MOROCCAN UNIVERSITIES AND ENTREPRENEURSHIP

Obstacles, Facilitating Factors and Measures

DEVEN3C

DÉVELOPPEMENT DES COMPÉTENCES ENTREPRENEURIALES À L'UNIVERSIYTÉ MAROCAINE : CRÉATIVITÉ, CONNAISSANCE ET CULTURE.

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THE STUDY'S BACKGROUND, JUSTIFICATION AND CONTEXT

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The study presented forms part of the European Union's Tempus programme for the "Development of Entrepreneurial Skills at Moroccan Universities: Creativity, Knowledge and Culture" (DEVEN3C), whose objective is to promote a culture of entrepreneurship at the 10 Moroccan universities participating in it, as set forth in the Annex section. These 10 universities currently account for approximately 80% of the country's university student population.

The general objective of the study is to identify the main obstacles, facilitating factors and measures that can bolster an entrepreneurial culture amongst university students, and to prompt and facilitate reflection on the main strategic lines to be followed towards this end. For that purpose, the study has been framed within an international economic context in which university knowledge takes on an important role.

The work, which combines secondary and primary sources, and is based on data obtained through its authors' participation in the DEVEN3C programme, is divided into five major sections, including this first, which justifies its approach and places it in context. Its main contents are comprised of a methodological description of the fieldwork carried out, an external analysis of the business ecosystem at Moroccan universities, an analysis and evaluation of the internal and organisational conditions of the universities, and the study's main conclusions and recommendations.

The results and information offered are valuable towards a diagnosis of the strategic situation of entrepreneurship at Moroccan universities and initiating a process of reflection on the measures suggested to improve it amongst the agents responsible for higher education and entrepreneurial development in the country. In addition, they serve to afford a global perspective on the models of entrepreneurial universities and a provide a useful agenda featuring the main subjects of research in the area, which can be applicable not only to the management and strategic administration of universities, but also to the challenge that Morocco faces as it aims to raise the level of research in this sphere, promote post-graduate courses, and incorporate its academic and research staff into international networks facilitating knowledge transfer.

1. THE ENTREPRENEURIAL PHENOMENON AND THE INTERNATIONAL CONTEXT OF MOROCCO

The creation of companies and the development of dynamic business communities shape countries' economic growth and the wellbeing of their societies, a fact ratified by numerous studies. The political agendas of leaders, governments, international institutions and local authorities have included entrepreneurship on their lists of priorities. This social and economic recognition of its importance has run parallel to the international relevance that entrepreneurship has acquired, along with research into it and its promotion at top universities around the world. It has been one of the most popular subjects in the social sciences in recent years, in increasing demand amongst professors, experts and publications. Figure 1 reflects this, illustrating the increasing number of scientific publications over the last 50 years and the major rise seen at the start of this century (Fuentes & Ruiz-Navarro, 2015).

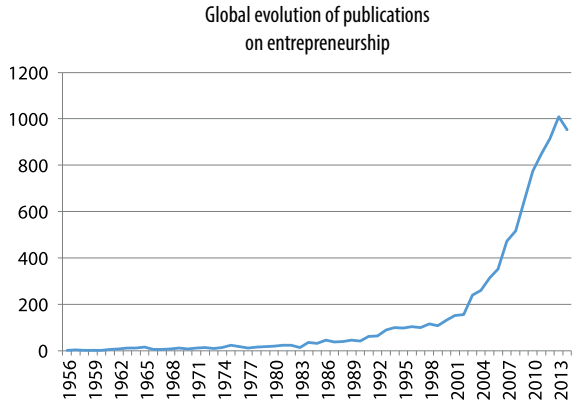


Figure 1

Source : Web of Knowledge. Fuentes and Ruiz-Navarro, 2015

This interest has been reflected in the appearance of specific reports and the work of international observatories stressing the importance of this subject. These efforts have included the World Economic Forum's reports on competitiveness, whose conceptual model includes the development of sophisticated business communities as an element essential to economic strategy (Schawab & Sala-i-Martin, 2016). More specifically, the Global Entrepreneurship Monitor, or GEM, (Reynolds et al, 2005) analyses and measures the variables impacting business creation and development processes in different economies, comparing countries and issuing recommendations. In a manner even more focused on universities, the Global University Entrepreneurial Spirit Student´s Survey (GUESSS), which the universities participating in the DEVEN3C recently joined, is designed to measure the entrepreneurial intentions of university students and issue recommendations (Ruiz-Navarro et al, 2017).

The economic policy implemented by Morocco in recent years, institutional reforms, the simplification of the operation of markets, and policies fostering the creation of companies and the promotion of entrepreneurship, have recently brought the country into the fold of economies based on factors of efficiency, and challenged it to make the jump to an innovation-based economy, in accordance with the national categorisation criteria previously established

by Michael Porter (1990).

At the last edition of the GEM, in 2015, in which the 62 countries that participated represented some 90% of the world's GDP, Morocco participated through the Entrepreneurship and Organisation Management Research Centre (Centre de Recherche en Entrepreneuriat et Management des Organisations) (EMO), attached to the Ain Chock Department of Legal, Economic and Social Sciences at Hassan II University in Casablanca (El Ouazzani, 2016). It had not participated since the last report by the Global Entrepreneurship Monitor GEM-MENA[1] Regional Report (2010), referring to 2009. Some of the changes that transpired during this period were significant.

In the 2015 GEM Maroc report, TEA (Total Early-Stage Entrepreneurial Activity) dropped to 4.44 (percentage of people engaged in the creation of emergent companies), below the average of 62 in the countries participating in the world-wide GEM and the TAE of the MENA zone, at 12.81. This TAE, which places Morocco 58th on the international ranking of GEM countries, differs notably from its position in 2009 when Morocco had about 2.9 million entrepreneurs and a TAE of 15.8. This major drop in the TAE is surprising, not squaring with perceptions conveyed by other sources. In 2009 Morocco was positioned in the group of countries with economies based on factors. Also worrisome is the low creation rate of companies considered innovative: just 12.8%, which places Morocco 58th amongst the countries analysed. This data clashes with the population's perception of its own capacities to create companies (32nd) and with that on entrepreneurial intentions (30.2% of the population states that it intends to create a company within three years), in which the country stands 14th, more in line with the entrepreneurial climate observed in Moroccan society.

The 2015 GEM report, although not offering data on Moroccan entrepreneurs' educational levels, stresses the importance of education to the success and consolidation of initiatives. The 2009 MENA report contained data indicating an educational deficit in Morocco: 10% of the business initiatives were headed up by people with no education (only Yemen and Libya were worse off) and only 16.9% had more than a secondary education (below the MENA average).

Another international observatory related to company creation processes, Doing Business 2017, also offers some data of interest on Morocco (Doing Business 2017). In its last edition Morocco improved its position in the international ranking of the 190 countries analysed, standing 68th, as it advanced by lowering the costs of administrative procedures, and introducing online processes that decreased the administrative complexity of creating a company.

[1] The countries analysed in the MENA (Middle East & North Africa) report from 2009 were: Syria, Palestine, Jordan, Lebanon, Morocco, Algeria and Yemen.

In general, although Morocco's overall economic situation has improved remarkably, there remain certain structural problems in its production systems and business community hampering the creation of companies, it being particular difficult to create companies boasting high growth potential and based on innovation. Some of these barriers are related to the role of its educational system, universities, and its policies of research and knowledge transfer in an advanced economy; that is, to the value of knowledge as a strategic resource for a territory.

2. HIGH-POTENTIAL ENTREPRENEURSHIP AND THE VALUE OF THE UNIVERSITY

Economic and social changes suggest that it is possible to overcome the "Schumpeterian" perspective of creative destruction, replacing it with creative construction in an economic context in which knowledge and innovation are the focus (Audrestsch et al, 2006). This idea hinges on a corporate concept that transcends the neoclassic model, emphasising the generation of value through collaboration between a range of agents and stakeholders. This paradigm affects the traditional strategic function of the university as a purveyor of human capital, challenging it to renew its supply of social capital and contribute to the identification, generation and exploitation of value creation opportunities with a territorial impact. It leads to a concept of the university bolstering entrepreneurship that necessarily entails taking into account the true learning process that proceeds from the entrepreneurial process, based on trial and error: "we learn the things through activity" (Popper et al, 1992: p.39). This calls for the use of a dynamic model (Ruiz et al, 2003) and an effectual method that combines action and reflection, promoting the transfer function and furnishing the university's traditional teaching and research functions with contents related to entrepreneurship.

An important characteristic of the economic change witnessed in recent years is the increase in the

importance of intangible resources delivering value to companies and the economy. Years ago companies invested mainly in productive material resources, such as machinery and buildings, but now they do so in immaterial assets in which the intellectual component and innovation are essential. In 1975, according to the Standard & Poor´s 500, 83% of companies' market value was related to its material assets, and 17% to their immaterial assets; 35 years later this proportion had changed to approximately 20% vs. 80%, respectively. This structural transformation shapes value creation and business development processes, and stands at the centre of economic policies oriented towards these assets, related to multiple factors affecting competitiveness. Amongst the different factors shaping the creation and growth of these assets, occupying a prominent place are organisations that are able to learn (Senge, 2006), fruit of the development of human capacities impacted by the quality of the educational system and, more concretely, the relationships that higher education establishes with society and the business community.

Different international studies highlight this approach. For example, the World Economic Forum (WEF) (2016), in its reports on competitiveness, presents a series of keystones that vary based on the stage or phase of an area's development. Aspects like the quality of the educational system, its scope, the quality of business schools, post-graduate education, scientific and mathematical education, and investments in R&D, among others, are key dynamic variables that repeatedly appear in the WEF's recommendations for the bolstering of production and business systems.

The models and information from the Global Entrepreneurship Monitor (GEM)[2] international observatory echo these ideas. Aspects related to social networks and business education, both generic and specific, are core elements of its analyses and recommendations. As countries graduate to more advanced stages of development, and their economies depend more on the innovation factor, these variables are more vital to supporting the intangible assets of their business systems. From this perspective, the quality of countries' nascent business communities is linked to their future prospects for growth, and give rise to what is called high-potential or strategic entrepreneurship (Aido et al, 2016). The evidence of the great impact of this type of entrepreneurship on economic growth is extensive (Wong et al., 2005) and its geographic aspects have been studied and related to locations near universities and research centres (Audretsch et al, 2006; Etzkowitz & Leydesdorff, 2000).

[2] GEM, see: http://www.gemconsortium.org

3. CONCEPTUAL MODEL: THE ENTREPRENEURIAL METHOD, TOWARDS THE ENTREPRENEURIAL UNIVERSITY

The creation of companies boasting high growth potential has gone hand in hand with a more detailed identification of the nature of their processes and new approaches to research into their methods. These are based on overcoming the theory of induction, which affirms that we learn things thanks to information coming from outside. We really learn by doing: "true learning is not inductive, but rather always consists of trying and failing, a process that we must undertake with the greatest degree of activity of which we are capable" (Popper et al, 1992; p.39). Thus, some authors state that generating value in a more complex and uncertain socioeconomic context calls for acting with an "entrepreneurial method" that complements the scientific method initiated by Francis Bacon (Sarasvathy & Venkataraman, 2011). This provocative proposal goes beyond teaching the specific process to create and develop companies. The entrepreneurial method is oriented towards the need to teach people how to create value, not only economic, but also social and artistic, through the identification or generation and exploitation of opportunities based on knowledge and interaction between people. This active aspect – through cocreation – is one of its distinguishing characteristics, and the rationale behind its denomination as an effectual method[3] (Sarasvathy, 2001).

[3] To find out more about the entrepreneurial or effectual method, go to: http://www.effectuation.org

An element central to this method is opportunity. Entrepreneurs recognise, find, create and exploit opportunities (Shane & Venkataraman, 2000). The conceptualisation of opportunities at times appears to be discovered, while at others co-created by the entrepreneur and his stakeholders. A second contribution consists of the generation of the markets that make opportunities valuable. These do not always arise from an unmet demand, but rather are complex forms of interaction entailing individual and collective actions (Olson, 1996). In most emerging markets neither the entrepreneur nor his stakeholders usually have a complete and coherent vision of them, as it is the relationships between them that gradually give rise to their construction. The third question centres on who is qualified to be an entrepreneur. Since the market generation and opportunity construction process is so broad, any person or institution is liable to be immersed in these changes of a social nature. Fourthly, the entrepreneurial method can serve to drive social innovations that make possible the development of human capacities (Sen, 1996; Nussbaum, 2012), overcoming - fifthly- the profit/non profit dichotomy of initiatives, making it possible to develop talent investing in the resolution of social problems and the disappearance of "public-private" borders. Thus, the entrepreneurial method is not an

instrument of the free market, but rather uses the market and public institutions as instruments to generate new markets and new institutions, a meta-logic or rational procedure to help reformulate the problems of society and to make it progress (Sarasvathy & Venkataraman, 2011).

This entrepreneurial method, its authors propose, should be taught not only to people who wish to be businesspeople, but to everybody, which would have a major impact, not only on the creation of companies, but also on the resolution of social problems, leading to a notable increase in productivity and answers to uncertainties and "black swans." This perspective entails removing education on entrepreneurship from its pigeonhole as a subdiscipline of Management or Economics, and understanding it as something broader than this. Just as scientific knowledge was originally something exclusive to a group of select individuals, and later spread as a method, the entrepreneurial method – that is, training enabling people to plan and then to follow through on their plans – can be used thanks to interaction between research, pedagogy and practice (Sarasvathy & Venkataraman, 2011). Applying this method to the educational system and, especially, to the university system, would make it possible to reinvent not only curricular contents, but also the very nature of the university, overcoming the contradictions experienced by some universities due to their incomplete approaches to the business world. This perspective makes it possible to transcend exclusively economic approaches and adopt a more comprehensive and integrative social perspective related to emergent concepts, like the civic university (Goddard et al 2013). The emergent idea of the civic university expands and reinforces the university's discourse and structures interest in university-company relationships, serving to build bridges between the university, social development and territorial development through the entrepreneurial method.

4. THE ENTREPRENEURIAL UNIVERSITY: RESEARCH AGENDA

The paradigm of the "entrepreneurial university" includes aspects like: the capacity to identify and exploit strategic resources; the development of executive capacities and the professionalised management of organisation; connection with surrounding areas and the establishment of alliances with key figures in them; and the diversification of financial sources (Clark, 1998). As a result of the publication of Clark's book, there has been an increased interest in this relationship between entrepreneurship and the university. This trend is confirmed by the bibliometric analyses (Ramos and Ruiz, 2004) carried out on the subject. It is evident from the 995 articles and 15.561 quotes in the journals of the Social Science Citation Index (SSCI) yielded by a selective search using the terms "entrepreneurship and university," from 1988 through early December 2016. Figure 1 illustrates this trend and the growth of annual publications, peaking at over 120 articles in 2016.

Analysis of the citations in this set of articles during the period analysed is presented in Figure 2 and ratifies the research community's interest in the subject. The journals that have recently published on this topic are Research Policy (29), Journal of Business Venturing (14), Technovation (10), Small Business Economics (6), and the Journal of Technology Transfer (5). The 10 articles cited most often appear in Table 1.

