FLANDERS DC
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Knowledge partner

Vlerick Leuven Gent Management School

the Autonomous Management School of
Ghent University and Katholieke Universiteit Leuven

SURVEY

HOW ENTREPRENEURIAL ARE OUR FLEMISH STUDENTS?

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November 2007

FLANDERS DISTRICT OF CREATIVITY

Flanders District of Creativity is the Flemish organization for **entrepreneurial creativity.** It was founded in 2004 by the Flemish Government as a non-profit organization and enjoys broad support. Flemish businesses, academia, and public institutions use Flanders DC as a platform for cooperation in the pursuit of a more creative Flanders region.

Creativity is the key ingredient in making companies more successful and in helping regional governments ensure a healthy economy with more jobs. Flanders DC inspires creativity and innovation:

1. by learning from the most **creative regions** in the world,
2. by igniting **creative sparks** in everyday life and business, and
3. by providing **research, practical business tools and business training,** in cooperation with the Flanders DC Knowledge Center.

1. Districts of Creativity: Inspiration from the most creative regions

Responses to global challenges are best found within an international network of excellence. With the single aim of learning from the very best, **Flanders DC aims to unite the most dynamic regions in the world within the 'Districts of Creativity' network**. Every two years, Flanders DC convenes the Creativity World Forum, bringing together government leaders, entrepreneurs, and knowledge institutions to exchange ideas about how to tackle pressing economic problems and make their regions hotbeds for innovation and creativity.

CREATIVITY WORLDFORUM

November 15-16, 2006 - Ghent, Belgium

FLANDERS DC
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*: Candidate members

2. Raising awareness: The best way to predict the future is to invent it

Flanders DC encourages entrepreneurs and citizens to look ahead and find creative solutions today for tomorrow's problems. Flanders DC has developed an idea-generation tool to encourage people and organizations to take the first step toward innovation. In addition, Flanders DC runs a general awareness-raising campaign entitled “Flanders’ Future”.

jij bent FLANDERS' FUTURE

3. The Flanders DC Knowledge Centre: Academic support

The **Flanders DC Knowledge Center** serves as a link between Flanders DC and Vlerick Leuven Gent Management School. Each year, the Flanders DC Knowledge Center publishes several reports and develops various tools, case studies and courses**.** All these projects focus on the role of creativity in a business environment and identify obstacles to, and accelerators of, competitive growth.

The **Creativity Talks** – brief monthly, interactive info sessions – update you on these research activities. See www.creativitytalks.be for a current calendar and subscription information.

Research reports:

- **De Vlaamse economie in 2015: Uitdagingen voor de toekomst,** Koen De Backer en Leo Sleuwaegen, September 2005, Published in Dutch
- **Ondernemingscreativiteit als motor van groei voor Vlaamse steden en Brussel,** Isabelle De Voldere, Eva Janssens en Jonas Onkelinx, November 2005, Published in Dutch
- **The Creative Economy: challenges and opportunities for the DC-regions,** Isabelle De Voldere, Eva Janssens, Jonas Onkelinx en Leo Sleuwaegen, April 2006, Published in English
- **Spelers uit de televisiesector getuigen: een verkennende studie in de creatieve industrie,** Marc Buelens en Mieke Van De Woestyne, Juni 2006, Published in Dutch
- **Mobiliseren, dynamiseren en enthousiasmeren van onze (toekomstige) zilvervloot,** Thomas Dewilde, Annick Vlaminckx, Ans De Vos en Dirk Buyens, Juni 2006, Published in Dutch
- **Development of a regional competitiveness index,** Harry Bowen, Wim Moesen and Leo Sleuwaegen, September 2006, Published in English
- **Innovation outside the lab: strategic innovation as the alternative,** Marion Debruyne and Marie Schoovaerts, November 2006, Published in English
- **De creatieve industrie in Vlaanderen,** Tine Maenhout, Isabelle De Voldere, Jonas Onkelinx en Leo Sleuwaegen, December 2006, Published in Dutch
- **Het innovatieproces in grote bedrijven en KMO's,** Geert Devos, Mieke Van De Woestyne en Herman Van den Broeck, Februari 2007, Published in Dutch
- **Creatief ondernemen in Vlaanderen,** Tine Maenhout, Jonas Onkelinx en Hans Crijns, Maart 2007, Published in Dutch
- **Hoe ondernemers in Vlaanderen opportuniteiten identificeren. Een rapport met tips en tools voor de ondernemer in de praktijk**, Eva Cools, Herman Van den Broeck, Sabine Vermeulen, Hans Crijns, Deva Rangarajan, Mei 2007, published in Dutch
- **Networking in multinational manufacturing companies**, Ann Vereecke, July 2007, published in English

In addition to these research projects, the Flanders DC Knowledge Centre has also developed the following tools and training sessions:

- **Ondernemen.meerdan.ondernemen**, an online learning platform
- **Creativity Class** for young high-potentials
- **Flanders DC Fellows**, inspiring role models in business creativity

FLANDERSDC FELLOWS

Published research reports can be downloaded via the Vlerick Leuven Gent Management School library catalogue or via www.flandersdc.be.

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PREFACE

The goal of this project is to examine, explain and discuss the behaviour and intentions of students in their decision to start entrepreneurial activities and to found an enterprise. This report has been written as part of an international research project – called "International Survey on Collegiate Entrepreneurship" (ISCE) – which is investigating Academic Entrepreneurship. The project is coordinated on an international level by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG) together with the KfW Endowed Chair for Entrepreneurship at the European Business School (EBS). The project is coordinated on a national level by the Centre of Entrepreneurship at Vlerick Leuven Gent Management School.

We are very thankful to the participating universities/colleges in Belgium, namely Ghent University, the University of Antwerp, EHSAL, Université de Liège and FUNDP Namur. Without the concerted efforts of these universities/colleges and their representatives, the project would not have been realized to the current level.

