



Greek students' attitude towards entrepreneurship: latest data and insights

Greek Report of the GUESSS Project 2019

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Executive Summary

The Global University Entrepreneurial Spirit Students' Survey (GUESSS) is a leading research project in the field of entrepreneurship with a special focus on students' entrepreneurial intentions and activities around the world. Greece participates in the project since 2008 and is represented through the University of Macedonia and Prof. Sarri. In 2018, 1157 students participated in GUESSS in Greece, the highest number up to this point. The project is steadily growing with each new wave of data collection, not only in terms of students but also in terms of the number of participating Universities.

Universities aspire to create the employees, the employers, the managers, the entrepreneurs, the leaders of the future. But even more imperatively because of the economic, social, environmental crises around the globe, they should aspire to create individuals that internalize and share entrepreneurial values and characteristics such as risk taking, independence, creativity and innovation. These values will help students thrive in any environment they choose to work and will also help them improve the world as a whole.

The latest results show a decrease in entrepreneurial intention in Greece, in comparison to the previous years, even if the majority of students had at least one course in entrepreneurship. As far as career choices are concerned, there is a central pattern, which is "first employee, then entrepreneur", that is evident also in Greece. These results are important in many ways and can serve as a basis for policy making. First of all, there is a need to reassess how entrepreneurship and the values of entrepreneurship, are taught in Universities and by whom. So besides the need to reassess the curricula and the opportunities that Universities offer for example in terms of networking (results show that there is clearly room for improvement in this field), there is also an imperative need to "train the trainers". Educators should be equipped with up-to-date tools and methodologies to master entrepreneurship education. Secondly, it becomes evident that Universities should further enhance and improve entrepreneurship related courses and offerings, especially when students show an interest in entrepreneurship in the long run. In this direction, Universities should also focus on their graduates and help them make the step into entrepreneurship by providing long life learning programmes in the field.

During the year of the deep economic recession, entrepreneurship has been seen as a trend and a way out of unemployment. The rate of necessity entrepreneurship was above average in Greece according to the Global Entrepreneurship Monitor. However even if entrepreneurship created under



these circumstances, can be a way out of unemployment in the short term, studies show that over 90% of start ups fail. To add to that in Greece, there is a hostile environment regarding entrepreneurship, which is reflected through high taxation and bureaucracy. Students seem to be realizing all the hurdles that are associated with entrepreneurship. "Trained" educators, have to provide them with the tools, skills, and capabilities, not only to become entrepreneurs, but to become successful entrepreneurs.

We would like to cordially thank all students that participated in the study.

Yours sincerely,

Prof. Dr. Katerina Sarri and Dr. Stavroula Laspita



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1. Introduction

1.1. GUESSS-An international research project

The international research project GUESSS stands for "Global University Entrepreneurial Spirit Students' Survey" and has been founded at the Swiss Research Institute of Small Business and Entrepreneurship at the University of St.Gallen (KMU-HSG) in 2003.

Since 2016, the GUESSS project is jointly organized by the University of St.Gallen (Switzerland, KMU-HSG/CFB-HSG) and the University of Bern (Switzerland, IMU). The GUESSS CEO is Prof. Dr. Philipp Sieger (University of Bern). The supervisory board consists of Prof. Urs Fueglistaller (University of St.Gallen), Prof. Thomas Zellweger (University of St.Gallen), Prof. Norris Krueger, and Dr. Frank Halter (University of St.Gallen).

GUESSS is one of the largest entrepreneurship research projects in the world. With every data collection wave, GUESSS has grown and has become more international. In 2018 the 8th wave of data collection took place, with 54 participating countries and more than 200.000 responses.

1.2. GUESSS Research Goals

The aims of GUESSS can be summarized as follows:

- Systematic and long-term observation of entrepreneurial intentions and activities of students
- Identification of antecedents and boundary conditions in the context of new venture creation and entrepreneurial careers in general
- Observation and evaluation of Universities' activities and offerings related to the entrepreneurial education of their students

GUESSS intends to create value for different stakeholders:

- Participating countries generate insights on their respective basic conditions for entrepreneurship in general
- Participating countries learn more about the entrepreneurial power of their students
- Participating Universities are enabled to assess the quantity and quality of their offerings in the context of entrepreneurship



- Politicians and the broader public can be sensitized for entrepreneurship in general and new venture creation in particular, and hopefully identify need for action
- Students can benefit from the implementation of respective actions in the long term

1.3. Project organisation and data collection procedure

Every participating country is represented by one main team, responsible for the recruitment of a large number of other universities in the specific country. Each country representative is also responsible for writing the national reports.

For every data collection wave, the GUESSS core team develops a comprehensive survey that meets the highest academic standards. The link to the online survey is then sent out to the different country teams. Each country team forwards the survey invitation to their own students and to the university partners they have recruited (who then also forward it to their respective students).

1.4. The 2018 GUESSS International Project in numbers

In the 2018 survey 208.636 students from 54 countries participated in the study. The majority of students (55.6 percent) are between 18 and 23 years old and 54.6% of them are female. 79.1% of all students are undergraduate (Bachelor) students and 24.7% of all students are studying in the field of "Business / Management", which constitutes the largest group in the sample.

The following table lists response rates in all participating countries. However the overall response rate may be an underestimation of the response rate in terms of students invited because we do not have information at the university level in terms of exactly how many students were invited to participate, which diminishes our ability to calculate exact response rates at the university or country level.