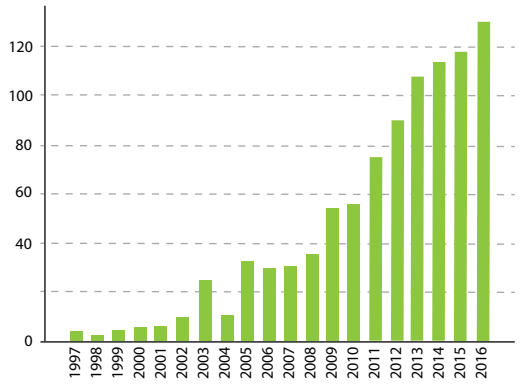


Figure 1: "Entrepreneurship and University" annual publications
Source: internally produced using SSCI data

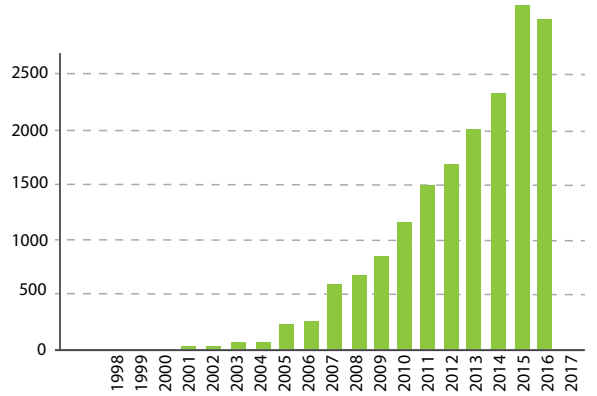


Figure 2: Entrepreneurship and University annual citations
Source: internally produced using SSCI data

Most-cited articles	Authors:	Journal	Years	Quotes
Internal capabilities, external networks, and performance: a study on technology-based ventures	Lee, C; Lee, K; Pennings, JM	*Strategic Management Journal*	2001	503
Organisational endowments and the performance of university start-ups	Shane, S; Stuart, T	*Management Science*	2002	393
Why do some universities generate more start-ups than others?	Di Gregorio, D; Shane, S	*Research Policy*	2003	346
University entrepreneurship: a taxonomy of the literature	Rothaermel, Frank T.; Agung, Shanti D.; Jiang, Lin	*Industrialist and Corporate Change*	2007	315
The mediating role of self-efficacy in the development of entrepreneurial intentions	Zhao, H; Seibert, SE; Hills, GE	*Journal of Applied Psychology*	2005	309
Research groups as "quasi-firms": the invention of the entrepreneurial university	Etzkowitz, H	*Research Policy*	2003	285
The emergence of entrepreneurship education: development, trends, and challenges	Kuratko, DF	*Entrepreneurship Theory and Practice*	2005	250
Entrepreneurial orientation, technology transfer and the spinoff performance of US universities	O'Shea, RP; Allen, TJ; Chevalier, A; Roche, F	*Research Policy*	2005	214
Founders' human capital and the growth of new technology-based firms: a competence-based view	Colombo, MG; Grilli, L	*Research Policy*	2005	212
The impact of network capabilities and entrepreneurial orientation on university spin-off performance	Walter, A; Auer, M; Ritter, T	*Journal of Business Venturing*	2006	195

Table 1: Entrepreneurship and University: The 10 Most-Cited Articles
Source: internally produced using SSCI data

Although the fragmentation in the studies' conceptual approach is significant, four blocks of subtopics can be distinguished: those corresponding to an individual or cognitive focus, analysing the importance of people's intentions and motivations (Zhao et al 2005; Kuratko, 2005); those which spotlight resources and capacities, their heterogeneity and complementarity (Colombo et al 2005); those that stress the role of institutional design and social networks (Rothaermel et al, 2007; Walter, 2006; Etzkowitz, 2003; Shane et al, 2002; Lee et al, 2001); and those illustrating the importance of result metrics (Di Gregorio & Shane, 2003).

The work of Rothaermel et al (2007) is very useful to organising the studies that have been conducted in the field. The first observation yielded by it and an analysis of the studies published to date is that the topic continues be highly fragmented, encompassing very diverse aspects of universities and their relationships with the business world. In spite of this fragmentation, the authors identify four major lines of work: 1) university research and entrepreneurship (nearly 50% of the articles); 2) business creation (24%); 3) surroundings, including the influence of innovation networks (17%); and, 4) the productivity of Research Results Transfer Offices (9%). These four areas attracting researchers' interest gradually give rise to a systemic vision of the concept of the entrepreneurial university, at whose centre lie research and the process of knowledge generation, its diffusion and interaction with surrounding areas to transfer it, and the mechanisms to consolidate and nurture business initiatives arising from the process.

These three basic functions – teaching, research and transfer – have multiple specific aspects not exempt from critical discussion. The first pertaining to the study raises the question of whether to choose between basic or applied research. The second, diffusion, in a broad sense can encompass the teaching and/or transfer function. Both questions address the importance of the provisioning of university resources and their strategic deployment to generate entrepreneurial activity. This internal aspect encompasses an ample spectrum of matters, from methods to follow in teaching; transfer mechanisms, interfaces between the university and its surrounding areas, such as Research Results Transfer Offices and specialised technical units, like Business Chairs; the system of incentives that educational and research personnel have; the characteristics of teaching staff and administrative and service personnel; university location; experience amassed in relationships with companies; reputation and status; culture and norms of behaviour in relation to the business system; and the value of the technology and knowledge that the university possesses. However, the relationship between the model's internal variables and entrepreneurial activity at universities are affected

by factors external to their territorial surroundings, including public policies that influence the creation of companies and their growth, and the sectorial and structural conditions of their regional contexts. External conditioning factors include business incubators and accelerators, technological/scientific parks, and an ample set of resources that make up the territory's entrepreneurial and innovation ecosystem, including networks and funding systems for the early and growth phases through seed capital, business angels, and specific public programmes. Figure 3 illustrates these conditioning factors.

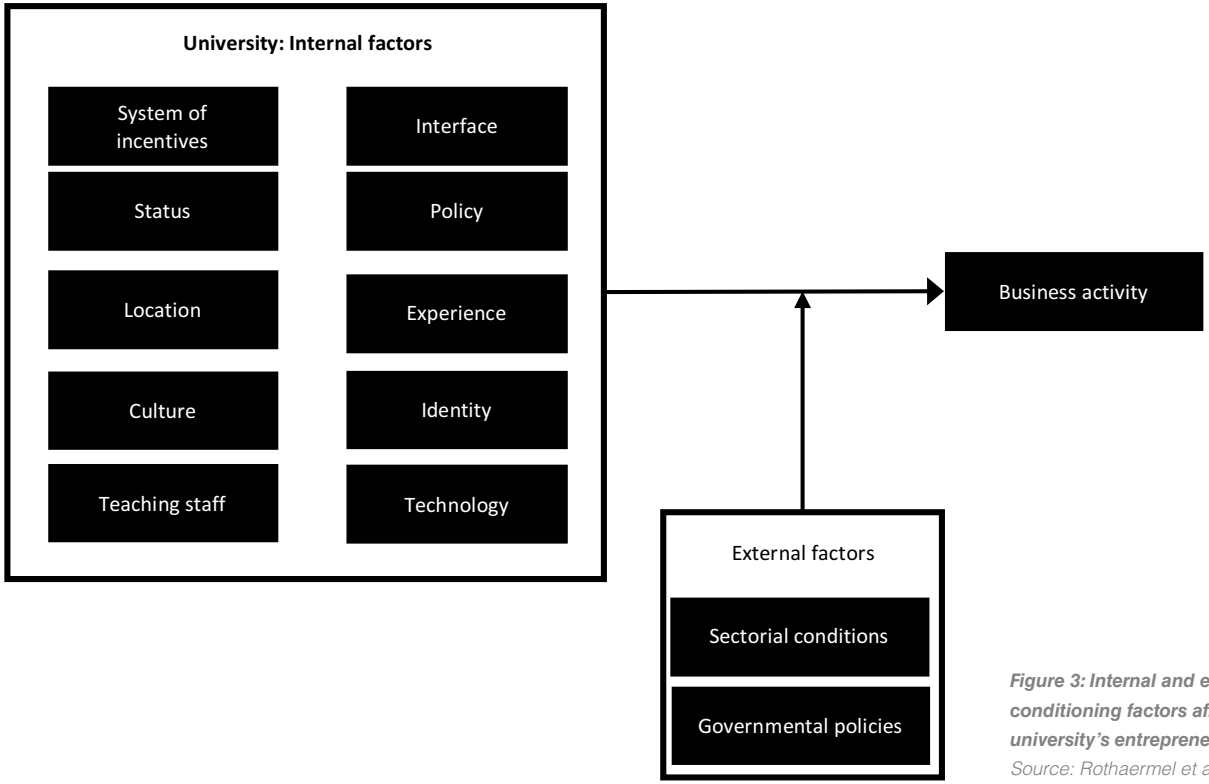


Figure 3: Internal and external conditioning factors affecting the university's entrepreneurial activity
Source: Rothaermel et al (2007)

This systemic vision of the multiple variables affecting the university's business activity is rounded out by a dynamic vision of the company creation process, featured in the model by Vohora et al (2004) summed up in Figure 4, which identifies its critical phases. According to this model entrepreneurial activity is focused on the process of generating university spinoffs; that is, the creation of companies based on knowledge stemming from university research. But this is a definition burdened with practical difficulties due to the ambiguity of the origins of such knowledge.

The first requirement for the process to begin is that there be quality research contributing a distinguishing value to the knowledge generated at the university. The following requirement is that the knowledge the research group has to offer must meet a demand through a process of opportunity recognition. In this phase the main drawback is usually the inexperience of the researchers in entrepreneurial matters and the lack of aid available from specialised units like Research Results Transfer Offices or Business Chairs. If this phase is successfully completed, the following is a corporate commitment or the materialisation of a new company or emergent organisation that meets the market's demand and accesses the resources necessary to do so with a suitable strategy. The causal approach - or traditional one of a business plan - would become complementary to the effectual approach, more action-oriented (Sarasvathy, 2001) to overcome the threshold of market credibility, grow and reorient its business model, passing to the next phase, in which the need for financial resources can be an important restriction. Finally, the consolidation phase is usually linked to the quality of the management team, which in most cases combines talent from the research team and external talent from the business sphere. Multiple parties participate in this process, mobilising and accessing different resources, which, depending on their organisation and exploitation model, affect results. Success in the results stems from initiatives that follow the effectual model with precise guidelines: they are set out based on resources that they control; they set a limit of assumable losses; they are flexible, pivoting and adapting to new opportunities; they construct effective alliances with other stakeholders; and they assign priority to the maintenance of control (Gabrielsson & Gabrielsson, 2013).

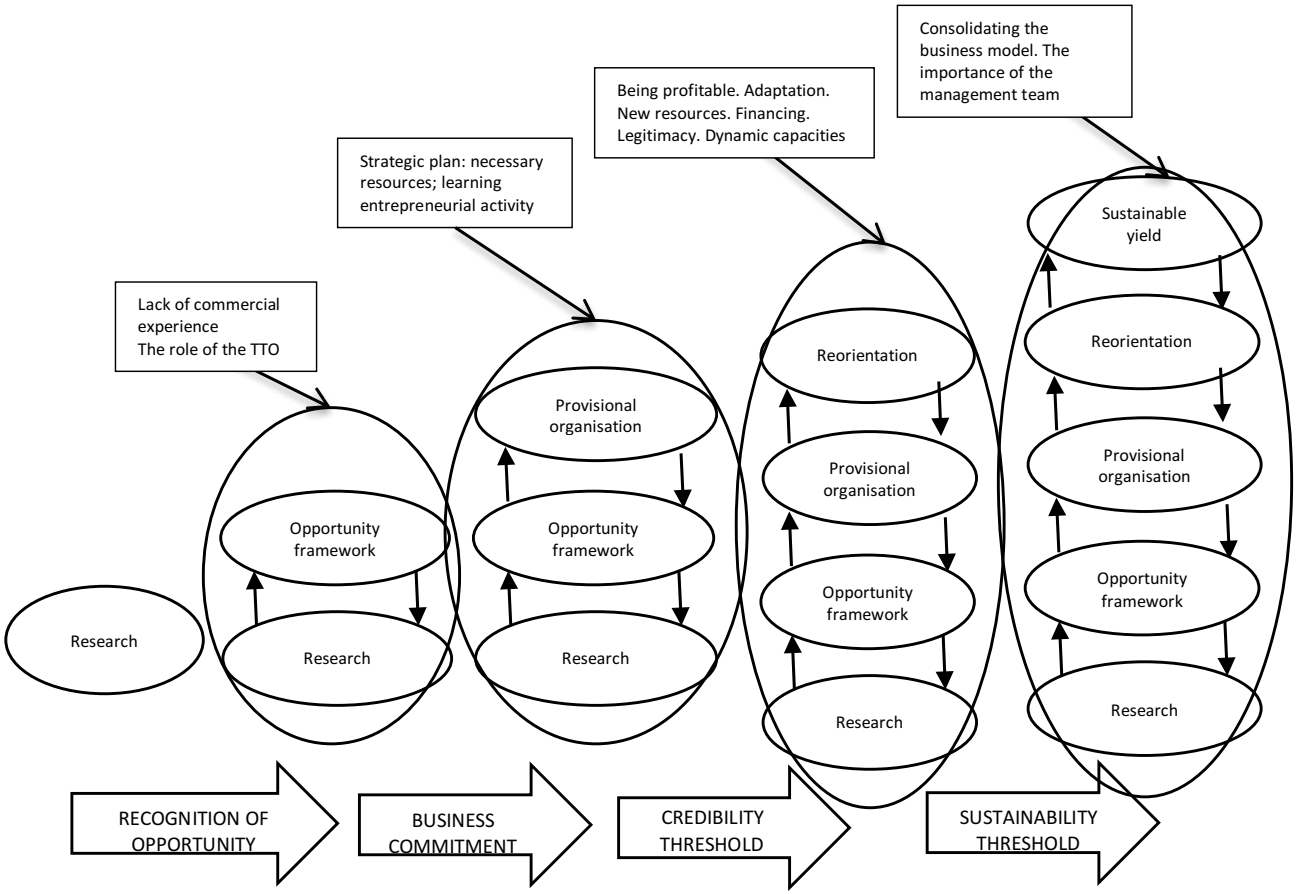


Figure 4: Critical phases in the university spinoff creation process

Source: Vohora et al 2004

5. RESEARCH ON ENTREPRENEURIAL INTENTIONS AS A KEY TO THE PROCESS

The commencement of these business initiatives' processes begins with the cognitive mobilisation of individuals, as revealed by studies on social psychology related to Azjen's Theory of Planned Behaviour (Krueger & Carsrud, 1993). This line of research asserts that intentions are the best predictor of behaviour and that research into them, conceptual and empirical, opens up new lines into the study of business initiatives. This approach also extends to the university, with research beginning years ago into university students' entrepreneurial intentions. Over the last ten years 67 works have been identified published in journals of the Social Science Citation Index (SSCI) as a result of a selective search with the terms Entrepreneurial intentions and university, still with relatively low citation figures, coming to 735. Their evolution over time can be seen in Figure 5, and Table 2 presents the ten most-cited works.

This interest in the entrepreneurial intentions of university students has given rise to collaborative research projects like the Global University Entrepreneurial Spirit Students' Survey (GUESSS), whose last edition in 2016 compiled the opinions of more than 122,000 individuals at 1,000 universities in 50 countries[4], including the incorporation of Morocco (Ruiz-Navarro et al, 2017).