We hope that this project will provide students, authorities, professors, teachers and service providers with a wealth of ideas, impulses and motivations to help develop a real entrepreneurial spirit amongst academics.

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1 INTRODUCTION

While most studies focus on the number of firms that are created, the Global Entrepreneurship Monitor (GEM) gives us a good indication of how many individuals are actively involved in starting a company or have recently started a company. However, entrepreneurial activity in Flanders seems to be quite low in comparison with other countries worldwide (GEM, 2002 – 2005). According to GEM 2006, the Flemish and Belgian TEA (Total Entrepreneurial Activity) remains seriously below the EU average of 5.01%). At this moment, Flanders and Belgium are falling in the ranks of the 16 participating EU countries and even of the 49 participating countries worldwide. That is, the Flemish TEA decreased even further from 3.71% in 2005 to 3.05 % in 2006, indicating that only 3 out of 100 people in the labour force are actively involved in starting up a company or have started up a company recently.

Assuming that entrepreneurs are not born but made (studies have shown that people who have had entrepreneurship training are twice as likely to start a company), it is crucial to encourage entrepreneurship at the individual level. This project will provide insight into how entrepreneurial Flemish students (with a higher education) are, and which policy measures need to be taken to stimulate the entrepreneurial spirit and to further support the start-up of new companies in Flanders.

1.1. Entrepreneurship and economic growth

The degree of entrepreneurship has an important influence on the economic prosperity of a region or country. New and growing companies are vital to economic prosperity: they increase an economy's innovative capacity, they anticipate market demands, they challenge existing companies to function more efficiently, and – last but not least – they create new business activities and therefore new jobs. Entrepreneurship induces economic growth because new ventures raise the competitiveness of a sector, region or country.

A good example that illustrates this is Silicon Valley in the United States where, through innovative entrepreneurship, a region blossomed into a hotbed of high-tech activity. Research states that 4000 new companies have originated here, creating 1.1 million jobs (Steffenson et al, 1999). The success of Silicon Valley has spurred an increased interest in entrepreneurship over the past twenty years.

An increase in the degree of entrepreneurship is the result of push-factors such as (imminent) unemployment and the anticipation of economic recovery. The degree of entrepreneurship is always coupled to the prosperity of an economy. High prosperity stimulates (pull) people to start a company themselves, while low prosperity forces (push) people to start a company themselves. The concepts 'entrepreneurship' and 'prosperity (economy)' are inseparable (Zwart, 2005).

Recent research shows that more than half of the newly created jobs result from newly founded companies (Verhoeven et al, 2005). Moreover, new entrepreneurs with new insights prod existing companies into greater alertness, so that they do not lose market share or even entire markets. This phenomenon corresponds with Schumpeter's theory of 'creative destruction'.

1.2. Entrepreneurship: a matter of learning?

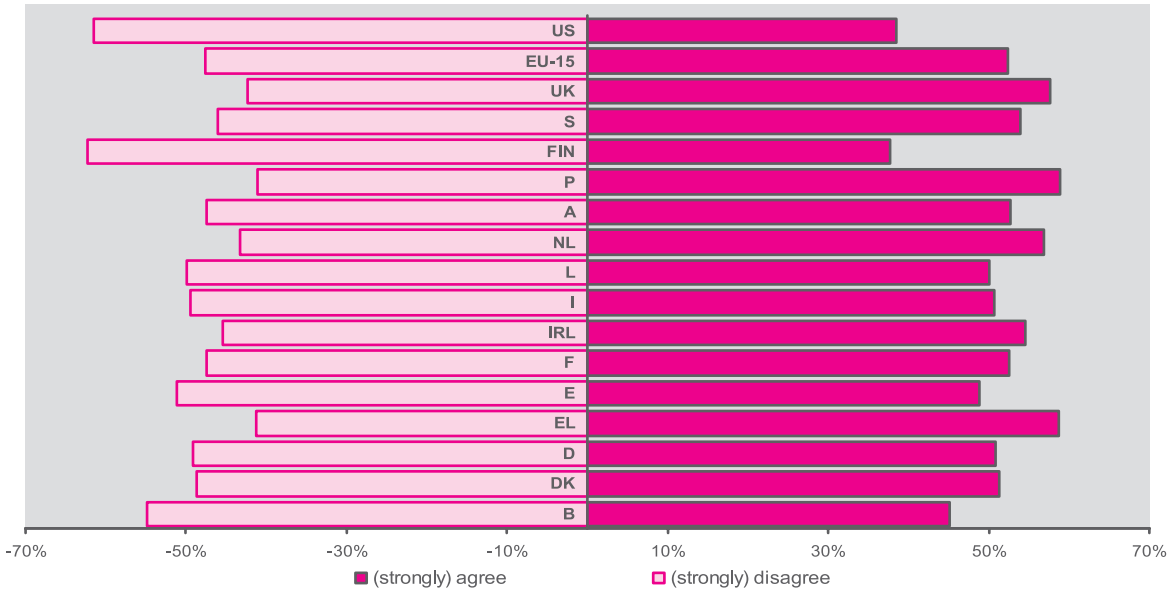
It is not our intention to launch a new definition of 'entrepreneurship' within the framework of this research project. However, from a literature survey, it can be concluded that the term concerns:

- entrepreneurs
- entrepreneurial behaviour
- entrepreneurship
- entrepreneurial process

A clear, generally accepted definition and description of the term "entrepreneurship" is lacking in Flanders. This could possibly disrupt the dialogue and policy discussions, since it is unclear in which aspects of entrepreneurship, and to what extent, education can play a role. Moreover, terms such as "entrepreneurship", "entrepreneurial behaviour" and "entrepreneurial society" aren't value-free, and ideological differences can therefore hinder the policy measures concerning education.

Furthermore, the question is whether or not entrepreneurship can be taught. From the European Commission's Eurobarometer (2001), we can see that the points of view vary significantly by country, region or culture (see Figure 1). Of all the persons interviewed in Belgium, the majority find that entrepreneurship can be partially learned. While some are convinced that entrepreneurship can absolutely be learned, others say that it can absolutely not be learned.