Table 1: Universities and response rate of the participating countries

#	Country	Number of universities	Completed responses	Valid percent
1	Albania (ALB)	5	518	0.25
2	Algeria (ALG)	10	979	0.47
3	Argentina (ARG)	26	2691	1.29
4	Australia (AUS)	1	77	0.04
5	Austria (AUT)	33	1999	0.96
6	Belarus (BLR)	15	504	0.24
7	Brazil (BRA)	143	20623	9.88
8	Chile (CHI)	30	7704	3.69
9	China (CHN)	2010	18685	8.96
10	Colombia (COL)	65	15851	7.60
11	Costa Rica (CRC)	85	7359	3.53
12	Czech Republic (CZE)	9	1254	0.60
13	Ecuador (ECU)	8	3702	1.77
14	El Salvador (ESA)	11	641	0.31
15	England (ENG)	6	465	0.22
16	Estonia (EST)	26	1303	0.62
17	Finland (FIN)	16	181	0.09
18	France (FRA)	7	230	0.11
19	Germany (GER)	25	10082	4.83
20	Greece (GRE)	32	1157	0.55
21	Hungary (HUN)	24	9667	4.63
22	Indonesia (IND)	7	1279	0.61
23		12	1408	0.67
24	Ireland (IRL)	21	7299	3.50
25	Italy (ITA)	49		
	Japan (JAP)	29	4150	1.99
26	Jordan (JOR)		4564	2.19
27	Kazakhstan (KAZ)	20	3425	1.64
28	Kosovo (KOS)	4	683	0.33
29	Lebanon (LBN)	1	40	0.02
30	Liechtenstein (LIE)	1	338	0.16
31	Lithuania (LTU)	24	1059	0.51
32	Mexico (MEX)	53	5173	2.48
33	New Zealand (NZL)	2	1924	0.92
34	Norway (NOR)	10	56	0.03
35	Pakistan (PAK)	17	2389	1.15
36	Panama (PAN)	8	3564	1.71
37	Peru (PER)	1	121	0.06
38	Poland (POL)	8	332	0.16
39	Portugal (POR)	26	4178	2.00
40	Republic of Korea (KOR)	19	832	0.40
41	Republic of North Macedonia (MKD)	6	398	0.19
42	Russia (RUS)	15	2851	1.37
43	Saudi Arabia (KSA)	16	1641	0.79
44	Sierra Leone (SLE)	11	332	0.16
45	Slovakia (SVK)	17	4868	2.33
46	Slovenia (SLO)	6	564	0.27
47	South Africa (RSA)	16	3515	1.68
48	Spain (ESP)	76	33278	15.95
49	Switzerland (SUI)	69	9784	4.69
50	Turkey (TUR)	25	693	0.33
51	Ukraine (UKR)	25	722	0.35
52	United Arab Emirates (UAE)	5	931	
				0.45
53	Uruguay (URY)	3 2	509	0.24
54	USA Total	3191	208636	0.03 100.0



Source: Sieger, Fueglistaller, & Zellweger, 2019



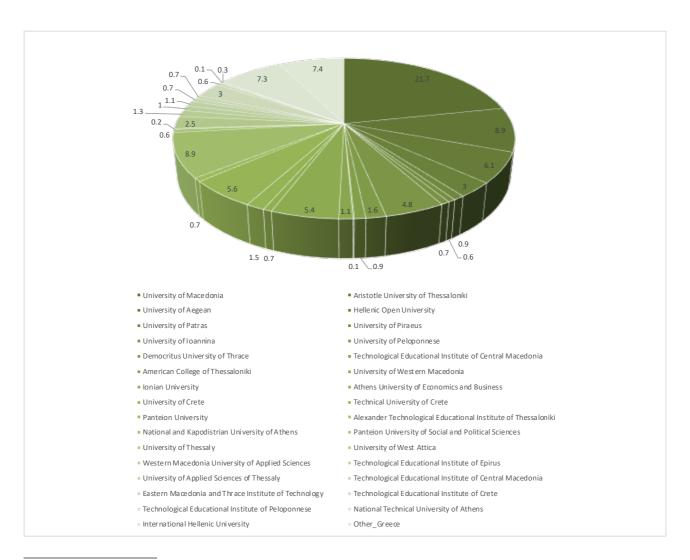
2. The project in Greece

Greece is participating in the survey since 2008 and is represented by the University of Macedonia and Professor Aikaterini Sarri. A total of 1157 students, from more than 30 universities participated in the 2019 study.

2.1. Universities

In 2019, students mainly from 31 universities participated in the study and the majority of them come from the University of Macedonia $(21,7\%)^1$ followed by students from the Aristotle University and Alexander Technological Educational Institute of Thessaloniki with 8,9% each. The exact distribution can be found in the Figure 1.

Figure 1: Participating Universities



¹ This result can be explained by the fact that the Professor who is responsible for GUESSS project in Greece is affiliated with the University of Macedonia.



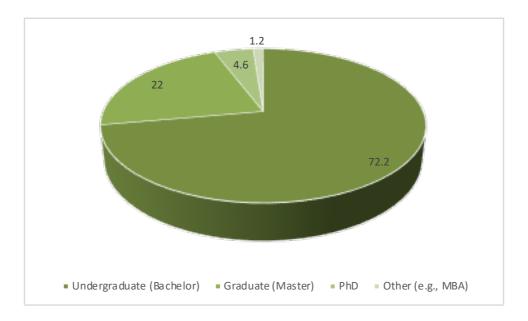
2.2. Characteristics of the sample

The respondents' mean age is 24,6 years and 61,6% of them are female. 96,3% of the students had the Greek nationality. More information about the level and the field of study of the respondents can be found in the following figures.

