship course. There were 19.1% of the students who had attended an entrepreneurship course as an elective (N=279), while 34.0% had attended at least one as a compulsory part of their course (N=496). Only 12.1% of the student sample were studying on a specific entrepreneurship program (N=176). When asked if the entrepreneurial reputation of the university was the deciding factor of choosing to study there, 88.5% of the students answered no.

Participation in Entrepreneurship Courses	(N of 1457)	%
I have not attended a course on entrepreneurship so far.	613	42.1
I have attended at least one entrepreneurship course as an elective.	279	19.1
I have attended at least one entrepreneurship course as a compulsory part of my studies.	496	34.0
I am studying in a specific program on entrepreneurship.	176	12.1
I chose to study at this university mainly because of its strong entrepreneurial reputation.	167	11.5



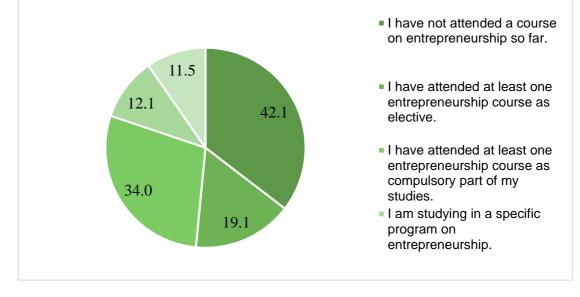


FIGURE 8: PARTICIPATION IN ENTREPRENEURSHIP EDUCATION (%)

4.3 Pedagogical Aspects Used in Entrepreneurship Education

Students that indicated they have taken or are taking some form of entrepreneurship course were asked to give specifics about the pedagogical (teaching) methods used within the course. As this question was also asked in the previous GUESSS Ireland study, comparisons were drawn. There were 209 students eligible for this question in 2016/17 and 804 in 2018/19. In answering, students were encouraged to select all elements that applied. Results indicated that the most common method for delivering a course in entrepreneurship education was through lectures, followed by guest speakers and teamwork. The use of hackathons is noted to have increase, however the use of business plans and workshops appeared to be less popular.

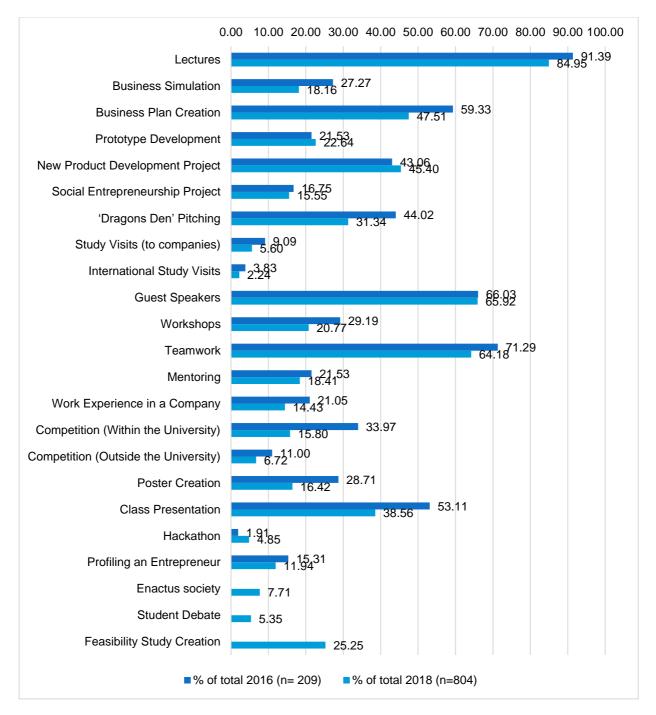
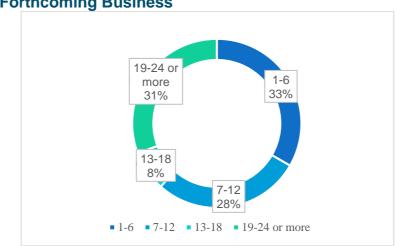


FIGURE 9: ENTREPRENEURSHIP EDUCATION PEDAGOGIES EMPLOYED IN IRELAND

5. Aspiring (Nascent) Entrepreneurs

A number of students considered that they would like to set up a company at some point in the future. These nascent entrepreneurs were asked about their plans and the teams they intended to form to pursue their startup (n=78). Students were asked if post their graduation, they see their intended business becoming their main occupation in the future. Of the students who responded to this question, 47% saw it becoming their main occupation, 17% did not and 33% were unsure. When asked of previous experience, 65.4% of the sample (n=78) noted that they have not created any other business, while 34.6% (N=27) had.



