



Global University Entrepreneurial Spirit Students' Survey



Entrepreneurial Intentions and Activities of Students at Portuguese Universities - 2018



Acknowledgments

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1. Introduction

Nowadays, there is great interest in the subject of entrepreneurship, considering the impact it has on the economy, and so on everyone's life. Consequently, it is an important topic for everyone: politicians, governments, labour unions, investors, employers, academics, students and citizens.

This report, which is based on the data collected through the international project Global University Entrepreneurial Spirit Students' Survey (GUESSS), gives insights into the entrepreneurial intentions and activities among the 4178 participants in the GUESSS 2018 survey, from a total of 25 Portuguese higher education institutions (see the appendix for the list of the Portuguese participant institutions).

In 2018, the Portuguese participation in the GUESSS project was coordinated by a team of professors from the Management Department of the School of Social Sciences, University of Évora, namely Rui Quaresma (coordinator), Jorge Casas Novas and Rui Fragoso, also researchers from Centre for Advanced Studies in Management and Economics (CEFAGE-UE).

The GUESSS project was founded in 2003 at the University of St. Gallen, Switzerland, and is presently organized and managed through a cooperation between that university and the University of Bern, also in Switzerland.

Currently, is one of the largest entrepreneurship research projects in the world, and the eight editions that have already taken place (2003, 2004, 2006, 2008, 2011, 2013/2014, 2016, and 2018) generated data that have been used by various researchers involved in the data collection process for publications in top journals such as the Journal of Business Venturing or Entrepreneurship Theory & Practice.

We hope that the data presented and analysed in the following pages may be useful.

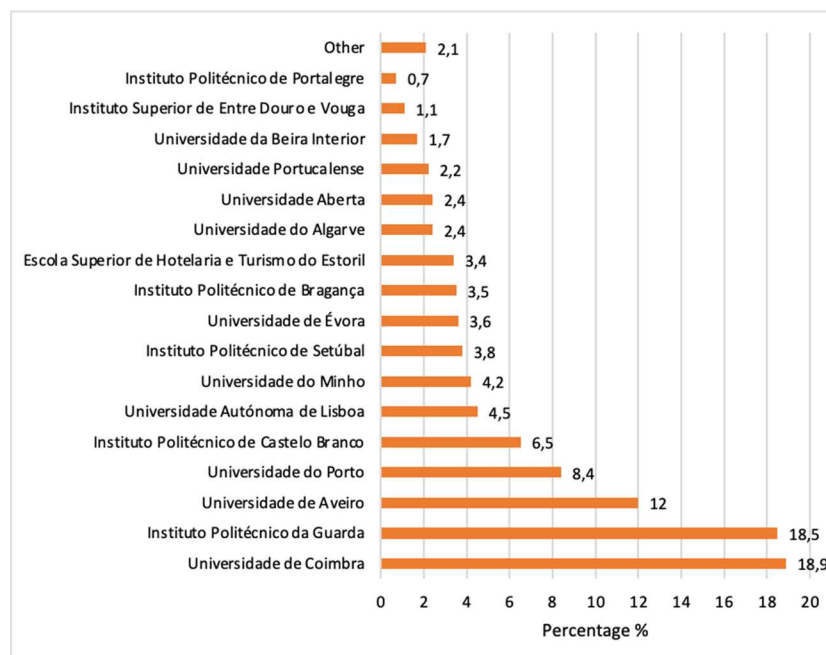
2. The sample

This section presents the data of the participants in the GUESSS 2018 survey and the characteristics of these participants in terms of age, gender, nationality, level and area of study.

Respondents

The Portuguese report is based on the responses of 4178 students from 26 higher education institutions (HEI). Figure 2.1 shows the distribution of students by the various HEI that participated in the 2018 edition of GUESSS.

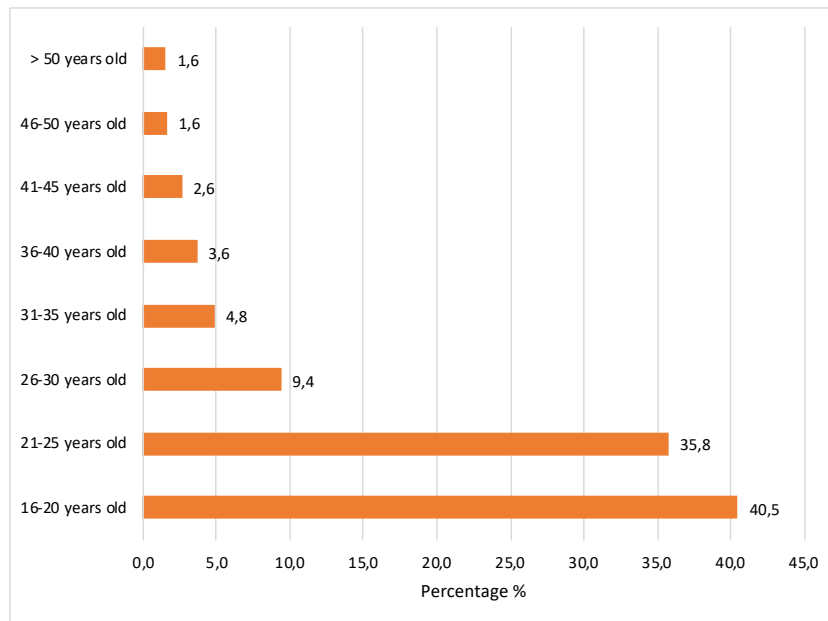
Figure 2.1 – Responses by higher education institution (%)



Age

The age profile of the students who responded to GUESSS 2018 in Portugal are presented on Figure 2.2. As can be seen from the graph data, 40.5% of respondents were in the 16-20 age group, followed by the 21-25 age group with 35.8% and then the 26-30 age group with 9.4%. These three groups represent more than 85% of survey respondents in Portugal.

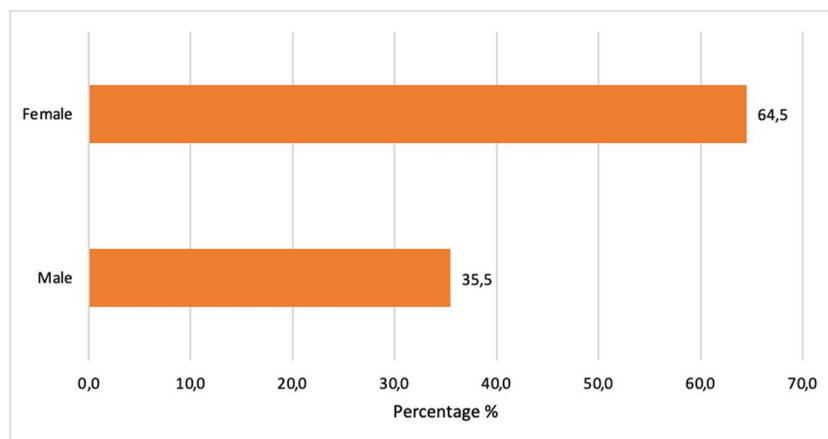
Figure 2.2 – Age of participating students (%)



Gender

As can be seen from the data presented in Figure 2.3, the majority of students who responded to the GUESSS survey in 2018 were female, 64.5%, while male participants rose to 35.5%. This distribution follows the trend of the international sample, which registered a percentage of female participants of 54.6%.

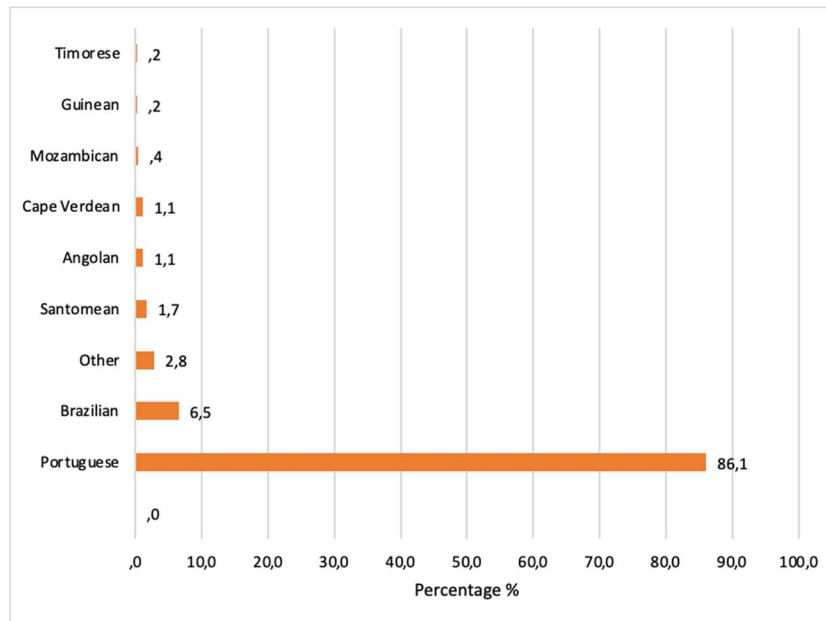
Figure 2.3 – Gender of participating students (%)



Nationality

Most of the students who answered the survey were Portuguese(86.1%), followed by Brazilians(6.5%). Also noteworthy was the participation of students from São Tomé and Príncipe (1.7%) and from Angola and Cape Verde (both with 1.1%), in addition to other Portuguese-speaking countries.

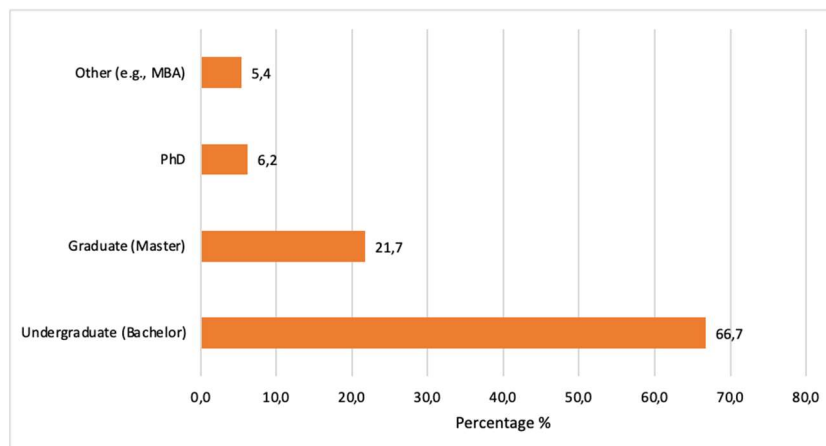
Figure 2.4 – Nationality of participating students (%)



Level of studies

Regarding the level of studies of students who participated in GUESSS 2018, two thirds (66.7%) were enrolled in a bachelor’s programme, followed by master’s students (21.7%), and then with similar values, 6.2% were PhD students and the remaining 5.4% were, for instance, MBA students. Compared to the international sample, Portugal had a higher participation of master’s students (12.9% versus 21.7%) and PhD students (2.9% versus 6.2%).