2.2.1. Level of study

The great majority of students (72,2%) are undergraduate (Bachelor) students, with 22% being graduate (Master) students. The share of students on other levels like PhD students and MBA students is smaller (5,8%). The results are also shown in the figure below.

Figure 2: Level of study

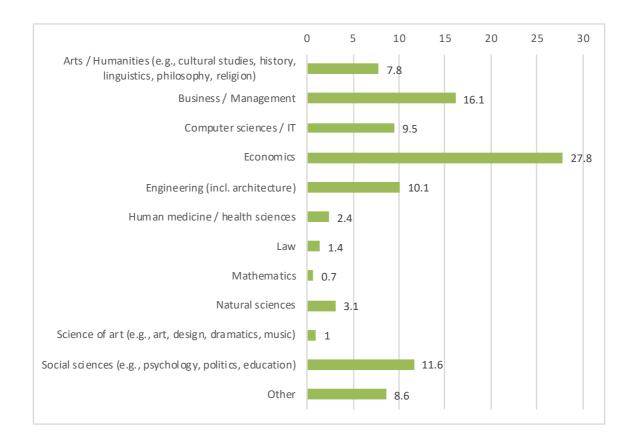


2.2.2. Field of study

The majority of the Greek students in our sample are studying economics, followed by business and management and social sciences. Less students in our sample study mathematics and science of art (e.g., art, design, dramatics, music). The exact results are shown in the figure below.



Figure 3: Field of study



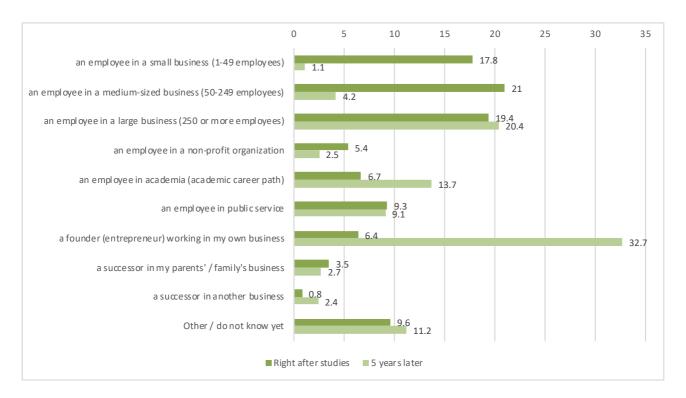


3. Results from the Greek sample

3.1.Career Choice Intentions

One of the central aims of GUESSS is to capture students' career choices in the near future but also in the long-term. The following figure reports students' occupation preference right after the completion of their studies and five years after graduation.

Figure 4: Career Choice Intentions directly after the studies and five years after graduation



Exactly like in the previous years, results for Greece (but also for the international sample), show that the first three options, namely being employed in a small, medium-sized, or large firm, are clearly the most preferable ones directly after studies. Referring to five years later, we see that the attractiveness of working as an employee in a small and in a medium-sized firm decreases significantly and slightly decreases for working in a large firm. The preference of working for large companies, both in the short and in the long term, signalizes that these companies provide a perceived feeling of security and stability compared to smaller ones, in a period during which, the Greek economy still faces challenges and unemployment rates are quite high.

The figure also shows that preference for entrepreneurial activities of any kind immediately after graduation is rather low. Five years after graduation the picture changes to a great extent. The percentage of students that would like to work as a founder in their own company increases to a



large extent from 6,4 to 32,7% (compared to 4% to 32,7% respectively in 2016 and 7.1% and 27.0% respectively in 2014). We see that the percentage of students wanting to become entrepreneurs five years after graduation has remained stable in the last years.

To illustrate the relevance of different types of occupations and the respective shifts depending on the time horizon, we group the different career options into "Employee", "Founder", and "Successor". The results for Greece and internationally are shown in figure below.

79.6

Right after studies

79.6

6.4 4.3 9.6

5 years later

Figure 5: Career choices directly after studies and five years after graduation in Greece

Figure 5 and 6 show students' clear preference for paid-employment directly after the studies and a shift towards self-employment five years after graduation both in Greece and internationally. The amount of successors slightly increases five years after graduation, however it is much lower than people who would like to found their own company and this shows that people mostly prefer to start their business from scratch than to take over an existing one. There is also not a trivial amount of students that have not yet decided about their future career endeavors.

successor

founder

employee



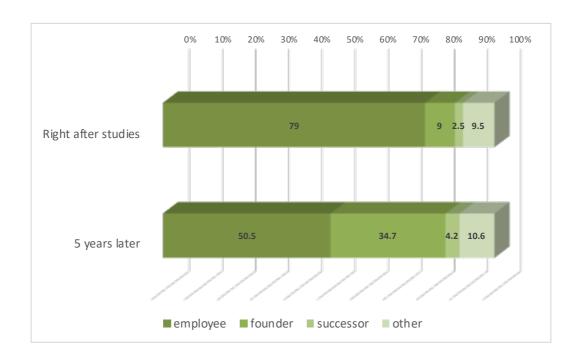
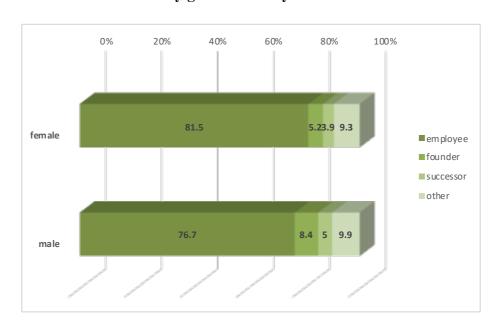


