

STUDENT ENTREPRENEURSHIP IN MOROCCO: GUESSSS report 2016

From the interaction of the Tempus DEVEN3C project (Développement des Compétences Entrepreneuriales à l'Université Marocaine : Créativité, Connaissance et Culture) and the GUESSSS research network (Global University Entrepreneurial Spirit Students' Survey).



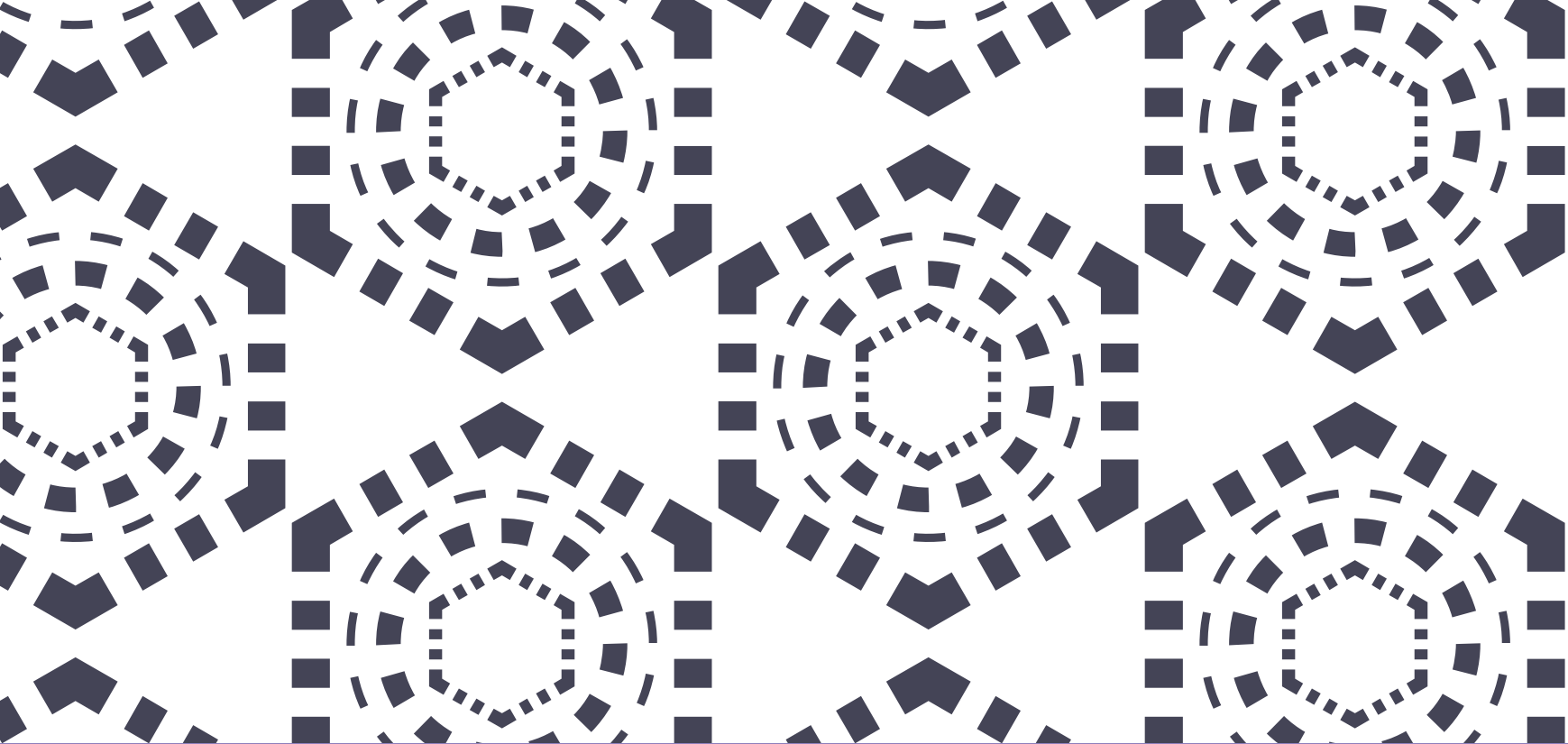
DEVEN3C

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ENTREPRENEURIALES À L'UNIVERSITÉ MAROCAINE :
CRÉATIVITÉ, CONNAISSANCE ET CULTURE.



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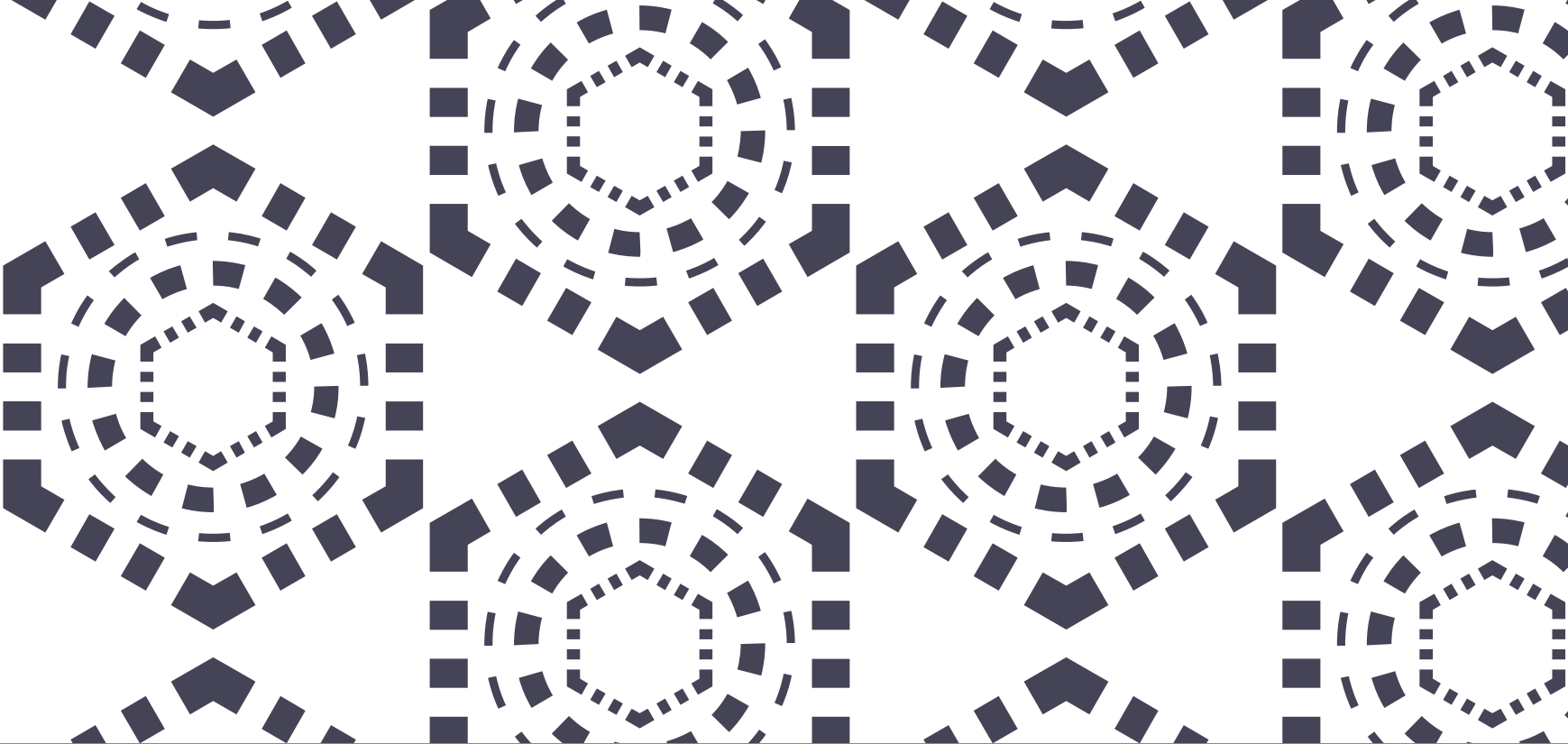
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PROLOGUE

This document constitutes the final report on the GUESSS Study (Global University Entrepreneurial Spirit Students' Survey) carried out as activity No. 8.2, entitled "Participation by Moroccan Universities in the GUESSS International Network", within the framework of the Tempus programme "The Development of Entrepreneurial Skills at Moroccan Universities: Creativity, Knowledge and Culture" (DEVEN3C), funded by the European Commission.

The study was conducted by the University of Cádiz (candidate for the DEVEN3C grant) through specialists of its Entrepreneurs' Chair, and by the University of Cantabria, working hand in hand with Abdelmalek Essaâdi University. This collaboration made possible the gathering and analysis of data to reach important and ground-breaking conclusions.

This report, fruit of a pioneering effort in Morocco, is based on responses to an online survey prepared and sent to students at 10 Moroccan universities, partners participating in the project in June of 2016. Without their involvement and dedication, and cooperation by the Moroccan Ministry of Higher Education, the Association of Women Entrepreneurs of Morocco (AFEM) and the Tangiers Law School Students Association, it would not have been possible to publish this report.

I would hereby like to express my sincere gratitude to the European Commission for having made it possible to fund our participation in the GUESSS Study, and to all the partners involved in the DEVEN3C project, who in a whole range of ways made this project a success, yielding excellent results and achieving the objectives set for it. Thanks to them this report will come out for the first time in Morocco.

Pr. Hassan EZBAKHE
Vice-president
Abdelmalek Essaâdi University

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INTRODUCTION

1

Interest amongst academics and politicians in verifying the extent to which the idea of becoming an entrepreneur is an attractive option for university students is what drives the GUESSS (Global University Entrepreneurial Spirit Students' Survey) Project, launched in 2003 by the University of St. Gallen (Switzerland,) and jointly organised in conjunction with the University of Bern, also in Switzerland, since 2016.

1.1. OBJECTIVES

The main aims of the GUESSS initiative can be summarised as follows:

1. To observe in a systematic way, and over time, students' career intentions and, in particular, their plans to become entrepreneurs. Also studied is the type and characteristics of entrepreneurial activity undertaken by the students engaged in these kinds of initiatives during their university stages.
2. To identify and to assess the effect of students' backgrounds and the characteristics of their surroundings as factors impacting their entrepreneurial intentions, the creation of new companies, and careers.
3. To observe and to evaluate the activities and the offerings of each University in relation to education for entrepreneurship for their students.

Additionally, throughout its successive editions, an effort has been made to progressively refine the theoretical foundations of the project related to the Theory of Planned Behaviour and its applications to entrepreneurial education (Ajzen, 1991, 2002; Fishbein and Ajzen, 1975).

1.2. THEORETICAL FRAMEWORK

The Theory of Planned Behavior (Ajzen, 1991, 2002; Fishbein and Ajzen, 1975) is one of the theoretical frameworks most commonly applied towards research into education in entrepreneurship. The theory proposes that the likelihood that an individual will ultimately exhibit a conduct depends on his previous intention to do so. Intentions, in turn, have three main antecedents shaping them: 1) The attitude of the individual with respect to the advantageousness of initiating the conduct 2) acceptance of the results stemming from the conduct, in accordance with the social norms of his groups of reference (friends, companions and relatives) and 3) the perception that the behaviour in question will lead to the expected results. The adaptation of this theoretical framework to the study is presented in Figure 1.

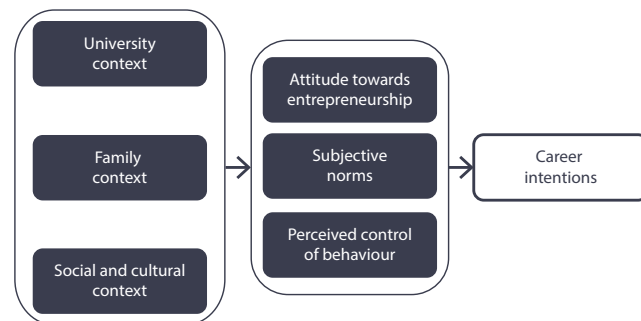


Figure 1: Theoretical Framework

Source : Ramos-Rodríguez and Ruiz-Navarro (2015)

1.3. ORGANISATION OF THE PROJECT

The GUESSS project, since its launch in 2003, has maintained a similar structure, conducting surveys of university students worldwide every two years, which yields a comparative instrument between countries and the evolution of results over time. In the 2016 edition there was a seventh survey, with participation by 50 countries and the gathering of 122,509 valid surveys.

The Global Competitiveness Report, put out by the World Economic Forum (2016) was used to analyse the data obtained, by blocks of countries. The five blocks of countries – 1) Factor-driven, 2) Transition to Efficiency-driven, 3) Efficiency-driven, 4) Transition to

Innovation-driven, and 5) Innovation-driven – were clustered into the 3 groups of countries on Table 1, following the criteria applied in previous studies (Coduras et al., 2008, Martinez et al. 2016): Factor (Groups 1+2), Efficiency (Groups 3+4) and Innovation (Group 5). Morocco is classified in the 2016 report in Block 3, included in the Efficiency group. This grouping will later be used throughout the report. Table 1, in addition, offers the number of surveys obtained by GUESSS 2016 by each type of country. It may be noted that the highest volume was reached in the Efficiency countries, a group to which Morocco belongs.