5.1 Timing of Forthcoming Business

FIGURE 10: TIMING OF FORTHCOMING BUSINESS

In the Irish sample, 78 students noted their intentions to become an entrepreneur. In terms of timing, 33% of these nascent student entrepreneurs noted their intention to start within the first 6 months, 28.2% mentioned they plan to do it between 7-12 months. 30.8% of the respondents mentioned that they plan to start their business in 19-24 months.

5.2 Approximate Ownership of the Business

Out of the 78 student responses, 34.6% said that they would own a 100% share in their business. Majority owners accounted for 28.2%. 17.9% indicated a split ownership (50%), while only one student indicated a lesser share.

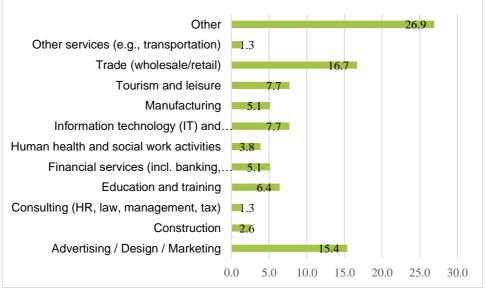
Co-Founders in the Business: 26.3% said that they would want to start a business on their own. The preference was to found the venture with one co-founder (31.6%), while 9.2% opted for founding a business with 2 co-founders. A low number wanted to start a business with three co-founders (3.9% students) or over four (7.9%). In addition, 21.1% said that they want to start a business but have not found a partner yet.

Fellow Students as Co-founders: Of the 27 respondents to this question, 11 students said that none of the co-founders were fellow students.

Origin of the Founding Team: Only 2/27 students mentioned that they internally searched for co-founders to build a team, while 4 students mentioned that their fellow students approached them to make a team. Five students said that co-founders from outside their university approached them to make a team, while four said that no one took the lead and that the team was formed during the course of a project or an activity related to the university. Despite this, seven students mentioned that none of the above-cited reason were the cause of their team's origination

Original Idea for the New Business: Relating to the concept for the business, 43 responded to this question where 24 mentioned that the idea of the business was theirs. Only four students mentioned that the idea was their co-founders and 15 students mentioned that the idea was a combined effort of theirs and their partner's.

Reasons to Start a Business on their own: OF the 20 students who intended to start their business alone, 11 students considered it a type of self-employment where a co-founder was not necessary. Five students mentioned that they do not want a co-founder and want to find a business on their own. Only one student mentioned that he/she has looked for a co-founder but has not found a suitable candidate. Two students mentioned that they have not looked for a co-founder but will do so in the future. Lastly, one respondent said that none of the above-mentioned reasons is applicable.



5.3 Sector of the Business

FIGURE 11: NASCENT ENTREPRENEUR SECTOR (N=78)

When asked which industry the students considered they would found a company in, 16.7% students, mentioned that their business will be in Wholesale and Retail trade, while a close second option was Advertising/Marketing and Design, which stood at 15.4%. Tourism and Leisure was favored by 7.7% while 6.4% students mentioned the field of Education and Training. Apart from these listed, 26.9% of the

respondents, mentioned that their business will be in a different economic sector to those mentioned in the survey.

5.4 Activities undertaken towards entrepreneurship

Students were asked to note how many actions they had taken towards their new venture creation. Of the sample, 46 had discussed the business idea with their potential customers while 45 had already collected market information about the market and competitors. There were 28 respondents who had already drafted a business plan and had started working on product/service development. A small number of students, 7, had already registered their business and 13 had already sold their product. It was interesting to note that 18 students had not completed any stage mentioned.

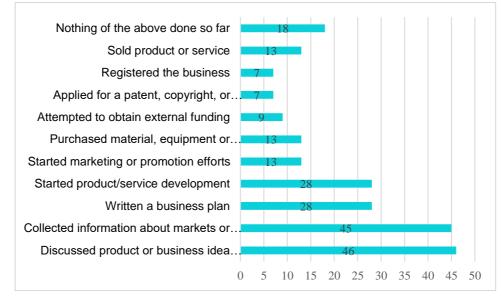


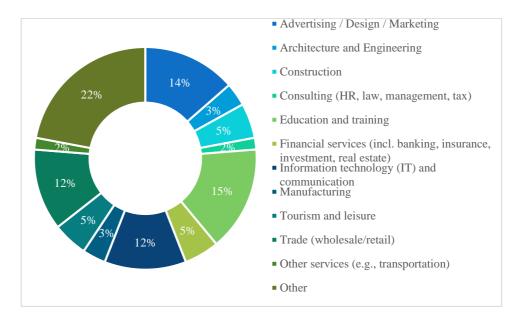
FIGURE 12: ACTIONS TAKEN BY NASCENT STUDENT ENTREPRENEURS

6. Active Entrepreneurs

From the sample of the Irish study, fifty students (n=50) noted they were currently involved in their own venture (i.e. were active entrepreneurs). These students were asked further questions about their experience as an entrepreneur, and their ventures.