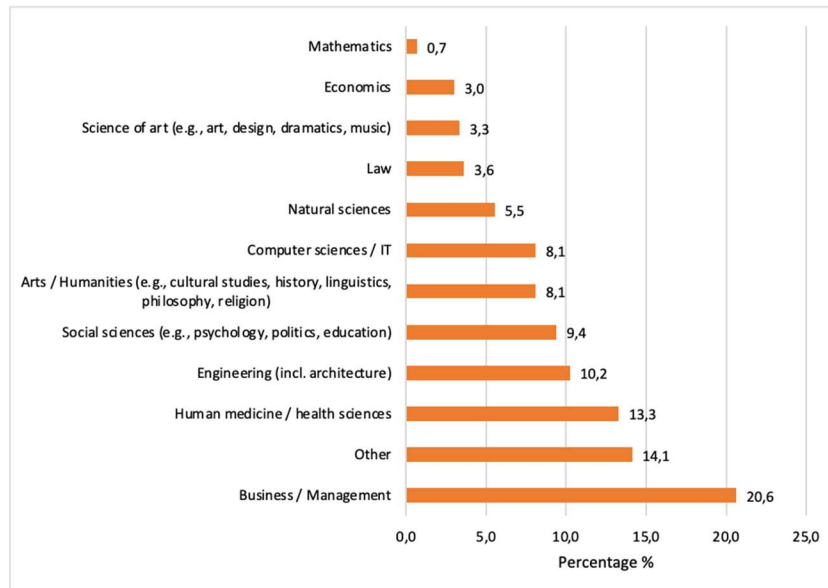
Figure 2.5 – Level of studies of participating students (%)



Fields of studies

The field of studies that stood out the most in the case of students who participated in the study in Portugal was business/management (20.6%), followed by human medicine/health sciences (13.3%) and engineering, including architecture (10.2%). In a comparison with the international sample, it can be seen that the field of studies with the largest number of participants, business/management, coincides, although with slightly different percentages: 24.7% internationally and 20.6% in Portugal.

Figure 2.6 – Fields of studies of participating students (%)



3. Students' career choice intentions

This section presents data related to the career choice intentions of participants in GUESSS 2018, analysing the situation in Portugal and internationally. Data related to those choices at the group level (employees, founders, successors), for Portugal and at the international level are also presented. Finally, data by intentional founders, nascent and active entrepreneurs are presented.

Detailed career choice intentions

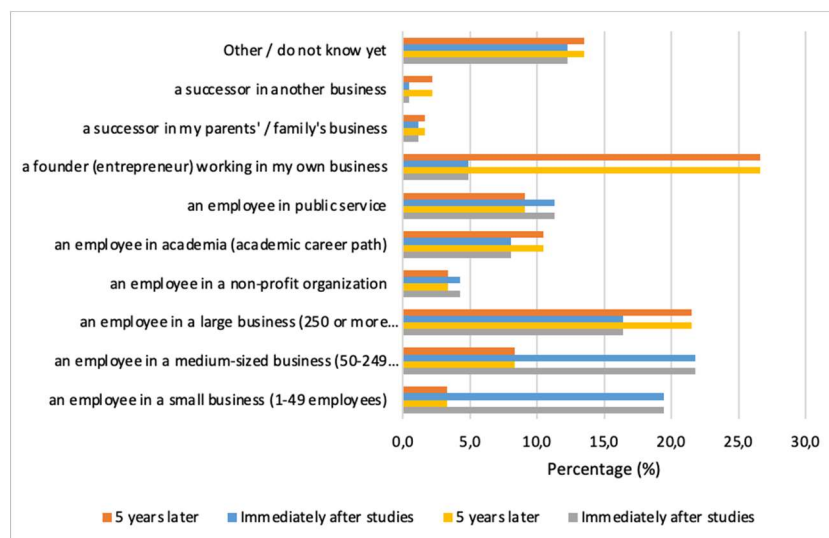
The career-related choices of the students who participated in the survey were analysed with a question that asked the participants about their intention immediately after completing their studies and five years later.

The data that can be observed in Figure 3.1 reveal a clear difference regarding the intentions of career choice on the part of participants. In the period immediately after the conclusion of studies, preference is given to being an employee in a business: 21.8% in a medium business, 19.4% in a small business, and 16.4% in a large business; and only 4.9% of the participants answered that they intended to be the founder of their own business.

When the same question is asked, but five years after the completion of the studies, 26.6% answered that they intend to be the founder of their own business and 21.5% intend to work in a large company. That is, in a period of five years, the desire to be the founder of a business more than quintuples.

These data represent a normal situation, that is: on the one hand, and given the lack of professional experience on the part of the students, it is understandable that their option is to be employed in a business, a situation that changes when some experience is acquired (five years later) and which translates into a more than fivefold increase in the desire to be the founder of their own business.

Figure 3.1 – Detailed career choice intentions in Portugal (%)

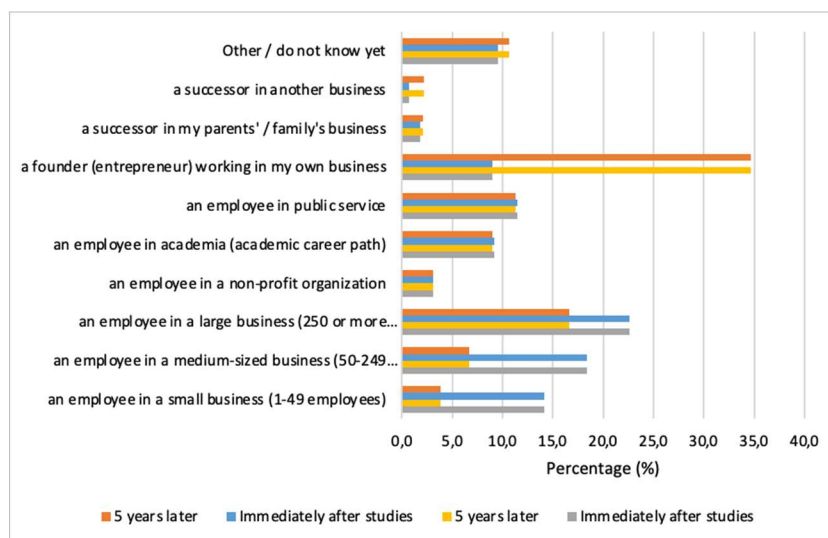


On the other hand, more than 41% of students in Portugal prefer to be employed in small and medium-sized businesses immediately after completing the course. This option is in line with the structure of

the Portuguese business structure, as according to data from Pordata,¹ in 2018 large companies accounted for 0.1% of the total number of companies in Portugal, small and medium-sized companies represented 3.8% and micro represented 96.1% of the total.

If we analyse the data from the international sample (see Figure 3.2), although the values do not coincide exactly with the Portuguese, in essence Portugal's results are in line with the international sample: immediately after the completion of the studies more than half of the students prefer to be employed in a business (22.6% in a large business, 18.4% in an average and 14.1% in a small business) and only 9% answered that they wanted to be the founders of their own business; five years later, the first option is to be the founder of their own business (34.7%), followed by being employed in a large business (16.6%).

Figure 3.2 – Detailed career choice intentions at international level (%)

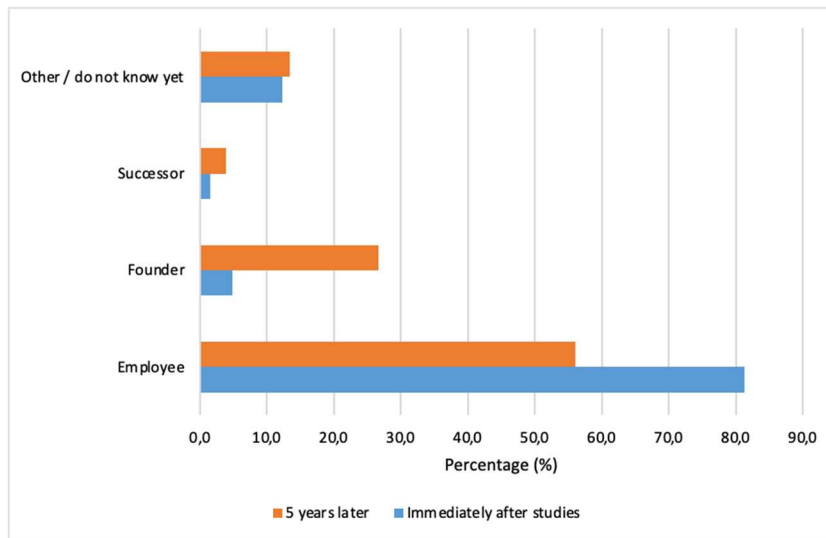


Career choice intentions in groups

Analysing the data on students' career options from a group perspective (employee, founder, successor), the previously observed trend (see Figure 3.1) is confirmed: immediately after completing their studies, the participants in the survey intend to be employees in a business (81.3%), and only 4.9% intend to start their own business (see Figure 3.3); five years later, although the majority of participants (56%) want to be employed in a business, the percentage of students who want to start their own business increases to 26.6%, an increase of more than 21 percentage points (while that of being employed in a company declines by more than 25 percentage points).

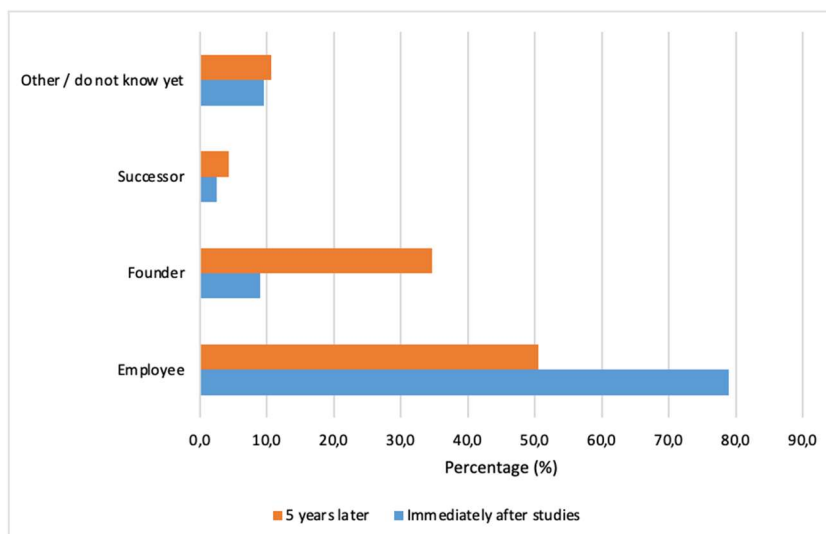
¹ See: <https://www.pordata.pt/Portugal/Empresas+total+e+por+dimensao-2857>

Figure 3.3 – Career choice intentions in groups in Portugal (%)



Also in this case, if we analyse the sample results at the international level (see Figure 3.4), we find that the intentions of the survey participants in Portugal are in line with the intentions of the students in the international sample: immediately after the conclusion of their studies, 81.3% of respondents in Portugal want to be employed in a business (Figure 3.3), while internationally this figure reaches 78.9% (Figure 3.4); 4.9% of respondents in Portugal want to be founders of their own business (Figure 3.3), while at the international level the percentage is 9% (Figure 3.4); five years after the completion of their studies, 56% of the respondents in the Portuguese sample want to be founders of their own business (Figure 3.3), while in the international sample (Figure 3.4), 34.7% of respondents have the same intention. In the latter case, both in Portugal and internationally, despite the fact that the option of being employed in a business continues to dominate, there is a great increase in the entrepreneurial option.