Type of Country	Countries	N° of Surveys
Factor Countries	Belarus, the Ukraine, Pakistan, Russia Kazakhstan and India	5.811
Efficiency Countries	Croatia, Argentina, El Salvador, Lithuania, Ecuador, Poland, Uruguay, Panama, Albania, Brazil, Chile, Colombia, Hungary, Morocco, Macedonia, Mexico, Peru, Slovakia, China, Malaysia	62.454
Innovation Countries	Estonia, Finland, Greece, Norway, Liechtenstein, Czech Republic, Japan, Sweden, Spain, Switzerland, Ireland, Australia, USA, Luxembourg, England, France, Canada, Slovenia, Korea, Germany, Portugal, Italy, Austria, Belgium	54.244

Table 1: Types of countries participating in GUESSS 2016, according to the World Economic Forum's (2016) Global Competitiveness Index.

Source: Compiled by authors

1.4. CHARACTERISTICS OF THE SAMPLE FROM MOROCCO

The GUESSS survey was carried out within the framework of the Tempus DEVEN3C European project, in which 10 Moroccan universities participate, making up almost 80% of the country's student population at public universities, as well as a contingent from its private universities. This places it in a privileged position to undertake the challenge of successfully collecting the information necessary to draft the

national GUESSS-Morocco report, integrating the country into this international observatory.

Of the 3,783 answers received, after a filtering process for control, a sample of 2,044 surveys considered valid was obtained, which represents 3.27% of all the Efficiency countries' surveys. The by-university breakdown of the surveys appears in Table 2.

University	Number of answers	%
Université Abdelmalek Essadi de Tétouan	504	26.8%
Université Cadi Ayad de Marrakech	245	13%
Université Hassan 1 de Settat	218	11.6%
Université Ibn Toifail de Kénitra	130	6.9%
Université Ibn Zohr d'Agadir	83	4.4%
Université Internationale de Rabat	11	0.6%
Université Mohammed Premier d'Oujda	17	0.9%
Université Mohammed V de Rabat	336	17.8%
Université Moulay Ismail de Meknès	14	0.7%
Université Sultan Moulay Slimane	64	3.4%
Other*	261	13.9%
TOTAL ANSWERS	1,883	100%
NS/NC	161	
TOTAL	2,044	

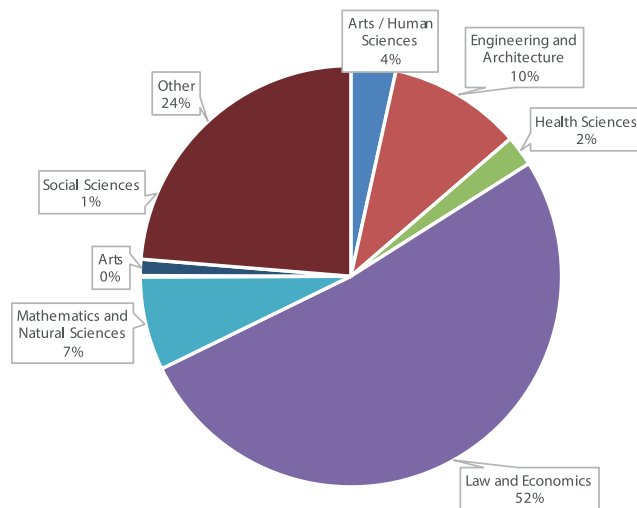
Table 2: Universities participating in GUESSS Morocco 2016

Source: Compiled by authors

* "Other" represents respondents that did not identify a specific university, not missing values.

The average age of the participants was 25.2, with 54% being women vs. 46% men. Almost 97% were Moroccan nationals, with Mauritians being the second most represented nationality, with 0.6% of the total. With regards to the branches of study of the students who responded to the survey, 51.7% studied Law, Economics or Business Administration; followed by 7.2% in Mathematics or the Natural Sciences; and 10.2% of students studied Engineering or Architecture. Students of Arts and Humanities

represented 4%, and those in Health Sciences, 23%. Finally, while the students of other Social Sciences accounted for 2% of those surveyed, 23.7% indicated other types of studies. With respect to the level of studies, 33.54% were degree (Bachelor) students, 39.33% were Master's students, and 27.13% were doctoral and MBA students.



With this sample of 2,044 answers (1.67% of the total) Morocco stands 21st amongst the 51 countries participating in GUESSS 2016, far above what would correspond to it based on its size. In addition, it is the only country in Africa contributing data to the international report. All of this furnishes the results of this report with added value.

Figure 2: Branches of study amongst the students making up the sample

Source: Compiled by authors

CAREER INTENTIONS OF MOROCCAN STUDENTS

The objectives of the GUESSS project include studying the career intentions of students, both upon graduation and in the long term. In order to gauge this students were asked the following: What are your career plans immediately after completing your studies? What career plans do you have for 5 years after completing your studies? The online questionnaire the students filled out included different employment options (employee in a small business, employee in a medium-sized company employee, employee in a large company, employee in a non-profit organisation, employed in academia/academic career, and employee in the public administration) as well as being the founder of a company (entrepreneur), employed at one's own company, taking one's place at a family business, or not, and, finally, the possibility of choosing the category Others / do not know yet.

In some cases, to facilitate comparison and analyses, the different options offered by the survey have been grouped into four categories. In particular, the first six categories are professional options that entail working as employees in different areas and types of organisations. The seventh indicates the intention to create one's own company; the eighth and ninth gauge intentions to join an existing company as a successor, and the tenth represents other situations. Consequently, the categories created are: working as an employee, founding one's own company,

being a successor at an existing company, and others. The international comparison includes two disaggregations. Firstly, a comparison was made to average international results. Additionally, as that average cannot be a very adjusted indicator, as it does not account or correct for the sizes and representativeness of the national samples, the countries participating in the GUESSS report were grouped according to the Global Competitiveness Index published by the World Economic Forum (2016). As indicated, Morocco is classified in the 2016 report in Group 2: Efficiency-oriented countries.

The following sections present the results in terms of the selection of these 10 career options by Moroccan students, when finalising their studies, and 5 years on. In addition, it was analysed whether the differences between groups were statistically significant, using a Chi-squared test.

2.1. CAREER INTENTIONS OF STUDENTS FIVE YEARS AFTER GRADUATION

Figure 3 shows the percentage of Moroccan students who indicated each career option when completing their studies, and 5 years later, using the grouping of the different options in the four categories previously indicated: employment, founding one's own company, being a successor at an already-existing company, and others.

As may be observed, most of the Moroccan students surveyed indicated intentions to orient their careers towards working as employees when they complete their studies, with the five most popular options being different forms of employment. The only option that has a lower percentage is that of working for a Non-Profit Organisation (NPO). If we add up the six options that entail some kind of employment, they account for 85% of the responses. Coming in sixth, chosen by 6.9% of students, was entrepreneurship

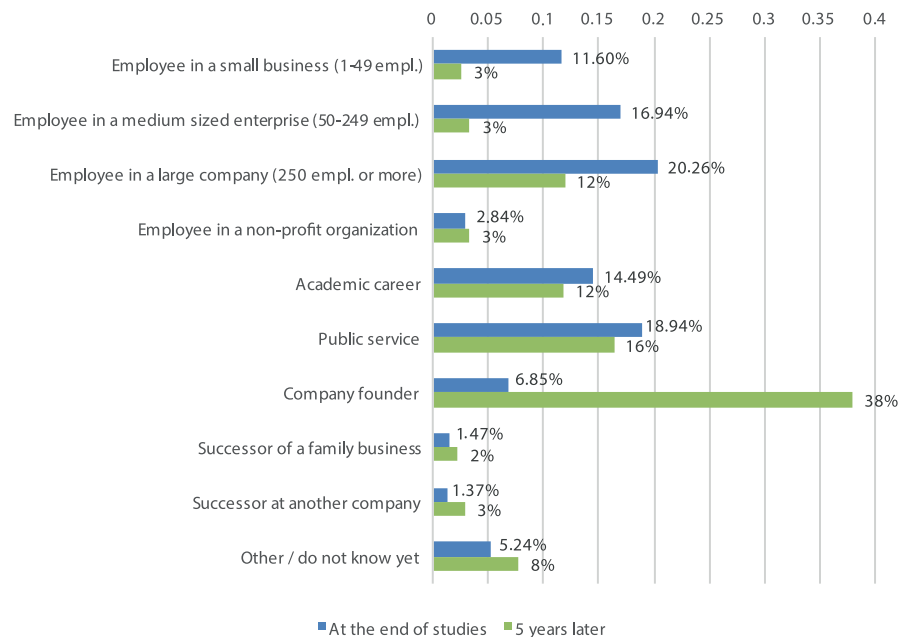


Figure 3: Career intentions of students five years after graduation (Morocco)

Source: Compiled by authors

2 CAREER INTENTIONS OF MOROCCAN STUDENTS

The situation changes notably when analysing the students' career orientations five years after graduation. If we analyse first the first block that wishes to work independently (self employment), we see that the percentage of Moroccan students who wish to work in any of the options indicated drops, except in the case of NGOs, where it increases slightly. With respect to the other categories, those with the sharpest drop are working at a Small and Medium-sized Business (SMBs), followed by work at a large company. The options that remain steadiest are those of an academic career or being a public employee. The rest of the options featured increases in the percentage of students who viewed them as desirable, but the category that really stands out is that of becoming the founder of one's own company, chosen by 38% of those surveyed.

It seems, therefore, that it is not until young people have a few years of professional experience under their belts in other areas that they begin to consider starting their own companies.

The comparison of these results with the situation at the international level is reflected in Figures 4 and 5. For their creation, as noted above, the career options were grouped into four blocks: employment, founding one's own company, being a successor at a company, and others. The results obtained in Morocco were compared with those internationally, as well as the

numbers for countries oriented towards Factors, Efficiency, and Innovation, as explained previously. Note that Morocco is a country classified in the group of nations oriented towards Efficiency.

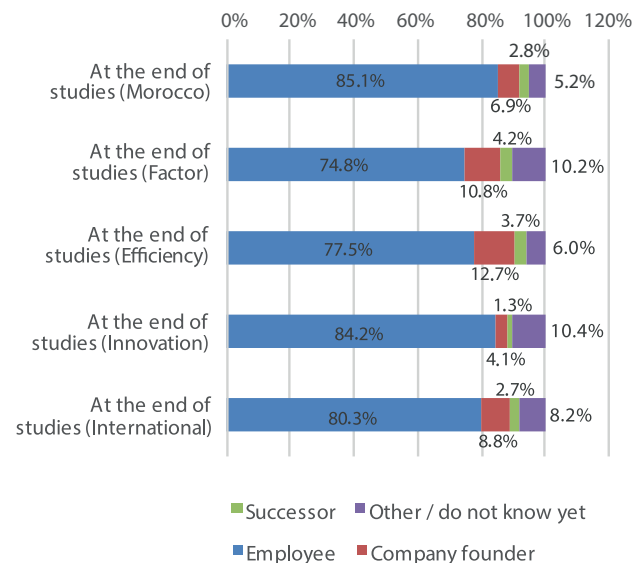


Figure 4: Students' career intentions upon graduation

Source: Compiled by authors

Figure 4 allows one to verify that, when completing their studies, the entrepreneurial intentions of Moroccan students (6.9%) fall below the international average (8.8%), but occupy an intermediate position amongst the countries oriented towards Efficiency (12.7%), to which Morocco belongs, and the countries geared towards Innovation (4.19%). It is noteworthy

that Morocco has a greater percentage of students who want to work as employees (85.1%) than the international average (80.3%) and than the average of the three groups of countries analysed.

Five years after finishing their studies the patterns of behaviour in the different areas studied are very similar, as illustrated in Figure 5. Thus, in all the cases, entrepreneurial intentions multiply by approximately 4, especially supplanting the intention to work for others (as an employee). In the case of Morocco, 5 years after graduation the percentage of students who hope to become entrepreneurs rises to 38%.

Morocco's percentage in this regard is slightly below the average for the set of countries participating in the GUESSS study (38.2%) and occupies an intermediate position between the average of the countries oriented towards Efficiency (the group to which Morocco belongs, with a 49% average) and those oriented towards Innovation (24.5%). The growth in entrepreneurial intentions in Morocco after 5 years (multiplying by 5.5), nevertheless, is slightly higher than that for all the countries participating in the GUESSS study (multiplying by 4.3), and is clearly higher than the countries in its reference group (Efficiency-oriented countries see a x 3.9 increase in entrepreneurial intention).