Figure 6: Career choices directly after studies and five years after graduation internationally

We take a closer look at male and female students future career choices, directly after their graduation and five years after graduation. The figures below show that directly after the studies both gender (and especially female students) have a clear preference towards paid-employment, whereas five years after graduation this interest decreases. Five years after graduation the share of intentional founders among males is higher than among females (36.1% versus 30.6%). The amount of undecided students is quite large for both gender in both time spans.

Figure 7: Career choice intentions by gender directly after studies





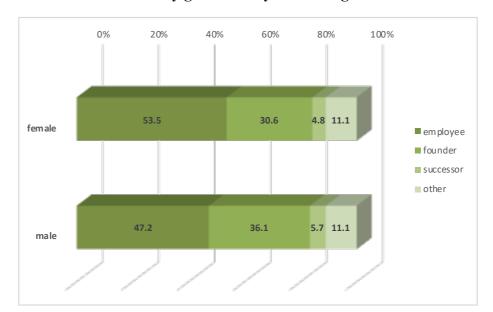


Figure 8: Career choice intentions by gender five years after graduation

3.2. Entrepreneurial intentions

Entrepreneurial intentions are an immediate antecedent of entrepreneurial behavior. In order to capture the extent of students entrepreneurial intentions, students were asked to indicate their level of agreement to a number of statements from 1 (strongly disagree) to 7 (strongly agree) that show their general intention to become an entrepreneur in the future (Linan & Chen, 2009). The results are presented in the following table.

Table 2: Strength of entrepreneurial intentions

		2014		2016			2018		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
I am ready to do anything to be an entrepreneur.	379	3.39	1.651	603	3.61	1.654	875	3.35	1.726
My professional goal is to become an entrepreneur.	379	3.69	1.704	597	4.06	1.774	870	3.55	1.873
I will make every effort to start and run my own firm.	376	3.85	1.783	599	4.11	1.745	875	3.70	1.939
I am determined to create a firm in the future.	380	3.93	1.825	598	4.20	1.761	875	3.74	1.920
I have very seriously thought of starting a firm.	383	3.92	1.943	601	4.19	1.793	876	3.79	2.004

	2014		2016		2018				
	N	Mean	SD	N	Mean	SD	N	Mean	SD
I have the strong intention to start a firm someday.	381	4.23	1.931	597	4.35	1.820		3.98	2.074

Furthermore an aggregated entrepreneurial intention index was generated by calculating the mean of all six items from Table 2. The average value of this variable is 3.7 (compared to 4.1 in 2016 and 3.82 in 2014) for Greece. This decline may be due to the formation of a hostile environment towards entrepreneurship with was manifested through bureaucracy, high social security contributions, high taxation, restrictive regulations and a perceived lack of explicit support from public and private institutions. Furthermore, during the years of the crisis, entrepreneurship was seen as a trend by young people and as a way out unemployment. But entrepreneurship is not an easy path, it is full of challenges of different kinds and students may have realized that through their courses, etc.

We also tested for gender differences in the aggregated entrepreneurial intention index. The entrepreneurial intention for male respondents (M=3,91, SD=1.739) is significantly higher than that for female respondents (M=3.57, SD= 1.677). (t(875)=2,812, p=0.005). This result is in accordance with previous research conducted in the field.

3.3. Drivers of entrepreneurial intentions

3.3.1. The university context

Students were asked to what extent they have been attending entrepreneurship-related courses and offerings. As figure 9 shows, 5,2% of all students are studying in a specific program on entrepreneurship which is below the international average. 29,6% of respondents did not attend any entrepreneurship-related course at all (34,6% in 2016). More than 65% of the students have attended an entrepreneurship course either as a compulsory or as an elective course (multiple answers were possible).



I am studying in a specific program on 7.1 entrepreneurship. 5.2 I have attended at least one 20.5 entrepreneurship course as compulsory part of my studies. I have attended at least one 24.4 entrepreneurship course as elective. 32.6 I have not attended a course on 51.9 entrepreneurship so far. 29.6 0 10 20 30 50 40 60 ■ Greek International

Figure 9: Attendance of entrepreneurship courses

GUESSS aims to examine not only the entrepreneurial spirit of students but also the entrepreneurial spirit of universities. Therefore, students were asked to indicate the extent to which they agree to the following statements. Answers ranged from 1 (not at all) to 7 (very much).

Table 3: Items to assess the entrepreneurial climate in universities

Item	Item text
1	The atmosphere at my university inspires me to develop ideas for new businesses.
2	There is a favorable climate for becoming an entrepreneur at my university.
3	At my university, students are encouraged to engage in entrepreneurial activities.

The average importance of the different factors is illustrated in the next table for the Greek sample throughout the years. Both the Greek (AM 4.0) and the international sample (AM 4.4) in the aggregated variable, reveal that universities have still a lot of work to do in order to be regarded as entrepreneurial as students assess the entrepreneurial climate in their universities quite neutrally.