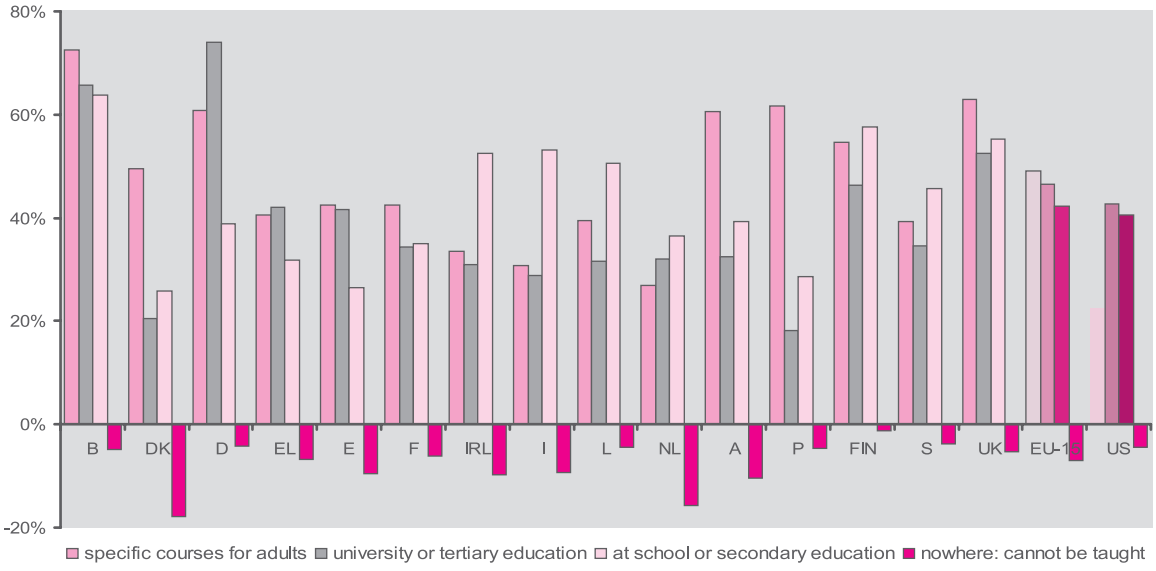
Figure 1 Do you (strongly) agree or (strongly) disagree with the following opinion? Entrepreneurship cannot be taught.



There is also some disagreement about this proposition within the educational institutions as well. Even if entrepreneurship can be (partially) learned, the question is when, where and how this should be done. With regard to the question *where* it should be learned, Belgians apparently

find that the period during higher education (along with specific courses for adults) is the most suitable time for students to learn about entrepreneurship (see Figure 2).

Figure 2 Where should entrepreneurship be taught?



It is obvious that, if Flanders wants to evolve into a more entrepreneurial, creative and knowledge-driven society, the educational system must play a decisive role. The pretext for entrepreneurship differs according to educational level. Overall, there are three aspects:

1 Creating awareness

Every student needs to be taught the importance of, and the contribution of, entrepreneurship to the society and the economy. Students become aware of the possibilities that entrepreneurship offers and of entrepreneurship as a career path.

2 Stimulating a positive attitude and characteristics with respect to entrepreneurship

The character traits generally associated with entrepreneurship include: creativity, risk-taking, audacity, ambition, perseverance, decisiveness, reliability, determination, efficiency, empathy, criticalness and persuasiveness.

3 Training entrepreneurial skills

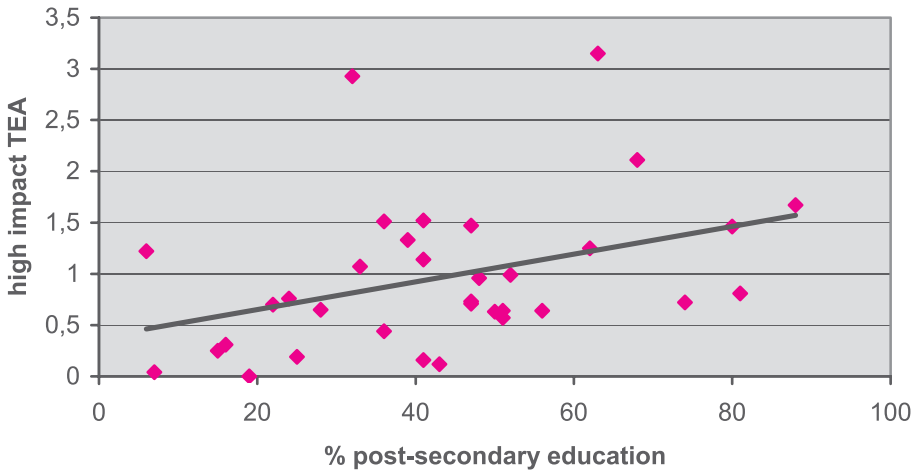
Students are given the opportunity to become acquainted with the different aspects that are necessary to experience entrepreneurship. The competencies students need to learn certainly include: business planning, financial management, market analysis, entrepreneurial management, negotiation skills, knowledge of ICT, etc. The teaching of these skills can be regarded as the preparation students require to become entrepreneurs themselves.

1.3 Entrepreneurship and education

The annual GEM research clearly indicates that the early educational situation remains one of Flanders' significant problem areas, in that it hinders the birth and growth of new ventures. Education and training refers to the extent to which the educational and training systems, at all levels (from primary and secondary school to university and business school), deal with creating or managing an independent new or growing business. (De Clercq et al, 2002)

It is also important to examine the role of a country's overall *educational attainment* (assessed, for example, by the percentage of the population that is enrolled in post-secondary education). The 2002 results for all GEM countries showed a significant positive correlation between a country's level of educational attainment and the prevalence rate for high-potential ventures (see Figure 3). The inference is that businesses with a high potential for market expansion and job growth may be more likely to flourish in countries with highly-educated people.