Figure 3.4 – Career choice intentions in groups at international level (%)

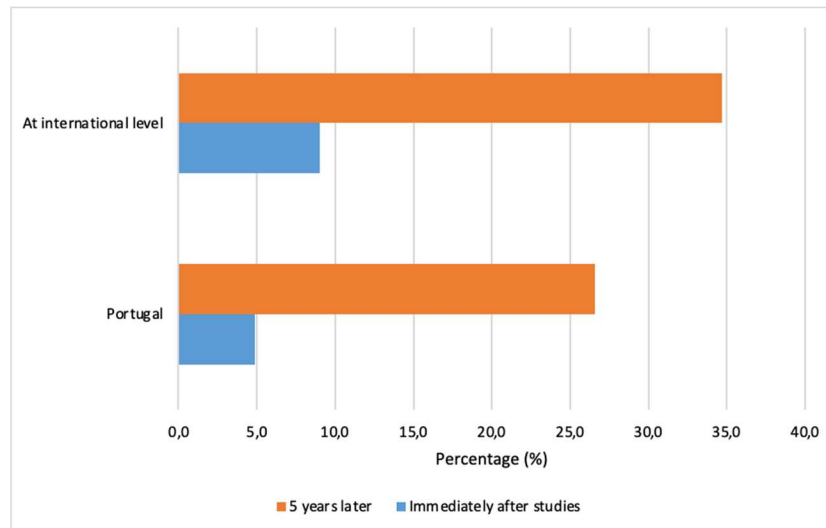


Share of intentional founders in Portugal and at international level

Analysis of the data on the intention of the survey participants to be the founders of their own business, in Portugal and internationally, also reveals a scenario with differences. There is, however, a certain alignment, as the values evolve in the same direction when comparing the moment immediately after completing studies and five years later. Looking at the data in Figure 3.5, it can be seen, on the one hand, that the entrepreneurial intention is lower in Portugal than at the international level, whatever the moment (4.9% and 26.6% in Portugal, versus 9% and 34.7%, internationally) and, on the other hand, that the growth between those two moments is also greater at the international level: an increase of 25.7 percentage points at the international level (from 9% to 34.7%), versus an increase of 21.7 percentage points in Portugal (from 4.9% to 26.6%).

Despite these differences, in Portugal there is also a pattern of "first employee, then entrepreneur".

Figure 3.5 – Share of intentional founders in Portugal and at international level (%)



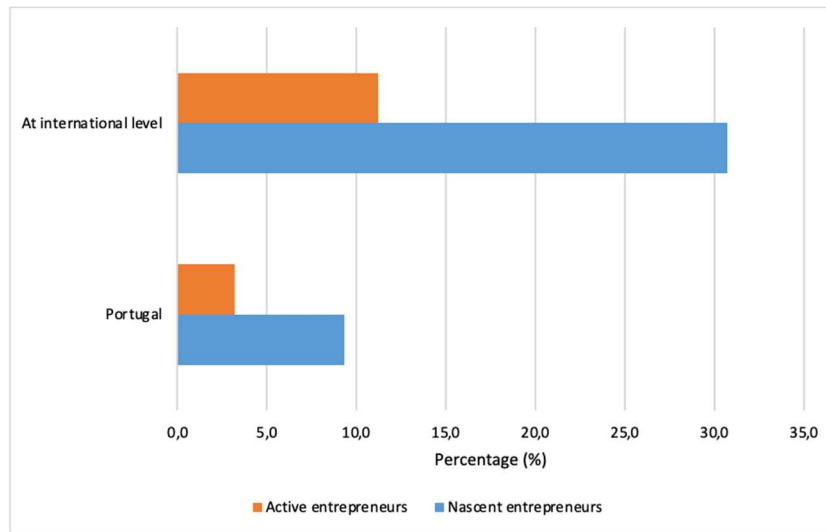
Share of nascent and active entrepreneurs in Portugal and at international level

With regard to the percentages of nascent entrepreneurs and active entrepreneurs, Portugal's profile is similar to that of other countries, although the percentages are much lower.

In Figure 3.6 it can be seen that the percentage of nascent entrepreneurs (those who are in the process of creating their own business) in Portugal is lower than the international average, 9.3% versus 30.7%; The same situation occurs with active entrepreneurs (those who already have and manage their own business), where Portugal records 3.2% while the international percentage is 11.2%.

In other words, Portugal still has a long way to go in order to increase the percentage of students who intend to be founders of their own businesses, that is, to be an entrepreneur.

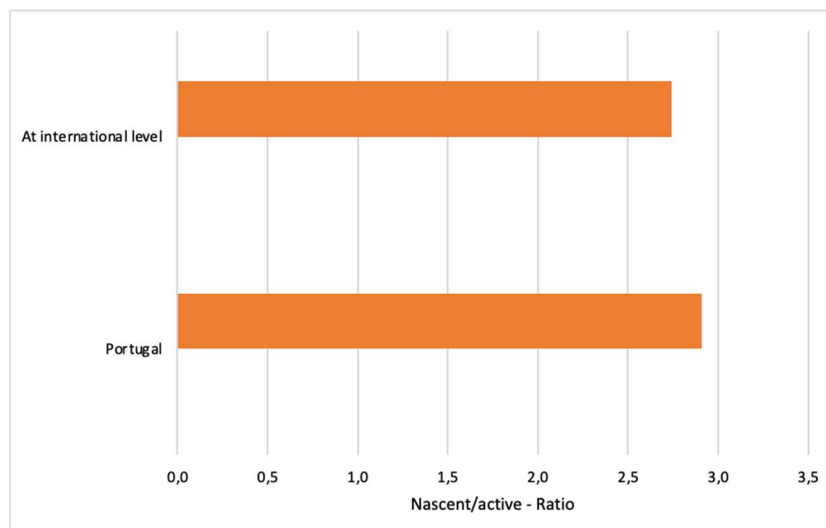
Figure 3.6 Share of nascent and active entrepreneurs in Portugal and at international level (%)



Proportion of nascent versus active entrepreneurs in Portugal and at international level

The evaluation of the future trend regarding the number of future entrepreneurs is obtained by calculating the ratio between nascent entrepreneurs versus active entrepreneurs. As can be seen from the data in Figure 3.7, Portugal has a better performance in this indicator, as there are 2.9 nascent entrepreneurs for each active entrepreneur, while internationally the ratio is 2.7 nascent entrepreneurs for each active entrepreneur. In a way, this result is not surprising, given that in the previously analysed data, Portugal was clearly positioned below international values.

Figure 3.7 Proportion of nascent versus active entrepreneurs in Portugal and at international level (%)



4. Influencing factors

Several factors can influence entrepreneurship, particularly an entrepreneurial culture and an entrepreneurial habitat or context. In the scope of this study, we have considered the university context, the field of study that students follow, the gender, the start-up experience and the family context as factors influencing entrepreneurship.

The university context

The university context is one of the influencing factors of entrepreneurial attitudes and entrepreneurial intention that has been widely studied. Some studies show that people who create a new business usually have a higher level of education than those who do not. Training and entrepreneurial education can enable students to get relevant skills to create a new venture or manage a business. In addition, specialized courses on entrepreneurship are usually associated with entrepreneurial behaviour.

This study assesses the attendance of courses on entrepreneurship among university students, as well as whether there are differences for nascent entrepreneurs and for those who intend to be entrepreneurs directly after their studies.

Thus, Figure 4.1 and Figure 4.2 show the attendance of entrepreneurship offerings among different student groups in Portugal and at the international level, respectively. In Portugal, most students (66.7%) have not attended a course on entrepreneurship so far. The percentage of interviewed students that have attended at least one course on entrepreneurship as elective or as compulsory part of their studies is 10% and 19.8%, respectively. Only 2.6% of the sample students are studying in a specific programme on entrepreneurship.

The figures are slightly different for nascent entrepreneurs and for students who intend to be entrepreneurs directly after their studies. In both cases, most students also have not attended a course on entrepreneurship so far (51.8% and 56.7%, respectively). However, between 16.3% and 20% of these students have attended at least one elective course on entrepreneurship, and more than 21% have attended at least one entrepreneurship course as a compulsory part of their studies. The specific programmes on entrepreneurship are clearly more requested by nascent entrepreneurs (7.4%) and those with direct intention (5.6%) than by the group of all students (2.6%).

The numbers of the Portuguese sample suggest that educational programmes and courses on entrepreneurship have the desired effect of developing entrepreneurial motivations, intentions and skills among students. This is clear since the share of students who attended courses on entrepreneurship is consistently higher among nascent entrepreneurs and intentional entrepreneurs.

However, the samples across countries differ considerably in several important aspects and the average values at the international level can be quite different. On average, the percentage of students who have not attended a course on entrepreneurship so far is lower at the international level than in Portugal, while the percentage of nascent and intentional entrepreneurs who have attended a course on entrepreneurship is higher. In addition, the differences between the groups of all students, nascent and intentional entrepreneurs are smaller at the international level than in Portugal.

Therefore, without excluding reverse causality, we can state that the effect of entrepreneurship education on entrepreneurial attitudes and intention is higher at the international level than in Portugal.