Table 4: Entrepreneurial climate assessment in Greece and internationally

Item text	Greek sample 2014	Greek sample 2016	Greek sample 2018
The atmosphere at my university inspires me to develop ideas for new businesses.	4.12	4.04	4.18
There is a favorable climate for becoming an entrepreneur at my university.	3.97	3.88	3.74
At my university, students are encouraged to engage in entrepreneurial activities.	4.22	4.15	4.15

The knowledge about entrepreneurship that students acquire when attending an entrepreneurship course or programme is very important, as knowledge may lead to an increased opportunity identification ability that could raise students' entrepreneurial attitudes and intentions (Souitaris et al., 2007). We thus asked them to indicate the extent to which they agree to five statements about their learning progress during their studies (answers ranged from 1=not at all to 7=very much). The question started with "The courses and offerings I attended..." (cf. Souitaris et al. 2007):

Table 5: Items used to assess entrepreneurial learning

Item	Item text
1	increased my understanding of the attitudes, values and motivations of entrepreneurs.
2	increased my understanding of the actions someone has to take to start a business.
3	enhanced my practical management skills in order to start a business.
4	enhanced my ability to develop networks.
5	enhanced my ability to identify an opportunity.

The results in the following figure show that there is clearly room for improvement. It seems that courses and other offerings enhance students' ability to identify an opportunity and enhance their understanding of entrepreneurial attitudes, values and motivations. Still steps have to be taken in oder to enhance the ability to develop networks and to gain practical management skills. The Greek average is 4,3, which is below the international average (AM 4,4).

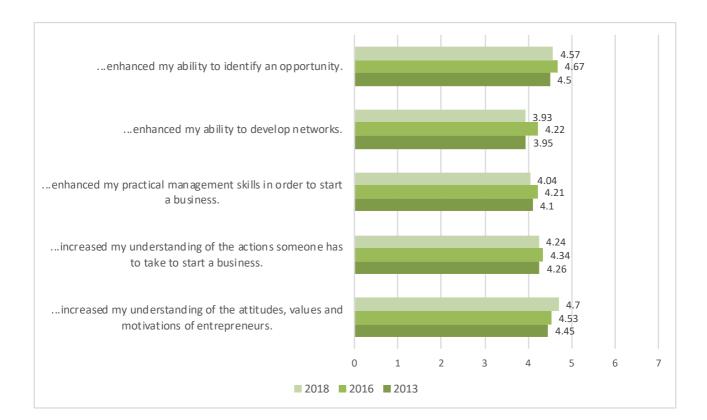


Figure 10: Entrepreneurial learning assessment

3.3.2.Locus of control and attitude towards entrepreneurship

The perceived ability to influence events in your own life, namely the locus of control and the attitude towards entrepreneurship are two characteristics that have been thoroughly studied in relation to entrepreneurial intentions.

The overall result for the locus of control variable is 4,73 (SD=1,109) which shows a rather internal locus of control. Furthermore, we tested for gender differences and found that male students (AM=4,86, SD=1.090) have a higher locus of control compared to women (AM=4,66, SD=1.113), and the difference is statistically significant (t(876)=2,498, p<0,05). We also conducted a correlation analysis between entrepreneurial intention and locus of control. The correlation is positive (0,303) and it is significant at the 0.01 level, confirming previous research that the higher the entrepreneurial intentions the higher the internal locus of control.

The overall result for the attitude towards entrepreneurship variable is 4,41 (SD=1,510) which shows a rather moderate positive attitude. Furthermore, we tested for gender differences and found that male students (AM= 4,53, SD=1,524s) have a more positive attitude towards entrepreneurship compared to women (AM=4,36, SD=1,508) but the difference is not statistically significant. Lastly we conducted a correlation analysis between entrepreneurial intention and attitude towards

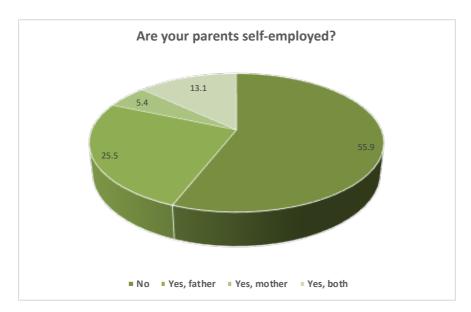


entrepreneurship. The correlation is very strong positive (0,798) and it is significant at the 0.01 level, confirming previous research that the more positive the attitude towards entrepreneurship, the higher the intention to become self-employed.

3.3.3. Family background

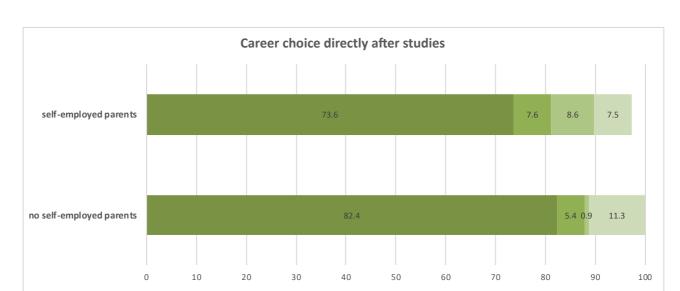
In order to explore students' entrepreneurial family background they were asked the if their father, their mother, or both of them are currently self- employed. The results are presented in the figure below.

Figure 11: Existence of self-employed parents



We split our sample into students with and without entrepreneurial parents and examined their career choice intentions directly after their studies and five years after graduation. The results can be found in the next figures.