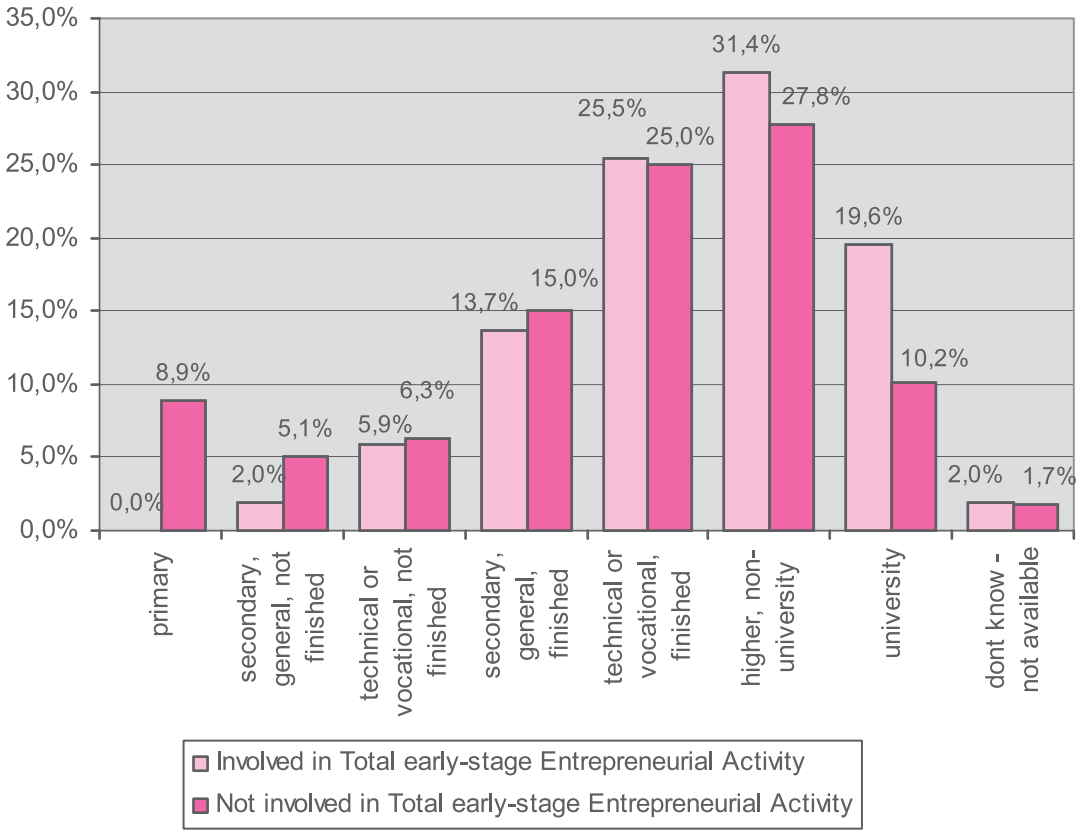
Figure 3 Correlation between educational attainment and high-potential TEA for all participating GEM countries (De Clercq et al, 2002)



Belgium (including Flanders) is a-typical when it comes to educational attainment: the proportion of individuals enrolled in post-secondary education is relatively high compared to other countries. However, although it is one of the front-runners in educational attainment, the prevalence rate for high-potential entrepreneurship is relatively low.

Figure 4 compares the education level of people within the GEM 2006 sample who are involved in total entrepreneurial activity (TEA) (n = 51) and people who are not involved in total entrepreneurial activity (n = 1952). This figure shows that 51% of the people involved in total entrepreneurial activity hold a higher educational degree (i.e., a college or university degree). Furthermore, the proportion of people with a higher educational degree is greater for people involved in total entrepreneurial activity. The largest difference seems to occur for people holding a university degree.

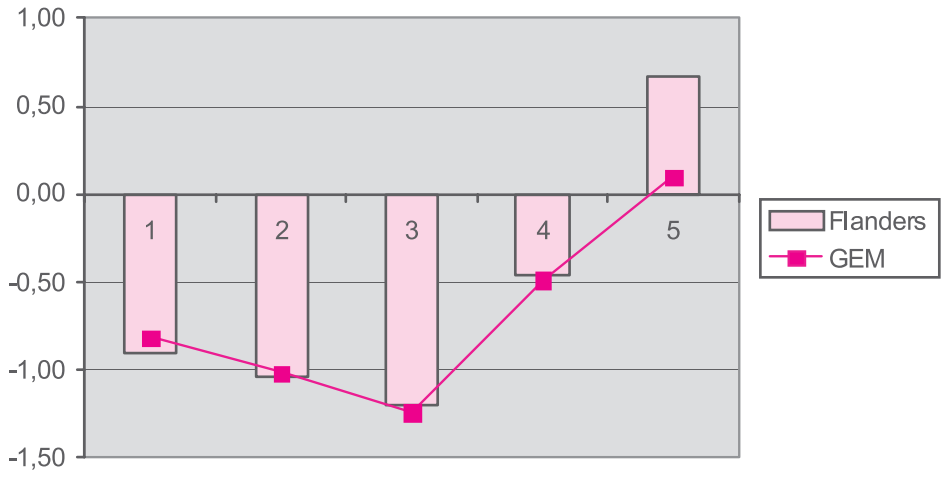
Figure 4 Education level versus TEA



It is not encouraging that Flanders scored low in terms of the attention devoted to entrepreneurship in higher education (see Figure 5). The assessment in absolute scores is (still) not positive, but, compared to Western European countries, Belgian key informants gave relatively comparable scores to the “higher education” questions.

On the other hand, the key informants felt that the overall level of business and management education in Belgium had improved compared to previous years. The good score in terms of management and business education is also evidenced by the key informants’ assessment of item 5 in Figure 5.