Figure 4.1. Attendance of entrepreneurship offering among different students groups in Portugal

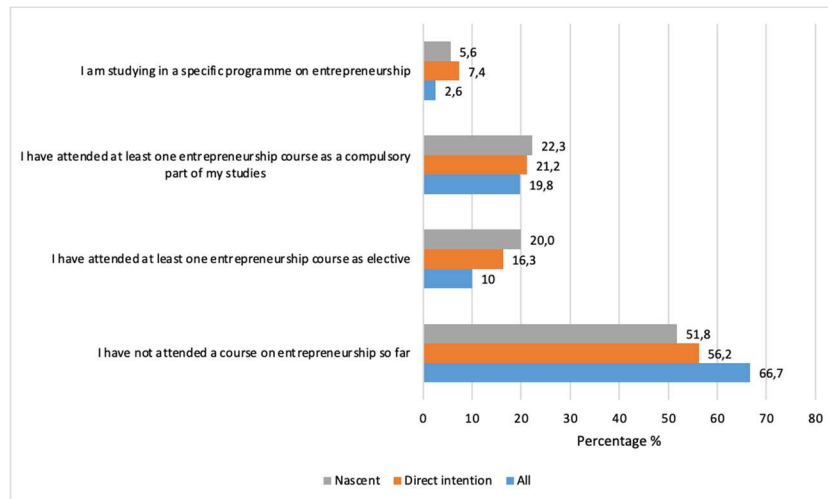
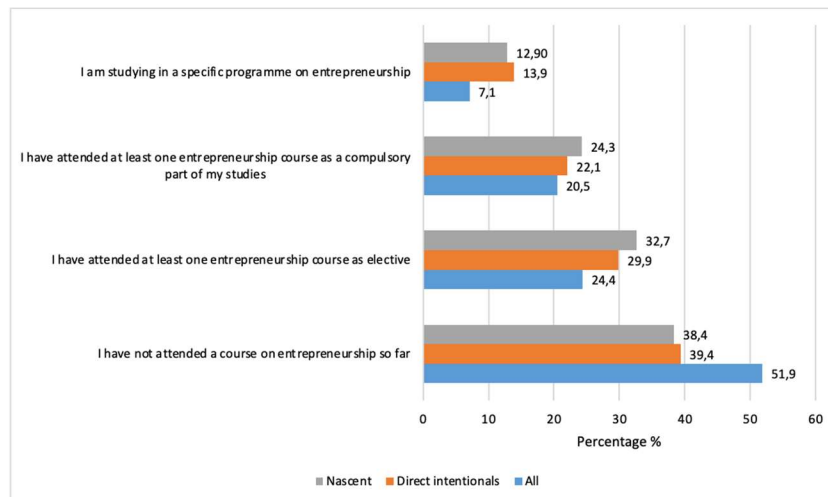


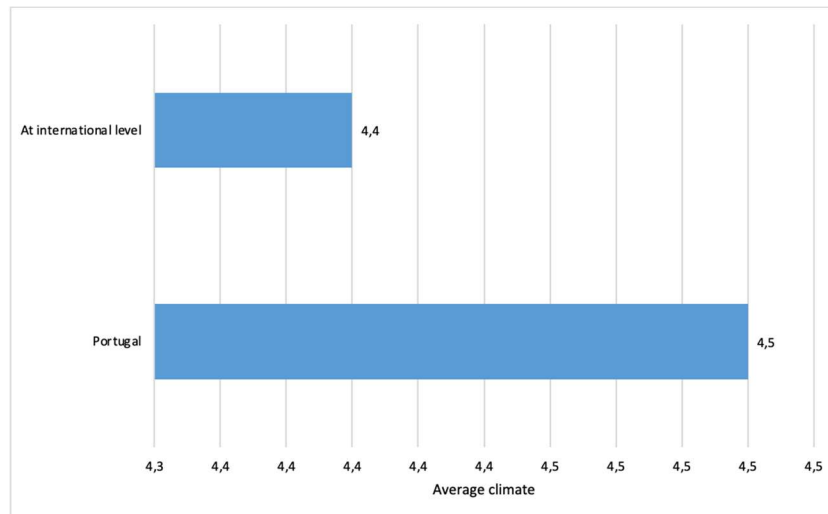
Figure 4.2. Attendance of entrepreneurship offering among different students groups at international level



The study analyses the students’ perception of the university entrepreneurial climate by trying to answer to the following question: How entrepreneurial is the university environment? An average assessment was obtained based on a Likert scale from “1 = not at all” to “7 = very much”, where students indicated their level of agreement with the following three items based on Frank and Lüthje (2004): “The atmosphere at my university inspires me to develop ideas for new business”; “There is a favourable climate for becoming an entrepreneur at my university”; and “At my university, students are encouraged to engage in entrepreneurial activities”.

Figure 4.3 shows the average results in Portugal and at the international level. In both cases the assessment of the university entrepreneurial climate is slightly above the neutral point of the Likert scale used (4.4 and 4.5). These results mean that there is still much to do at the universities to transform their environments into an entrepreneurial climate where students feel engaged in entrepreneurial activities and encounter ideas for new business.

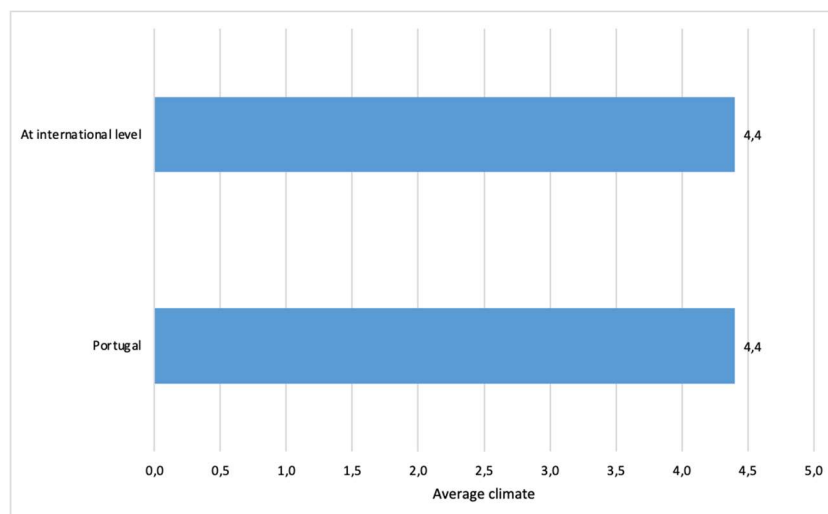
Figure 4.3. Average university entrepreneurial climate in Portugal and at the international level



The study also looks at how the university studies have given students entrepreneurial knowledge and skills. An average assessment was made using also a Likert scale from “1 = not at all” to “7 very much”, and the items based on Souitaris et al. (2007): “The courses and offerings that I attended increased my understanding of the attitudes values and motivations of entrepreneurs”; “The courses and offerings that I attended increased my understanding of the actions someone has to take to start a business”; “The courses and offerings that I attended enhanced my practical management skills to start a business”; “The courses and offerings that I attended enhanced my ability to develop networks”; and “The courses and offerings that I attended enhanced my ability to identify an opportunity”.

Figure 4.4 show the results in Portugal and at the international level. In both cases the result is 4.4, which means that the utility of university courses on entrepreneurship is perceived by students as limited. Thus, a revolution at the level of entrepreneurship teaching is called for in Portuguese universities and at the international level.

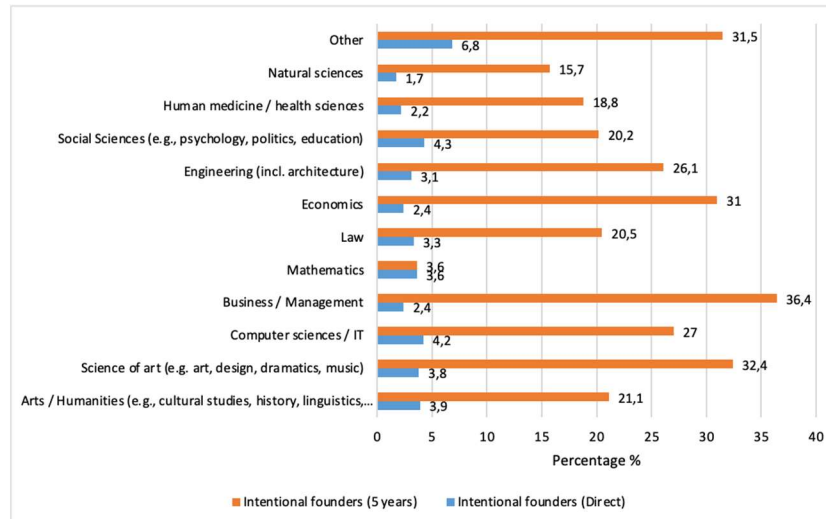
Figure 4.4. University learning in Portugal and at international level



The field of study

Usually entrepreneurial intentions are not the same for different fields of study. Figure 4.5 shows the entrepreneurial intentions depending on the field of study in Portugal, considering the intentional founders directly after their studies and five years later.

Figure 4.5. Entrepreneurial intentions depending on field of study in Portugal



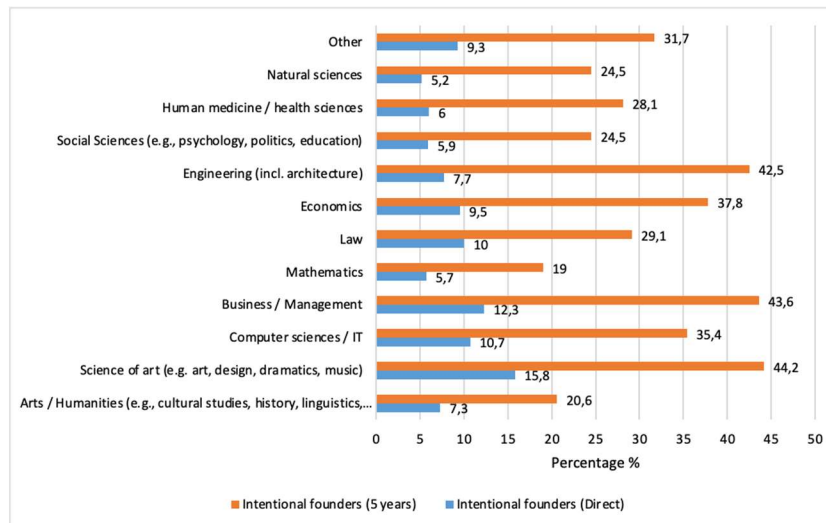
Business/management, science of art and economics are the fields of study with the strongest entrepreneurial intentions among intentional founders five years after their studies, with all above 30%. In the group of intentional founders directly after studies, the situation is slightly different. In this case, the strongest entrepreneurial intentions occur in the fields of social sciences (4.3%), computer sciences (4.2%), arts/humanities (3.9%), science of art (3.8%), mathematics (3.6%), law (3.3%) and engineering (3.1%).

In Portugal, the strongest shares of entrepreneurial intentions among intentional founders five years after their studies may be related to the influence that entrepreneurship courses have on business/management programmes. In the field of science of art the high shares of entrepreneurial intention can be associated with a study environment of creativity and courses of innovation that are offered in these programmes, as well as the low perspectives of employment in this field of study in the country.

In the case of intentional founders directly after studies, the highest shares of entrepreneurial intentions in arts/humanities or science of art are probably also associated with the lack of employment perspectives in these fields of study. In other fields such as computer sciences/IT, law or engineering, the possibility of working as an independent freelancer after acquiring experience can be a good motivation to become an entrepreneur in the future.

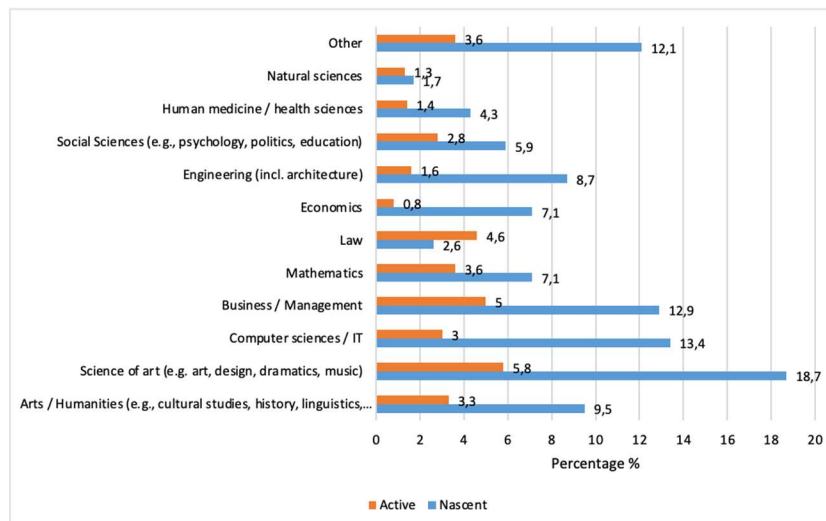
As we can see in Figure 4.6, the profile of entrepreneurial intentions across different fields of study is not very different in Portugal and on average at the international level, where science of art, business/management, engineering and computer sciences/IT are also the fields of study with the highest shares.