[4] See more at: http://www.guesssurvey.org

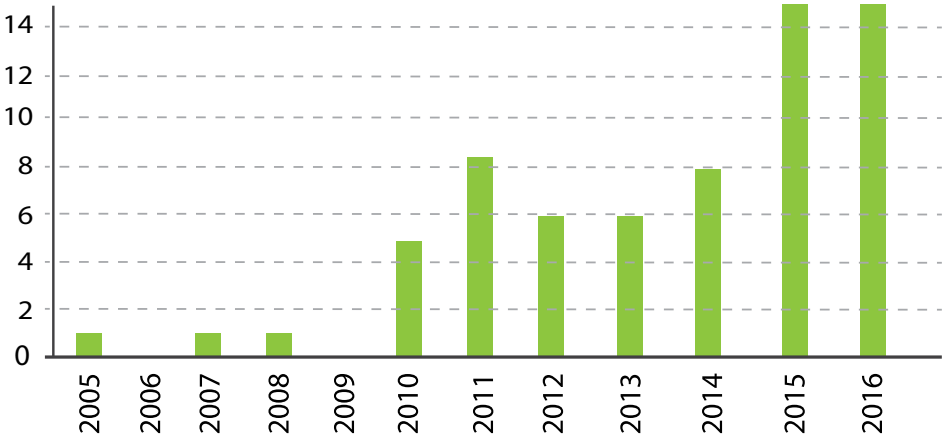


Figure 5 "Entrepreneurial intentions and university," annual publications.

Titles	Authors	Journals	Years	Quotes
The mediating role of self-efficacy in the development of entrepreneurial intentions	Zhao, H; Seibert, SE; Hills, GE	*JOURNAL OF APPLIED PSYCHOLOGY*	2005	310
Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain	Linan, Francisco; Urbano, David; Guerrero, Maribel	*ENTREPRENEURSHIP AND REGIONAL DEVELOPMENT*	2011	66
Entrepreneurial Perceptions and Intentions: The Role of Gender and Culture	Shinnar, Rachel S.; Giacomin, Olivier; Janssen, Frank	*ENTREPRENEURSHIP THEORY AND PRACTICE*	2012	52
Conceptualizing academic-entrepreneurial intentions: An empirical test	Prodan, Igor; Drnovsek, Mateja	*TECHNOVATION*	2010	46
The influence of sustainability orientation on entrepreneurial intentions - Investigating the role of business experience	Kuckertz, Andreas; Wagner, Marcus	*JOURNAL OF BUSINESS VENTURING*	2010	42
The significance of personality in business start-up intentions, start-up realization and business success	Frank, Hermann; Lueger, Manfred; Korunka, Christian	*ENTREPRENEURSHIP AND REGIONAL DEVELOPMENT*	2007	33
Tourism students´entrepreneurial intentions	Gurel, Eda; Altinay, Levent; Daniele, Roberto	*ANNALS OF TOURISM RESEARCH*	2010	27
The theory of planned behaviour as a predictor of entrepreneurial intent amongst final-year university students	Gird, Anthony; Bagraim, Jeffrey J.	*SOUTH AFRICAN JOURNAL OF PSYCHOLOGY*	2008	18
The role of entrepreneurship education as a predictor of university students' entrepreneurial intention	Zhang, Ying; Duysters, Geert; Cloodt, Myriam	*INTERNATIONAL ENTREPRENEURSHIP AND MANAGEMENT JOURNAL*	2014	14
Knowledge context and entrepreneurial intentions among students	Dohse, Dirk; Walter, Sascha G.	*SMALL BUSINESS ECONOMICS*	2012	12

Table 2:"Entrepreneurial intentions and University": most-cited articles

6. RESEARCH AGENDA OF MOROCCAN UNIVERSITIES

With the aim of analysing studies on the entrepreneurial university undertaken at Moroccan universities, the 995 articles resulting from the search run at the SSCI described in Section 3 of this chapter were cross-referenced with the authors' universities, and no results were obtained. Neither were any results yielded by cross-referencing these articles with the subjects "Moroccan universities" or "Moroccan university."

The search run in Google Academic using the criteria "Moroccan universities and entrepreneurship" on 14 January, 2017 offered 47 publications in journals not catalogued in the SSCI or in books. Those most cited appear in Table 3. A similar number of articles (56), but without quotes, was found using the search criterion "Moroccan university and Entrepreneurial".

Number of quotes	Articles related to "Moroccan universities and entrepreneurship" in Google Academic
13	Bekkaoui, K., & Larémont, R. R. (2011). Moroccan Youth Go Sufi. *The Journal of the Middle East and Africa*, *2*(1), 31-46
10	Bahji, S. E., Lefdaoui, Y., & El Alami, J. (2013). Enhancing Motivation and Engagement: A Top-Down Approach for the Design of a Learning Experience According to the S2P-LM. *iJET*, *8*(6), 35-41.
3	Kabbaj, M., El Ouazzani Ech Hadi, K. H. A. L. I. D., Elamrani, J., & Lemtaoui, M. (2016). A Study of the Social Entrepreneurship Ecosystem: The Case of Morocco. *Journal of Developmental Entrepreneurship*, 1650021
3	Ayegou, Jamila, Mahrek, Faiçal, Rajrajic, Amina and Talbi, Mohammed (2014). Self-employment: Towards making entrepreneurship teaching more beneficial at the Moroccan university. Social and Behavioral Sciences 116, 3410 – 316.
2	Zuabi, V. (2012). Building higher education partnerships in the Maghreb.
2	SABOUR, M. H. (2010). Retrospective and experiential perceptions on education in Morocco by an engaged observer. *Mediterranean Journal of Educational Studies*, *15*(2), 77-87.

Table 3."Moroccan universities and entrepreneurship" in Google Academic

METHODOLOGY OF THE FIELD WORK

2

The diagnosis of the main obstacles, facilitating elements and recommended measures to bolster entrepreneurship at Moroccan universities has followed a methodology similar to that used by other international studies. The fieldwork was divided into two large blocks of analysis: the external conditioning factors and characteristics of the university ecosystem; and the internal conditioning factors at the universities. In order to obtain this information two specific questionnaires were created: one directed at the universities, to analyse their internal determinants; and another for experts in their surrounding areas.

The questionnaires used in the two surveys are provided in the annex, and were drawn up based on previous experiences at other studies. Their adaptation to the territorial scope of Morocco was tested at Abdelmalek Essaadi University before distributing them.

Each of the 10 universities participating in the Tempus programme was asked to send these questionnaires to 9 experts near their selected territories and with the following profiles: 3 people with profiles as businesspeople; 3 administration officials, and 3 freelance professionals or business executives.

In addition, each university was asked for 5 questionnaires from people at its organisation with the following profiles: one from the chancellor (20% of the total weight); one from a vice-chancellor (20%); one from an official at the employment service or entrepreneurial or transfer service (20%); two surveys from professors involved in entrepreneurship (40%).

As complementary information a table was also requested featuring some statistical data from recent years (those received are attached in the Annex).

At the coordination meeting in Rabat on 3 May, 2016 the objective of the work was explained and paper copies of the surveys were given to attendees, and made available to the universities in electronic format, scheduling the completion deadline for the end of June, later extended until the end of September.

In the two following sections the results from these surveys are presented in tables, represented graphically and discussed. Thanks to the information from other studies, mainly the Global Entrepreneurship Monitor (GEM)[5] project, it was possible to carry out a comparative analysis between Morocco and other territories, useful for the issuance of recommendations.

[5] The GEM is the world's premier collaborative research project on entrepreneurship. The methodology and contents of the GEM's information can be viewed at: http://www.gemconsortium.org

3 EXTERNAL ANALYSIS OF THE PERCEPTION OF THE UNIVERSITY'S ENTREPRENEURIAL ECOSYSTEMS

The objective of the survey on surroundings was to gauge the factors that hamper vs. those that facilitate entrepreneurship through universities, and the possible measures to promote it. An evaluation was also carried out of 12 conditioning factors impacting the entrepreneurial ecosystem, used to compare Morocco with other territories based upon the perceptions of the experts consulted.

Leaders at each university participating in the programme were asked to select 9 experts from their territorial scopes, with business, professional, consulting or public administration experience.

The drafting of the questionnaire was carried out considering the main variables which in other studies have proved relevant to business creation and development processes in a given territory. Special attention was paid to the information and experience proceeding from Global Entrepreneurship Monitor (GEM) international project.

The contents offered below provide a description of the characteristics of the experts who responded to the survey, indicating their regional origins, gender, experience (years in their profession), position, sector of economic activity and education. The high figures in these variables reflect the panel of expert's high qualifications, which validates the information obtained from the surveys. After this description the answers regarding the barriers to entrepreneurship, factors that facilitate the process, and the main measures proposed for their promotion were indicated on graphs. Finally, an evaluation of the 12 factors impacting the entrepreneurial sphere is offered.

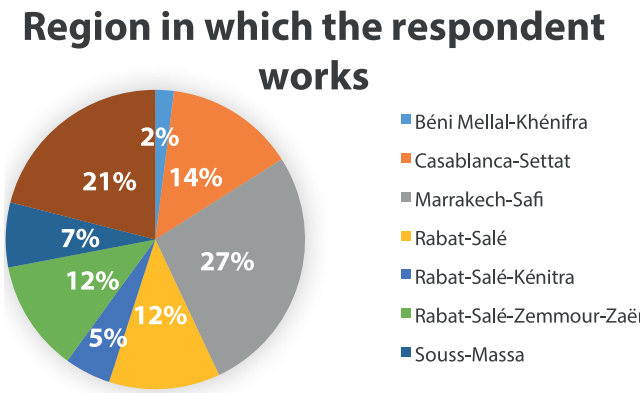
1. CHARACTERISTICS OF THE SAMPLE IN MOROCCO

From May to September, 2016 hard copy and online questionnaires were distributed to gauge the opinions of university experts on the university entrepreneurship situation in Morocco. 90 questionnaires were sent out (with an objective of obtaining at least 9 for each university), and the completion rate was 47%. The breakdown of the 42 surveys received, by university, appears in Table and Figure 1

TABLE 1: ANSWERS BY REGION

Region	Answers	%
Béni Mellal-Khénifra	1	2%
Casablanca-Settat	6	14%
Marrakech-Safi	11	27%
Rabat-Salé	5	12%
Rabat-Salé-Kenitra	2	5%
Rabat-Salé-Zemmour-Zaër	5	12%
Souss-Massa	3	7%
Tangier-Tétouan	9	21%
Total	42	

FIGURE 1:



24% of the sample came from women, and 76% from men. With regards to the positions of responsibility held by the participants, with an average period of 8.5 years at their companies and 6.5 years in their present positions, 44% were directors and managers of companies and bodies, followed by 21% directors, and 18% bosses. Next, there appear coordinators (8%) and advisors (3%), consultants (3%), engineers (3%) and self-employed professionals (3%) (see Figure 2), representing 6% each (see Figure 2), with an average of 10 years in this position of responsibility.

Next they were asked to indicate the characteristics that best defined their company, being able to choose several. Figure 3 indicates the different sectors of the companies and bodies represented by the experts who responded to the survey. Among them were companies providing services to others (41%), followed by companies that employ intermediate to low technological levels (24%), and high ones (20%). 17% reported being at urban companies, with high growth (10%), while their national vs international orientations featured more proximate figures: 29% and 20%, respectively.

FIGURE 2

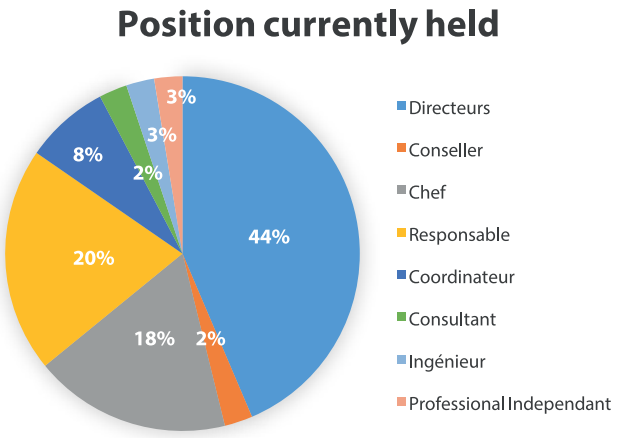
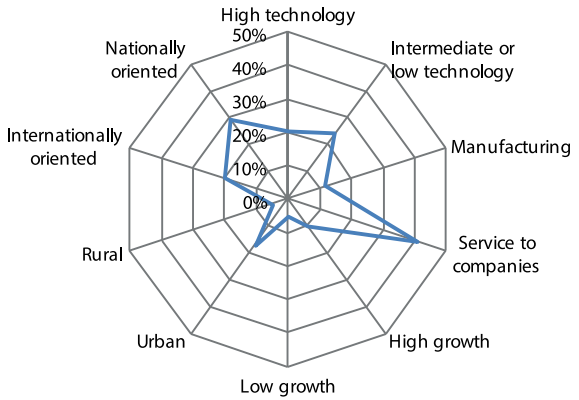
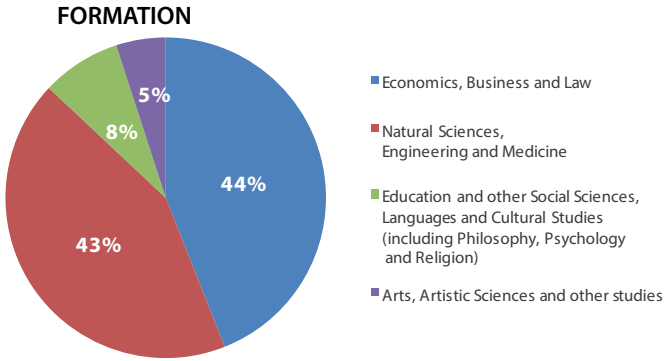


FIGURE 3: SECTORS



In terms of their education, the experts possessed mainly higher educations; see Figure 4. The majority boasted postgraduate studies (Masters, doctorates, etc.) (76%), 20% had completed studies at technical universities or schools, 20% had completed advanced vocational training, and 5% had completed intermediate-level technical or professional training.

FIGURE 4



2. MAIN OBSTACLES TO ENTREPRENEURSHIP

To identify and measure the main obstacles to entrepreneurship, the experts were asked to mention 3 factors that can pose, in their view, obstacles (01-03) to students who intend to become entrepreneurs and to the company creation process. The online questionnaire included three open fields to be filled out in order of priority. Once the answers were obtained a codification and grouping process was carried out in five major categories:

- Financing, to gather opinions having to do with the lack of initial capital and the difficulties obtaining financing from financial organisations.
- An entrepreneurial culture, which reflects the absence of a culture of management or a lack of awareness and information on entrepreneurship, or programmes to promote and foster an entrepreneurial spirit, for example.
- Education in the field of entrepreneurship, a deficit of competencies (technical and relational), the content and the objectives of secondary education, courses in entrepreneurship in general are given by university faculty, the curriculum of the itineraries does not feature education in entrepreneurship, and the lack of a strategy within the university framework, among others.
- Bureaucracy and institutions - Economy, including the business climate and time-consuming

- administrative procedures, the lack of a culture of partnership, and the absence of a strategic vision of entrepreneurs as drivers of self-employment.
- Others, featuring aspects not covered by the previous categories.