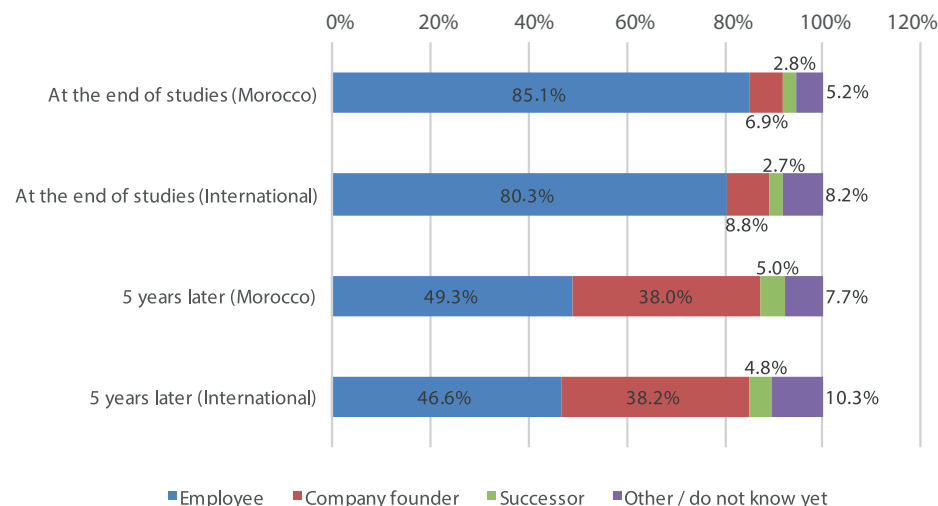


Figure 5: Career intentions five years after graduation

Source: Compiled by authors

2.2. INTENTIONS BY GENDER

As there is a certain consensus in the literature with regards to the existence of lower entrepreneurship rates amongst women (Chen et al., 1998; Goktan & Gupta, 2015; Scherer, Brodzinsky & Wiebe, 1991; Yang & Wang, 2014; Zhao et al., 2010) an analysis was conducted of entrepreneurial intentions in both subsamples for the purpose of exploring the potential mitigating effect that higher education has on this gap. The previous literature does suggest that university education serves to increase women's interest in becoming entrepreneurs (Wilson et al., 2007).

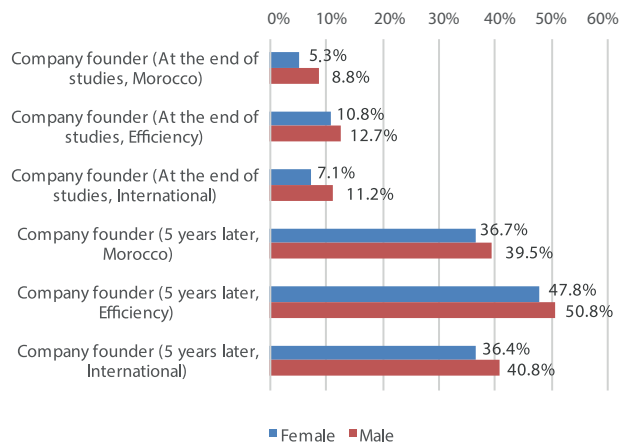


Figure 6: Career intentions by gender (Morocco, Efficiency-oriented and International countries)

Source: Compiled by authors

Figure 6 demonstrates men's and women's intentions to become entrepreneurs after university, and five years on. As can be seen, in all cases entrepreneurial intentions are greater amongst men than women. Nevertheless, in the case of Morocco, the gap narrows when people are asked 5 years after graduation. This does not happen in the overall set of countries included in the GUESSS project, where there is just a slight increase, of 0.3 points; or in the set of countries oriented towards Efficiency, where the gap opens by 1.1.

The comparisons from the Chi-squared test confirm this, indicating that the by-gender differences in career selection (including the creation of a company) are statistically significant right after graduation ($X^2= 33.154$; p -value: .000) but are no longer so after 5 years later ($X^2= 13.473$; p -value: .142) in the case of Morocco. If we look at Efficiency-based countries, the gender-based differences are significant, both upon graduation ($X^2= 612.728$; p -value: .000) and five years later ($X^2= 1816.686$; p -value: .000). This is also true of the overall international data set, as the differences are significant after graduation ($X^2= 1816.686$; p -value: .000) and remain so 5 years later ($X^2= 231.938$; p -value: .000).

2.3. INTENTIONS BY DEGREE, MASTER'S AND DOCTORAL PROGRAMME

Since the different educational programmes have very different objectives and natures, Moroccan students' career intentions are analysed based on whether they are studying for a degree (Bachelor's), Master's, or Doctorate, both upon graduation and 5 years later (Figure 7).

In the case of Morocco, Bachelor's students exhibit the least entrepreneurial intentions, both upon graduation and five years later. The percentage of those who wish to create a company is greater among Master's and doctoral students; while the first group is more interested in entrepreneurship upon graduation, the second is more interested 5 years later.

Again the patterns for Morocco diverge from both the international sample and that from its neighbouring countries, as in both these cases Bachelor's students are those expressing the greatest interest in entrepreneurship.

The differences in career intentions upon graduation between the different educational levels are statistically significant ($X^2= 248.877$; p -value: .000) and 5 years later ($X^2= 140.403$; p -value: .000) in the case of Morocco. The same is true for the overall set of Efficiency-oriented countries, upon graduation

($X^2= 1425.665$; p -value: .000) and 5 years later ($X^2= 1174.405$; p -value: .000) and the overall data set for students upon graduation ($X^2= 3325.252$; p -value: .000) and 5 years later ($X^2= 2601.983$; p -value: .000).

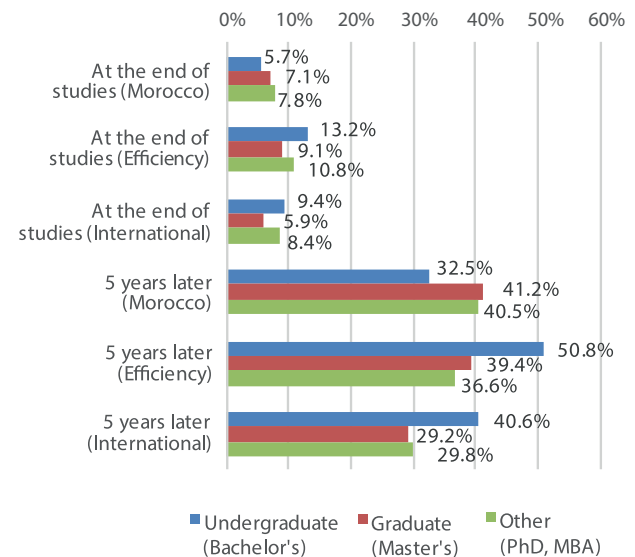


Figure 7: Career intentions by life juncture and level of education (Morocco, Efficiency-oriented and International countries)

Source: Compiled by authors

2.4. INTENTIONS BY BRANCH OF KNOWLEDGE

To conclude this section, entrepreneurial intentions are analysed depending on the branch of knowledge pupils are studying at the time of the survey. In this regard the GUESSS report classifies the different degrees into 6 branches: Arts/Human Sciences (e.g., Linguistics, Cultural Studies, Religion, Philosophy, History); Engineering (including Computer Science and Architecture); Human Medicine / Health Sciences; Law and Economics (including commercial sciences); Mathematics and Natural Sciences, Science of Art (e.g., Art, Design, Theatre, Music); Social Sciences (e.g., Psychology, Political Science or Education); and Others.

Figure 8 shows the average numbers for Morocco and the group of countries that, like Morocco, are oriented towards Efficiency according to the World Economic Forum's Global Competitiveness Index (GCI).

Previous studies have indicated that there exist significant differences in entrepreneurial intention depending upon the branch of knowledge pupils study. In particular, it seems that Engineering students (Wu and Wu, 2008) and those in the Sciences (Hassan and Wafa, 2012) harbour more intentions to become entrepreneurs than those in other fields. This difference is explained, among other factors, because the possession of technical abilities leads to a greater sense of self-sufficiency and this, in turn, facilitates the opportunity recognition process and one's capacity to

take on risks (Krueger and Dickson, 1994).

Figure 8 corroborates this, showing that in the case of Morocco, those most interested in entrepreneurship are students specialising in the Health Sciences (10.6%), Mathematics and Natural Sciences (9.7%) and Engineering (8.8%), followed by Law and Economics (5.9%). If we look at entrepreneurial intention 5 years after graduation, the students with the highest numbers are from Engineering (56.1%), Science of Art (50%), and Mathematics and the Natural Sciences (41.7%), followed, again, by Law and Economics (39.2%). It should be noted that the numbers for Science of Art should be viewed with caution due to the small size of the sample group in this category. In any case, the results obtained were very similar to those appearing in the previous literature, and these differences are statistically significant between the different types of careers and studies, both upon graduation ($X^2= 156,025$; p-value: .000) and 5 years later ($X^2= 122,774$; p-value: .000) in the case of Morocco.

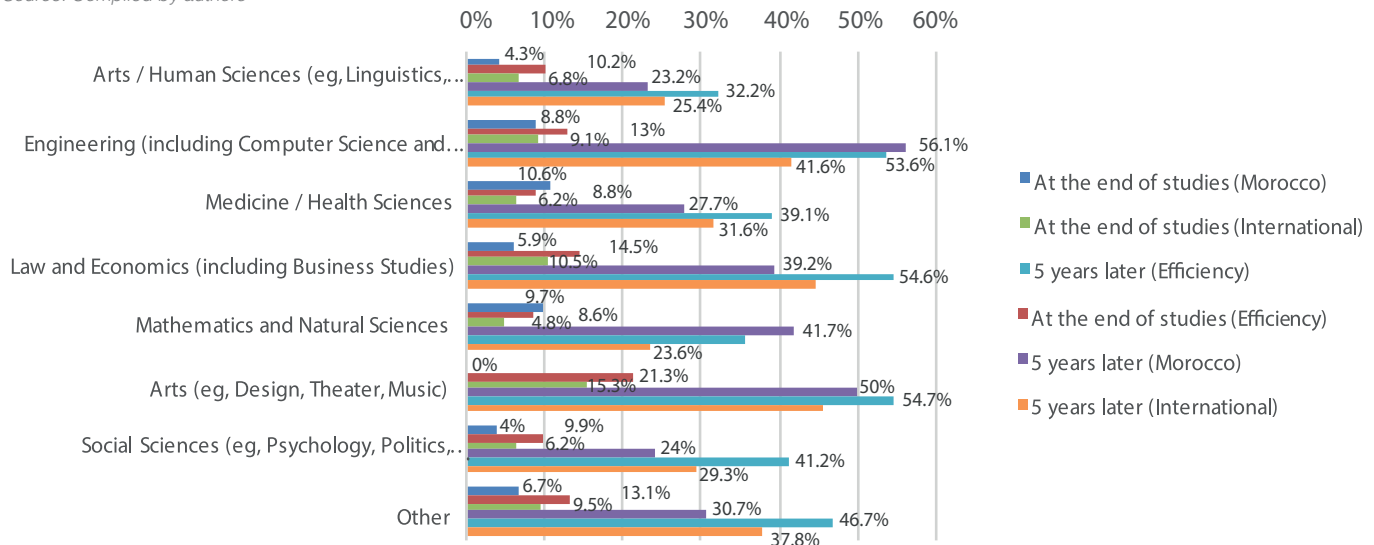
In the case of the whole set of the international sample making up the GUESSS study, the three branches featuring the highest entrepreneurial intention rates, upon graduation, were Science of Art (15.3%), Law and Economics (10.5%) and Others (9.5%) followed by Engineering (9.1%). Entrepreneurial intention after 5 years in the international sample is greater

amongst students from Science of Art (45.6%), Law and Economics (54.6%) and Engineering (41.6%), followed by Others (37.8%). In the case of the international sample it seems that students from the branches of Science of Art, Law, and Economics, surpass Engineering pupils in terms of entrepreneurial intention. Moreover, it is confirmed that that for the international set of data the differences by branch of study are statistically significant with regards to students' intentions upon graduation ($X^2= 15433.062$; p-value: .000) and five years on ($X^2= 9925.265$; p-value: .000).

If we focus, finally, on the group of countries that, like Morocco, are oriented towards Efficiency, the results indicate that, upon graduation, the branches with the greatest entrepreneurial intention are: Science of Art (21.3%), Law and Economics (14.5%) and Engineering (13%). Entrepreneurial intention 5 years after graduation in the international sample is greater amongst students in Science of Art (54.7%), Law and Economics (54.6%) and Engineering (53.6%), followed by Others (46.7%). The relevance of the same branches that appeared in the international sample is confirmed here, as is the existence of statistically significant by-branch entrepreneurial differences upon graduation ($X^2=6160.178$; p-value: .000) and 5 years afterwards ($X^2=3782.391$; p-value: .000).

Figure 8: Career intentions by field of study (Morocco, Efficiency-oriented and International countries)

Source: Compiled by authors



FACTORS INFLUENCING THE ENTREPRENEURIAL INTENTIONS OF MOROCCAN STUDENTS

In Section 2 career intentions were evaluated, allowing the students to choose just one option from those available, at two different junctures: upon graduation, and 5 years later.

In Section 3 more complex scales were used making it possible to take into account the evaluations of all the students surveyed regarding different factors that influence their entrepreneurial intentions. Through the use of these scales, first the entrepreneurial intention index of Moroccan students is calculated. Later, as the intention to become an entrepreneur depends on a number of different factors, they are studied. The GUESSS study examines the influence of factors related to students' surroundings (university, family and social context) as well as factors related to the personal characteristics of the students (perception of social and family support, peers, subjective norms, perceived control of behaviour or locus of control, and entrepreneurial self sufficiency).