Figure 4.6. Entrepreneurial intentions depending on field of study at international level



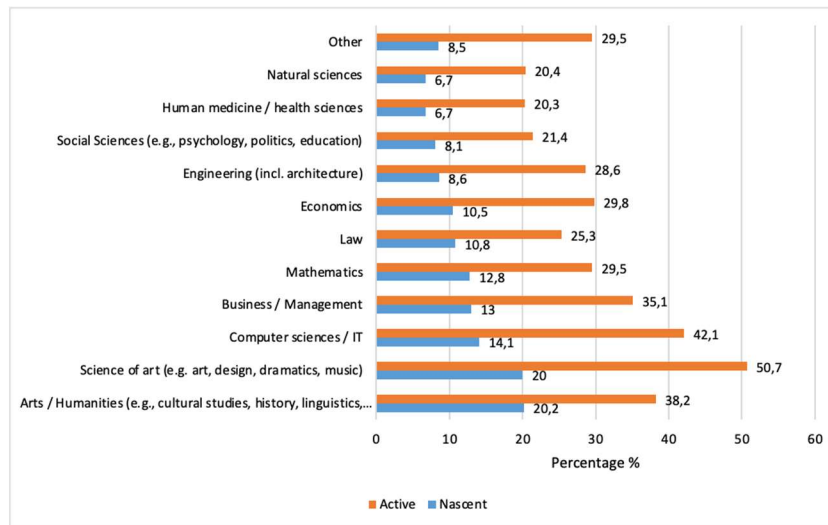
Another interesting analysis is to see how nascent and active entrepreneurs are distributed across the fields of study (Figure 4.7). In Portugal, science of art, computer sciences/IT and business/management are the fields of study which have the highest percentage of nascent entrepreneurs: 18.7%, 13.4% and 12.9% and 12.1%, respectively. In the case of active entrepreneurs, the highest-scoring fields of study are science of art (5.8%), business/management (5%) and law (4.6%). Notice that in the law field of study, the share of active entrepreneurs is higher than the share of nascent entrepreneurs.

Figure 4.7. Nascent and active entrepreneurs depending on field of study in Portugal



On average at the international level, the situation is similar to Portugal, with the major difference being the fact that the percentage of entrepreneurs (nascent and active) is higher. The most representative fields of study among nascent entrepreneurs are science of art (50.7%) and computer sciences/IT (42.1%). In the case of nascent entrepreneurs, the fields of study of arts/humanities and science of art show the highest shares (20%).

Figure 4.8. Nascent and active entrepreneurs depending on field of study at international level



Gender

Several studies argue that men usually show stronger entrepreneurial intention than women (Zhao, Seibert & Hills 2005). Some differences between genders seem to be important and influence entrepreneurial intention, such as cognitive perspectives (Brush, 1992), psychological traits (Sexton & Bowman-Upton, 1990) and attitude toward entrepreneurship (Haus, Steinmtz, Isodor & Kabst, 2013).

In this study, gender differences among intentional, nascent and active entrepreneurs are assessed. Figure 4.9 shows that the shares of intentional founders and entrepreneurs in Portugal are consistently higher for men than for women. For instance, the share of active entrepreneurs, nascent entrepreneurs and intentional founders directly after studies for men is twice that of women. These numbers confirm the statements presented in several researches referred to above.

The situation in Portugal is not very different from the international average, as we can see in Figure 4.10, where the numbers for men are consistently higher than the numbers for women.

Figure 4.9. Gender differences among intentional, nascent and active entrepreneurs in Portugal

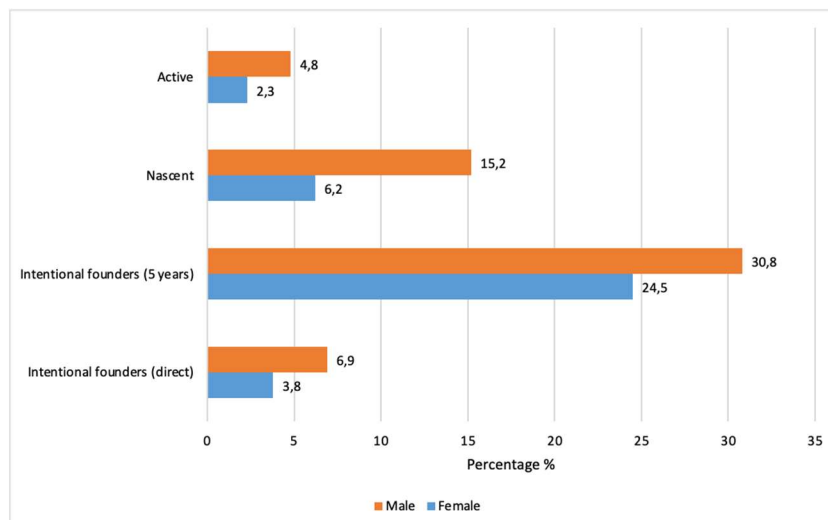
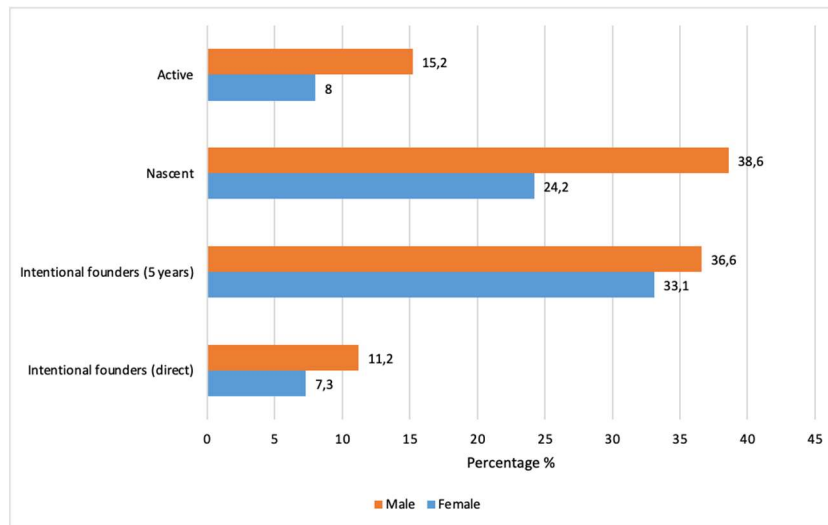


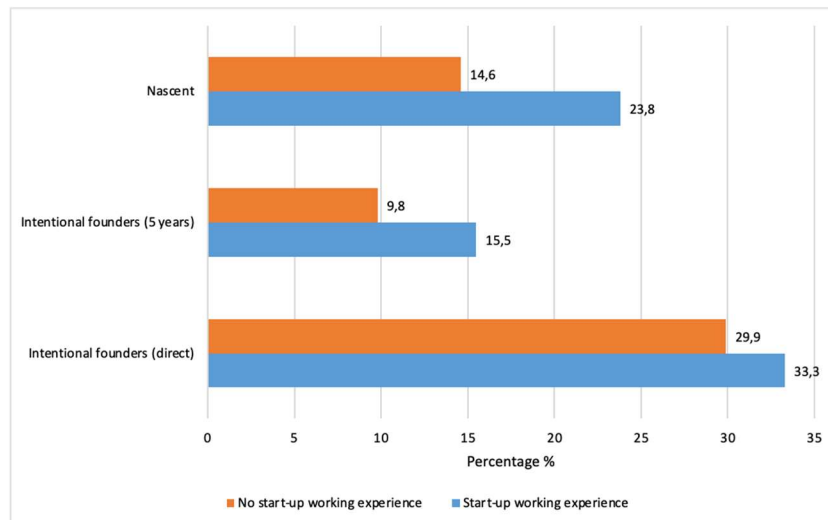
Figure 4.10. Gender differences among intentional, nascent and active entrepreneurs at international level



Start-up work experience

Start-up working experience seems to be an influencing factor for entrepreneurship. According to the results for Portugal presented in Figure 4.11, the shares of intentional and nascent entrepreneurs are highest for those who had had a start-up working experience before creating their own business.

Figure 4.11. Shares of intentional and nascent entrepreneurs depending on start-up working experience in Portugal

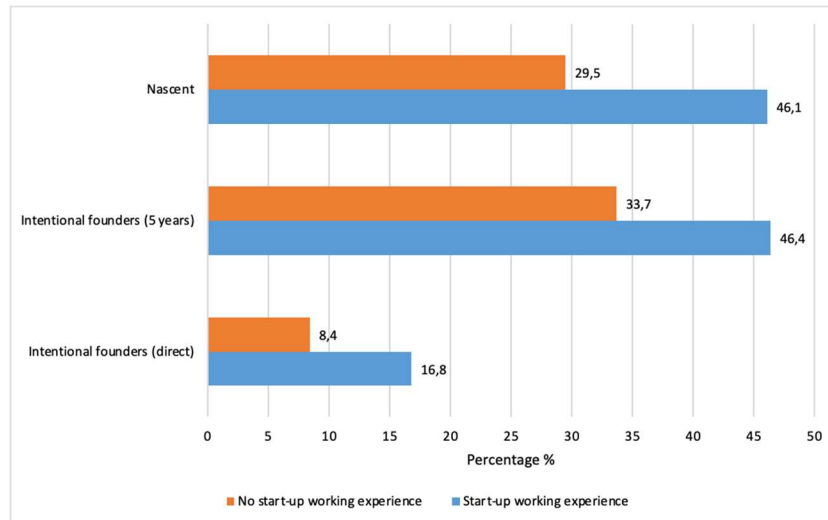


One third of intentional founders directly after studies had previously worked in a start-up context. These percentages are 15.5% and 23.8% for the intentional founders five years after studies and for nascent entrepreneurs, respectively. Notice that people who worked in a start-up before have gained experience, which could be very useful when they are creating a new business, and many business opportunities arise in an employment context.

On average at the international level, there is also a trend for students that worked in a start-up context to have higher shares of nascent and intentional entrepreneurs, as is shown in Figure 4.12. Notice that

the percentage of intentional and nascent entrepreneurs who worked in a start-up before creating their own business is higher than in Portugal. For the nascent entrepreneurs and for intentional founders 5 years after studies it is almost 50% (46.1% and 46.4%, respectively). Only the share of intentional founders directly after studies is lower on average at the international level than in Portugal.