Figure 5 Scores of Flemish key informants on separate items of Education and Training (De Clercq et al, 2002)



Legend: 2 = Completely agree; 0 = Neither true nor false; -2 = Completely disagree

1: In my country, teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative.
2: In my country, teaching in primary and secondary education provides adequate instruction in market economic principles.
3: In my country, teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation.
4: In my country, colleges and universities have enough courses and programs on entrepreneurship.
5: In my country, the level of business and management education is truly world-class.

1.4 Entrepreneurship and higher education

The institutions of higher education in Flanders have great freedom in the structuring and development of their curricula. As a result, there is a great diversity amongst study areas that issue the same degrees. At present, entrepreneurship is not part of the accreditation criteria. However, there is an indirect link, as some of the criteria aim to develop general entrepreneurial competencies such as creativity, problem solving, leadership, communication skills, and so on. In some study areas, such as economics, engineering, etc., courses on entrepreneurship are offered as electives or as inter-faculty courses. However, in a lot of other study areas, students are not given the chance to follow entrepreneurial courses.

GEM results show that, relatively speaking, there are no other countries in Europe where there are fewer people with a higher educational degree who are willing to start a venture. At the same time, studies show that more highly educated people who create a venture will (due to the nature of the firm) create more growth and employment than ventures established by people with less education. That people with a higher education show limited interest in this area could be due to

the fact that they do not want to take financial risks, as there are plenty of jobs available to those who have a marketable degree (most of the economics and engineering students have already been offered a job before they have even graduated). Still, the fact that every year thousands of higher education graduates follow a Syntra training programme to obtain an entrepreneurial certificate could be an indication that even graduates of higher education do not feel prepared for a career as an entrepreneur. The question is whether these low figures are the result of the students' attitudes or other (environmental) factors.

1.5 Policy and initiatives

Several initiatives towards start-ups and specific groups are being undertaken in the education field and encouraged by the Flemish Government to increase entrepreneurial spirit and, consequently, the number of newly founded companies. Policy makers and social partners are convinced that culture and education are partly responsible for stimulating entrepreneurship.

Moreover, there is also noticeable activity in the field of education in Flanders. During the last few years, the Flemish Government has regularly launched (directly or indirectly) new initiatives, such as:

- Syntra-Vlaanderen: creation of the "Competento" database and website, which contains information regarding entrepreneurial competencies and entrepreneurial education.
- "Brugprojecten": launched to promote entrepreneurship, innovation and internationalisation.
- Vlajo, including "mini-ondernemingen"
- "Leerondernemingen": 10 in higher education and 15 in secondary education
- "Actieplan Ondernemend Onderwijs" which includes several initiatives (such as the "Ondernemersklasseweek")
- "Ondernemende School" (UNIZO)
- "Accent op Talent"
- Development of new tools for teaching entrepreneurship
- Study on entrepreneurship education (under the authority of the "Koning Boudewijnstichting")
- Flanders DC, including "Flanders DC Fellows" (50 Flemish entrepreneurs that travel to schools to tell their story)
- And more.

In addition, professional and inter-professional organisations (such as UNIZO, VKW and VOKA) have taken initiatives during the last few years: company visits, learning enterprises, development of tools, … Organisations such as Vlajo, Dream, and NFTE have education and training explicitly in their mission and are reaching hundreds of students, schools and other institutions.

There is also the will to increase contact between educational institutions and companies in order to promote cooperation. In the long run, the impact of this policy development will make entrepreneurial education more discussible within the institutions concerned.

1.6 Reasons for a study on how entrepreneurial Flemish students are?

Based on the information presented above, a number of conclusions can be drawn:

- The Flemish government is highly committed to developing a creative knowledge-based economy. In a comparative analysis concerning the degree of creativity of nine economically top regions, Flanders scores a total of 65.2%. This score is far lower than the front runners (Baden-Württemberg and Maryland), but higher than regions such as Quebec and Lombardy. Flanders scores significantly higher than the average of the nine regions (56.6%), earning good points for openness and innovation. More problematic is the score for entrepreneurship in Flanders: with 46.8%, it is not even close to the average of 52.1%. In this respect, Flanders occupies seventh place out of the nine. (Bowen et al, 2006).
- There is a clear positive correlation between entrepreneurship and economic growth. Moreover, there is a correlation between educational attainment and entrepreneurship (TEA). However, Flanders is atypical in this respect: despite high educational attainment and a high quality of education, Flanders has a low TEA.
- The Flemish government wishes to pursue an active policy regarding education and entrepreneurship. As a result, a whole range of initiatives has been launched in Flanders with the aim of stimulating entrepreneurship – especially for youngsters.
- High-potential entrepreneurship leads to knowledge-intensive and innovative new companies. High-potential entrepreneurship is partly determined by the quality and quantity of human and social capital. High-potential entrepreneurs generally have a higher education.
- The attention currently paid to entrepreneurship in Flanders' universities and colleges is highly fragmented.

2 METHODOLOGY

2 METHODOLOGY

The 'International Survey on Collegiate Entrepreneurship 2006' was based on voluntary cooperation among representatives from 14 different countries. The initiative arose as a result of the efforts of the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen and the KfW Endowed Chair for Entrepreneurship at the European Business School. This core team was responsible for developing the questionnaire, coordinating the international efforts in conducting the survey, and publishing the findings of the study.

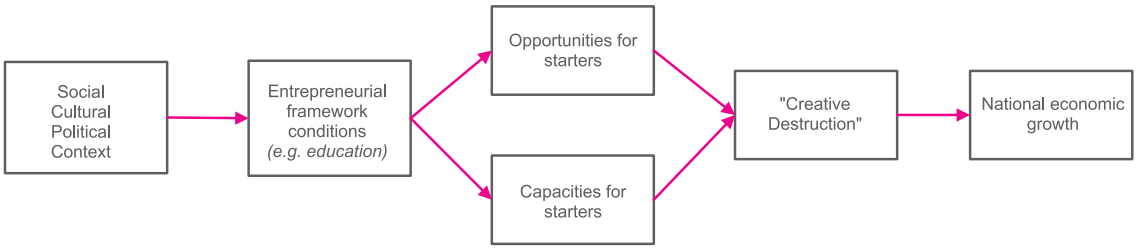
Each of the 14 countries had one representative (see Appendix 1), who was responsible for contacting students in that country. The representatives were asked to email the link to the questionnaire to as many students as possible, encouraging them to participate in the survey. Prize draws amongst participants were used as an incentive in some countries, so as to increase the students' participation in the survey. The survey itself was conducted via the Internet. On completion of the survey, all data was processed by the core team and then provided to the various national representatives in order to produce the national results.