FIGURE 5: MAIN OBSTACLES TO ENTREPRENEURSHIP

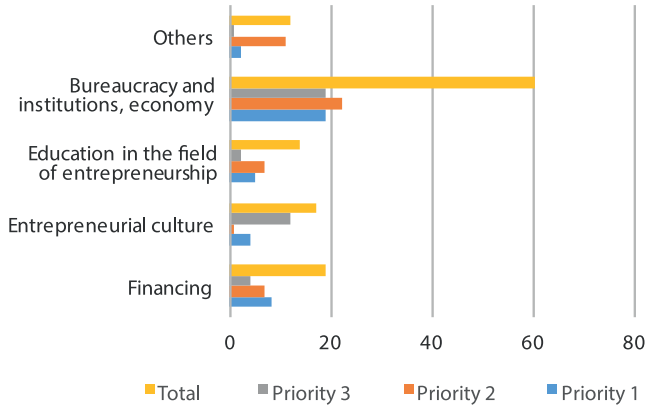


Figure 5 presents the answers obtained, classified in these categories and indicating the priority assigned by the expert. As can be observed, most of the experts surveyed indicated the importance of obstacles related to excessive bureaucracy and administrative procedures. They also emphasised concerns regarding financing tools for entrepreneurs, followed by the absence of a strong business culture and education in entrepreneurship. This result repeats, almost identically, in each of the three answers or priorities indicated by the respondents, with very minor fluctuations.

Analysing the answers received in detail, these obstacles were underscored:

- Economic and financial limitations.
- Time-consuming administrative procedures.
- Ambiguous procedures.
- Lack of support.
- The absence of an entrepreneurial spirit amongst young people.
- The political parties, public sector and regional authorities are oblivious to the young entrepreneurs in the region.
- A lack of specialised education.
- Corruption.
- A lack of support by the Administration.
- The complexity of the administrative procedures in question.
- Difficulties accessing economic information.

3. MAIN FACTORS FACILITATING ENTREPRENEURSHIP

The project's objectives include studying the main factors facilitating entrepreneurship. Thus, the online questionnaire included three open fields asking the experts to cite 3 factors involved in the process for the creation of companies associated with universities, and 3 factors that could be considered facilitators (F1-F3). Once the answers were received, a codification and grouping process was carried out using the five categories previously described.

FIGURE 6: MAIN FACTORS FACILITATING ENTREPRENEURSHIP

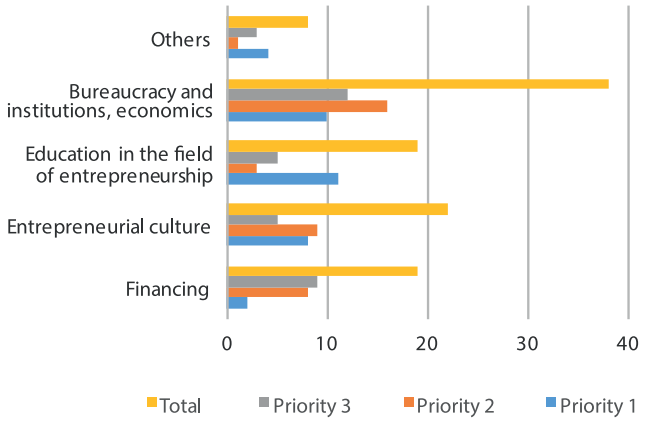


Figure 6 shows that actions related to government are the facilitating factors most often mentioned as forces driving entrepreneurship. Along with these appears a culture of entrepreneurship, followed by the financing of projects and education as aspects that expedite the process. There are only small variations in terms of each of the priorities.

Analysing in detail the answers received, these facilitating factors were emphasised:

- Finding financial resources and placing investors and project promoters in contact.
- Promoting entrepreneurship and the possibility of sharing risks, facilitating access to the public market.
- Support.
- Incubators.
- Start-up accelerators.
- A structure dedicated to innovation and entrepreneurship.
- Access to financing.
- Creating forums that bring parties together, and multiplying awareness-raising activities.
- Support from the RICs (Regional Investment Centres).
- Promotion by the State.
- Road infrastructure.
- Information availability.

4. MAIN MEASURES TO ADOPT

Finally, the online questionnaire included three open fields asking the experts to mention three measures that should be adopted in the future (M1 - M3) with a view to improving them. Once the answers were received the codification and grouping process was carried out using the five categories previously described.

FIGURE 7: MAIN MEASURES TO ADOPT

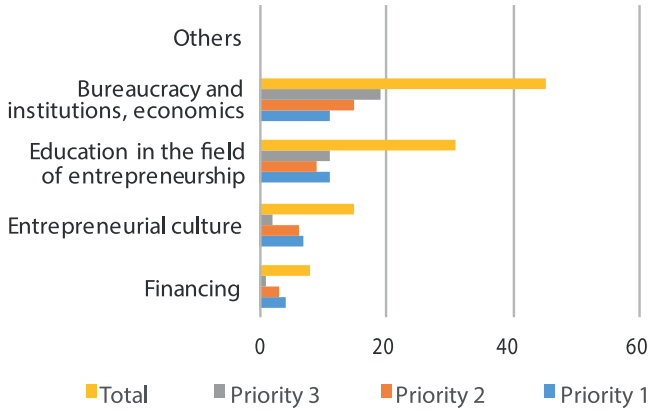


Figure 7 again confirms that actions to reduce bureaucracy and institutional policies for the promotion of entrepreneurship by the public administration are considered the most important measures according to the experts, followed by education in entrepreneurship, which is assigned a very important role, through entrepreneurial actions by the university and throughout the educational system.

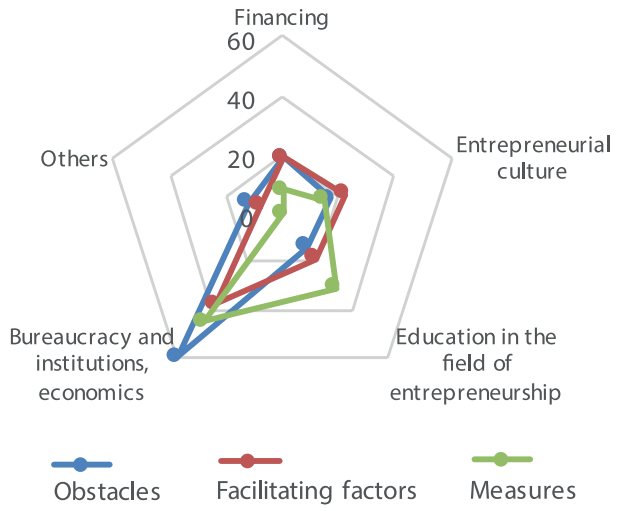
Analysing in detail the answers obtained, these measures stand out:

- Reducing the requirements of public tender processes, or distributing the market on the basis of equal opportunities, or specifying the tasks assigned to young companies in these processes, and multiplying their initiatives.
- Greater Customs flexibility.
- Adaptation of education to meet the needs of companies. Therefore, educational facilities should be careful, open and responsive, while companies should manifest their needs and collaborate with these institutions financially.
- Integrating the business culture into the educational system from its earliest stages.
- Supporting companies by means of fiscal incentives.
- The creation of information centres on trades and professions.
- Creating one-stop shops for administrative procedures.
- The progressive professionalization of school and university academic offerings.
- Proposing accessible support packages.
- Reforming the business sphere and introducing good governance measures (equality of opportunities, above all for start-ups).
- Modifying laws and adopting national entrepreneurship promotion strategies, placing special trust in women entrepreneurs.

5. SUMMARY OF THE FACTORS IN THE UNIVERSITY ENTREPRENEURSHIP SPHERE

An aggregated analysis of the opinions regarding the factors that hamper vs. those which enhance the conditions affecting university entrepreneurship, and the measures to be adopted to promote it, upholds the diagnosis identifying the need to stress institutional measures by the government. These aggregated results are presented in Figure 8. High-priority actions, according to the opinions of the experts, must centre on aspects related to decreasing bureaucratic barriers, facilitating governmental administration, improving fiscal conditions, and simplifying administrative requirements and resources. These actions to streamline governmental processes and make them more fluid must be combined with economic policy actions that improve the complementary resources available to undertake entrepreneurship in spheres related to knowledge, furnishing territories near universities with complementary infrastructures (incubators, technological/scientific parks, etc.), along with financial resources adapted to projects. Along with these measures, as stressed previously, aspects related to education in entrepreneurship also occupy an important position.

FIGURE 8. SUMMARY OF THE OBSTACLES, FACILITATING FACTORS AND MEASURES IDENTIFIEDFIÉS

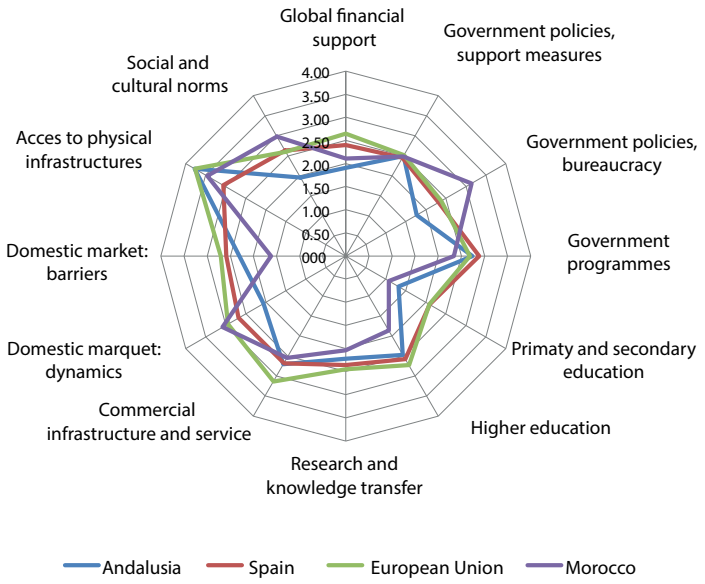


6. COMPARISON OF THE ENTREPRENEURIAL ECOSYSTEM WITH THAT IN OTHER COUNTRIES AND TERRITORIES

One of the challenges involved in promoting a culture of entrepreneurship and the creation of high-potential companies, which generate economic value and employment, is having comparative analysis tools to examine different territories. This comparative analysis makes it possible to identify the elements or factors in an area in which a given country or region has strengths, or weaknesses where it must improve. To this end, and following the methodology of the GEM project, experts were asked to evaluate 12 statements on a Likert Scale corresponding to the main factors

impacting the entrepreneurial ecosystem. Figure 10 indicates the scores obtained, on a scale of 1 (less favourable) to 5 (more favourable), compared to those obtained in other nearby territories, both geographically and from a perspective of engagement with economies of innovation, in which universities play an important role: with an average of the GEM countries of the European Union, Spain and Andalusia. Table 2, along with these values, includes a column with the information from the "GEM Maroc 2015."

FIGURE 10 : STRATÉGIE



The differences in the scores assigned to factors 12 (social norms) and 9 (dynamism of markets of goods and services) are better in Morocco than the average of the territories selected. In contrast, Morocco must improve in factors that received a score under this average; specifically, in the following ones: 10 (overcoming entrance barriers to certain markets); 5 (primary and secondary education); and, 6 (education and support to universities for the creation and growth of companies). The following section is dedicated to this last aspect.

Table 2

	Strategic axes of the entrepreneurial ecosystem	Morocco 2016 (1)	Averages (2) *	(1)-(2)	GEM Maroc 2015 (3)
1	There exist resources and sufficient elements of financial support assigned to the new companies and to support their growth.	2.11	2.32	-0.21	2.51
2	Public support measures for entrepreneurs are a strategic priority for public administrations.	2.49	2.49	0.00	2.22
3	The legal procedures associated with the creation of a company are straightforward and simple.	3.14	2.16	0.99	2.22
4	The public administration's support programmes for new companies, or those in the creation phase, are effective.	2.34	2.77	-0.43	2.23
5	Primary and secondary education institutions stimulate creativity, autonomy and personal initiative.	1.08	1.83	-0.75	1.21
6	The university provides adequate, high-quality preparation for the creation of new companies and the growth of those already created.	1.86	2.59	-0.74	2.01
7	Universities and public research centres public effectively teach new technologies, science and other knowledge to new companies or those in the creation phase.	2.04	2.35	-0.30	1.91
8	There are sufficient suppliers, advisers and subcontractors to meet the needs of new companies exist or those in the creation phase.	2.55	2.84	-0.29	3.04
9	The markets for goods and services are dynamic and change from one year to the next.	3.08	2.56	0.52	2.88
10	New companies or those in the growth phase can easily access new markets.	1.62	2.53	-0.91	2.25
11	Physical infrastructure (highways, telecommunications, energy, etc.) provide strong support to new companies and those in the growth phase.	3.46	3.54	-0.07	4.14
12	Social and cultural norms support and value individual success that is the fruit of personal effort.	2.98	2.39	0.59	2.23

* Averages: European Union, Spain and Andalusia

4 INTERNAL ANALYSIS OF THE PERCEPTION OF UNIVERSITIES' ENTREPRENEURIAL CULTURE

1. OBJECTIVES AND CONTENTS OF THE CONSULTATION WITH UNIVERSITY EXPERTS

The external perceptions of the conditions for entrepreneurship at universities as expressed by the experts consulted was complemented by the observations of university officials. This was the objective of the survey given a group of university experts: to gather their opinions in relation to the factors that hinder vs. those that facilitate entrepreneurship by universities, as well as the measures that can promote it. In addition, they were asked about other strategic aspects, like the reasons they believe students choose their universities, and the variables that can impact a university's deployment of a strategy to achieve a more entrepreneurial culture.

The contents offered below provide a description of the characteristics of the experts who responded to the survey, indicating their regional origins, gender, age, experience (years in their profession), category, position and education. The high figures in these variables demonstrate the panel of experts' advanced qualifications, which reinforces the validity of the information obtained from the surveys.

2. CHARACTERISTICS OF THE SAMPLE FROM MOROCCO

The 36 responses received came from the universities appearing in Table and Figure 1. The completion rate relative to the established objective (50 surveys) was greater than that obtained in the area fieldwork, here coming to 72%.

TABLE 1: ANSWERS BY UNIVERSITY

UNIVERSITIES	ANSWERS	%
Ibn Zohr	7	19%
Mohammed V - Souissi	6	17%
Abdelmalek Essaadi	5	14%
Cadi Ayyad	5	14%
Hassan Premier	4	11%
Ibn Tofail	3	8%
Internationale de Rabat	3	8%
Mohammed Premier	1	3%
Moulay Ismail	1	3%
Sultan Moulay Slimane	1	3%
Total	36	100%

The average age of the participants was 45; 31% were women and 69% were men.

As far as the positions of responsibility held by the experts who responded to the survey, 56% were educators (exceeding the 40% assigned in the survey's design), followed by 17% in university administration (this category includes the response of a vice-president; no presidents participated) while 11% were dedicated to research and knowledge transfer. Those in charge of international relations, and incubators, or support for entrepreneurs and others, represented 6% each (see Figure 2) with an average of 10 years in their positions.

Finally, with respect to the studies carried out by the experts who responded to the questionnaires, most had higher educations (Masters, doctorates, etc.) (94%), while 6% completed their studies at technical universities or schools.