6.1 Student Company Information

Of the student entrepreneur respondents, 27% wanted this business to become their main occupation once graduated. The majority 56% did not want it to be their main occupation and 17% did not know yet. When asked about the start-up team, 58% (n=29) noted that they were the sole founder of the company.





6.2 Student Company Business Environment, Behavior and Performance

Considering the start-up itself, students were asked to compare their company to competitors on a number of levels. The respondents feared their companies were underperforming on job creation, but were more innovative and had higher profit growth (Figure 13).



FIGURE 14: COMPANY PERFORMANCE (1=MUCH WORSE, 7=MUCH BETTER)

7. Family Business and Succession

In the survey, respondents were asked to note whether their parents were self-employed or were owners of a business. The analysis found that 478 (32.8%) students indicated in the affirmative and were then asked a range of questions relating to these companies, and their intentions of succession (i.e. taking over the company from their parent/s).

7.1 Family Business Information

Table 13 below indicates the owner/founder careers of the parents of the survey participants. As seen below, 22.2 % of the students (n=320) indicated that their father was self-employed and 18.5 % (n=267) owned the majority share of a business. Notably less students indicated that their mother was self-employed (3.8%, n=55) or a majority owner (3.2%, n=46).

		Are your parents self- employed? majority own busines			
	Frequency	Valid Percent	Frequency	Valid Percent	
No	965	66.9	1024	71.0	
Yes, father	320	22.2	267	18.5	
Yes, mother	55	3.8	46	3.2	
Yes, both	103	7.1	106	7.3	
Total	1443	100.0	1443	100.0	

TABLE 13: FAMILY BUSINESS OWNERSHIP

Students were asked, "Is your father or your mother leading the business operationally?" Of the 453 respondents, 391 students or 86.3 % answered yes. Students were also asked if they considered the company could be termed a "family business". Of the 452 students who answered the question, 46.2 % (n=209) did not consider it a family business, while 53.8 % (n=243) did. Considering the family unit, 29.1 % (n=132) respondents were the eldest child in their family, while 30.7% had one older sibling, 21.4% had two and 18.8% (n=453) indicated they had three or more older siblings.

Over half the respondents (54.9%, n=248) had previously worked or were working for their parents' business. In the sample of 452 responses, 204 (45.1%) noted they had not worked in their parents' business.

The children of parents who have a business (n=451) were asked to indicate in how many years they may take over the business. Seven students (1.6% of owners' children) indicated they would succeed their parents' business within one year, 24 (5.3%) between two and five years, and 85 (18.3%) in over 5 years. However, 74.3% of this category, which amounts to 335 students, indicated that they do not intend on taking over their parents' business. That is, in our sample, **74.3% of the children of business owners/founders do not intend to engage in family business succession.**

As shown in Table 14, the main areas of industry, which respondents indicated their parents were involved in, were: 1) Other, 2) Trade, and 3) Construction.

	Frequency	Valid Percent
Advertising / Design / Marketing	10	2.3
Architecture and Engineering	21	4.8
Construction	58	13.2
Consulting (HR, law, management, tax)	21	4.8
Education and training	15	3.4
Financial services (incl. banking, insurance,	27	6.2
investment, real estate)		
Human health and social work activities	25	5.7
Information technology (IT) and communication	10	2.3
(incl. software & IT services)		
Manufacturing	22	5.0
Tourism and leisure	19	4.3
Trade (wholesale/retail)	61	13.9
Other services (e.g., transportation)	37	8.4
Other	112	25.6
Total	438	100.0

7.2 Influence of Parents' Occupation on Entrepreneurial Intentions

Table 12: Career Intentions of Students (right after graduation) by Parents' Occupation (Owner/Founder versus Non)