3.1. ENTREPRENEURIAL INTENTION INDEX

The entrepreneurial intention index for Moroccan students is calculated using the scale by Liñan and Chen (2009), in which the students rate from 1 (totally disagree) to 7 (totally agree) their responses to the

indicators featured in Figure 9. The arithmetic average of the scores for each indicator was later calculated. The entrepreneurial intention index for Morocco (5.04) was slightly greater than that for the countries in its group of reference, (Efficiency-oriented), and almost a point above the international average in the GUESSS survey.

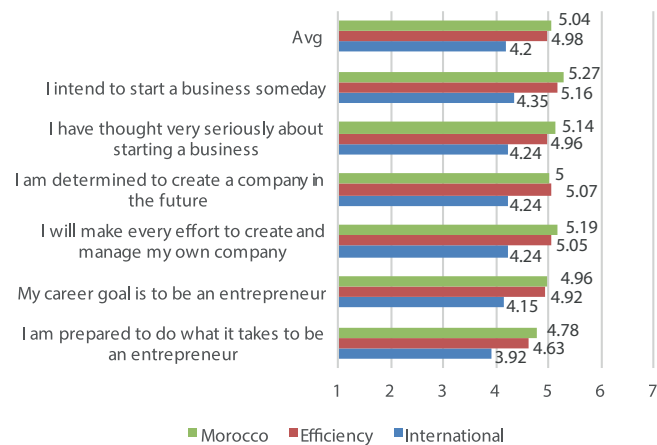


Figure 9: Entrepreneurial intention index (Morocco, Efficiency-oriented and International countries)

Source: Compiled by authors

3.2. THE UNIVERSITY'S ROLE

In the academic literature there exists an interesting debate on the effect that university education has on students' entrepreneurial intentions. Previously we noted how intention to become an entrepreneur multiplies when graduates are asked 5 years after completing their studies. This seems to suggest that to successfully implement their ideas for companies students need to complement their university educations with experience acquired outside the classroom. Having a higher education makes them more conscious of the difficulties involved in launching a company, and spurs them to postpone the decision.

In accordance with the academic literature on the subject, students were asked a series of questions related to their educations.

First, as shown in Figure 10, 32.4% of the Moroccan students surveyed had never taken a course on entrepreneurship. This figure is, actually, below the international average, and lower than that for the group of Efficiency-oriented countries, to which Morocco belongs. In fact, the percentage is also lower than that for the rest of the groups of countries analysed, which denotes an effort on the part of the education system in Morocco to promote entrepreneurial education amongst students.

In Figure 10 it may also be observed that the percentage of Moroccan students who chose the

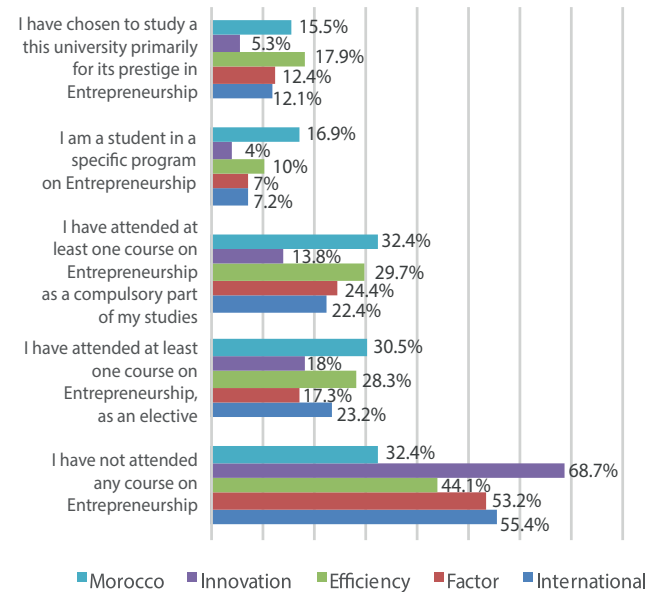


Figure 10: Main reasons for choosing one's university and attendance of courses in entrepreneurship (Morocco, Efficiency-oriented and International countries)

universities they attend for their prestige in the field of entrepreneurship (15.5%) is above the international average (12.1%), but lower than that corresponding to the Efficiency-oriented countries (17.9%).

To get an initial idea of education's effect on intentions to engage in entrepreneurship we calculated the percentage of intentional founders, after 5 years, amongst the students who selected each option in Figure 10. The results are presented in Figure 11.

3 FACTORS INFLUENCING THE ENTREPRENEURIAL INTENTIONS OF MOROCCAN STUDENTS

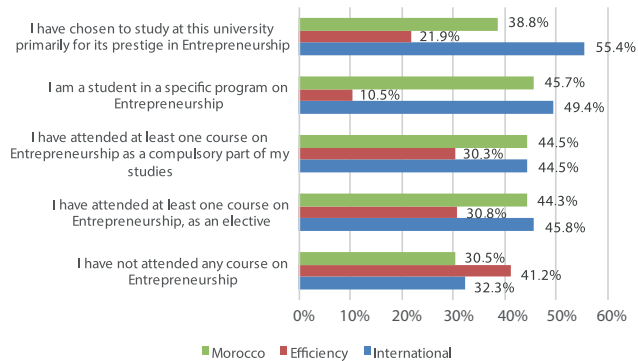


Figure 11: Percentage of intentional founders (5 years after studies) as a function of education in entrepreneurship (Morocco, Efficiency-oriented and International countries)

Source: Compiled by authors

The first observation that can be made is that the percentage of students intending to become entrepreneurs 5 years after finishing their studies is around 15 points lower amongst the group of students who never have taken a course on entrepreneurship. This leads us to believe that receiving any type of education in entrepreneurship increases Moroccan students' propensity to become entrepreneurs. This situation repeats at the international level, but not in the group of Efficiency-oriented countries, where the situation is the opposite. That is, in the group of countries oriented towards Efficiency, the percentage of habitual entrepreneurs amongst students who took no course on entrepreneurship is 10 actual points

higher amongst those who did, and 30 points higher than amongst those who are pursuing a specific entrepreneurship curriculum.

To complete this first approach, we examined Moroccan students' perceptions of the entrepreneurial climates at their universities. To this end the scale developed and validated by Luethje and Franke (2003) was used. The scale is made up of three items in which students are asked to issue a score between 1 (totally disagree) and 7 (totally agree) in response to the questions set forth in Figure 12.

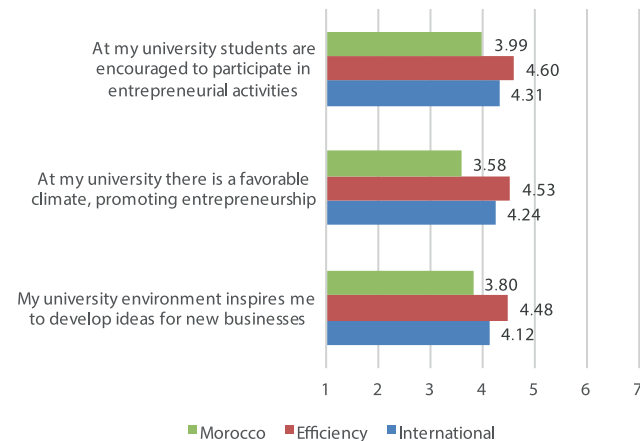


Figure 12: Perception of the university environment (Morocco, Efficiency-oriented and International countries) (Scale of 1-7)

Source: Compiled by authors

In general the values obtained in the three items in Morocco were lower than the international average and those for the Efficiency-oriented countries. The average of the three answers in Morocco was 3.79; that is, slightly over the midpoint on the scale, and with very similar values for the three indicators.

To measure the students' opinions about the education in entrepreneurship received during their degree programmes, the scale by Souitaris et al 2007 was used. As in the previous case, they were asked to issue scores between 1 (totally disagree) and 7 (totally agree) in response to the five questions indicated in Figure 12 on the courses and services received.

The results featured in Figure 13 indicate that Moroccan students' opinions are very similar to those of international students, but more critical than those in the set of Efficiency-oriented countries. Altogether, the average of the five indicators in Morocco is 4.22, as opposed to an average of 4.632 in the Efficiency-oriented countries, and 4.24 in the overall international set. In all the cases the results are clearly over the midpoint on the scale, indicating that the general level is fair to high, although there is significant room for improvement.

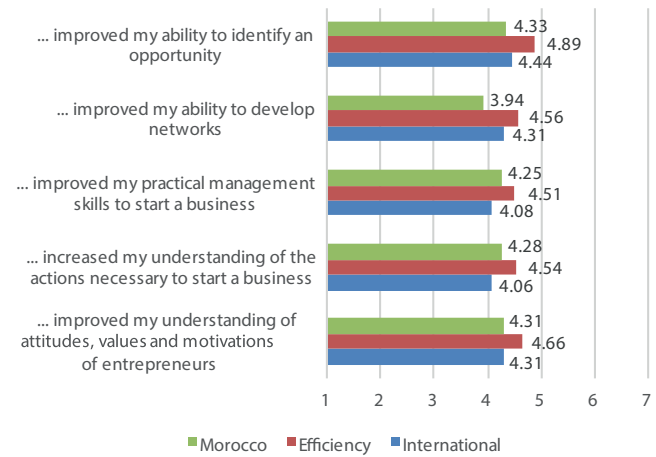


Figure 13: View of courses and other educational offerings in which students participated (Morocco, Efficiency-oriented and International countries) (Scale of 1-7)

Source: Compiled by authors

3.3. THE FAMILY CONTEXT

The influence of family environments on entrepreneurial intention has been analysed repeatedly (Morianio et al., 2012; Fayolle et al, 2006), with previous studies demonstrating that having entrepreneurial parents increases the likelihood of children wishing to do the same thing (Laspita et al., 2012), and indicating that they will more easily have the resources to do so (Krueger, 1993).

In the international report, 17.5% of students are children of entrepreneurs, which means that at least one parent (father or mother) is self-employed and the majority owner of a private company. In Efficiency-oriented countries, according to the WEF, the percentage is 16.6%. In Morocco, however, only 9% of students surveyed were children of entrepreneurs.

To further analyse the influence of parent entrepreneurs on the careers of their children, we will present separately the career intentions of students whose parents are entrepreneurs and those whose parents are not.

The data shown in Figure 14 confirms that there is a relationship between having entrepreneurial parents and a greater propensity to become an entrepreneur too. In the case of the Efficiency-oriented countries, the difference practically disappears when students are asked about their intentions 5 years after finishing their studies. Nevertheless, in the case of Morocco,

and also for the international data set, the difference increases after 5 years in absolute, though non-relative terms, indicating that parents' influence on entrepreneurship is greater in the short term.

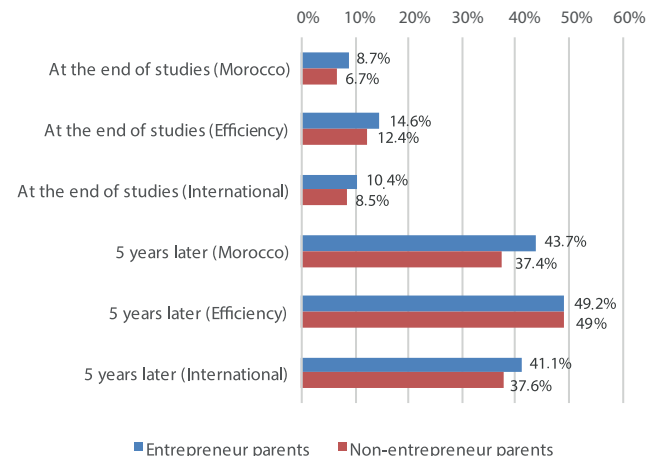


Figure 14: Aspiring founders, according to life juncture and status of parents (Morocco, Efficiency-oriented and International countries)

Source: Compiled by authors

3.4. THE SOCIAL CONTEXT

The social context and distinctive characteristics of national cultures also exert a major influence on people’s intentions to become entrepreneurs. In order to be able to assess this influence, the GUESSS survey features some scales extracted from the GLOBE (Global Leadership & Organizational Behavior Effectiveness) (Dickson et al, 2012) international project.

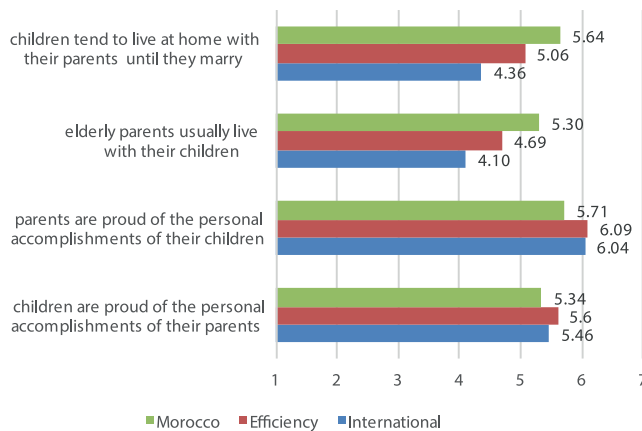


Figure 15: Characteristics of the students’ society (Morocco, Efficiency-oriented and International countries) (Scale from 1 - 7)

Source: Compiled by authors

As can be seen in Figure 15, family ties remain solid throughout people’s lives. Young people generally remain in their parents’ homes until marriage, and

elderly parents tend to live with their children. In both aspects, the average score in Morocco is greater than that for the Efficiency-oriented countries, while, in turn, that of these countries is below the study’s international average. This may be due to cultural differences, or the existence of an economic context in which young people have difficulties establishing their independence.