FIGURE 1: ANSWERS BY UNIVERSITY

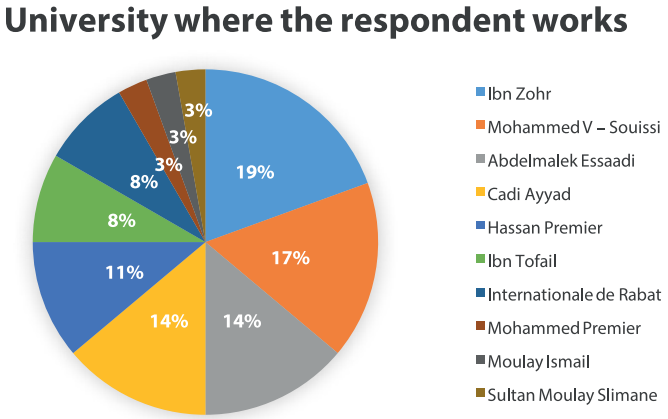
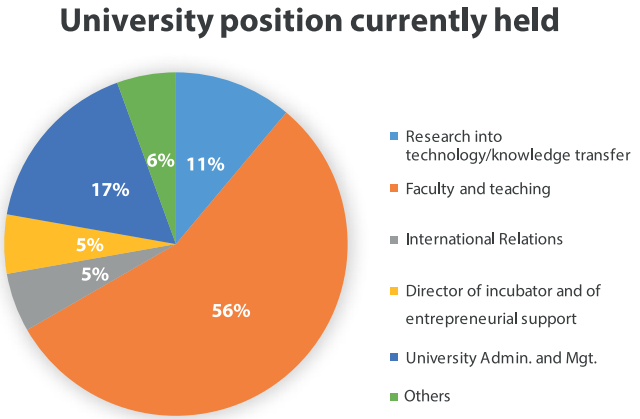


FIGURE 2: POSITION CURRENTLY HELD



3. MAIN OBSTACLES TO ENTREPRENEURSHIP

The project's objectives include studying the main factors constituting hurdles to entrepreneurship. In order to be able to measure these questions they were asked to mention 3 factors that represented, in their view, obstacles (01-03) dissuading students at their universities from becoming entrepreneurs or creating a company. The online questionnaire included three open fields to be filled out. Once the answers were obtained a codification and grouping process was carried out using five major categories:

- Financing, to gather opinions having to do with the lack of initial capital and the difficulties obtaining financing from financial organisations.
- An entrepreneurial culture, which reflects the absence of a culture of management or a lack of awareness and information on entrepreneurship, or programmes to promote and foster an entrepreneurial spirit, for example.
- Education in the field of entrepreneurship, a deficit of competencies (technical and relational), the content and the objectives of secondary education, courses in entrepreneurship in general are given by university faculty, the curriculum of the itineraries does not feature education in entrepreneurship, and the lack of a strategy within the university framework, among others.
- Bureaucracy and institutions - Economy, including the business climate and time-consuming administrative procedures, the lack of a culture of partnership, and the absence of a strategic vision of entrepreneurs as drivers of self employment.
- Others, featuring aspects not covered by the previous categories.

FIGURE 3: MAIN OBSTACLES TO ENTREPRENEURSHIP

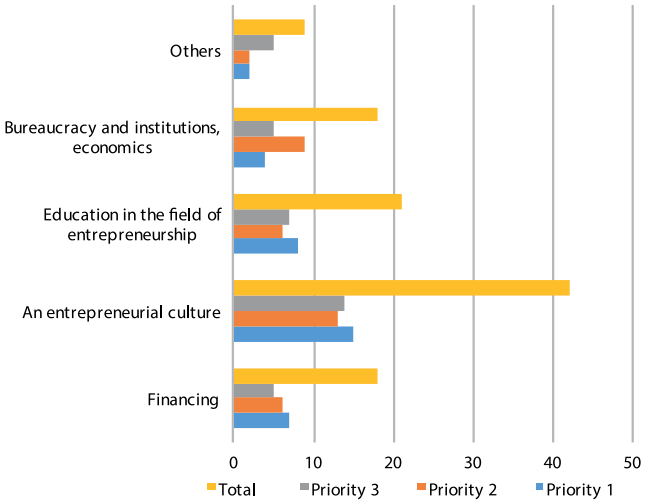


Figure 3 shows the answers obtained, classified in these categories and indicating the priority assigned by the expert. As can be observed, most of the Moroccan university experts surveyed indicated the importance of obstacles stemming from the lack of a culture of entrepreneurship. Second in importance was the lack of adequate education oriented towards entrepreneurship, while in third place was concern with financing tools for entrepreneurs and the obstacles perceived of an administrative, economic or bureaucratic nature. This result repeats, almost identically, in each of the three answers or priorities indicated by the respondents, with very minor fluctuations.

Analysing the answers received in detail, some of the key obstacles identified were:

- A lack of initial capital and difficulties obtaining financing from financial organisations.
- A lack of competencies (technical and relational).
- The absence of a culture of entrepreneurship.
- The content and objectives of secondary education.
- A lack of information and education in entrepreneurship.
- The courses on entrepreneurship in general are taught by professors who, generally, lack experience in companies or creating them.
- The curriculum of the itineraries does not include education in entrepreneurship.
- The absence of a strategy at the university level.
- The absence of actions raising awareness of entrepreneurship.
- The university offers few modules about the culture of entrepreneurship.
- A lack of business education.
- The absence of actions raising awareness of entrepreneurship.

4. MAIN FACTORS FACILITATING ENTREPRENEURSHIP

Similarly, the project's objectives include identifying the main factors facilitating entrepreneurship. Thus, the online questionnaire included three open fields asking the experts to cite 3 factors involved in the company creation process associated with universities, and 3 factors that could be considered facilitators (F1-F3). Once the answers were received, the codification and grouping process was carried out using the five categories previously described.

FIGURE 4: MAIN FACTORS FACILITATING ENTREPRENEURSHIP

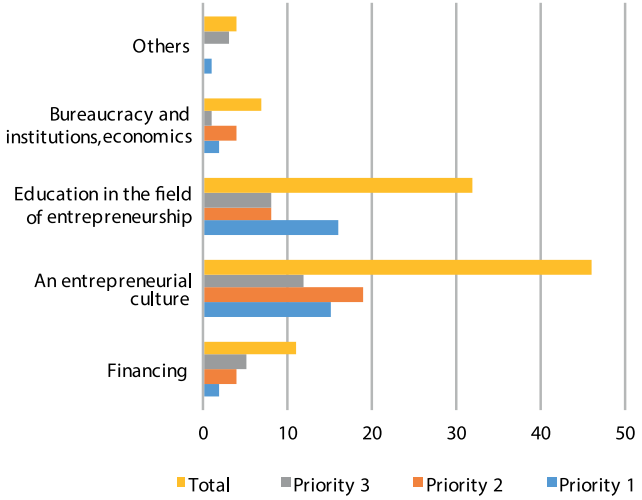


Figure 4 indicates that an entrepreneurial culture and education are confirmed as the two main factors requiring improvement to increase university students' propensity to create companies, both at the aggregate level and based on each of the priorities.

Analysing some of the obtained answers in detail, the following facilitating factors were identified:

- Structures for incubators.
- The creation of incubators.
- Financial and administrative support.
- Awareness raising and educational sessions for students.
- Access to the real estate sector (industrial land) and State subsidies.
- Promoting the entrepreneurial culture by divulging success stories.
- Promoting a culture of entrepreneurship in initial and continuing education.
- Better coordination between secondary and higher education.
- A clear strategy for entrepreneurship supported by universities.
- Professors who possess educational qualifications in entrepreneurship.
- The existence of a policy and an internal strategy aimed at promoting entrepreneurship.
- The creation of a favourable climate (success stories, etc.).

5. MAIN MEASURES TO ADOPT

Finally, the online questionnaire included three open fields asking the experts to cite three measures that should be adopted in the future (M1 - M3) with a view to improving them. Once the answers were received the codification and grouping process was carried out using the five categories previously described.

FIGURE 5: MAIN MEASURES TO ADOPT

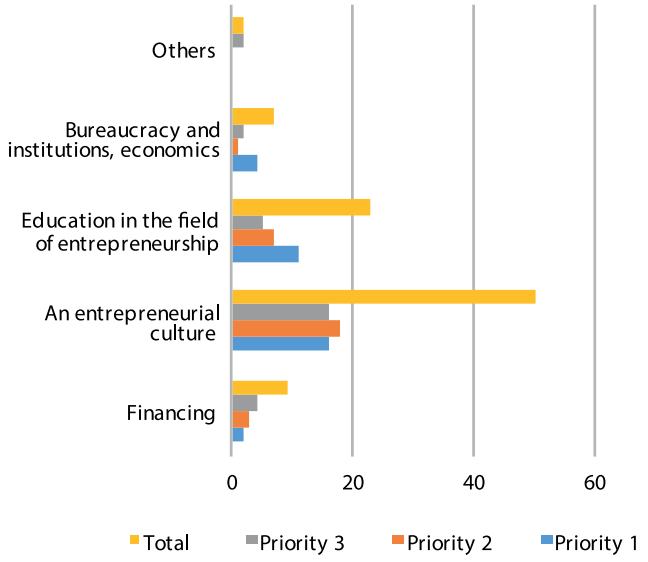


Figure 5 indicates how an entrepreneurial culture and education are the two great factors suggested as those requiring improvement, at both the aggregate level and based on each of the priorities.

Analysing the answers obtained in detail, these measures stand out:

- Interest-free loans for the launching of projects, and the possibility of having advisers and experts in management, commerce and logistics.
- The widespread organisation of forums and seminars featuring entrepreneurs who have enjoyed success.
- Promoting the creation of networks of university incubators.
- Organising seminars given by professionals and designed for students.
- Educating current professors on entrepreneurship.
- Better integrating entrepreneurship into courses.
- The implementation of a policy that supports the university's strategy with regards to entrepreneurship.
- Fighting against speculation and the informal economy.

These results are summarised in Figure 6, which features an evaluation of obstacles, facilitating factors and measures. They make it clear that efforts should centre primarily on the strategic axes related to cultural and educational aspects associated with promoting and raising awareness of the business culture and the entrepreneurial spirit, increased information on entrepreneurship, and the development of support programmes. These actions on the cultural axis must be buttressed by adequate education in entrepreneurship at every level, with a special emphasis on the development of competencies (technical and relational) through courses taught by teachers, most of whom should have experience at companies or creating them. In the opinion of those participating in the fieldwork, the obstacles related to bureaucracy and financing are the next elements that should be addressed in order to promote entrepreneurial university initiatives.

Worthy of note are the differences in the perceptions by external vs. internal university experts. A comparison of the two is offered in Figure 7. Thus, it is observed that external experts place more emphasis on the need for measures to deal with bureaucracy, while those within the university are more concerned about and interested in promoting a culture of entrepreneurship

FIGURE 6. SUMMARY OF THE OBSTACLES, FACILITATING FACTORS AND MEASURES IDENTIFIED

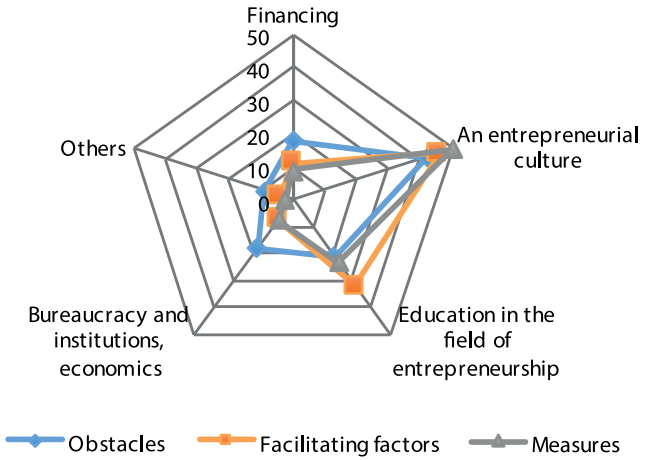
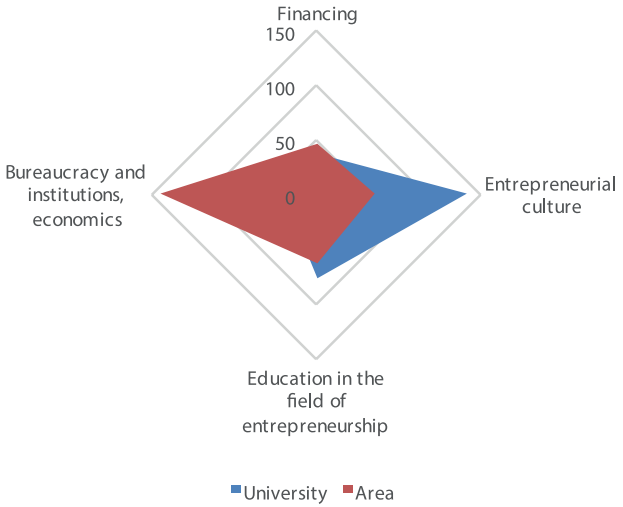


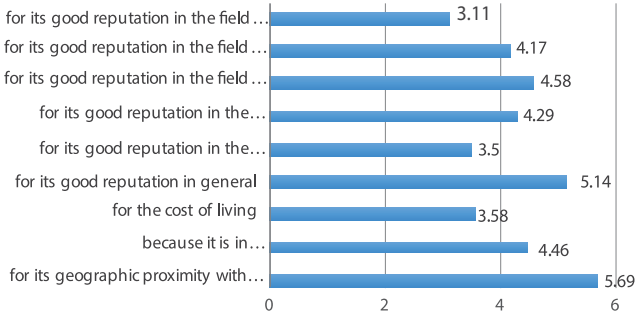
FIGURE 7: SUMMARY OF THE OBSTACLES, FACILITATING FACTORS AND MEASURES IDENTIFIED



6. CHOICE OF UNIVERSITY

One element that describes a university's profile is composed of experts' opinions regarding why students at the university selected it for their studies. Figure 8 indicates the results obtained on a Likert Scale from 1-7, in which a score of "7" denotes maximum agreement with the statement. They both emphasise geographic proximity and the good reputation of the university as the two decisive factors when it came to selecting schools. In a second group there appear factors like its reputation in different areas, like the Sciences, Engineering and Medicine, or Business and Economics, or the area surrounding the university. A good reputation in education in **entrepreneurship was ranked second to last,** near other factors like its reputation in the Arts and Artistic Sciences, and the cost of living in the city.

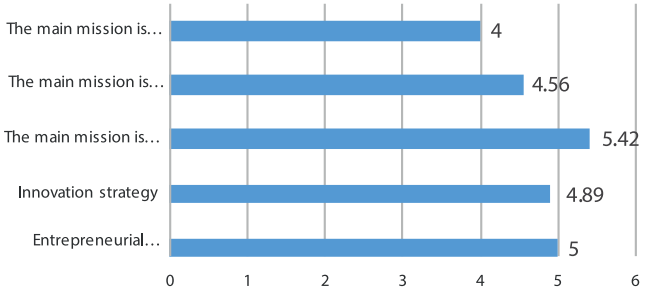
FIGURE 8. STUDENTS CHOOSE THEIR UNIVERSITIES



7. STRATEGY: MISSION, INNOVATION AND ENTREPRENEURSHIP

Next, they were asked the extent to which they agreed with the following statements. A scale from 1 (disagree completely) to 7 (agree completely) was used to evaluate the university's strategy. Figure 9 presents the results obtained. Teaching was the predominant factor, followed by entrepreneurial strategy. Ina second group appear other strategies, like innovation, research and transfer. It is noteworthy that in these results the difference between the factors greatly diminishes, as they feature relatively high scores, being grouped together.