Figure 4.12. Shares of intentional and nascent entrepreneurs depending on start-up working experience at international level



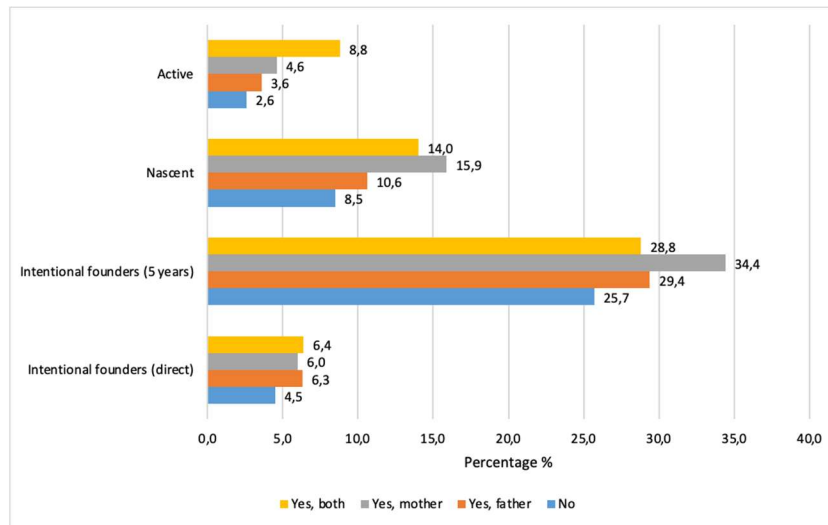
Family context

Cultural heritage and direct experience are both important to form entrepreneurial beliefs (Fragoso et al., 2020; Karayiannis, 1993). Therefore, the family context is really a factor which influences entrepreneurial intention. To assess this influence among the university students, they were asked whether one or both parents are entrepreneurs.

In Figure 4.13 the share of different founders depending on parents’ entrepreneurship in Portugal is presented. For all types of founders, parents’ entrepreneurship seems to be relevant to become entrepreneur. In the cases of active entrepreneurs and intentional founders, it is more important that both parents are entrepreneurs. In the latter, the highest share of founders is also reached if the father is an entrepreneur.

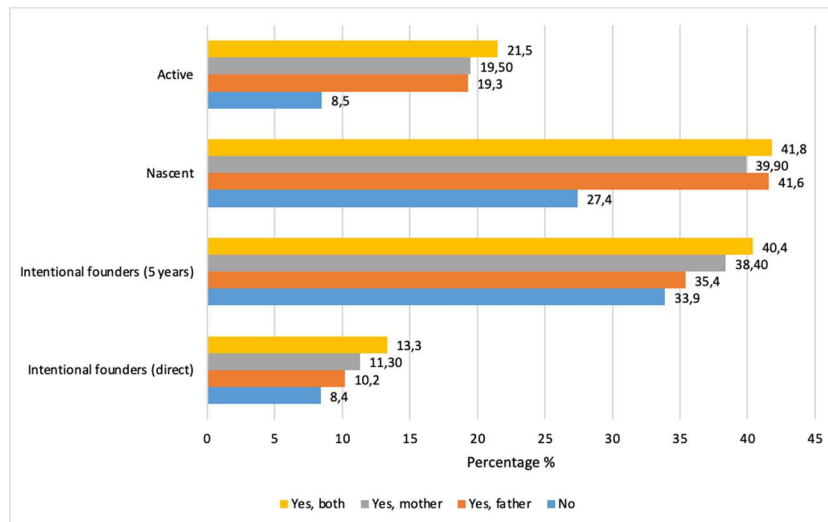
It is also interesting to see that for nascent entrepreneurs and for intentional founders five years after studies, the mother being an entrepreneur is the most important (15.9% and 34.4%, respectively).

Figure 4.13. Share of different types of founders depending on parents' entrepreneurship in Portugal



On average at the international level, the situation is not exactly the same. For all types of founders, the strongest entrepreneurial influence occurs when both parents are entrepreneurs. However, it is interesting to find that for active entrepreneurs, intentional founders five years after their studies and intentional founders directly after their studies, having a mother who is an entrepreneur is the second most important influence (Figure 4.14).

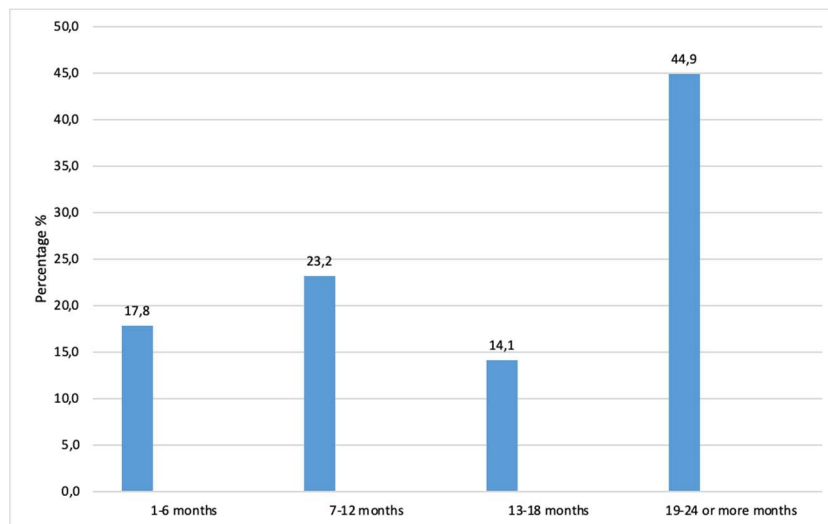
Figure 4.14. Share of different types of founders depending on parents' entrepreneurship at international level



5. Nascent entrepreneurs

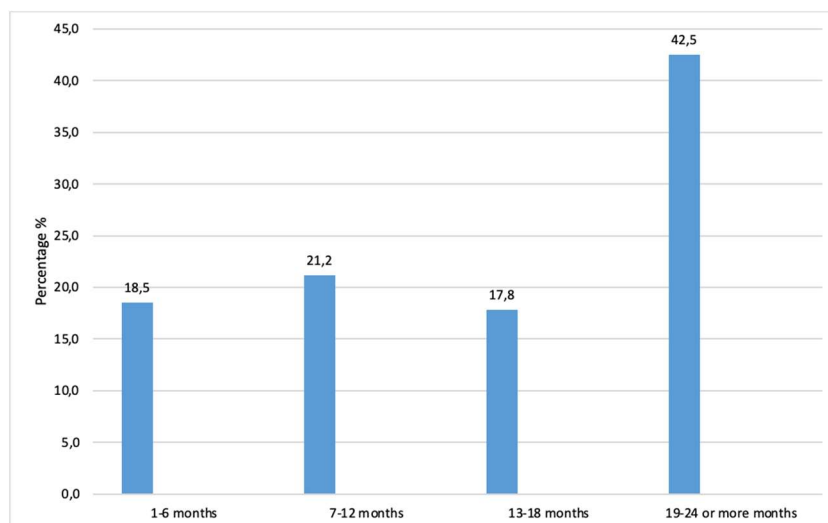
A nascent entrepreneur is an individual trying to start an independent business (Delmar & Davidsson, 2000). In Portugal, the time horizon of nascent entrepreneurs is, in most cases, over than 18 months (44.9%). However, according to the data presented in Figure 5.1, 17.8% become nascent entrepreneurs in less than six months and 41% in less than twelve months.

Figure 5.1. Time horizon of nascent entrepreneurs in Portugal



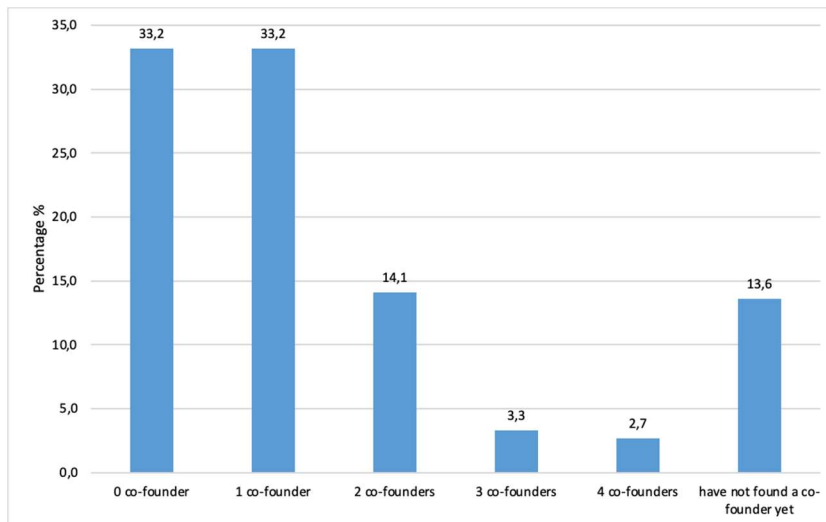
When comparing the results for Portugal with the results at the international level, it can be seen that the profile of the time horizon to become a nascent entrepreneur is very similar. However, the time horizon for becoming a nascent entrepreneur internationally is slightly lower than in Portugal (Figure 5.2).

Figure 5.2. Time horizon of nascent entrepreneurs at international level



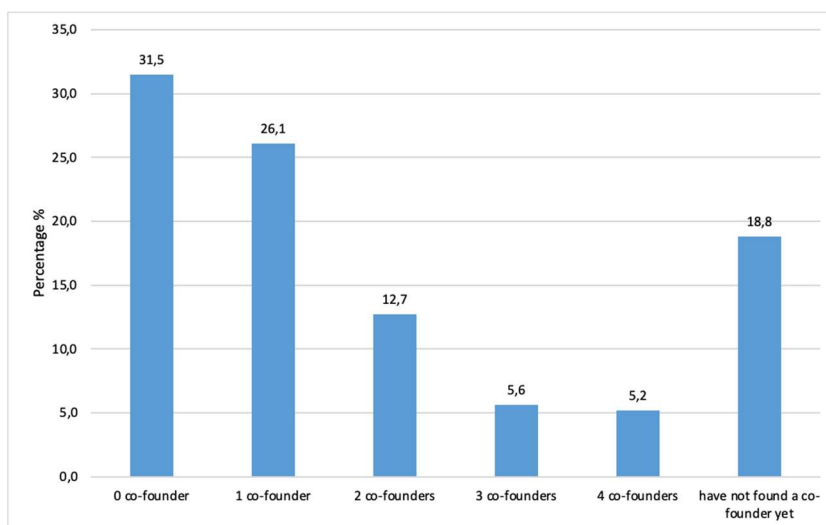
According to the data in Figure 5.3, most nascent entrepreneurs in Portugal (53.3%) have picked a co-founder for their business. This circumstance somehow corroborates the idea that most entrepreneurs start their business with co-founders (Cooper & Daily, 1997). About a third (33.2%) of nascent entrepreneurs in Portugal start their business without co-founders, while 13.6% revealed that they have not yet found a co-founder.

Figure 5.3. Number of co-founders of nascent entrepreneurs in Portugal



The scenario in Portugal is not significantly different from the international standard, although the percentage of businesses with three and four co-founders is significantly higher internationally, as shown in Figure 5.4.