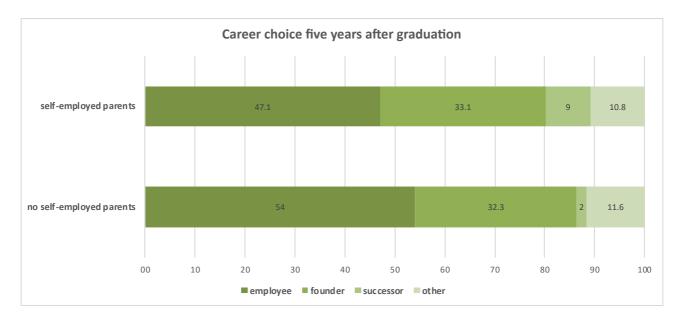




■ employee ■ founder ■ successor ■ other

Figure 12: Career choice intentions by family background directly after studies

Figure 13: Career choice intentions by family background 5 years after graduation



Students with and without entrepreneurial parents in the Greek sample do not differ to a great extent in their future career choices. We see some differences in the percentage of people that would like to become a successor but this can be explained by the fact that students without entrepreneurial parents do not have the option to take over their parents' firm one day.



3.4. Nascent entrepreneurs

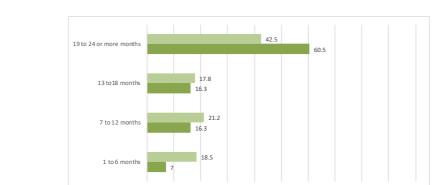
To identify nascent entrepreneurs, all students were asked: "Are you currently trying to start your own business / to become self-employed?". As results (see Figure 14) the vast majority of the students are not nascent entrepreneurs which is in accordance with the fact that they would like to work as employees right after their studies. In our sample 221 students are nascent entrepreneurs (19.1%). The international average is 30.7%.

Are you currently trying to start your own business / to become self-employed? 19 1 • No Yes

Figure 14: Share of nascent entrepreneurs

The nascent entrepreneurs in our sample have a mean age of 23.5 and are male (53.4%) in their majority. 51,6 percent of them have self employed parents. Most of them are undergraduate students (74,2%) and study economics (22,3%) followed by management (15,9%). 38,6% of the nascent entrepreneurs would like this business to become their main occupation after graduation and for a small percentage (4,5%) this is not their first business.

Respondents were asked in how many months they plan to found their business. More than half of the nascent entrepreneurs (60,5%) would like to start their business within period of 19 months to two years. The results can be found in the figure below.



30

40 ■ International ■ Greece

Figure 15: Months until launch of the start up

3.4.1. Foundation partners

The majority of the students would like to found their company with co-founders. The results can be found in the table below. Please note however that only 61 out of the 221 nascent entrepreneurs answered this question. Furthermore, in 2018 another possible answer was provided to students, which can be seen in the table below.

Table 7: Number of co-founders for nascent entrepreneurs

With how many co-founders do you plan to found	Percent	Percent	Percent
your firm?	2014	2016	2018
No Co-founders	17,6	13,6	28,7
1 Co- founder	29,4	37,0	25,3
2 Co- founders	28,2	29,6	12,6
3 Co- founders	15,3	11,1	1,1
> 3 Co- founders	9,4	8,6	2,3
I want to start this business with a co-founder but have not found one yet.			29,9

3.4.2. Preferred sector

Nascent entrepreneurs were also asked about the sector in which their company would be active. The most preferred industry sectors of the nascent founders among students for their start-up are information technology (17.4%) consulting (11.6%), tourism (10,5%) and trade (10,5%). The least preferred industry sectors is health services, manufacturing, architecture and engineering and construction. More details are given in the table below.

Table 8: Preferred economic sector for nascent entrepreneurs

Economic sector	Percent
Advertising/Design/Marketing	8,1
Architecture and Engineering	3,5
Construction	3,5
Consulting (HR, law, management, tax)	11,6
Education and training	5,8
Financial services (incl. banking, insurance, investment, real estate)	9,3
Human health and social work activities	2,3
Information technology (IT) and communication (incl. software & IT services)	17,4
Manufacturing	1,2

Economic sector	Percent
Tourism and leisure	10,5
Trade (wholesale/retail)	10,5
Other services (e.g. transportation)	4,7
Other	11,6

3.4.3. Gestation activities

In order to gain more detailed information about how far the nascent entrepreneurs have already proceeded in the founding process, they were asked which activities they have already completed (multiple answers possible). The table below shows that nascent entrepreneurs are still in the very initial phase of their start up activities.

Table 9: Activities already conducted by nascent entrepreneurs

	Percent
Collected information about markets or competitors	19,5
Written a business plan	11,3
Discussed product or business idea with potential customers	13,6
Started marketing or promotion efforts	5,4
Started product/service development	8,1
Sold product or service	1,4
Purchased material, equipment or machinery	3,6
Nothing of the above done so far	11,8
Registered the company	1,4
Attempted to obtain external funding	3,6
Applied for a patent, copyright or trademark	2,3

3.5. Active entrepreneurs

GUESSS also observes the entrepreneurial activities of students and the quality and performance of start-ups created by students. Therefore, students who are already running their own business were identified. In Greece 8.2% (95 students) stated that they are active entrepreneurs which is below the international average of 11.2%.



Are you already running your own business / are you already self-employed?