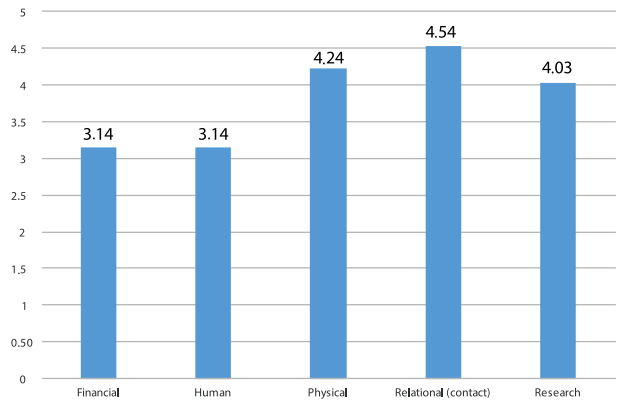
FIGURE 9: STRATEGY



8. STRATEGY: RESOURCES AND CAPACITIES

The resources and capacities of an organisation impact not only the selection of its strategies, but especially their implantation and development. Due to their importance, the surveys included five major groups of resources related to Finances, Human Resources, Material or Physical Resources, Relational Resources and Social Capital from the universities' supporters, and resources directly related to research. They were asked to use a scale of 1 (completely disagree) to 7 (agree completely) to assess whether there was enough support allotted to each category of resources. Figure 10 reflects the scores assigned Relational Resources, as well as Physical and Research Resources. The other resources and capacities, such as human and financial, appear in a second group. The assessments reflect a notable drop in the difference between the factors. This time the scores were more balanced.

FIGURE 10: RESOURCES AND CAPACITIES



9. STRATEGY: ACTIONS RELATED TO ENTREPRENEURSHIP

The strategic models of other universities and research into the entrepreneurial university stress four great lines of action designed to: encourage and foment entrepreneurial intentions amongst university students (motivation); those related to education in the field (education); those that complement students' entrepreneurial and offer them support to carry them out in the form of guidance, financing or contacts (support); and those intended to establish a system of indicators that measure the results of the model's actions, including research that delves deep into knowledge of the entrepreneurial phenomenon (control and evaluation).

To obtain an evaluation of these strategic axes, university experts were asked for their opinions on these sets of actions at their universities, indicating to what extent they agreed with the following statements. A scale from 1 (disagree completely) to 7 (agree completely) was used. Figures 11 and 12 present the scores obtained.

Of special note are motivational actions, like the holding of numerous activities that encourage students to become entrepreneurs, as well as the granting of a prize to the best entrepreneurial ideas of students and professors, with the highest scores, followed by a consolidated interface to help students when they are just starting out as entrepreneurs. In a second group of actions is the university's educational programmes

including training in the area of entrepreneurship, as well as doctoral education related to entrepreneurship and the creation of companies, and the existence of a complete system for follow-up and the evaluation of the entrepreneurial activities carried out. Finally, the actions with the lowest scores were those related to financing and the existence of a complete system of information to identify good entrepreneurship practices at other national or foreign universities.

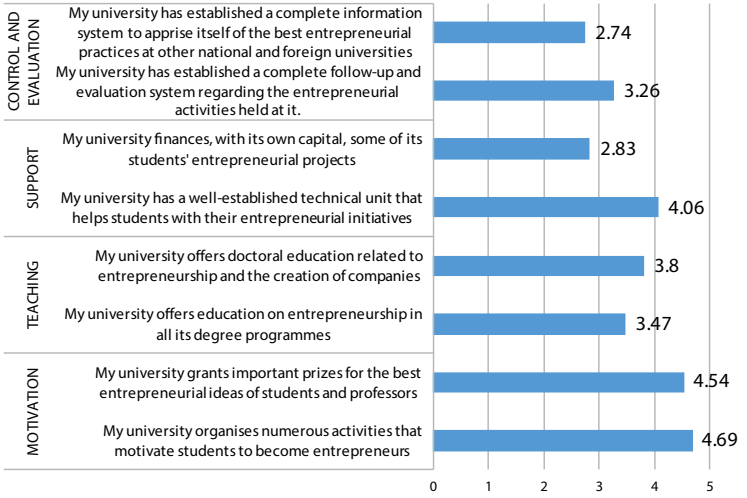


FIGURE 11: ACTIONS IN THE FIELD OF ENTREPRENEURSHIP

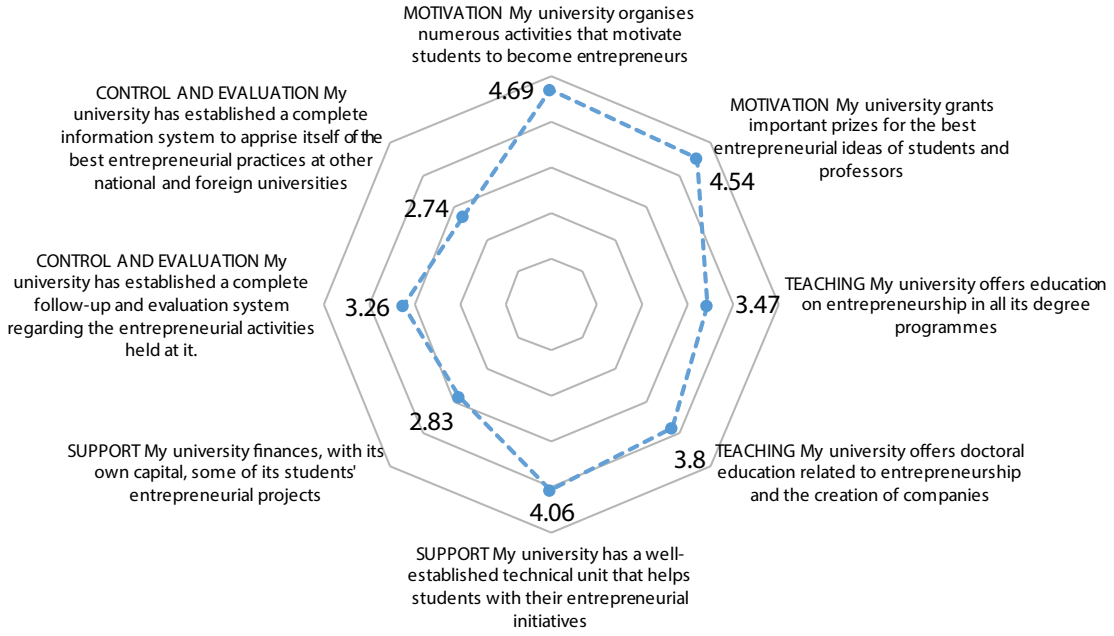


FIGURE 12: ACTIONS IN THE FIELD OF ENTREPRENEURSHIP

5 CONCLUSIONS AND RECOMMENDATIONS

It is necessary for universities to overcome their relative weakness in the field of entrepreneurship in order to promote high-potential entrepreneurship in Morocco. This is the most important message to be drawn from the study, and is based on the strategic value that knowledge possesses, its transfer to the production system, and the need for a university education system that is aware of and committed to this function. International trends support this conclusion, as does an increased interest in the subjects of company creation and the entrepreneurial university amongst researchers, as reflected in leading journals and publications around the world.

The Moroccan university system must strive towards integration into the international academic community, particularly in the field of entrepreneurship. The incorporation of all the universities participating in the DEVEN3C initiative into the GUESSS international project and the recent integration of the University Hassan II in Casablanca into the GEM international project constitute good signs of progress in this direction and an important opportunity.

This international collaboration must be used to research more and better into the entrepreneurial process. The level of quality publications could benefit from integration into the aforementioned international projects. Their databases will offer, without a doubt, an important opportunity for the research community at universities, which should also take advantage to organise doctoral courses improving the number and capacities of professors, current and future.

This integration and embracing of good practices at other foreign universities constitute an opportunity for Moroccan universities. The exchange of information, and especially the generation of human capital that knows and participates in the international academic community will be, without any doubt, factors driving change at Moroccan universities.

A practical aspect to consider would be facilitating relationships with universities that are nearby or already known. The practical experience accumulated at the DEVEN3C is a good starting point to nurture these relationships and overcome resistance to change and renovation. To this must be added integration into scientific societies related to entrepreneurship, the allotment of library resources, access to the main scientific journals, attendance at international congresses, and attracting distinguished, talented professionals to classrooms.

In summary, an important agent for change, and a factor facilitating of the entrepreneurial university in Morocco, will be the university community itself. The personnel and the professors who have participated in this project have an important opportunity and responsibility. Their knowledge, ability to integrate

into an international community, and enthusiasm will be the most important forces driving the change towards an entrepreneurial university. This task should be complemented by an elevation of the quality of research and transfer at universities in other areas of knowledge. Without valuable knowledge to transmit, there can be no processes leading to the creation of companies through universities, nor high-potential entrepreneurship.

The second aspect of the challenge is the designing of a system to provide resources and incentives facilitating the aforementioned tasks. The provisioning of resources to universities to develop a culture of entrepreneurship must be demanded by university leaders, who must make a commitment, in return, to ensuring that these allocations are transparent and that they are accountable for them when presenting results. This entails two crucial aspects: an adequate design of the resources to be assigned, in accordance with the potential opportunities that universities identify, which may be asymmetric between them, depending on their specialisations and locations; and a homogenous monitoring and accountability system, which should be based on objective indicators. With respect to the system of incentives, it could be advantageous to combine the evaluation of three aspects of professors' and researchers' activity: the quality of their teaching, the quality and quantity of their scientific production, and their transfer capacity.

A third element is the use of models that organise and prioritise the actions of university policies in this area; a model that defines the structural components of the university strategy with regards to entrepreneurship, and the method or dynamics of how it functions. The good practices at other universities and the restrictions and opportunities of each university in question should serve to tailor the theoretical models to the reality of each one.

Said models tend to feature four components: those that have to do with the entrepreneurial intentions or motivations of college students, encompassing the actions to mobilise people; those having to do with training people in entrepreneurship, together with education at different levels and degrees of transversality; those that take into account the importance of accessing basic resources to be able to engage in entrepreneurship, and networks of contacts that facilitate these resources (relational capital); and, finally, the system of information and knowledge generation with regards to entrepreneurship, accountability, and the creation of indicators that facilitate comparison with other institutions and the university's strategic management.

In addition, amongst these recommendations that frame in a general way the universities' entrepreneurial strategies, it is necessary to stress some barriers to a shift towards the entrepreneurial university.

The uneven participation by the universities in the study is, in itself, indicative of an important hurdle. Just four universities of the ten achieved the objective of obtaining five valid surveys from experts in their areas, which reflects the difficulties and scant interest in connecting with collaborating agents in their business areas, something that will have to change radically in the future.

Another barrier detected were the disparate levels of cooperation by internal university agents secured through the study. The internal participation by groups of experts denotes very different degrees of interest in the matter. The participation objective of 40% of the professors was surpassed, with 56% of this group providing valid answers. However, it is worrisome that not a single president, and only one vice-president, responded to the surveys requested. This apathy may be a consequence of the scant entrepreneurial culture that has been identified as one of the main institutional barriers.

In contrast, it is important to underscore the high levels of education and extensive experience – about ten years on average in their jobs – of the people who participated in the fieldwork, which not only validates the data gathered, and lends it credibility, but is also a source of hope that the rest of the university community might be mobilised. Although women accounted for over 30% of the internal experts participating, the incorporation of more women into the challenge of constructing entrepreneurial universities will be a task to consider.

These types of barriers are much more important than the limited availability of financing tools for entrepreneurs and the obstacles perceived of an administrative, economic or bureaucratic character.

The lack of adequate education in entrepreneurship is another one of the aspects that must be discussed. This is something detected in general at every level of the educational system, but that is even more pressing at the higher ones. There is no specific post-graduate education in entrepreneurship, or specialised doctoral courses, at any of the universities studied.

The facilitating elements are also framed in the same categories, which reflects the breadth of the actions and tasks that they encompass. Certain aspects of the university culture and education are being oriented towards facilitating entrepreneurship, and awareness of its importance is on the rise. Thus, it is possible to identify some actions aimed at raising students' awareness, incubator creation policies, the gradual increase in specialised education offerings on the subject, and the divulgation of entrepreneurial success stories, among others, which facilitate the promotion of an entrepreneurial culture.

Consequently, the measures proposed seek to overcome these obstacles and bolster the effects of facilitating factors. A careful reading of the data obtained leads one to conclude that the strengthening of higher education, at the post-graduate and doctorate levels, should be a top priority. Promoting the education of PhDs in entrepreneurship would make it possible: to equip universities with new specialists in the field of entrepreneurship, which are currently lacking; connect university thinking and culture with entrepreneurship; improve the research capacity of universities and integrate them into international networks, which would furnish the system with permeability. In order to organise quality doctorate-level courses on entrepreneurship, two parallel work lines should be followed: first, attracting talent; that is, professors of international prestige to teach or contribute to the courses; secondly, facilitating the participation of professors from Moroccan universities in specialised courses abroad.

This commitment to equipping universities with human resources “from the top”, with experts in entrepreneurship, should be coupled with a system of incentives, as aforementioned, and a strategic management system oriented towards entrepreneurship benefitting from involvement by university presidents.

6 ANNEXES

I. Participating universities in Morocco and DEVEN3C partners

1. Abdlemalek Essaâdy University (Tangier-Tétouan)
2. Mohammed Premier University (Oujda)
3. Mohammed V – Souissi University (Rabat)
4. Moulay Ismail University (Meknes)
5. Cadi Ayad University (Marrakech)
6. Hassan I University (Settat)
7. Ibn Zohr University (Agadir)
8. International University of Rabat (Rabat)
9. Ibn Tofail University (Kenitra)
10. Sultan Moulay Slimane University (Beni Mellal)

Moroccan institutional partners on the DEVEN3C project:

- Ministry of Higher Education and Scientific Research
- Association of Women Directors of Moroccan Companies (Tangier)
- Association of the FDET Students' Office (Tangier)

II. Statistical data from the universities

ABDELMALEK ESSAADI – TÉTOUAN

- Year of the university's creation: 1989
- Year of creation of the Professional Insertion Service: 2010
- Number of people who work at the Professional Insertion Service: 2

ABDELMALEK ESSAADI UNIVERSITY	Start	2000	2004-2005	2009-2010	2014-2015	2015-2016
Names of the presidents	Kabli Mohammed	Daoudi Saad	Bennouna Mustapha	Bennouna Mustapha	Ameziane Houdaifa	Ameziane Houdaifa
Number of students enrolled (without counting doctoral students)			17,505	20,738	61,614	73,504
Number of students who finish their studies			1,776	4,048	10,070	
Number of doctoral theses				96	201	82
Number of published articles			48	80	104	84
Number of registered patents				4	10	4
Number of academic spin-offs (*)						
Number of university companies (**)	INSTITUT DE LOGISTIQUE					
Number of incubators	INCUBATOR WITH THE CHAMBER OF COMMERCE					

(*) Spin-off: company created based on the knowledge of a research group.

(**) Company created by students, professors or graduates from the university in collaboration with it (without counting spin-offs).