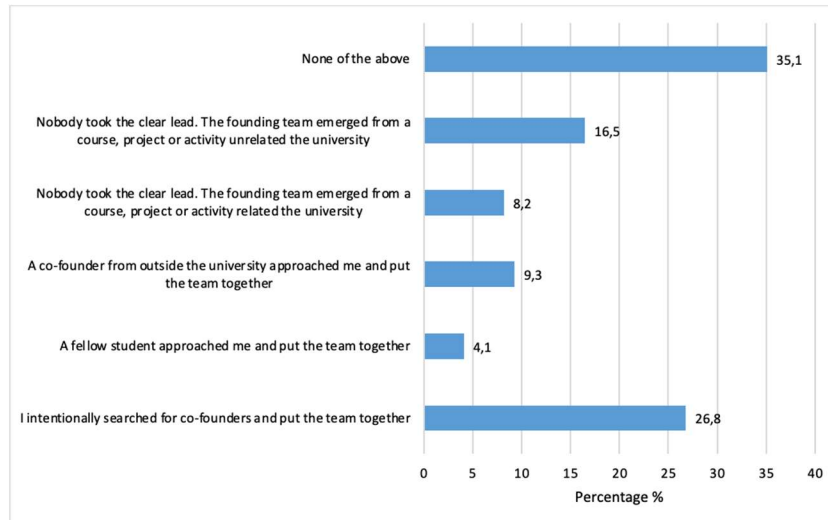
Figure 5.4. Number of co-founders of nascent entrepreneurs at international level



The formation of entrepreneurial teams in Portugal is mainly driven by deliberate actions by the entrepreneur in search of co-founders (26.8%). However, about 25% of entrepreneurial teams

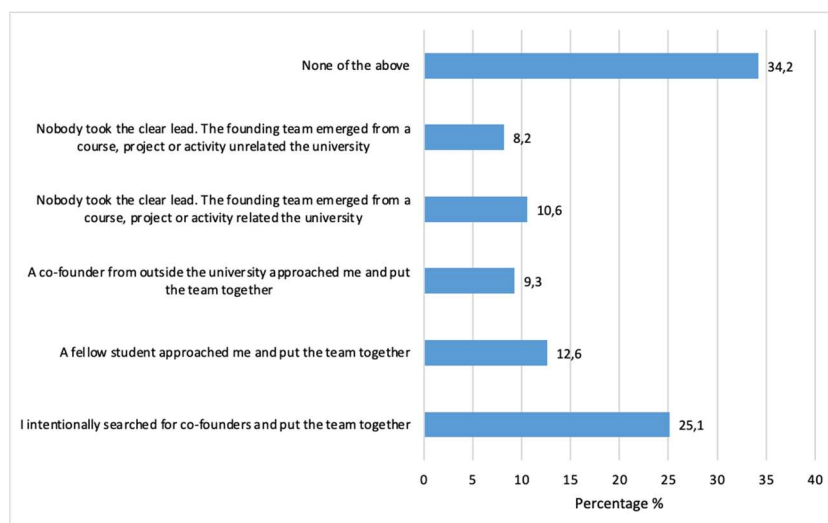
emerged from a course, project or activity related or not to the university. In these cases, no one took a clear lead. Entrepreneurial teams are also formed through the approach of a co-founder external to the university (9.3%) or a fellow student (4.1%). Finally, about 35% of the entrepreneurial teams are formed in a way other than those mentioned above (Figure 5.5).

Figure 5.5. Formation of entrepreneurial teams in Portugal



Internationally, the formation of teams of entrepreneurs is also driven primarily by deliberate actions on the part of the entrepreneur in searching for co-founders (25.1%). Unlike Portugal, the fellow student approach is the second most relevant element for the formation of entrepreneurial teams internationally (12.6%). Considering that 10.6% of entrepreneurial teams also emerge from courses, projects or activities related to the university, we can conclude that the university context is a pivotal element in the formation of entrepreneurial teams at the international level. Finally, just over 34% of entrepreneurial teams are formed in a way other than those mentioned above (Figure 5.6).

Figure 5.6. Formation of entrepreneurial teams at international level



6. Active entrepreneurs

Figures 6.1 and 6.2 below detail the founding year of active entrepreneurs' firms in Portugal and at the international level, respectively. A relevant percentage of active entrepreneurs' firms, both in Portugal and internationally, were founded in the last five years (59.4%² and 79.8% in Portugal and internationally, respectively). Although the information in both figures is not strictly comparable, it can be seen that the percentage of active entrepreneurs' firms reduces as we go back in time, as expected.

Figure 6.1. Founding year of active entrepreneurs' firms in Portugal

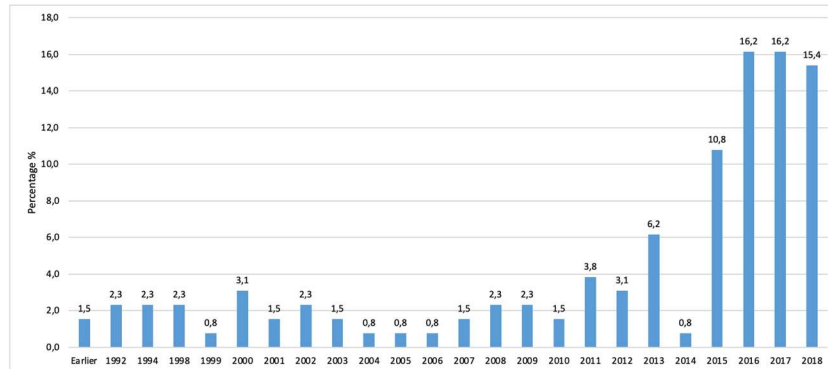
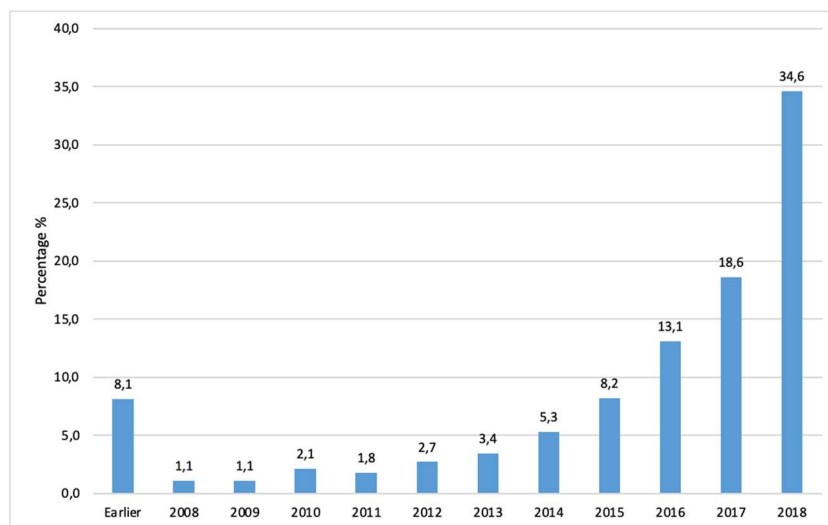


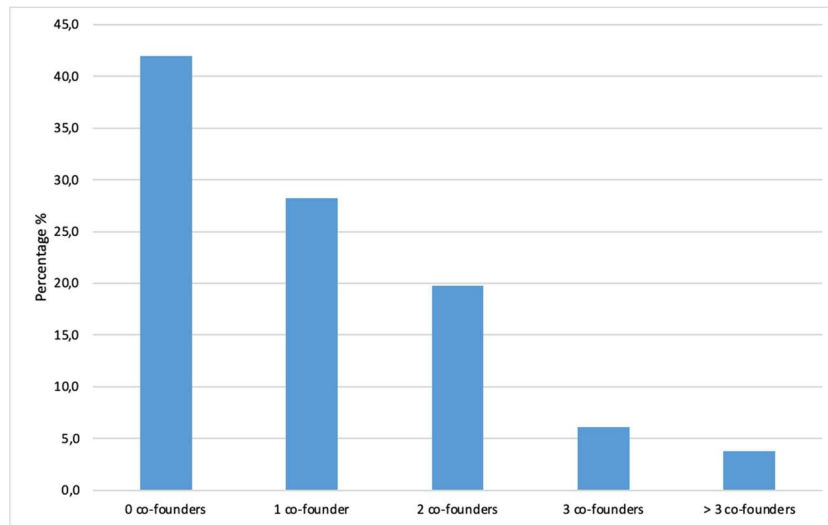
Figure 6.2. Founding year of active entrepreneurs' firms at international level



A significant number of active entrepreneurs in Portugal (42.0%) reveal that they keep their businesses without co-founders, which corroborates the previous conclusions regarding the number of co-founders of nascent entrepreneurs in Portugal (Cf. Section 5.). Although it is evident that the majority of active entrepreneurs in Portugal have at least one co-founder (58.0%), it is also clear that the lack of co-founders in many businesses is something that typifies entrepreneurship in Portugal.

² In Portugal, the percentage of active entrepreneurs' firms founded five years ago (2014) is only 0.8%, an extremely low percentage for which we have not yet found a reason.

Figure 6.3. Number of co-founders of active entrepreneurs in Portugal



When comparing figures 6.3 and 6.4, it is clear that the profile of active entrepreneurs, with regard to the number of business co-founders, is very similar in Portugal and internationally. In both cases, the majority of active entrepreneurs keep their businesses without co-founders and the percentage of active entrepreneurs decreases as the number of co-founders increases. However, it is also clear that there is a greater international propensity for active entrepreneurs to keep their businesses with a greater number of co-founders.