2.1 Goals of the study

We intend to use the data of this survey to explain and discuss the intentions and behaviour of students in higher education in their decision to start entrepreneurial activities and found an enterprise. This study is driven by three questions that need to beanswered in order to understand how institutions of higher education can support student entrepreneurship: What are colleges and universities doing to support student entrepreneurship? What do their students think the colleges and universities should do? and Is this different according to the area of study?

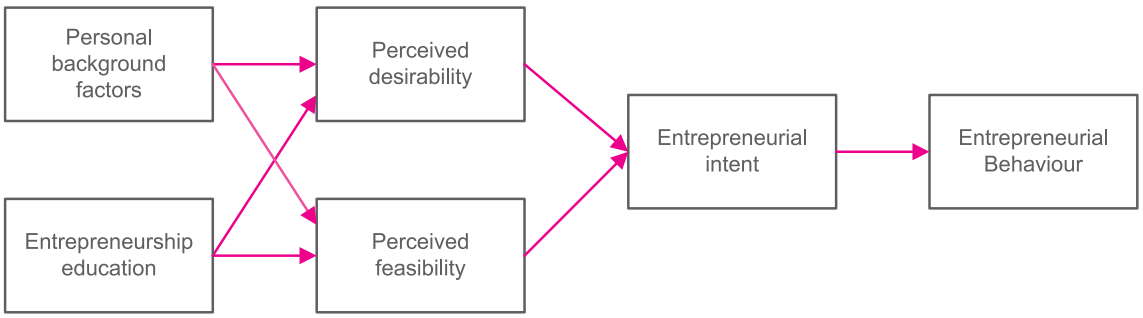
When constructing the conceptual model of this study, we first start by illustrating the Global Entrepreneurship Monitor (GEM) model, which shows the nature of the relationship between entrepreneurship and economic growth (see Figure 6). The GEM model makes a distinction between entrepreneurial opportunities and entrepreneurial capacity. What drives entrepreneurial activity is the perception of entrepreneurial opportunities combined with the skills and motivation to exploit them. When opportunities are joined with skills and motivation to pursue them, the outcome is the creation of new firms and, inevitably, the destruction of some existing firms (new firms frequently displace inefficient or outmoded existing firms). This process of “creative destruction” is captured in the model by business churning. Despite its negative connotation, creative destruction actually has a positive impact on economic growth, because declining businesses are phased out as new start-ups competitively manoeuvre their way into the market. These dynamic transactions occur within a particular context, which is referred to in the GEM Model as Entrepreneurial Framework Conditions. These include variables such as: availability of funding, governmental policies and programs designed to support start-ups, R&D transfer, commercial infrastructure, *education in general, education and training for entrepreneurship,* social and cultural norms, and internal market openness (Bygrave *et al.*, 2001).

Figure 6 Framework of the Global Entrepreneurship Monitor (GEM)



When focusing on the entrepreneurial framework conditions and, in particular, the role of education, we obtain the research model used in our study (see Figure 7). The main focus of this study is on entrepreneurship education, both perceived and desired. *Perceived entrepreneurship education* concerns students' perception of the entrepreneurial support that colleges and universities provide. Universities can support entrepreneurship in many ways that can be measured objectively. However, the extent to which they reach students is crucial to the effectiveness of the support measures. A suitable way to measure this is to measure the students' perceptions of the support measures. *Desired entrepreneurship education* concerns student attitudes and preferences towards support measures and indicates the students' opinions of the way and the extent to which their universities should support entrepreneurship. Students' opinions are an important indicator – but surely not the only one – for the direction colleges and universities should take in their support of entrepreneurship.

Figure 7 Framework of this study



The uniqueness of this project is emphasized by the ability to compare the entrepreneurial intent of students from higher education throughout different countries. The ability to compare the educational 'package' with the degree of entrepreneurial intent is an opportunity to find national best practices within entrepreneurial education. As the project is carried out on an international level, the results from Flanders can be benchmarked against results from 13 other countries worldwide (Liechtenstein, New Zealand, Switzerland, Singapore, Austria, Finland, Hungary, Germany, Norway, France, Ireland, South Africa and Australia).

2.2 Significance of the study

The sample on which this study is based consists of 37,412 questionnaires for analysis, coming from the 14 participating countries. The distribution across the various countries shows that some distinctions can be made (see Table 1).

Table 1 Participating countries and response rate

Country	Number of interviewed universities	Population	Number of completed questionnaires	Response rate (in %)
Liechtenstein	1	570	200	35,09%
New Zealand	2	27353	7970	29,14%
Switzerland	26	55105	8825	16,01%
Singapore	1	3500	354	10,11%
Flanders	**4**	**6954**	**657**	**9,45%**
Belgium	**5**	**21954**	**1612**	**7,34%**
Austria	23	122600	8857	7,22%
Finland	8	45400	1566	3,45%
Hungary	8	100205	3346	3,34%
Germany	9	111474	3189	2,86%
Norway	6	38125	1086	2,85%
France	1	2500	67	2,68%
Ireland	4	37000	248	0,67%
South Africa	1	12600	25	0,20%
Australia	3	52536	67	0,13%
International	93	630922	37412	5,93%

The response rate for Belgium and Flanders is higher than the international average of 5.93%. The population indicated in the third column relates to the number of universities effectively questioned. These figures were obtained as a result of adding up the number of students enrolled at the universities questioned for each country at the time the survey was held. This means that not every university was questioned. The population therefore shifts accordingly between 122.600 students in Austria and 570 students in Liechtenstein. The fourth column shows the number of questionnaires that were completed in each country. The last column shows the resulting response rates. The highest response rates were achieved in Liechtenstein (35.1%), New Zealand (29.1%), and Switzerland (16.0%). The lowest response rates were obtained in Australia (0.1%), South Africa (0.2%), and Ireland (0.7%). The international average is 5.93%.