CADI AYYAD – MARRAKECH

- Date of execution: 14/06/2016
- Position: Office of the vice-president responsible for research/ Coordinator of the entrepreneurship module
- Year of the university's creation: 1978
- Year of creation of the Professional Insertion Service: 2009
- Number of people who work at the Professional Insertion Service: 1
- Year of creation of the Knowledge/Technology Transfer Service: 2001
- Number of people in the Knowledge/Technology Transfer Service: 3
- Year education in the field of entrepreneurship was initiated: 2010
- Institution at which education in the field of entrepreneurship began: FSSM
- Percentage of educational institutions at which entrepreneurship is currently taught (with respect to all institutions): 70%

CADI AYYAD UNIVERSITY	Start	2000	2005	2010	2015	Current year	OBSERVATIONS
Names of the presidents	M. Knidiri	M. Knidiri	A. Jebli	M. Marzaq	A. Miraoui	A. Miraoui	
Number of students enrolled				35,077	64,264		The statistics service does not have data for prior to 2008
Number of students who finish their studies				46,00	7,230		The statistics service does not have data for prior to 2008
Number of doctoral theses				70	90		
Number of articles published				379	530		Indexed elements
Number of patents registered			2	11	15	3	
Number of academic spin-offs (*)			3	2	2	1	
Number of university companies (**)					1	1	
Number of incubators	Just one at the whole university: https://www.uca.ma/fr/page/incubateur-universitaire-de-marrakech-inma						

(*) Spin-off: company created based on the knowledge of a research group.

(**) Company created by students, professors or graduates from the university in collaboration with it (without counting spin-offs)

HASSAN 1ER – SETTAT

- Date of execution: 14/06/2016
- Year of the university's creation: 1997
- Year of creation of the Professional Insertion Service: 2011
- Number of people who work at the Professional Insertion Service: 3 educators and 11 doctoral student researchers
- Year of creation of the Knowledge/Technology Transfer Service: In progress
- Year education in the field of entrepreneurship was initiated: 2006
- Institution at which education in the field of entrepreneurship began: Department of Sciences and Techniques
- Percentage of educational institutions at which entrepreneurship is currently taught (with respect to all institutions): 85%

UNIVERSITY HASSAN I	Debut	2000	2005	2010	2015	Current year	OBSERVATIONS
Names of the presidents	A. Essaid	A. Essaid	M. Rahj	M. Rahj	A. Nejmeddine	A. Nejmeddine	
Number of students enrolled				8,055	23,604	28,705	
Number of students who finish their studies							
Number of doctoral theses	2006			18	69		1st thesis defended in 2006
Number of articles published	1997	72	225	463	816	67	Statistics since 1997 Source: Scopus
Number of patents registered				-3 national patents, of which 1 is in the international scope -1 international patent	-33 national patents, of which 7 are in the international scope -33 national patents, of which 7 are in the international scope	-36 national patents, of which 7 are in the international scope	
Number of academic spin-offs (*)					7		
Number of university companies (**)				2	3		
Number of incubators				1	1		

(*) Spin-off: company created based on the knowledge of a research group.

(**) Company created by students, professors or graduates from the university in collaboration with it (without counting spin-offs)

MOHAMMED PREMIER - OUJDA

- Date of execution: 14 December 2016
- Year of the university's creation: 1978
- Year of creation of the Professional Insertion Service:
- Number of people who work at the Professional Insertion Service: 0
- Year of creation of the Knowledge/Technology Transfer Service: 2004
- Number of people in the Knowledge/Technology Transfer Service: 3
- Year education in the field of entrepreneurship was initiated: 2012
- Institution at which education in the field of entrepreneurship began: CUDRO (University Center for the Development of the Eastern Region)
- Percentage of educational institutions at which entrepreneurship is currently taught (with respect to all institutions): 2/5

MOHAMMED PREMIER OUJDA UNIVERSITY	Debut	2000	2005	2010	2015	Current year	OBSERVATIONS
Names of the presidents		Belkhadir	El Farissi	El Farissi	Addou	Benkaddour	
Number of students enrolled	-	-	25,699	29,664	55,293	54,219	The numbers for the current year are provisional
Number of students who finish their studies	Average of 10%	Average of 10%	Average of 10%	Average of 10%	Average of 10%	Average of 10%	The numbers are approximate
Number of doctoral theses	-	-	-	-	100	-	
Number of articles published	-	-	80	100	420	-	
Number of patents registered	-	-	-	1	-	2	
Number of academic spin-offs (*)	0	0	0	0	0	0	
Number of university companies (**)	0	0	0	0	0	0	
Number of incubators	0	0	0	0	0	0	

(*) Spin-off : entreprise créée à partir des connaissances d'un groupe de recherche.

(**) Entreprise créée par des étudiants, des professeurs ou des lauréats de l'université avec la collaboration de celle-ci (sans inclure les spin-offs).

MOULAY ISMAIL MEKNÈS

- Date of execution: 28/11/2016
- Position: International Relations
- Year of the university's creation: 1989
- Year of creation of the Professional Insertion Service: 2015
- Number of people who work at the Professional Insertion Service: 3
- Year of creation of the Knowledge/Technology Transfer Service: 2013
- Number of people in the Knowledge/Technology Transfer Service: 3
- Year education in the field of entrepreneurship was initiated: 2013
- Institution at which education in the field of entrepreneurship began: universities attached to the UMI
- Percentage of educational institutions at which entrepreneurship is currently taught (with respect to all institutions): 80%

MOULAY ISMAIL MEKNES UNIVERSITY	Start	2000	2005	2010	2015	Current year
Names of the presidents	Pr. ECHADLI	Pr. Abdeatif BENANI	Pr. Abdelatif BENCHRIFA	Pr. Mohammed Zahir BEN ABDELLAH Pr. Amhed LEBRIHI	Pr. Hassane SAHBI	Pr. Hassane SAHBI
Number of students enrolled				27,099	54,375	56,316
Number of students who finish their studies				3,186	5,623	6,542
Number of doctoral theses	167	185	147	307	91	12
Number of articles published	Not available	Not available	Not available	134	535	562
Number of patents registered	Not available	Not available	Not available	Not available	Not available	Not available
Number of academic spin-offs (*)	Not available	Not available	Not available	Not available	Not available	Not available
Number of university companies (**)				1		
Number of incubators				1		

(*) Spin-off: company created based on the knowledge of a research group.

(**) Company created by students, professors or graduates from the university in collaboration with it (without counting spin-offs).

IBN TOFAIL - KÉNITRA

- Date of execution: 19 December 2016
- Position: Head of International Relations/Director of Specialisation, Technology Transfer and Incubator Analysis Centre
- Year of the university's creation: 1989
- Year of creation of the Professional Insertion Service: 2007
- Number of people who work at the Professional Insertion Service: 2
- Year of creation of the Knowledge/Technology Transfer Service: 2014
- Number of people in the Knowledge/Technology Transfer Service: 3
- Year education in the field of entrepreneurship was initiated: 2012
- Institution at which education in the field of entrepreneurship began:
- Percentage of educational institutions at which entrepreneurship is currently taught (with respect to all institutions):

IBN TOFAIL KENITRA UNIVERSITY	Start	2003	2005	2010	2015	Current year
Names of the presidents	Chaouki SERGHINI	Mohammed ESSAOURI	Mohammed ESSAOURI	Abderrahman TENKOUL	Azzeddine the MIDAOUI	Azzeddine the MIDAOUI
Number of students enrolled	-	-	-	11,160	46,940	48,228
Number of students who finish their studies	-	-	-	21.99%	12.85%	-

IBN TOFAIL KENITRA UNIVERSITY	Start	2000-2004	2005-2009	2010-2014	2015	Current year	OBSERVATIONS
Number of doctoral theses	137	183	151	231	87	81	
Number of articles published	224 / 620	539/1530	388/1500	798/2,356	213/656	294/711	Scopus/Others
Number of patents registered	-	3	1	4	1	3	-
Number of academic spin-offs (*)	0	0	0	0	0	0	-
Number of university companies (**)	0	0	0	0	0	1	In the creation phase
Number of incubators	0	0	0	0	0	1	

(*) Spin-off: company created based on the knowledge of a research group.

(**) Company created by students, professors or graduates from the university in collaboration with it (without counting spin-offs).

III. Statistical information from the universities[6]

Number of permanent teachers according to their field of study and degree

Field of study	2009-10 (1)	2010-2011 Higher education teachers	Qualified teacher	Associated teacher	Higher Education teacher assistant	MA	Ass.	Others	Total (2)	Women	Var. in (%) (2)-(1) / (1)
Traditional teaching	124	45	19		63			12	139	26	12.10
Law, economics and social sciences	1.367	467	232		677		6	116	1.498	382	9.58
Arts and human sciences	2.133	936	311		840	1	3	106	2.197	524	3.00
Sciences	3.161	2.112	305		765	1	2	87	3.272	772	3.51
Science and technology	1.041	533	269		258			57	1.117	253	7.30
Medicine and Pharmacy	1.335	553	15	244	571	3	10	3	3.399	452	4.79
Dental medicine	90	51	2	16	31				100	61	11.11
Engineering	493	163	61		297	1		82	604	132	22.52
Business and Management	164	10	43		132			15	200	54	21.95
Technology	391	70	60		190			101	421	116	7.67
Education	58	27	2		19			6	54	23	-6.90
Translation	15	5	2		6			3	16	4	6.67
Higher college or higher technical college		182	43		165	11		242	643	142	
Subtotal	10.372	5.154	1.364	260	4.014	17	21	830	11.660	2.941	12.42
Scientific Research Institutes	95	45	18		34			11	108	23	13.68
Total	10.467	5.199	1.382	260	4.048	17	21	841	11.768	2.964	12.43

[6] Sources consulted at: http://www.enssup.gov.ma/fr/Page/131-enseignement-supérieur-universitaire

IV. Survey used in the external analysis

VERSION: April 25, 2016

The information gathered in this questionnaire will be handled anonymously, it being impossible to identify the identity of the respondents.

TERRITORY: mark the area(s) of your activities (more than one possible).
Place the list of the territories of the 10 universities

SECTION 1 **Open questions:**

Please indicate three factors that in your opinion are hindering (O1-O3) entrepreneurial activity in your local environment, three that are promoting it (F1 - F3), and propose three future measures (M1-M3) to foster improvement

OBSTACLES	O1	
	O2	
	O3	
FACILITATING FACTORS	F1	
	F2	
	F3	
MEASURES	M1	
	M2	
	M3	

SECTION 2.

The next 12 statements serve to evaluate certain conditions that may impact activity leading to the creation of companies.

Please indicate the extent to which you agree with the following statements, ranging from 1 (totally disagree) to 7 (strongly agree).

(NA) Not Applicable

(DK) I do not know

(7) Completely true

(5) Quite true

(3) Neither true nor false

(2) Quite false

(1) Completely false

	In your area...	F						W		
1	There are enough resources and financial support for new businesses and their growth.	1	2	3	4	5	6	7	DK	NA
2	Public support measures for entrepreneurs are a strategic priority for the public administrations and the government.	1	2	3	4	5	6	7	DK	NA
3	The procedures and legal licenses to create a business are easy and simple.	1	2	3	4	5	6	7	DK	NA
6	The programmes of the public administrations and government that support new and growing businesses are effective.	1	2	3	4	5	6	7	DK	NA
7	In primary and secondary education, creativity, self-reliance and personal initiative are encouraged.	1	2	3	4	5	6	7	DK	NA
6	The university provides adequate and high-quality preparation for the creation of new companies and the growth of established ones.	1	2	3	4	5	6	7	DK	NA
7	New technologies, science and other knowledge are transferred efficiently from the university and public research centres to new and growing businesses.	1	2	3	4	5	6	7	DK	NA
8	There are enough suppliers, consultants and subcontractors to support new and growing businesses.	1	2	3	4	5	6	7	DK	NA
9	Markets for goods and services are dynamic and change from one year to another.	1	2	3	4	5	6	7	DK	NA
10	New and growing businesses can easily enter new markets.	1	2	3	4	5	6	7	DK	NA
11	Physical infrastructure (roads, telecommunications, energy, etc.) provide good support for new and growing companies.	1	2	3	4	5	6	7	DK	NA
12	Social and cultural norms support and promote individual success achieved through personal effort.	1	2	3	4	5	6	7	DK	NA

SECTION 3. PERSONAL INFORMATION

To help us determine the profile of the experts participating in this survey, please answer the following:

GENDER	MAN (1)	WOMAN (0)	YEAR OF BIRTH	

INDICATE ALL SECTIONS THAT APPLY TO YOUR EDUCATION			
Vocational Training or Intermediate Professional Education	YES	NO	Don't know/No response
Advanced Vocational Training (Advanced Modules,...)	YES	NO	Don't know/No response
University or Technical School (Diploma, Degree,...)	YES	NO	Don't know/No response
Post-graduate (Master's, PhD ...)	YES	NO	Don't know/No response

In what year did you complete your last training/educational programme? (indicate year)	
Mark your educational specialisation 1. Economics, Business and Law 2. Natural Sciences, Engineering and Medicine 3. Education and other Social Sciences, Languages and Cultural Studies (including Philosophy, Psychology, Religion) 4. Arts, Artistic Sciences and Other Studies	
Indicate your current position (Ex: Director, Head of Department, employee, manager, secretary ...)	
How long have you been working at your current company or entity? (number of years)	
How long have you been in your current position? (number of years)	
How long, in total, have you worked on issues or in areas in some way to entrepreneurial activity? (number of years)	

IN WHAT KIND OF BUSINESSES OR ENTREPRENEURIAL ACTIVITIES DO YOU HAVE YOU EXPERIENCE? **(Check all that fit your profile using the YES box)**	High tech	YES	NO	Don't know/No response
	Medium-low-technology (MLT)	YES	NO	Don't know/No response
	Manufacturing	YES	NO	Don't know/No response
	Corporate services	YES	NO	Don't know/No response
	High growth	YES	NO	Don't know/No response
	Low growth	YES	NO	Don't know/No response
	Urban	YES	NO	Don't know/No response
	Rural	YES	NO	Don't know/No response
	With an international orientation	YES	NO	Don't know/No response
	With a national orientation	YES	NO	Don't know/No response
	Other (please specify):			
Which of the following profiles best describes you? **(Check one box)**	Entrepreneur / businessman	YES	NO	Don't know/No response
	Investor, financier, banker	YES	NO	Don't know/No response
	Advisor or implementer of public policies	YES	NO	Don't know/No response
	Provider of services or corporate support	YES	NO	Don't know/No response
	Teacher, educator or academic researcher	YES	NO	Don't know/No response
	Other (specify)			

The **DEVEN3C project team (http://devenecproject.uae.ac.ma/)** thanks you very much for your help and will keep you informed of the outcome of the study. To this end, we ask that you provide us with your contact information, which will only be handled internally and confidentially as part of the project and used to contact you.

Name and surname(s): .....
Email :.....

TO BE COMPLETED BY THE RESEARCH TEAM:

Data (day/month/year):_____ expert ID |__|__|__|__|__|__|__|__|__|__|__|__|

 Survey of EXPERTS REGARDING: THE ENVIRONMENT

INSTRUCTIONS TO COMPLETE THE SURVEY OF EXPERTS REGARDING THE ENVIRONMENT

1. Conduct online, preferably

2. For the areas surrounding each university, at least 9 valid surveys should be received from:

   a. 3 BUSINESSMEN

   b. 3 GOVERNMENT OFFICIALS

   c. 3 LIBERAL PROFESSIONALS OR BUSINESS EXECUTIVES

V. Survey used in the internal analysis

Aim of the survey: to identify the main organisational and strategic factors at universities that impact the entrepreneurial and business creation intentions of students.