Nevertheless, the questions measuring the mutual pride of parents and children towards their achievements, yielding high scores in all areas, were slightly lower in Morocco than in the other two areas analysed.

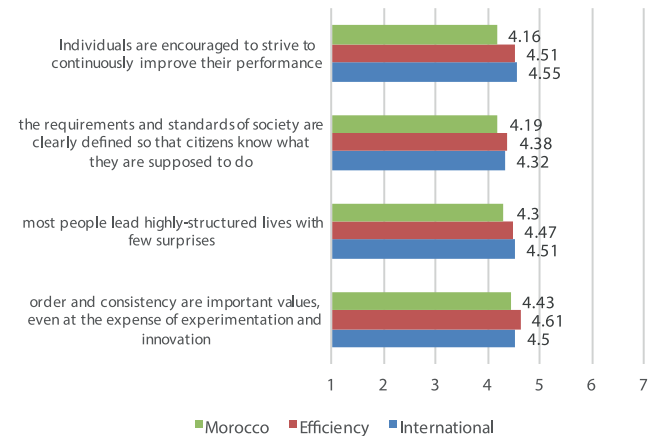


Figure 16: Perception of living in an orderly and well-structured society (Morocco, Efficiency-oriented and International countries) (Scale from 1-7)

Source: Compiled by authors

3 FACTORS INFLUENCING THE ENTREPRENEURIAL INTENTIONS OF MOROCCAN STUDENTS

In addition, the students surveyed were asked about a series of social and cultural values that can impact entrepreneurial intentions. Figure 16 illustrates Moroccan students' evaluation of whether they live in an orderly and structured society, as well as a comparison with opinions in Efficiency-oriented countries, and the international average on the GUESSS project. Worthy of note is the fact that, although the differences are slight, in general, the perceptions of Moroccan students are slightly more negative than those in the other two areas.

Finally, Figure 17 shows the results obtained when students were asked to evaluate their society on the basis of pairs of statements or semantic difference, 1

indicating their total agreement with the first option, 4 a position of ambivalence, and 7 total agreement with the opposite.

As may be observed in Figure 17, the students surveyed see themselves as living in a society in which compensation based on performance is not the general rule. They are not convinced that being innovative is worth the effort, and tend to think that power is concentrated, depends on one's position, and there is little room for transgression. All these values fall below those of the Efficiency-oriented countries and, although to a lesser extent, below the international average too.

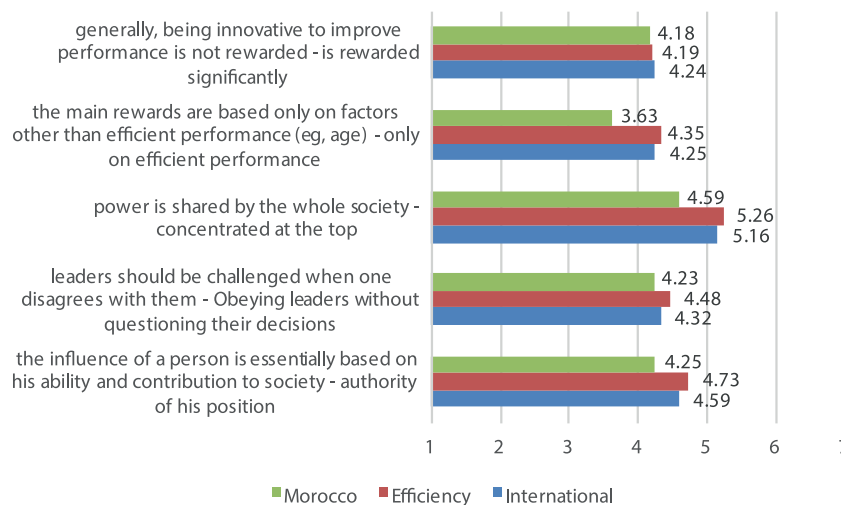


Figure 17: Perception of the distribution of power in society (Morocco, Efficiency-oriented and International countries) (Scale from 1-7)

Source: Compiled by authors

3.5. PERSONAL CHARACTERISTICS AND THEIR EFFECT ON ENTREPRENEURSHIP

Finally, in this section we analyse the assessment of Moroccan students regarding a series of aspects that the literature on entrepreneurship has identified as explaining entrepreneurial intentions. We do so by following the theoretical model explained at the start of the report. Specifically, we will analyse the subjective standard (support from society, family and friends), perceived behavioural control (or control locus) and self-efficacy

3.5.1. Social Support (Subjective Standard)

According to the Theory of Planned Behaviour, subjective standards measure the social pressure perceived to engage (or not) in a certain behaviour (Ajzen, 1991). In the specific case of entrepreneurship, it measures how the students surveyed perceive the approval by three groups of individuals (classmates, friends and family) of their decision to become entrepreneurs. The theory indicates that if students perceive their potential decision to become entrepreneurs as favourable, this encourages them to undertake the actions needed to become entrepreneurs. In contrast, if they think the opinion would be negative, this will tend to dissuade them. In either case, subjective standards, meaning acceptance or rejection by friends and family, do

not in and of themselves determine the decision to become an entrepreneur (or not), but they do raise (or lower) the perception of its advisability, and, as a result, the actual intention to engage in a behaviour (Schalaegeel and Koenig, 2012).

In the case of Morocco, Figure 18 shows that the students surveyed think that if they decided to create a company, their friends, classmates and relatives would approve of their decision, though the values are, in general, lower than those for the Efficiency-oriented countries and very similar to the international average.

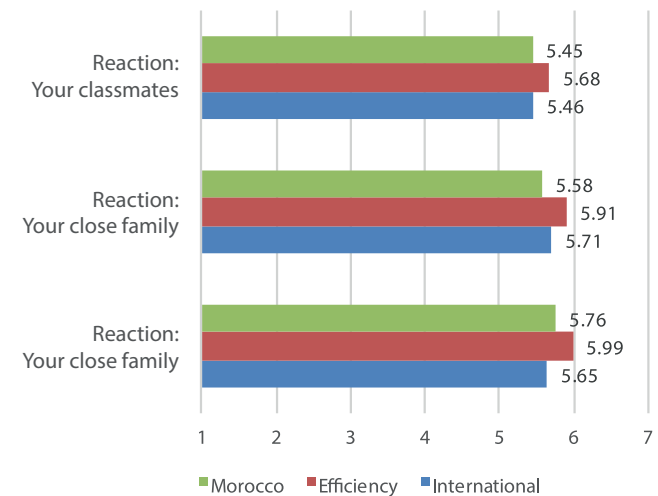


Figure 18: Expected reaction to entrepreneurship (Morocco, Efficiency-oriented and International countries) (Scale from 1-7)

Source: Compiled by authors

3 FACTORS INFLUENCING THE ENTREPRENEURIAL INTENTIONS OF MOROCCAN STUDENTS

Below we analyse this perception amongst the three groups in Morocco, differentiating by the type of career that students hope to work in upon completing their studies. The values in Figure 19 show that, as expected, the most favourable perceptions on how the decision to become an entrepreneur would be evaluated are highest amongst those who have expressed an intention to do so.

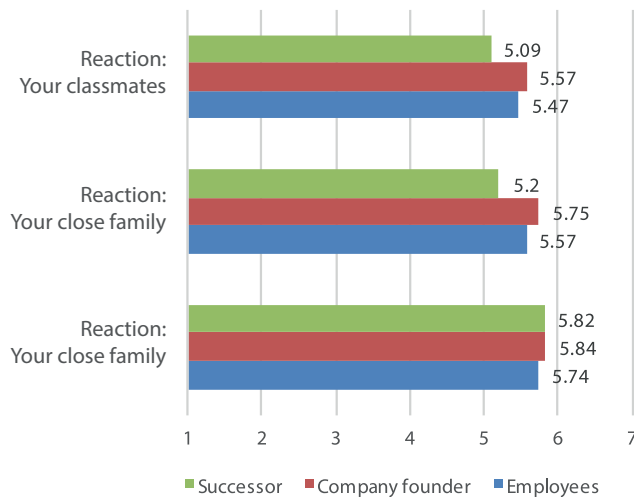


Figure 19: Expected reaction in Morocco to entrepreneurship, by career intention (Scale from 1-7)

Source: Compiled by authors

3.5.2. Perceived Control (Locus Of Control)

The concept of perceived behavioural control refers to the student's perception of how easy or difficult it would be to become an entrepreneur. Although this concept resembles those of self-efficacy (Bandura, 1997) and perceived viability (Shapero and Sokol, 1982), the literature has confirmed the differences between them (Ajzen, 2000). As a result, they are analysed separately. It may be said that perceived behavioural control includes not only the sensation of power, but also the perceived ability to control behaviour (Liñan and Chen, 2009).

In the case of Morocco, Figure 20 shows that the perceptions of Moroccan students are more positive than in the group of Efficiency-oriented countries, and than in the international group, with the exception of the last three indicators: I can decide more or less what will happen in my life; When I make plans, I am almost sure I can put them into practice; and Normally I am able to protect my personal interests.

Considered as a whole, and if we calculate the average of the indicators used, the average control perceived by students in Morocco is 5.24, versus 5.39 in Efficiency-oriented countries and 4.95 in the international group.

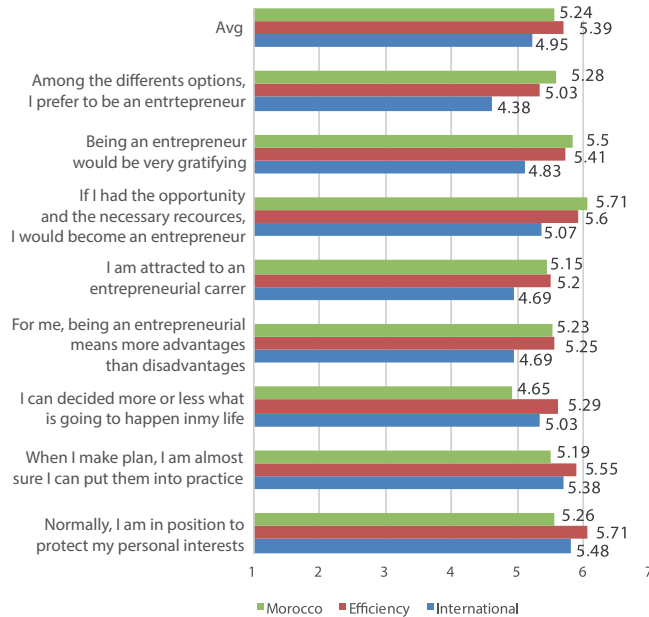


Figure 20: Indicators of perceived behavioural control and their average (Morocco, Efficiency-oriented and International countries) (Scale from 1-7)

Source: Compiled by authors

3.5.3. Self-Sufficiency

The concept of self-efficacy refers to an individual's conviction that he is capable of effectively organising and carrying out actions to produce the required results (Bandura, 1997; Chen et al. 1998). Self-efficacy affects the choice of alternatives and the amount of effort required (Waug, 1995), and has been confirmed as the leading predictor of an individual's

career choice (Bandura, 1986), since people avoid careers that exceed their abilities and focus on those that are better suited to their abilities (Krueger and Dickson, 1994).

As Figure 21 shows, in the case of Morocco, the measure of self-efficacy perceived by the students surveyed is slightly below that of Efficiency-oriented countries, but clearly above the international average. Notice that all of the indicators are above 4.5.



Figure 21: Indicators of self-efficacy and their averages (Morocco, Efficiency-oriented and International countries) (Scale from 1 to 7)

Source: Compiled by authors

3 FACTORS INFLUENCING THE ENTREPRENEURIAL INTENTIONS OF MOROCCAN STUDENTS

Lastly, as we can see in Figure 22, the various indicators that comprise self-efficacy have much higher scores amongst students who had selected to create a company as their chosen career option upon completing their studies. The group with the

second highest indicator values is for those who opted to succeed their parents. In contrast, those who aspired to work for others exhibited lower values across every indicator, which confirms the positive relationship noted earlier between self-efficacy and entrepreneurship.