Table 2 Structure of the samples by country

Country	Academic year (average)	Undergraduate / Bachelor level	Graduate / Master level	Doctoral program / Ph D.	Full time	Part time	Average age	Male	Female
South Africa	3,68	12,0	84,0	4,0	96,0	4,0	22,9	60,0	40,0
Austria	3,64	40,2	52,8	7,0	74,7	25,3	25,3	47,7	52,3
Germany	3,23	42,9	52,9	4,2	96,9	3,1	24,0	48,7	51,3
Hungary	3,19	40,2	58,6	1,2	90,6	9,4	23,3	51,6	48,4
Ireland	3,11	91,5	6,1	2,4	95,6	4,4	23,8	48,0	52,0
Switzerland	3,10	56,4	34,9	8,7	84,4	15,6	24,8	62,8	37,2
Norway	3,06	30,5	67,2	2,3	97,2	2,8	24,4	60,0	40,0
New Zealand	2,91	84,1	11,4	4,5	93,7	6,3	22,8	46,8	53,2
Belgium	**2,75**	**40,7**	**48,1**	**11,2**	**92,7**	**7,3**	**23,0**	**51,9**	**48,1**
Flanders	**2,56**	**42,0**	**53,3**	**4,7**	**91,0**	**9,0**	**23,3**	**56,8**	**43,2**
Finland	2,48	79,4	20,2	0,4	85,8	14,2	25,5	48,3	51,7
Liechtenstein	2,31	67,5	31,5	1,0	65,0	35,0	26,3	71,5	28,5
Australia	2,28	97,0	0,0	3,0	79,1	20,9	23,2	44,8	55,2
Singapore	2,18	98,9	1,1	0,0	98,3	1,7	22,5	49,4	50,6
France	1,00	94,0	6,0	0,0	100,0	0,0	21,0	37,3	62,7
Total	3,15	56,2	38,1	5,7	86,6	13,4	24,2	52,2	47,8

In addition to a quantitative description of the sample, its internal structure must also be taken into account. Table 2 therefore identifies five criteria in relation to the qualitative characteristics of the sample. In the second column, we have calculated the average duration of the students' course of study so far. The average number of study years is 3.15 years. For Belgium and Flanders, this average is slightly lower, 2.75 and 2.56 respectively. The second criterion is the stage of the course of study. 56.2% of all those questioned were Bachelor's degree students or an equivalent level, and 38.1% were Master's degree students or equivalent level. The remaining 5.7% were engaged in obtaining their Ph.D. or equivalent degree. When looking at Belgium and Flanders, there is apparently a higher percentage of Master's students than the international average. Furthermore, we also see a high percentage of Ph.D. students in Belgium (11.2%). However, this score is extremely high, so we suspect that there is a bias towards Ph.D. students because they might be more motivated to fill out the questionnaire. The third criterion relates to the way in which the course of study is structured. 86.6% of all students questioned indicated that they are in full-time education, whereas 13.4% stated that they are in part-time, or vocational, education. If we examine the sample for Belgium and Flanders in this respect, then once again we can see an over-representation of full-time students. In relation to the average age, which is 24.2 internationally, the students in Belgium and Flanders appear to be somewhat younger, averaging 23.0 and 23.3 years of age, respectively. The fourth criterion examines the division of gender amongst the students. On an international level, 52.2% of the students are male. For Belgium and Flanders, this percentage is 51.9% and 56.8% respectively.

Table 3 Main subject studied by students

	Business administration	Social sciences (psychology, sociology and similar subjects	Natural sciences	Mathematical sciences	Mechanical and electrical engineering	Medical sciences and pharmaceutics	Economics	Others
Switzerland	24,2	5,3	11,4	10,9	11,2	6,9	4,1	26,0
Liechtenstein	74,0	0,0	0,0	0,0	0,0	0,0	1,0	25,0
Germany	20,5	11,6	11,2	10,0	16,6	4,1	2,4	23,6
Austria	36,5	12,0	7,2	9,1	7,0	1,6	1,4	25,2
France	97,0	1,5	0,0	0,0	0,0	0,0	1,5	0,0
Belgium	**23,3**	**11,8**	**8,4**	**4,8**	**3,0**	**15,0**	**15,3**	**18,4**
Flanders	**27,7**	**9,6**	**3,8**	**2,7**	**0,3**	**7,3**	**33,9**	**14,6**
Ireland	53,6	2,4	5,6	2,8	5,6	5,2	9,3	15,5
Finland	36,2	2,2	5,1	14,4	22,1	4,0	2,7	13,3
Norway	9,9	0,7	12,4	14,3	14,2	5,1	12,2	31,2
Hungary	30,3	5,1	7,1	16,3	8,6	0,7	16,7	15,2
New Zealand	11,1	17,3	13,4	5,7	6,0	12,9	6,1	27,5
Australia	68,7	1,5	0,0	0,0	1,5	0,0	11,9	16,4
South Africa	72,0	0,0	0,0	0,0	0,0	0,0	24,0	4,0
Singapore	63,0	6,8	0,0	1,7	0,0	0,0	12,7	15,8

Another criterion is the composition of the national samples in relation to field of study (see Table 3). Here, we find large differences among the countries. This is a result of the questionnaire, which, in some cases, was sent to the entire student population of the university/school of higher education and, in other cases, to a particular faculty.