8.2

91.8

No

Yes

Figure 16: Share of active entrepreneurs

3.5.1. General information

The active entrepreneurs in our sample have a mean age of 29,1 (25,7 in 2016, 30,3 in 2014) which is higher than the mean age of nascent entrepreneurs. The share of male and female active entrepreneurs is almost equal (52,3% male vs 46,8%). The majority is undergraduate students (49,5%), followed by graduate students (40%) studying business and management (23,2%), followed by engineering (15,8%) and economics (15,8%). 45,6% of the students would like this business to become their main occupation after graduation and 32,2% have not decided yet.

Start ups are regarded to be job creators, which is very important especially in periods of an economic crisis. The mean number of employees of active entrepreneurs in our sample is 2,83 (the median is 2.0). 32,9% of the entrepreneurs do not have any employees. Active entrepreneurs were asked to indicate their ownership share in the business. The results show a preference towards a majority ownership as more than 60% percent of the respondents have more than 51% equity in their business.

3.5.2. Economic sector

Entrepreneurs were also asked about the industry sector in which their company is mainly active. Trade comes first (16,7%), followed by tourism and leisure (14,4%) The least preferred industry sector is health services. More details are given in the table below.



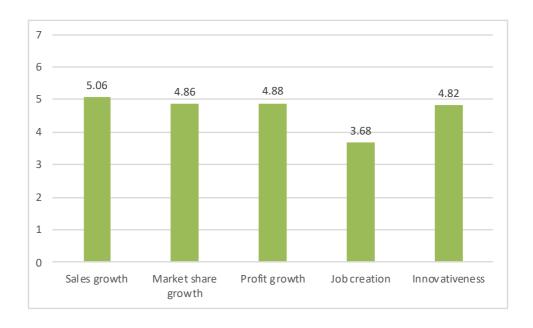
Table 10: Economic sector for active entrepreneurs

Economic sector	Percent
Advertising/Design/Marketing	6,7
Architecture and Engineering	6,7
Construction	5,6
Consulting (HR, law, management, tax)	10
Education and training	8,9
Financial services (incl. banking, insurance, investment, real estate)	2,2
Information technology (IT) and communication (incl. software & IT services)	5,6
Manufacturing	4,4
Tourism and leisure	14,4
Trade (wholesale/retail)	16,7
Other services (e.g. transportation)	4,4
Other	14,4

3.5.3. Perceived performance

Active entrepreneurs were asked asked to rate their business' performance as compared to its competitors since its establishment in several dimensions. The average is 4.7, which is below the international average (4.99) but above the neutral point of the scale and therefore can be regarded as optimistic. Especially as far as sales growth is concerned entrepreneurs are quite satisfied (above 5). There is still room for improvement as far as job creation is concerned. The exact results can be found in the table below.

Figure 17: Perceived performance





4. Summary

The main findings of this report can be summarized in the following:

- As far as general career choices are concerned, the pattern first employee and then entrepreneur is stable the last years both in Greece and in the international sample.
- Entrepreneurial intentions in Greece are quite low and lower than in the previous years. The
 entrepreneurial intention for male respondents is significant higher than that for female
 respondents.
- More than 2/3 of the respondents had a course in entrepreneurship. Results reveal that Greek universities still have a lot of work to do in order to be regarded as entrepreneurial as students assess the entrepreneurial climate in their universities quite neutrally. Students claim that entrepreneurial learning in their Universities only neutrally enhanced their ability to develop networks. Also steps have to be taken for the improvement of practical management skills.
- In the Greek sample 221 students can be classified as nascent entrepreneurs (19,1%). This percentage is below the international average which is 30,7%.
- Less that 1/3 of the nascent entrepreneurs would like to create the business on their own. Results show that a significant number would like to found the business with a co-founder, but have difficulties finding one. This result may also be connected with the fact that students ask for the enhancement of their ability to develop their network through the University. We also see that the business of the nascent entrepreneurs are still not very mature, as the majority would like to launch the business in the next two years. Nascent entrepreneurs show their preference to the developing industries of the Greek Economy and namely tourism, Information Technology, and consulting. This study confirms the devastating role that the current economic crisis has on the construction industry in the country but also on architecture and engineering (fields related to construction), as only few of the nascent entrepreneurs in our sample prefer this sector.
- In the Greek sample there 95 active entrepreneurs (8,2%) which is below the international average (11,2%)
- Almost half of the active entrepreneurs in our sample would like this business to become their
 main occupation after graduation almost 1/3 have not decided yet. Almost 1/3 of the active
 entrepreneurs do not have any employees. The most preferred industries are trade, tourism and



leisure and consulting. Active entrepreneurs show a moderate satisfaction towards entrepreneurship.



References

Linan, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. Entrepreneurship Theory and Practice, 33(3), 593-617.

Sieger, P., Fueglistaller, U., Zellweger, T. & Braun, I. (2019). Global Student Entrepreneurship 2018: Insights From 54 Countries. St.Gallen/Bern: KMU-HSG/IMU.

Souitaris, V., Zerbinati, S. & Al-Laham, A., (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. Journal of Business Venturing 22 (4), 566–591

Tsakanikas, A. Stavraki, S. Valavanioti, E. (2018). Annual Entrepreneurship Report 2017-2018: Fewer ventures, better employment prospects. Foundation for Economic and Industrial Research, Global Entrepreneurship Monitor.