	No (%)	Yes (%)	Total N
an employee in a small business (1-49 employees)	73.09	26.9	275
an employee in a medium-sized business (50-249			329
employees)	65.96	34.0	
an employee in a large business (250 or more employees)	73.07	26.9	479
an employee in a non-profit organization	64.00	36.0	25
an employee in academia (academic career path)	80.49	19.5	41
an employee in public service	69.84	30.2	63
a founder (entrepreneur) working in my own business	52.27	47.7	44
a successor in my parents' / family's business	9.09	90.9	11
a successor in another business	50.00	50.0	6
Other / do not know yet	82.22	17.8	135
Ν	999	409	1408

7.3 Family Business Succession: Support and Encouragement from Parents

In considering the relationship that each student respondent had to their family business, a series of

questions were asked about the emotional support or encouragement that the student received relating to succession.

Emotional Support

TABLE 13: EMOTIONAL SUPPORT FOR SUCCESSION

My parents (%)	Talked to me about what fun my future job	Said things that made me happy when I	And I get excited when we talk about
		learned something I	what a great job I

	in their business could be.	might use in their business.	might have someday in their business.
1	25.0	21.4	28.2
2	12.8	10.0	14.4
3	12.2	10.9	11.0
4	16.7	20.3	15.8
5	11.3	13.2	10.4
6	10.1	10.5	8.6
7	11.9	13.6	11.7
Total	100.0	100.0	100.0

(1 - Strongly Disagree to 7 - Strongly Agree)

Verbal Encouragement

In terms of the verbal encouragement that the student respondents receive from parents, it was extremely positive. For all three items (pertaining to verbal encouragement for academic success), students strongly agreed that their parents offer encouragement for their success.

My parents	Encouraged me to	.encouraged me to	told me they
%	learn as much as l can at school.	make good grades.	are proud of me when I do well in school
1	1.3	0.7	1.1
2	0.7	0.4	1.8
3	3.1	2.7	3.4
4	8.5	8.5	8.3
5	8.9	10.8	10.8
6	17.4	19.7	17.5
7	60.0	57.2	57.2
Total	100.0	100.0	100.0

(1 - Strongly Disagree to 7 - Strongly Agree)

7.6 Family Business Succession: Attitude to Succession

Students were asked a series of questions relating to their attitude to succession. The students had a predominantly negative attitude to business succession (See Table 18).

 TABLE 18: FAMILY BUSINESS SUCCESSION: ATTITUDE TO SUCCESSION

(1 - Strongly Disagree to 7 - Strongly Agree)	1	2	3	4	5	6	7
Being a successor implies more advantages than disadvantages to me.	17.3	12.9	15.8	21.1	16.7	11.8	4.4
A career as a successor is attractive for me.	23	14.8	15	20.8	12.8	7.5	6
If I had the opportunity and resources, I would become a successor in my parents' firm.	30.2	14.9	13.6	17.8	11.1	8.2	4.2
Being a successor would entail great satisfactions for me.	26.4	13.1	14.4	17.7	13.1	9.1	6.2
Among various options, I would rather become a successor in my parents' firm.	36.2	16.2	15.6	15.3	9.1	4.9	2.7

8. Working in a Start-up

Only seven students indicated that they work in a start-up company, of which two were created in 2015 and two were created in 2018. The majority of these students indicated they worked between 10-40 hours per week and 57% indicated that they had low-level position in the company, and in the Tourism and Leisure sector. Students were asked some questions about the atmosphere in their company as shown in Table 15. For the most part, responses indicate that students tended to enjoy their culture and colleagues in their company.

	Not at All	2	3	4	5	6	Very Much
How much do you trust your colleagues?		1		2		3	1
How comfortable do you feel delegating to your colleagues?		2		2	1	1	1
Are your colleagues truthful and honest?			1		2	2	2
How much do you respect your colleagues?			1			3	3
How much do you respect the ideas of your colleagues?			1			3	3
How much do you like your colleagues?				2		3	2
To what degree would you consider your colleagues as your friends?				2	3	1	1
How much open discussion of issues is there in the start- up?				3		2	2
To what degree is communication in the start-up, open?				2	1	1	3
To what degree is conflict dealt with openly in the start- up?				2	2	1	2
To what extent is your team cohesive?				1		2	4
How much do you feel like your team has group spirit?				2		2	3
To what degree would you talk about the start-up as a great place to work at?				1	1	1	4

TABLE 15:	ATTITUDE TOWARDS	START-UP ANI	COLLEAGUES
I ADLL IV.	ATTITUDE TOWARDS	DIANI-UI ANI	COLLEAGUES

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