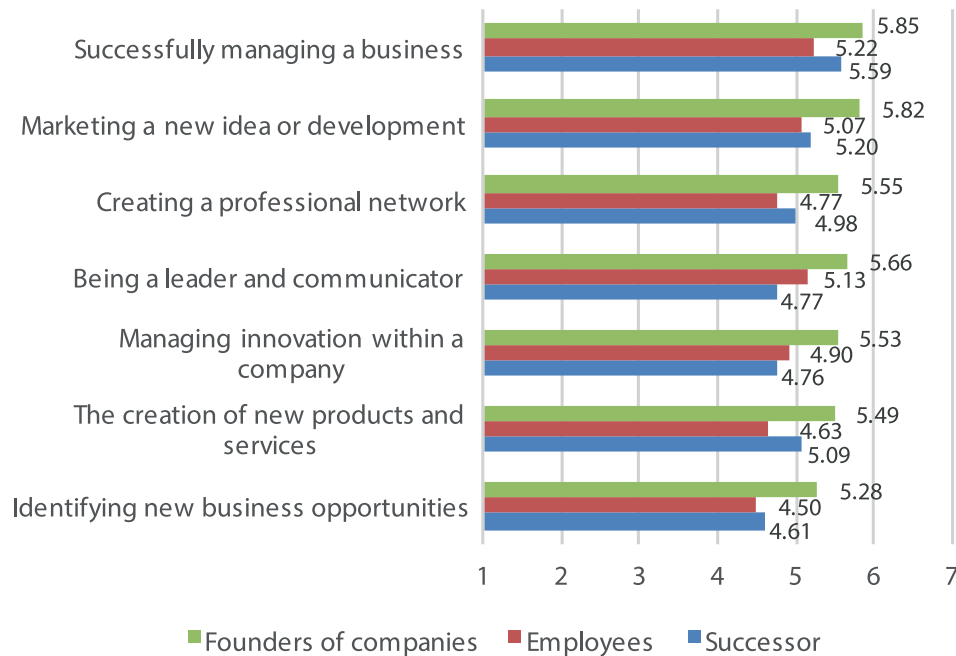


Figure 22: Competencies of aspiring founders, aspiring employees and aspiring successors at the end of studies (Scale from 1-7)

Source: Compiled by authors

STUDENTS ENGAGING IN THE BUSINESS CREATION PROCESS (ASPIRING ENTREPRENEURS)

Having analysed the career intentions of Moroccan university students in Chapter 2, and having considered their entrepreneurial intentions in Chapter 3, we shall now analyse the behaviour of the sub-group of survey respondents who are either in the process of creating their own company (Chapter 4) or who have already done so (Chapter 5).

In the academic literature, an “aspiring entrepreneur” (or “nascent entrepreneur”) is an individual who, either by himself or with other partners, is at the time of the survey in the process of starting his own business, or who is self-employed.

As Figure 23 shows, the percentage of Moroccan students who can be classified as aspiring or nascent entrepreneurs is 32%, with a difference between genders of almost 10% (27.8% of women are entrepreneurs, compared with 37.1% of men). The percentage of aspiring entrepreneurs amongst Moroccan university students in the sample is higher than the average in Efficiency-oriented countries (30.5%), as well as above the international average (21.9%).

In the rest of the chapter we present the answers given by this group of aspiring entrepreneurs to a series of questions involving their entrepreneurial activity and how it is progressing.

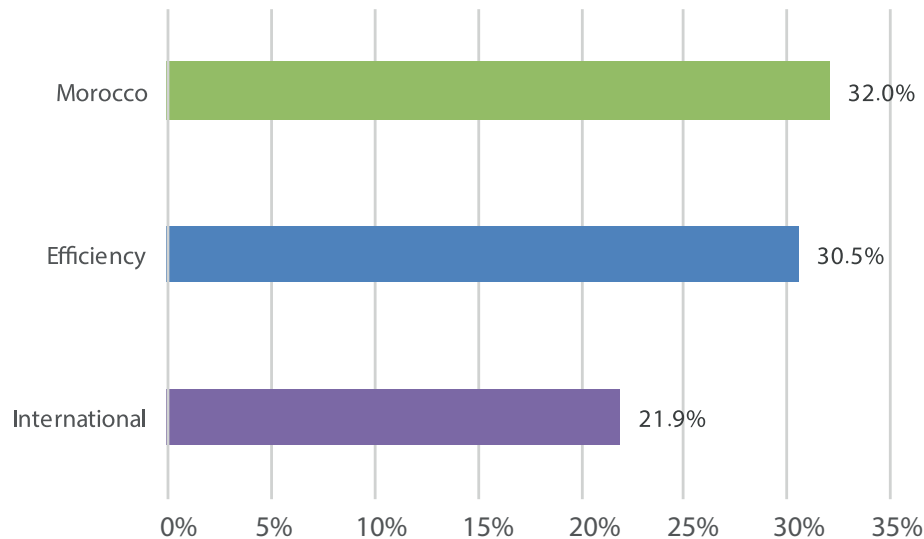


Figure 23: Proportion of aspiring entrepreneurs (Morocco, Efficiency-oriented and International countries)
Source: Compiled by authors

4 STUDENTS ENGAGING IN THE BUSINESS CREATION PROCESS (ASPIRING ENTREPRENEURS)

Figure 24 shows that only 17.4% expect their company to start operations within the next six months. This indicates that in most cases, the entrepreneurial initiatives are still in very early stages. This value, however, is still slightly above the international average in the GUESSS (15.3%).

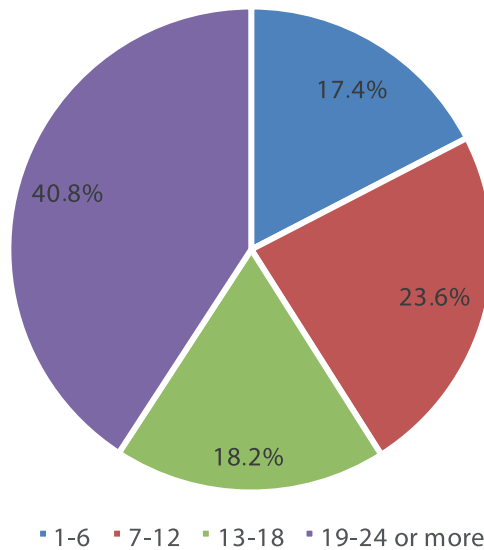


Figure 24: Time frame for the creation of companies (in months) (Morocco)
Source: Compiled by authors

Figure 25 specifies the sectors in which aspiring entrepreneurs plan to start their future companies, with Commerce (16.7%), Manufacturing (14.2%),

Education (12.5%) and Advertising and Marketing (10.1%) leading the field.)

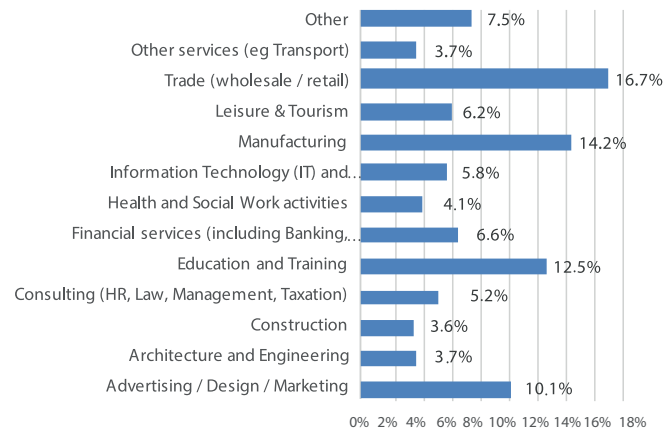


Figure 25: Business sectors expected (sum = 100) (Morocco)
Source: Compiled by authors

Figure 26 shows that 39.1% have discussed the idea, while 31.9% have drafted a business plan. This confirms the lack of development of most of the projects, though these values are in line with those reported internationally.

Figure 27 shows the number of partners involved in developing the business. The results confirm that entrepreneurship is primarily a team effort, since only 11% reported not having any partners. The most frequent numbers of co-founders are two (31.8%) and 1 (25.9%).

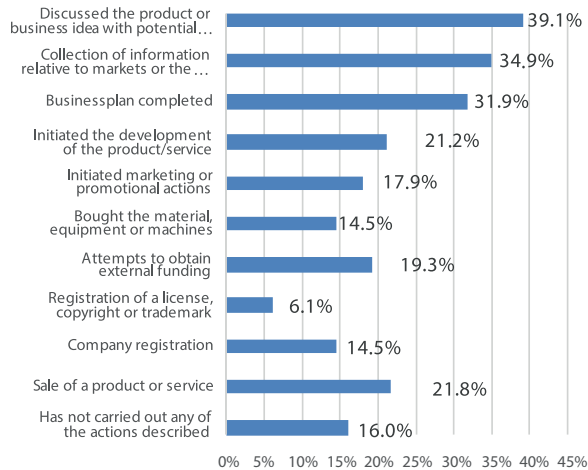


Figure 26: Preliminary activities engaged in by students in the entrepreneurial process (Morocco)

Source: Compiled by authors

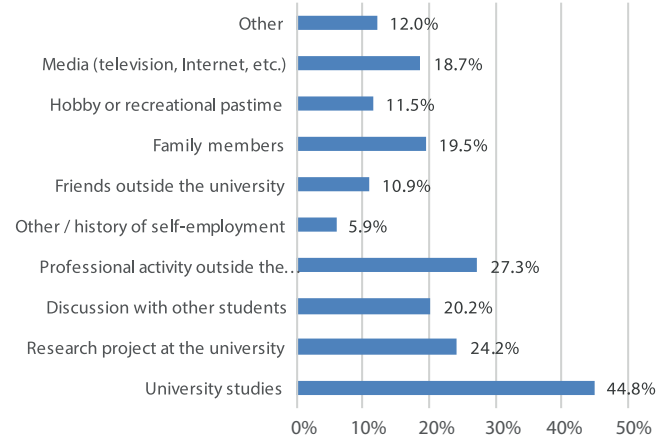


Figure 28: Origin of new entrepreneurs' ideas (Morocco)

Source: Compiled by authors

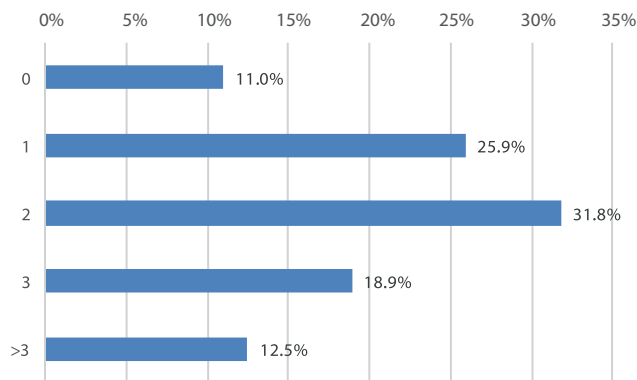


Figure 27: Number of co-founders (Morocco)

Source: Compiled by authors

The source of the ideas that gave rise to the entrepreneurial project is shown in Figure 28. The question allowed for several answers, and the results show that university is an important source for the ideas, since three of the four sources of ideas most chosen involved it in some way: university studies (44.8%), work outside university (27.3%), a research project at university (27.3%) and discussions with fellow students (20.2%). This situation differs considerably from that revealed by the GUESSS global sample, where even though university studies is the most common answer, the next three are hobbies, work outside university, and family members.

4 STUDENTS ENGAGING IN THE BUSINESS CREATION PROCESS (ASPIRING ENTREPRENEURS)

Lastly, Figure 29 shows the importance that the aspiring entrepreneurs surveyed ascribe to a series of career objectives. There are no major differences between the options selected, there being barely a

one-point difference between the most popular (to advance in the business world) and the least popular (to make money and become rich).

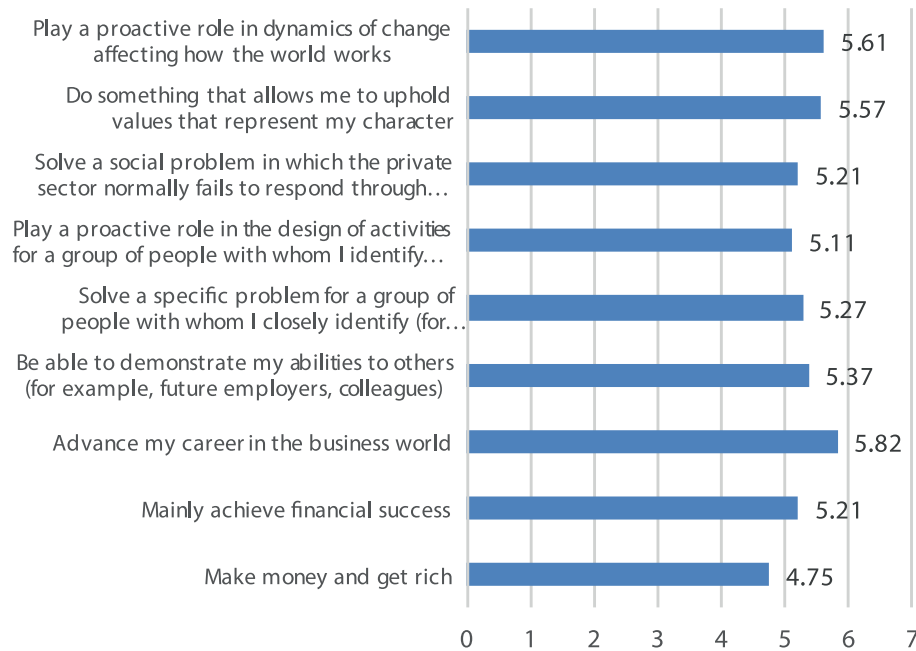


Figure 29: Importance of aspiring founders' career goals (Morocco) (Scale of 1-7)

Source: Compiled by authors

SUCCESSFUL CREATION OF COMPANIES (ACTIVE ENTREPRENEURS)

Lastly, in this chapter we focus on analysing the group of university students who have already completed the process of setting up a company and who are, thus, entrepreneurs.