Appendix

List of country teams

#	Country	Team Leader(s)	University
1	Albania (ALB)	Prof. Ermira Qosja	European University of Tirana
2	Algeria (ALG)	Dr. Mohammed Kerbouche	University Mustapha Istambouli Mascara
3	Argentina (ARG)	Prof. Silvia Carbonell	Universidad Austral - JAE Business School
4	Australia (AUS)	Prof. Paull Weber / Dr. Louis Geneste	Curtin University
 5	Austria (AUT)	Prof. Norbert Kailer /	Johannes Kepler University Linz /
_		Prof. Alfred Gutschelhofer	University of Graz Belarusian Economic Research and Outreach
6	Belarus (BLR)	Dr. Radzivon Marozau	Center (BEROC)
7	Brazil (BRA)	Prof. Edmilson Lima	UNINOVE - Universidade Nove de Julho
8	Chile (CHI)	Prof. Gianni Romaní	Universidad Catolica del Norte
9	China (CHN)	Jing Su	Shanghai Lixin University of Accounting and Finance
10	Colombia (COL)	Prof. Claudia Alvarez	Universidad EAFIT
11	Costa Rica (CRC)	Dr. Juan Carlos Leiva	Technology Institute of Costa Rica
12	Czech Republic (CZE)	Prof. Klara Antlova	Technical University of Liberec
13	Ecuador (ECU)	Prof. Mariella Jácome Ortega	UCSG & UCACUE
14	El Salvador (ESA)	Prof. Manuel Sifontes	Universidad Dr. Jose Matias Delgado
15	England (ENG)	Prof. Robert Blackburn	Kingston University
16	Estonia (EST)	Prof. Urve Venesaar	Tallinn University of Technology
17	Finland (FIN)	Prof. Timo Pihkala	Lappeenranta University of Technology
18	France (FRA)	Prof. Alain Fayolle	EM Lyon Business School
		Prof. Heiko Bergmann /	University of St. Gallen (SUI) /
19	Germany (GER)	Prof. Stephan Golla	Fulda University
20	Greece (GRE)	Prof. Katerina Sarri	University of Macedonia
		Dr. Szilveszter Farkas /	Budapest Business School /
21	Hungary (HUN)	Dr. Andrea Gubik	University of Mikolc
22	Indonesia (IND)	Dr. Eko Suhartanto	Universitas Prasetiya Mulya
23	Ireland (IRL)	Dr. Eric Clinton	Dublin City University
24	Italy (ITA)	Prof. Tommaso Minola / Dr. Davide Hahn	University of Bergamo
25	Japan (JAP)	Prof. Tomoyo Kazumi	Senshu University
26	Jordan (JOR)	Dr. Omar Shubailat	German Jordanian University
27	Kazakhstan (KAZ)	Dr. Olga Sudibor	Turan University
28	Kosovo (KOS)	Dr. Ermal Lubishtani	University for Business and Technology
29	Lebanon (LBN)	Dr. Georges Samara	American University of Beirut
30	Liechtenstein (LIE)	Prof. Marco Furtner / Prof. Urs Baldegger	University of Liechtenstein
31	Lithuania (LTU)	Virginija Kargytė	Vytautas Magnus University
32	Mexico (MEX)	Prof. José Ernesto Amorós	EGADE Business School
33	New Zealand (NZL)	Prof. Rod McNaughton	University of Auckland
34	Norway (NOR)	Prof. Marina Solesvik	Western Norway University of Applied Sciences
35	Pakistan (PAK)	Dr. Altaf Hussain Samo	Sukkur IBA University
36	Panama (PAN)	Dr. Maria do les Angeles Frende Vega	-
37	Peru (PER)	Prof. Jaime Serida	Universidad de Panama Universidad Esan
	D. I. I.(DOL)	D 411 1 1	
38 39	Poland (POL)	Dr. Adrianna Lewandowska	Family Business Institute Poland University of Evora
39 40	Portugal (POR) Republic of Korea (KOR)	Prof. Rui Quaresma	Korea Entrepreneurship Foundation
	Republic of North Macedonia	Dr. Makedonka Dimitrova /	Notea Entrepreneurship Foundation
41	(MKD)	Prof. Marjan Bojadjiev	University American College Skopje
12	Russia (RUS)	Prof. Galina Shirokova	St.Petersburg University - GSOM
43	Saudi Arabia (KSA)	Dr. Dalal Alrubaishi	Princess Nourah bint Abdulrahman University
44	Sierra Leone (SLE)	Dr. Alfred Mbeteh / William Conteh	University of Sierra Leone
45	Slovakia (SVK)	Dr. Marian Holienka	Comenius University in Bratislava
		Predrag Ljubotina /	International School for Social and Business
46	Slovenia (SLO)	Dr. Valerij Demol	Studies
47	South Africa (RSA)	Prof. Kobus Visser	University of Western Cape
48	Spain (ESP)	Prof. Antonio R. Ramos / Prof. José Ruiz-Navarro	Universidad de Cádiz
49	Switzerland (SUI)	Prof. Philipp Sieger / Prof. Rico Baldegger	Universities of Bern & St.Gallen / HEG Fribourg
50	Turkey (TUR)	Prof. Gonca Günay	Istanbul Bilgi University
51	Ukraine (UKR)	Prof. Marina Solesvik	Western Norway Univ. of Applied Sciences (NOR)
52	United Arab Emirates (UAE)	Prof. Rodrigo Basco	American University of Sharjah
	5 7		Universidad Católica del Uruguay
53 54	Uruguay (URY)	Prof. Magdalena Giuria	9 ,
54	USA	Prof. Isabel Botero	Stetson University



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