VERSION: April 25, 2016

The information gathered via this survey will be handled anonymously. The responses from all the universities will be pooled, with no possibility of identifying the people who respond.

1. Select the university where you are working: insert drop-down menu
2. Indicate the position you currently occupy at your university:
3. Indicate the duration of this position (term) at your university (no. of years):
4. Indicate how long you have been in this position (1, 2 ...):
5. Indicate how long you have been at your university (no. years):

SECTION 1 Open questions: Please indicate three factors that, in your opinion, are hindering (O1-O3) the entrepreneurial intentions of students at your university and business creation processes related to it, three that are promoting it (F1 - F3), and propose three future measures (M1-M3) to foster improvement.		
OBSTACLES	O1	
	O2	
	O3	
FACILITATING FACTORS	F1	
	F2	
	F3	
MEASURES	M1	
	M2	
	M3	

The following statements serve to evaluate certain conditions that may impact the entrepreneurial intentions of students and business creation processes related to your university.

SECTION 2 CHOICE OF UNIVERSITY

Please indicate the extent to which you agree with the following statements, ranging from 1 (totally disagree) to 7 (strongly agree).

1.	Students select my university for its geographic proximity to the cities where they live.
2.	Students select my university because it is located in an interesting / attractive place
3.	Students select my university for the cost of living here
4.	Students select my university for its good overall reputation
5.	Students select my university for its reputation with regards to entrepreneurship
6.	Students select my university for its reputation in the fields of Economics, Business and Law
7.	Students select my university for its reputation in the fields of Natural Sciences, Engineering and Medicine
8.	Students select my university for its reputation in the field of Education and other Social Sciences, Languages and Cultural Studies (including Philosophy, Psychology, and Religion)
9.	Students select my university for its reputation in the Arts, Artistic Sciences and other studies

SECTION 3 STRATEGY

Please indicate the extent to which you agree with the following statements, ranging from 1 (totally disagree) to 7 (strongly agree).

1.	My university has an strategy that promotes entrepreneurship in the university community
2.	My university has an entrepreneurial strategy that favours innovation and the creation of opportunities
3.	The main mission of my university is teaching
4.	The main mission of my university is research
5.	The main mission of my university is the transfer of knowledge to companies and institutions

SECTION 4 RESOURCES AND CAPABILITIES

Please indicate the extent to which you agree with the following statements, ranging from 1 (totally disagree) to 7 (strongly agree).

FINANCIALS

1.	My university encourages entrepreneurship with the money earmarked for it in its budgets
2.	At my university, external agents and stakeholders provide significant financing for some entrepreneurial actions
3.	At my university significant revenue is earned from services to businesses and knowledge transfer
4.	My university has significant revenue from participating in the share capital of investee companies

HUMAN

5.	At my university there are many qualified people who have entrepreneurial knowledge and experience
6.	My university encourages people, in a significant way, to participate in entrepreneurial development.
7.	At my university there are a significant number of qualified professionals who support entrepreneurship

PHYSICAL

8.	My university has a sufficiently active Technical Transfer Office (TTO) for transferring knowledge to businesses.
9.	My university has sufficient specialised infrastructure for business creation (incubators, technology parks, accelerators, etc.)

RELATIONAL

10.	My university has numerous agreements with other institutions (government, local administration, technology parks, etc.) for the development of entrepreneurship
11.	My university has numerous agreements with business associations for the development of entrepreneurship
12.	My university has an extensive network of contacts with entrepreneurs and companies collaborating in entrepreneurship

RESEARCH

13.	My university has well-established research groups studying the entrepreneurial phenomenon
14.	My university has numerous research groups that produce patents and skills transferable to businesses and society in general
15.	My university has adequate legislation for the protection of intellectual property

SECTION 5 ENTREPRENEURIAL ACTIONS

Please indicate the extent to which you agree with the following statements, ranging from 1 (totally disagree) to 7 (strongly agree).

INTENTIONS

1.	My university undertakes numerous activities that encourage students to become entrepreneurs
2.	My university issues important awards for the best entrepreneurial ideas of students and professors

TEACHING

3.	My university provides education in entrepreneurship in all its degree programmes
4.	My university has doctoral training related to entrepreneurship and business creation

SUPPORT

5.	My university has a well-established Technology Transfer Office (TTO) that helps students with their entrepreneurial initiatives
6.	My university finances, with its own capital, some students' business projects

MONITORING AND ASSESSMENT

7.	My university has established a complete system for the monitoring and evaluation of the entrepreneurial activities taking place at it
8.	My university has established a complete system of information to learn about the best entrepreneurial practices at other domestic or foreign universities

SECTION 6 PERSONAL INFORMATION

To help us determine the profile of the experts participating in this survey, please answer the following:

GENDER	MAN (1)	WOMAN (0)	YEAR OF BIRTH	
INDICATE ALL SECTIONS THAT APPLY TO YOUR EDUCATION				
Vocational Training or Intermediate Professional Education		YES	NO	Don't know/No response
Advanced Vocational Training (Advanced Modules, ...)		YES	NO	Don't know/No response
University or Technical School (Diploma, Degree, ...)		YES	NO	Don't know/No response
Post-graduate (Master's, PhD ...)		YES	NO	Don't know/No response

The DEVEN3C "Barriers and facilitators of university entrepreneurship in Morocco" (WEB) team thanks you very much for your support and will keep you informed of the outcome of the study. To this end, we ask that you provide us with your contact information. This information will only be handled internally and confidentially as part of the project, and used to contact you.

Name and surname(s): .....
Email :.....

TO BE COMPLETED BY THE RESEARCH TEAM:

Data (day/month/year):_____ expert ID |__|__|__|__|__|__|__|__|__|__|__|__|

 Survey of EXPERTS REGARDING: THE ENVIRONMENT

INSTRUCTIONS TO COMPLETE THE SURVEY OF UNIVERSITY EXPERTS

1. Conduct online, preferably

2.From each university at least 5 valid surveys should be obtained, from:

a. 1 RECTOR/CHANCELLOR/PRESIDENT

b.1 VICERRECTOR/VICE-CHANCELLOR/VICE-PRESIDENT

c.1 OFFICIAL FROM THE EMPLOYMENT, OR ENTREPRENEURSHIP, OR TRANSFER UNIT

d. 2 PROFESSORS INVOLVED IN ENTREPRENEURSHIP

STATISTICAL INFORMATION ON THE UNIVERSITY

Document Version: 25/04/16

Date Completed:

Name of person completing the document:

Position:

Year of the University's founding:

Year of the creation of the employment unit:

Number of people working in the employment unit:

Year of the creation of the knowledge transfer unit:

Number of people working in the transfer unit:

Year the teaching of Entrepreneurship began:

Centre at which teaching Entrepreneurship began:

Percentage (of total centres) where it is currently taught:

	Beginning	2000	2005	2010	2015	Today	OBSERVATIONS
Name of the rectors							
No. of students enrolled							
Number of students completing their degrees							
No. of doctoral dissertations							
No. of articles published							
No. of patents registered.							
No. of academic spin-offs (*)							
No. of university companies (**)							

(*) Spin-off: company created based on a research group's knowledge

(**) company created by students, professors or university graduates in collaboration with it (not including spin-offs)

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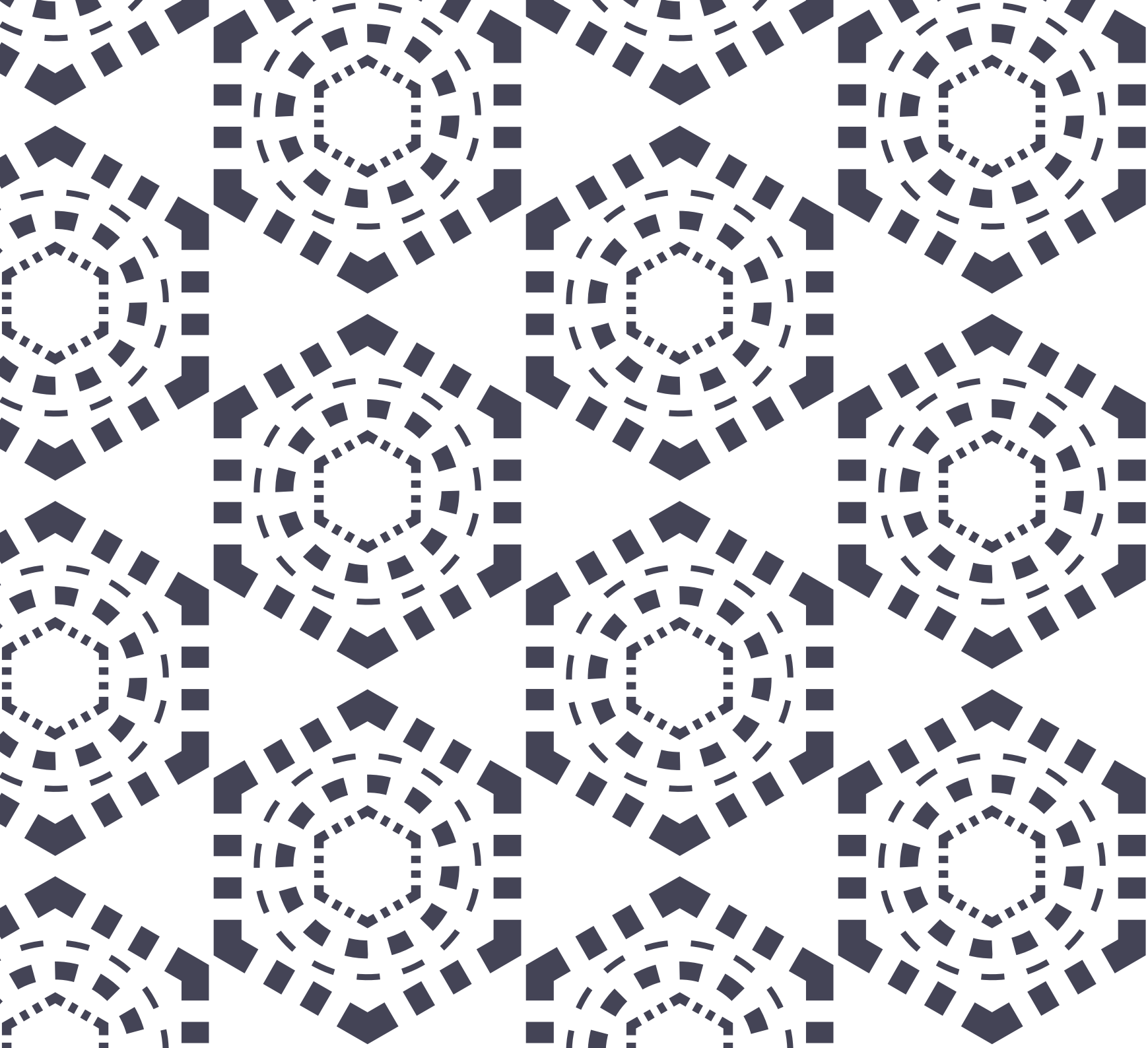

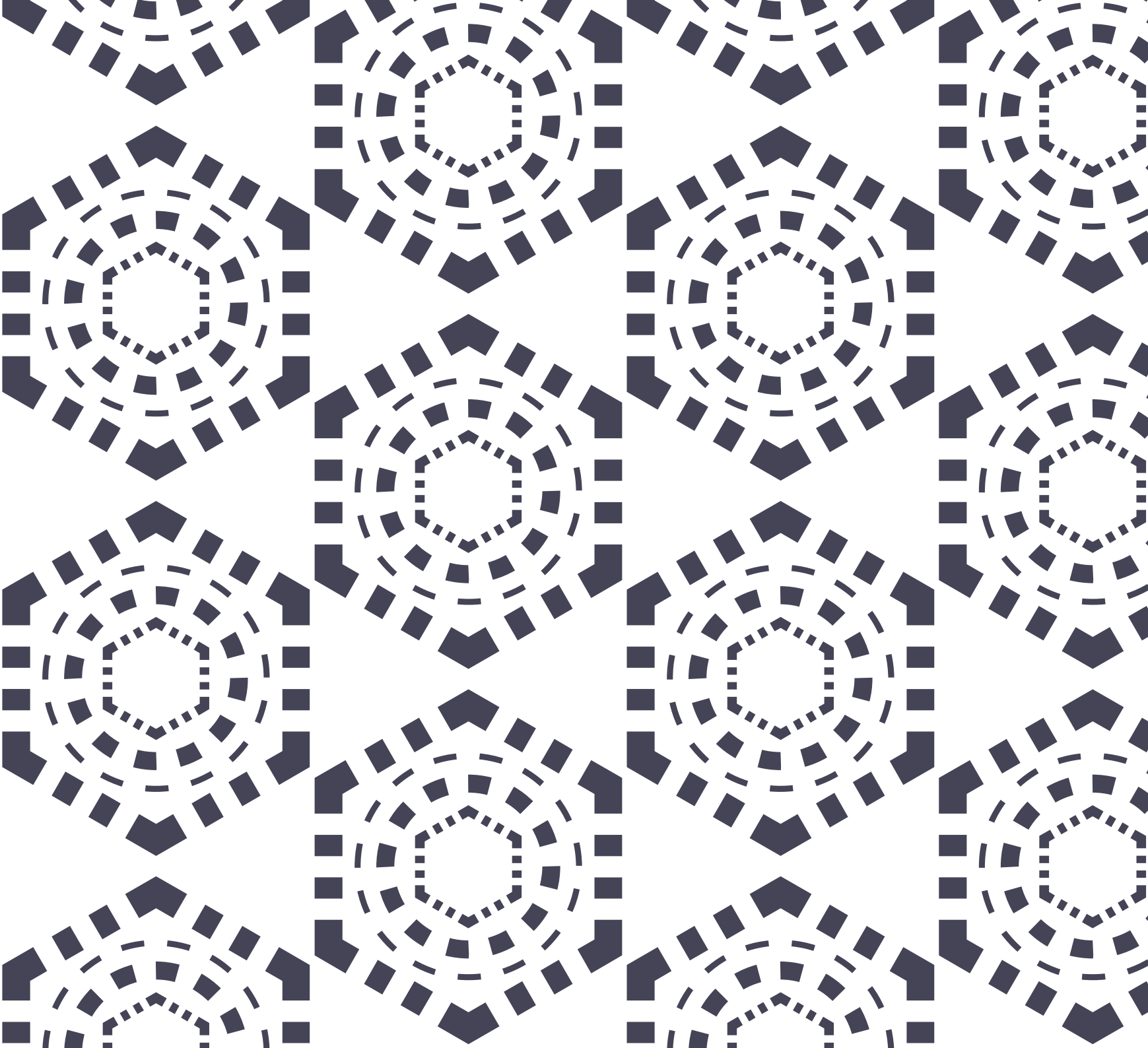

DEVEN3C

DÉVELOPPEMENT DES COMPÉTENCES ENTREPRENEURIALES À L'UNIVERSIYTÉ MAROCAINE : CRÉATIVITÉ, CONNAISSANCE ET CULTURE.

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