Figure 30 shows that 7% of the university students surveyed in Morocco can be regarded as entrepreneurs. This percentage is lower than in the group of Efficiency-oriented countries (12.2%) and below the international average in the GUESSS study (8.8%).

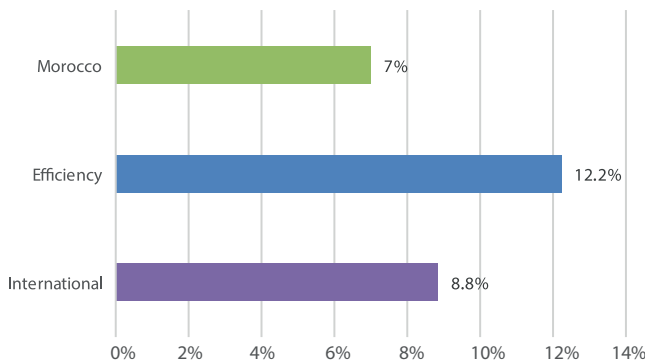


Figure 30: Proportion of students who have already created a company (Morocco and International)
Source: Compiled by authors

Most of these companies were created very recently (17.2% in 2015 and 43% in 2016). On average they are 2.5 years old, whereas in the GUESSS international survey they are around 4 years old.

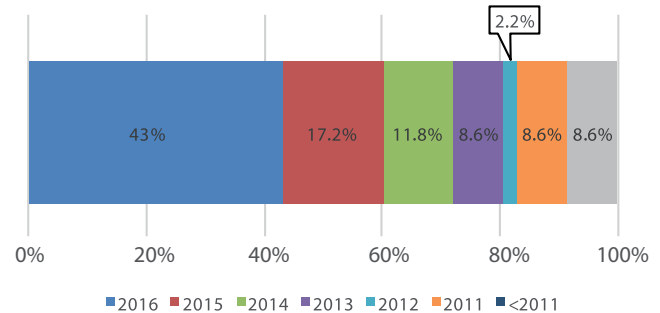


Figure 31: Creation date of companies in operation (Morocco)
Source: Compiled by authors

Whilst only 11% of aspiring entrepreneurs reported to be working alone (Figure 27), 22.4% of active entrepreneurs created their company by themselves. This percentage is below that of the international sample (28.7%). We may deduce, then, that the number of partners decreases during the process of creating the company, although the figures confirm that entrepreneurship is primarily a team activity.

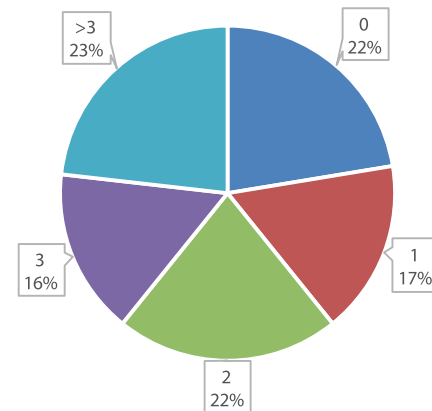


Figure 32: Number of co-founders among active entrepreneurs (Morocco)
Source: Compiled by authors

5 SUCCESSFUL CREATION OF COMPANIES (ACTIVE ENTREPRENEURS)

As for the size of the companies created in terms of the number of employees, the average company created by students in the Morocco sample had 33.3 equivalent full-time employees, while in the international sample this number barely reaches 6.30. This result may have been influenced by the presence of a significant number of large companies in the sample, so the average size was recalculated after removing the six companies with over 100 employees, leading to a corrected value of 6.57 employees. This figure, though still slightly higher than the international average, is much more comparable..

As for the industries in which the companies created by the Moroccan students surveyed operate, these are shown in Figure 34. The Commerce sector has the highest representation (18.8%), as was the case with aspiring entrepreneurs, followed by Other (17.2%), Advertising and Marketing (12.5%), Education (11.7%) and Information Technology (10.9%). Both the fragmentation and the sectors with the highest number of entrepreneurs are very similar to those reported in the international sample.

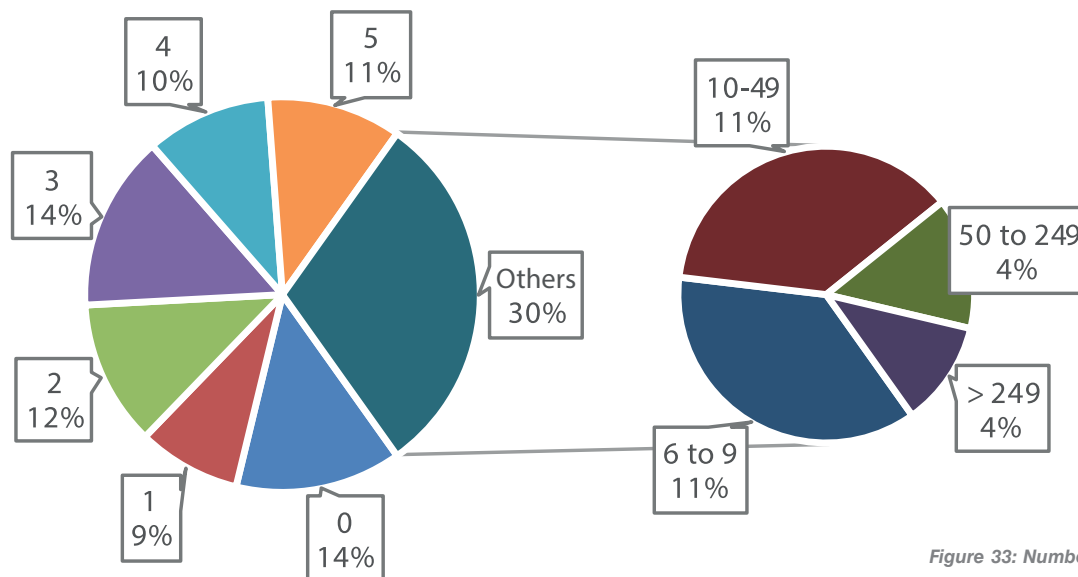


Figure 33: Number of employees at active companies (Morocco)
Source: Compiled by authors

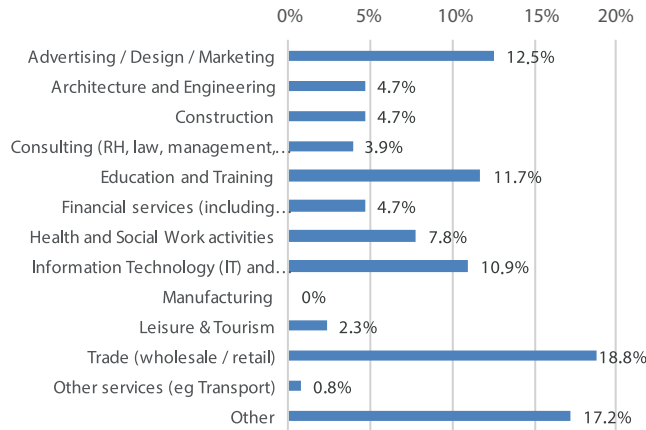


Figure 34: Branches of companies created (Sum = 100) (Morocco)

Source: Compiled by authors

Lastly, Figure 35 shows how satisfied active entrepreneurs are with their professional lives. This was measured as the average score given by active entrepreneurs to four indicators on a scale of 1 (not at all) to 7 (completely). The indicators are: I am happy with my career as an entrepreneur; I am generally satisfied with my business; I would start all over again with the same business if I had to; and, Despite everything, I am satisfied with my life as an entrepreneur. The average degree of satisfaction amongst active entrepreneurs in Morocco is 4.9, which is below the average of the international sample (5.29). Analysing the distribution of the scores shown in Figure 35 reveals that 32.8% rated their satisfaction as

4 or lower (with 4 being the midpoint in the satisfaction scale). At the other extreme, just 13.1% reported the highest level of satisfaction. Despite this, the net result is positive and should provide incentive to aspiring entrepreneurs and to those who, despite having taken no specific steps, are considering starting their own company in the future.

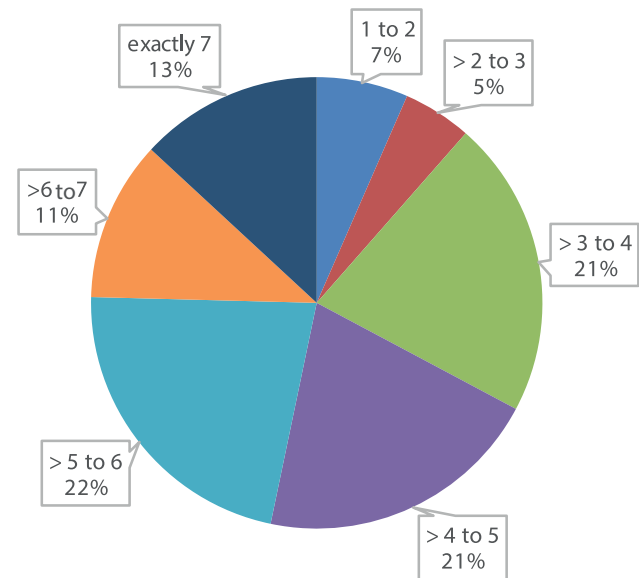


Figure 35: Satisfaction of active entrepreneurs (Morocco)

Source: Compiled by authors

SUMMARY AND CONCLUSIONS

The results of the study offer extensive information and a detailed analysis of the entrepreneurial intentions and undertakings of university students in Morocco. Some of the most relevant findings are highlighted below:

1. The delay students experience in realising their entrepreneurial intentions (five years after graduating from university) follows a similar pattern to that found in other universities analysed throughout the world. The number of entrepreneurs, however, is different in Morocco.
2. Upon graduating, the percentage of Moroccan students who plan to start a company is 6.9, compared to 12.8 in Efficiency-oriented countries, and to the international average of 8.8.
3. Within five years, the intentions of Moroccan students increase five-fold to reach 38%, practically the same as the international average (38.2%) but below the value in Efficiency-oriented countries (49%), which narrows.
4. Increasing the involvement of female university students in entrepreneurial activities remains a challenge, but it will result in more talent being added to the entrepreneurial ecosystem.
5. Entrepreneurial intent in Morocco is greater amongst men than women, and follows a pattern similar to that in other countries. In the case of Morocco, however, the gap narrows after five years. This does not happen either for the set of countries included in the GUESSS, where the gap widens slightly by 0.3 points, or for the set of Efficiency-oriented countries, where it grows by 1.1 points.
6. The results in Morocco also differ from international patterns when intentions are analysed by year of undergraduate, Master's and Doctorate studies.
7. Unlike in the Efficiency-oriented countries, and internationally as a whole, the intentions of Master's and Doctoral students in Morocco are higher than for undergraduate students for the two periods analysed.
8. This gap increases over time, with the figures for Master's and Doctoral students being 9.2 and 8 points above those for undergraduate students in Morocco. These differences are completely opposite those reported for universities in Efficiency-oriented countries and in the rest of the world.
9. As concerns intentions by area of knowledge, within five years of graduating from university,

Engineering students in Morocco were shown to be more inclined to create a company, confirming the findings of previous studies. Science of Art and Mathematics and Natural Sciences students, however, also report high rates of entrepreneurial intentions.

- 10.** The synthetic index of entrepreneurial intention in Morocco (5.04) is slightly higher than for the set of countries in its reference group, for Efficiency-oriented countries, and almost one point higher than the GUESSS international average.
- 11.** As for the university's role, we note that 77.6% of Moroccan students took some kind of course or received training on entrepreneurship, which exceeds the figure reported for any of the groups of countries analysed and demonstrates the efforts made in this area in Morocco. Furthermore, the percentage of intentional entrepreneurs is 15 points higher amongst those who received some kind of entrepreneurial training. This situation is repeated internationally, but is not as relevant in the Efficiency-oriented countries.
- 12.** As concerns the students' opinion of the entrepreneurial atmosphere at university (3.79/7) and of the entrepreneurial training received (4.22/7), Morocco is above the midpoint on the scale, which indicates a medium-high level, though with significant room for improvement. In both cases the values tend to be slightly below those for the group of Efficiency-oriented countries, and well below the international average.
- 13.** With regard to the effect on career choice of having entrepreneurial parents, this is confirmed, though the positive effect seems to wane after five years, both in Morocco and internationally. Within the group of Efficiency-oriented countries, the difference is practically non-existent after five years.
- 14.** As for the effect of one's social setting, we note two differentiating aspects in Morocco versus the international and Efficiency-oriented groups: family bonds remain more solid over their lifetimes, but mutual respect between parents and children is lower.
- 15.** In this same regard, we noted that the opinion of Moroccan students on whether they live in a well-ordered and structured society, while clearly above the midpoint on the scale, is slightly below the average for the international and Efficiency-oriented groups. They also report, to a higher degree than both groups of countries, their perception of living in a society where rewards are not generally based on performance. They

6 SUMMARY AND CONCLUSIONS

are similarly unsure that innovation is rewarded, and they tend to think that power is concentrated, depending on one's position, and that there is little room for transgression.