Figure 6.4. Number of co-founders of active entrepreneurs at international level

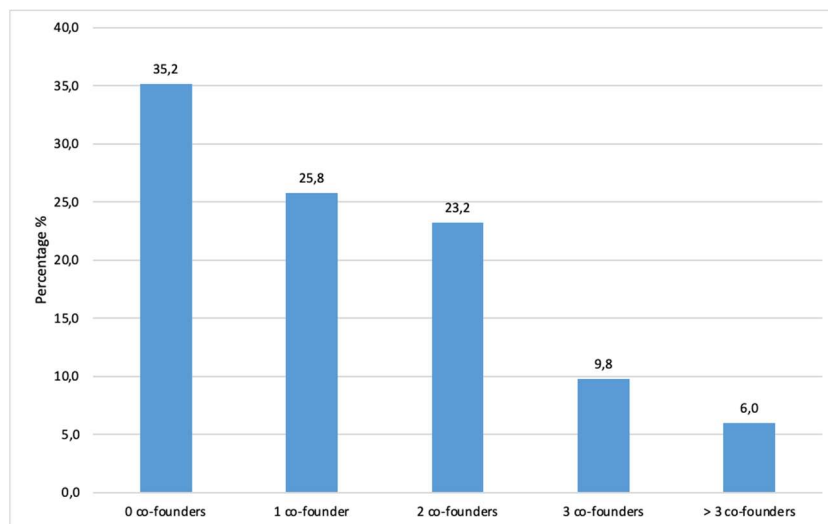
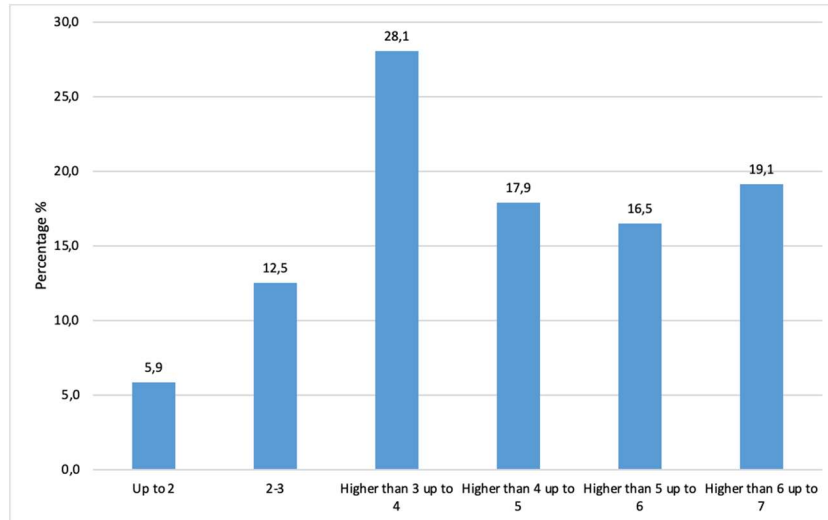


Figure 6.5 below summarizes the information regarding the performance ratings of active entrepreneurs in Portugal, in which they rate their performance by comparison with their competitors' performance. The performance measure comprises sales growth, market share growth, profit growth, job creation and innovation. Each of these items was assessed on a seven-point Likert scale (1 = much worse; 7 = much better). Based on this assessment, the global average values for each active entrepreneur in Portugal were computed. According to the information in Figure 6.5, 28.1% of active

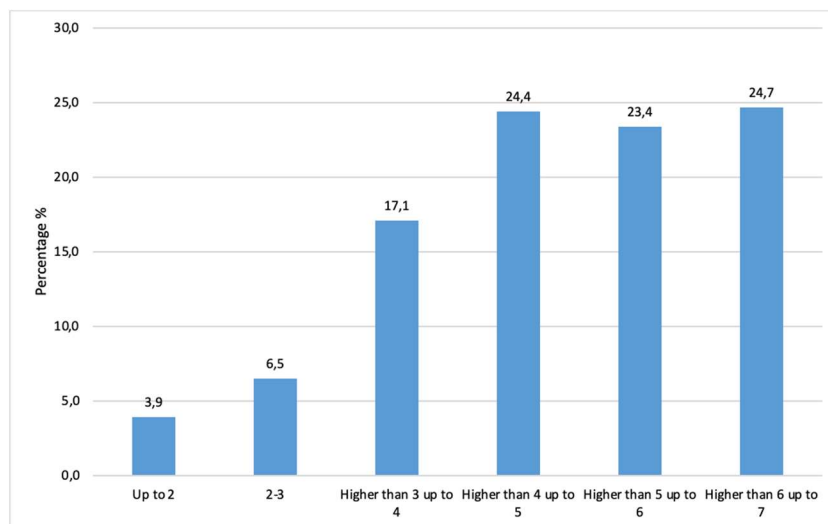
entrepreneurs in Portugal rate their performance as equal to that of their competitors, while more than half of active entrepreneurs rate their performance as better or even much better than their competitors.

Figure 6.5. Performance ratings of active entrepreneurs in Portugal



The profile of performance ratings at the international level is different from that of Portugal and the global assessment is more positive: 72.5% of active entrepreneurs rate their performance better or even much better than their competitors, while only 17.1% rate their performance equal to that of their competitors. Therefore, the percentage of active entrepreneurs who rate their performance worse than their competitors is low and lower than in Portugal (Figure 6.6).

Figure 6.6. Performance ratings of active entrepreneurs at international level



7. Final remarks

The 2018 edition of the Global University Entrepreneurial Spirit Students' Survey (GUESSS) project collected data from 54 countries, involving 3191 higher education institutions (HEI), with 208,636 completed responses.

For the second time in the history of GUESSS, Portugal has been part of the project, in an effort coordinated by the team from CEFAGE - University of Evora: Rui Quaresma, Rui Fragoso, and Jorge Casas Novas.

The Portuguese report is based on a total of 4178 completed questionnaires, representing students from 25 public and private HEI.

The main results are summarized as follows:

- In terms of age, the 16-20 age group were the most represented with 40.5%, followed by the 21-25 age group with 35.8%. Almost two thirds of participants, 64.5%, were female, and the most represented nationality of participants were the Portuguese, with 86.1%, followed by the Brazilians, with 6.5%.
- 66.7% of the participants were enrolled in a bachelor's programme and 21.7% were enrolled in a master's programme. The field of studies of 20.6% of participants was business/management, the most represented, and 13.3% were from human medicine/health sciences.
- In Portugal, and at the international level, the pattern is "first employee, then entrepreneur".
- After the conclusion of the studies, the majority of the participants in the survey, 57.6%, wants to be an employee in a business (21.8% in a medium business, 19.4% in a small business, and 16.4% in a large business); only 4.9% of the respondents intend to be the founder of their own business. Five years later, there is a change in terms of career choice intentions: only 33.1% want to be an employee in business (21.5% in a large business, 8.3% in a medium business, and 3.3% in a small business), and 26.6% want to be the founder of their own business, representing an increase of 21.7 percentage points. On general, the results from Portugal are in line with the results at the international level, although with different values.
- From a group perspective (employee, founder, successor), the trend in terms of career choice is the same, although with different values: immediately after the conclusion of the studies, the choice is to be employee in a business; five years later, and though the majority still want to be employee in a business, there is a significant increase in the percentage of participants who want to create their own business. This behaviour in Portugal is similar to the behaviour of participants at the international level.
- The percentage of nascent entrepreneurs (those who are in the process of creation) and the percentage of active entrepreneurs (those who already have and manage their own business) are lower in Portugal, compared to the international level: 9.3% versus 30.7% for nascent, and 3.2% versus 11.2% for active entrepreneurs. This situation results in a better indicator concerning the proportion of nascent versus active entrepreneurs in Portugal, 2.9 nascent entrepreneurs for each active entrepreneur, compared to 2.7 at the international level.
- The majority of participants in the GUESSS survey did not attend courses on entrepreneurship: 66.7% in Portugal and 51.9% at the international level had not attended a course on entrepreneurship until the moment they answered the survey. In Portugal less than half the number of respondents (10.0%) of those at the international level (24.4%) have attended at least one entrepreneurship course as elective. This can be interpreted as a sign of indifference by Portuguese participants regarding entrepreneurship. In addition, the percentage of students that are studying in a specific programme on entrepreneurship is lower in Portugal (2.6%) than at the

international level (7.1%). This difference between Portugal and the other countries reinforce the observation of indifference by Portuguese participants.

- In Portugal, and at the international level, the participants in the GUESSS survey made a slightly positive assessment of the university entrepreneurial climate. The utility of university courses on entrepreneurship is also perceived by the participants in the GUESSS survey as limited.
- The fields of studies with the strongest entrepreneurial intentions among intentional founders five years after studies are business/management, science of art, and economics (all above 30%); immediately after studies the strongest intentions occur in social sciences (4.3%) and computer sciences (4.2%). At the international level, entrepreneurial intentions across different fields of study are not very different.
- In Portugal, the highest percentage of nascent entrepreneurs are from science of art (18.7), computer sciences/IT (13.4%), and business/management (12.9%); the active entrepreneurs are mainly from science of art (5.8%), business/management (5.0%), and law (4.6%). At the international level, the situation is similar, although with higher percentages.
- In Portugal, and at the international level, there are more male entrepreneurs than female entrepreneurs, both nascent and active, and directly after studies or five years later. In Portugal, the biggest difference is in nascent entrepreneurs, where 15.2% are male, and 6.2% are female; at the international level it is the same: 38.6% male versus 24.2% female.
- Start-up working experience is an important factor for all Portuguese participants, especially for those who want to create their own business immediately after their studies: 33.3% have some work experience versus 29.9% that have no working experience. At the international level, it is the participants that want to create a business five years after studies that stress the experience factor most: 46.4% have working experience versus 33.7% that do not have working experience.
- In Portugal, for all types of entrepreneurs (active, nascent, intentional founders immediately after studies, and intentional founders five years after studies) parents' entrepreneurship seems to be relevant. Although the situation is not the same at the international level, in terms of values and the importance given to father or mother, parents' entrepreneurship is also relevant.
- In most cases (44.9%), the time horizon of nascent entrepreneurs in Portugal is over 18 months; however, 41% become entrepreneurs in less than 12 months, and 17.8% in less than 6 months. At the international level the situation is very similar.
- The majority of nascent entrepreneurs that participated in the survey, 53.3%, answered that they picked a co-founder for their business (33.2% one co-founder; 14.2% two co-founders, 33% three co-founders, and 2.7% four co-founders). A similar scenario happens at the international level, although businesses with three and four co-founders have higher percentages, 5.6% and 5.2%, respectively.
- The formation of the entrepreneurial teams is driven primarily by deliberate actions in Portugal (26.8%) and at the international level (25.1%). However, about 25% of the Portuguese entrepreneurial teams emerged from a project or activity in which nobody took the clear initiative (8.2% related to the university, and 16.5% not related to the university). At the international level, 10.6% of the entrepreneurial teams emerged from a project or activity related to the university, and 8.2% in a project or activity not related to the university. In both cases, the university context is a pivotal element in the formation of entrepreneurial teams.
- The majority of active entrepreneurs' firms in Portugal, and more at the international level, have been founded in the last five years, 59.4% and 79.8, respectively.
- The majority of active entrepreneurs keep their business with co-founders, both in Portugal, with 58%, and at the international level, with 64.8%. However, in Portugal the percentage of active entrepreneurs that keep the business without a co-founder is significant, at 42%.

- More than half (53.5%) of active entrepreneurs in Portugal rate their performance better or even much better than their competitors, and 28.1% rate their performance equal to that of their competitors. At the international level, the assessment is more positive, with 72.5% of active entrepreneurs rating their performance better or even much better than their competitors, and only 17.1% rate the performance equal to that of their competitors.

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9. Appendix

Portuguese participant institutions

Escola Superior de Hotelaria e Turismo do Estoril

Instituto Politécnico da Guarda

Instituto Politécnico de Beja

Instituto Politécnico de Bragança

Instituto Politécnico de Castelo Branco

Instituto Politécnico de Portalegre

Instituto Politécnico de Santarém

Instituto Politécnico de Setúbal

Instituto Politécnico de Tomar

Instituto Politécnico do Porto

Instituto Superior de Entre Douro e Vouga

Instituto Superior Politécnico Gaya

ISCTE - Instituto Universitário de Lisboa

Universidade de Trás-os-Montes e Alto Douro

Universidade Aberta

Universidade Autónoma de Lisboa

Universidade da Beira Interior

Universidade de Aveiro

Universidade de Coimbra

Universidade de Évora

Universidade do Algarve

Universidade do Minho

Universidade do Porto

Universidade Nova de Lisboa

Universidade Portucalense