- 16.** In terms of social support for the decision to be an entrepreneur, it is clearly positive in Morocco, though below the level of approval reported in Efficiency-oriented countries and in the international group.
- 17.** As for the perceived ability to control one's own behaviour, the perceptions of Moroccan students are more positive than in the Efficiency-oriented group and, as a whole, than in the international group as well.
- 18.** As concerns self-sufficiency, the average amongst Moroccan students is clearly above that of the international group, though slightly below that of the Efficiency-oriented countries.
- 19.** The rate of aspiring entrepreneurs, or of those who are trying to start a company, is 32%, one and a half points higher than in the Efficiency-oriented countries, but 10 points above the international average. University seems to be an important source of inspiration for the companies they plan to create.
- 20.** The percentage of active entrepreneurs, however, is below the average for both groups of countries, and stands at 7%, with many recently created companies and a satisfaction index of 4.9/7.

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology* 32, 665-683.

Bandura, A. (1986). *The Social Foundations of Thought and Action*. Englewood Cliffs: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman. Baumol, 1968

Chen, C.C., Greene, P.G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295–316.

Coduras, A., Urbano, D., Rojas, A., & Martínez, S. (2008). The relationship between university support to entrepreneurship with entrepreneurial activity in Spain: A GEM data based analysis. *International Advances in Economic Research*, 14(4), 395–406. doi:10.1007/s11294-008-9173-8.

Dickson, M., Lelchook, A., Sully de Luque, M. y Hanges, P. (2012). *Project GLOBE: Global Leadership and Organizational Behavior Education. The Handbook for Teaching Leadership*. Eds. Scott Snook, Nitin Nohria, & Rakesh Khurana. Thousand

Oaks, CA: SAGE Publications.

Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: A new methodology. *Journal of European Industrial Training*, 30(9), 701-720

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior. An introduction to theory and research*. New York: Addison-Wesley.

Goktan, A. B., & Gupta, V. K. (2015). Sex, gender, and individual entrepreneurial orientation: evidence from four countries. *International Entrepreneurship and Management Journal*, 11(1), 95-112.

Hassan, R. A., & Wafa, S. A. (2012). Predictors towards entrepreneurial intention: a Malaysian case study. *Asian Journal of Business and Management Sciences*, 1(11), 1–10.

Krueger, N.F. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice*, 18(1), 5–21

Krueger, N., & Dickson, P. R. (1994). How believing in ourselves increases risk-taking: perceived self-efficacy and opportunity recognition. *Decision Sciences*, 25(3), 385–400.

Laspita, S., Breugst, N., Heblich, S. & Patzelt, H. 2012. Intergenerational transmission of entrepreneurial intentions. *Journal of Business Venturing*, 27(4), 414-435.

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

Luthje C. & Franke N. (2003). The “making” of an entrepreneur: Testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management* 33 (2), 135-147.

Martínez-Fierro, S., Biedma-Ferrer, J. M., & Ruiz-Navarro, J. (2016). Entrepreneurship and strategies for economic development. *Small Business Economics*, 47(4), 835-851.

Moriano, J.A., Gorgievski, M., Laguna, M., Stephan, U., & Zarafshani, K. (2012). A crosscultural approach to understanding entrepreneurial intention. *Journal of Career Development*, 39(2), 162–185.

Ramos-Rodríguez, A.R. & Ruiz-Navarro, J. (2015). *Intenciones emprendedoras y de elección de carrera de los alumnos de la Universidad de Cádiz. Cátedra de Emprendedores de la Universidad de Cádiz*. ISBN: 978-84-606-7626-3

Scherer, R.F., Brodzinski, J.D., & Wiebe, F.A. (1991). Examining the relationship between personality and entrepreneurial career preference. *Entrepreneurship and Regional Development*, 3(2), 195–206.

Schlaegel, C. & Koenig, M. (2012). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. Paper presented at the Academy of Management Annual Meeting, Boston, MA.

Shapero, A. & Sokol, L. (1982). Social dimensions of entrepreneurship. In C. Kent, D. Sexton, & K. Vesper (Eds.), *The encyclopedia of entrepreneurship* (pp. 72–90). Englewood Cliffs, NJ: Prentice-Hall.

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

Waung, M. (1995). The effects of self-regulatory coping orientation on newcomer adjustment and job survival. *Personnel Psychology*, 48, 633–650.

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*,

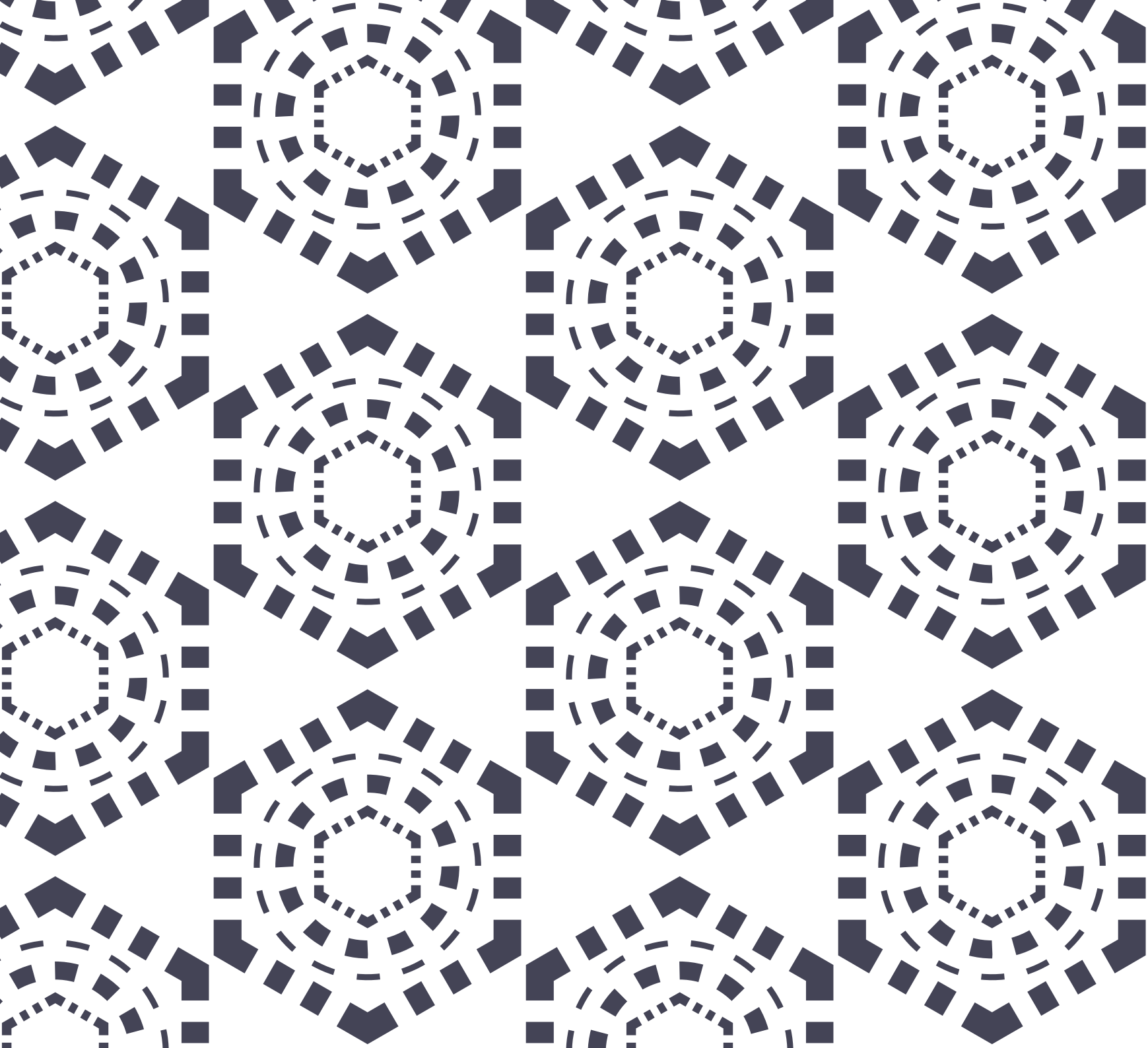
31(3), 387–406.

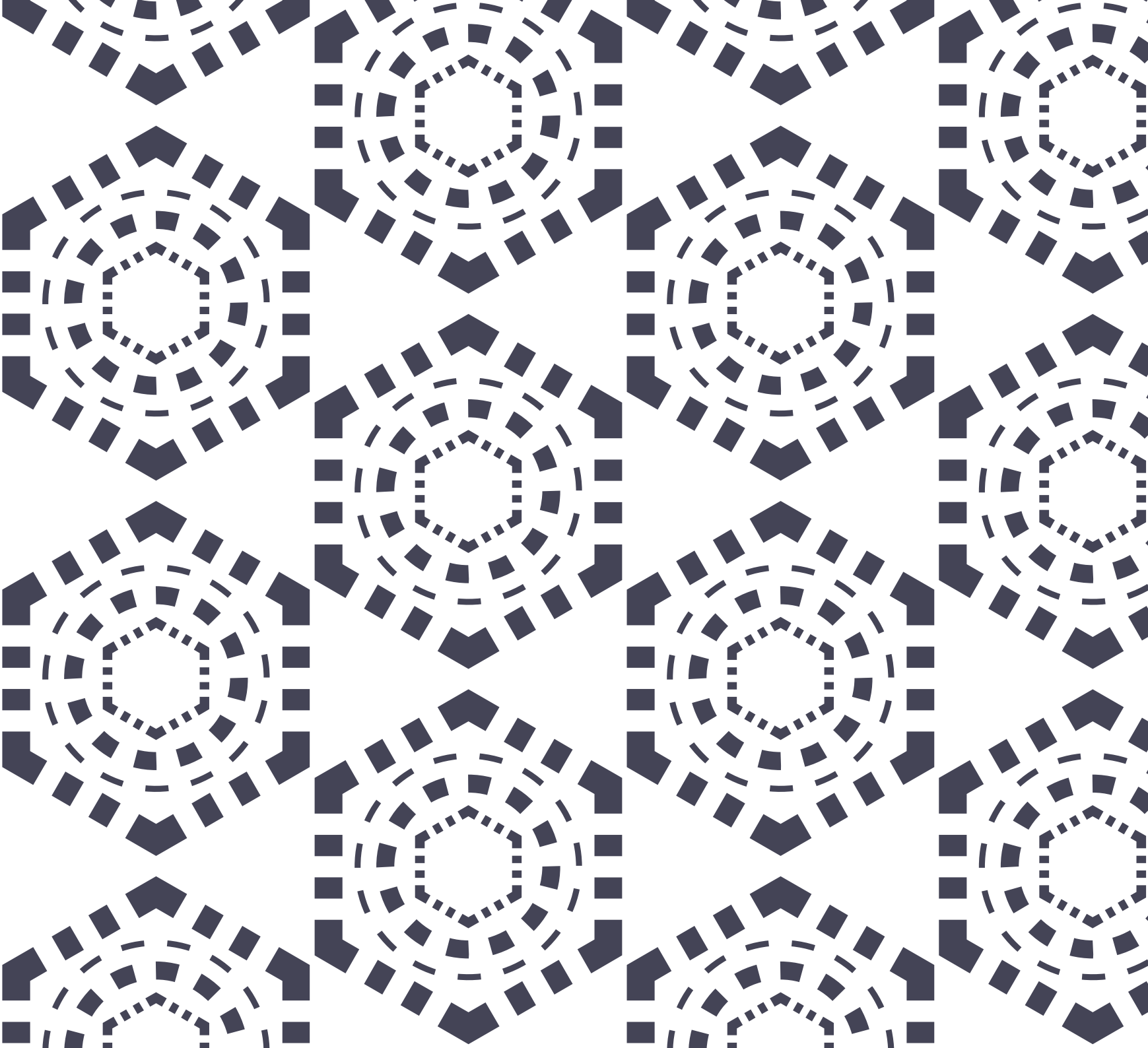
Wu, S. & Wu, L. (2008). The impact of higher education on entrepreneurial intentions of university students in China. *Journal of Small Business and Enterprise Development*, 15, 752– 774.

World Economic Forum (2016). *The Global Competitiveness Report 2016-2017*. Schwab, K. (Ed) y Sala-i-Martin, X (Adv.). World Economic Forum. Geneva.

Yang, L., & Wang, D. (2014). The impacts of top management team characteristics on entrepreneurial strategic orientation: The moderating effects of industrial environment and corporate ownership. *Management Decision*, 52(2), 378-409.

Zhao, H., Seibert, S.E., & Lumpkin, G. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381–404







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