Notwithstanding small differences among the various countries in relation to the structure of the samples, as well as the risks inherent to web-based questionnaires, we find that the significance of this study's findings is quite high, with the exception of France, Australia, and South Africa. Therefore, we will not include these three countries in our analyses. Hence, most analyses in this report are based on the total sample.

2.3 Sample and representativeness

The sample obtained from the survey in Belgium was drawn from six universities/institutions of higher education in Flanders, Brussels and Wallonia (see Table 4). The majority of the respondents, i.e. 58.4%, were students of the University of Liège. Other participating universities were: the University of Antwerp, which accounted for 17.7% of the respondents; Ghent University and EHSAL, each accounting for 8.7% of our sample; and Vlerick Leuven Gent Management School, which accounted for 5.7% (or 92 students). The last 0.8 % of the sample was drawn from other universities in Belgium.

Table 4 At which university/technical college are you studying?

	Percent Belgium	Percent Flanders
University of Liège	58,4	-
University of Antwerp	17,7	43,4
Ghent University	8,7	21,3
EHSAL	8,7	21,3
Vlerick Leuven Gent Management School	5,7	14,0
Others	0,8	-
Total	100	100

In this study, we will focus primarily on the region of Flanders and the Dutch-speaking student population. Thus, we will only take into account the responses from the following four schools of higher education: University of Antwerp, Ghent University, EHSAL and Vlerick Leuven Gent Management School.

While the sample obtained is not representative of the entire student population of higher education in Flanders and worldwide, the participation of the several highly regarded educational institutions and the renowned project leaders has resulted in a stable basis from which we can draw solid conclusions on both the national and the international levels.

3 CONDITIONS AT INSTITUTIONS OF HIGHER EDUCATION

3 CONDITIONS AT INSTITUTIONS OF HIGHER EDUCATION

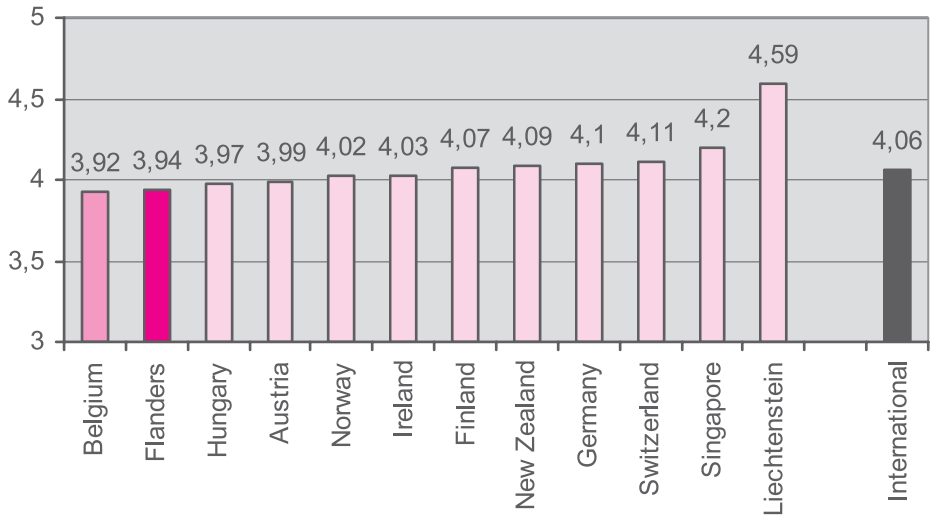
The “International Survey on Collegiate Entrepreneurship 2006” was carried out at institutions of higher education. Hence, it is also very important to examine the conditions at the institutional level: the entrepreneurial environment at the institutions of higher education and the activities students would like to see offered at their university/college.

3.1 Entrepreneurial environment

3.1.1 International comparison

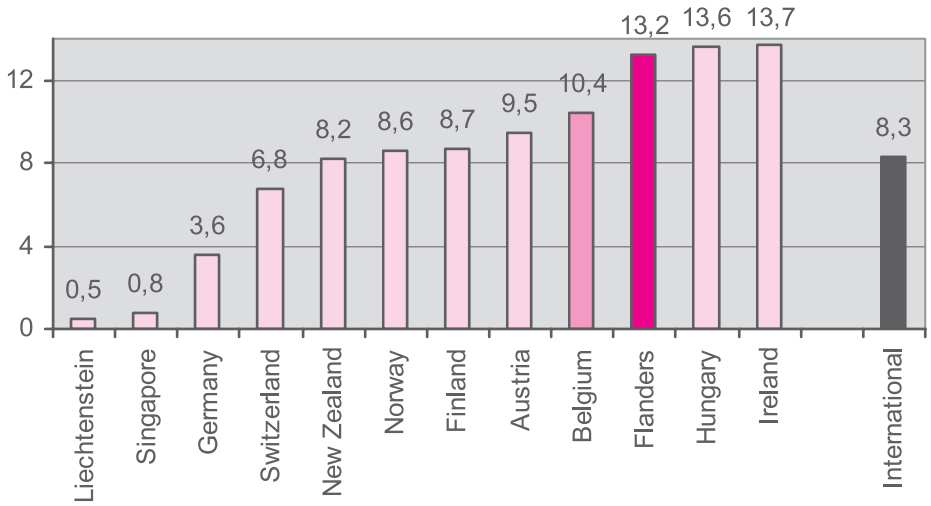
Students were asked to rate their university in terms of entrepreneurial environment (see Figure 8). To this end, we used a scale ranging from 1 (very bad) to 6 (very good). The international average showed that the entrepreneurial environment at universities was perceived as 'rather good' (4.06). Overall, the national scores are above the neutral value of 3.5. Furthermore, the differences are very small when compared internationally. The averages per country range between 3.92 and 4.20. However, it is quite remarkable that the entrepreneurial environment at the institutions of higher education in Belgium and Flanders score the lowest (3.92 and 3.94) of all participating countries.

Figure 8 How do you judge the climate and premises for starting a business at your university/ college? (1 = very bad; 6 = very good)



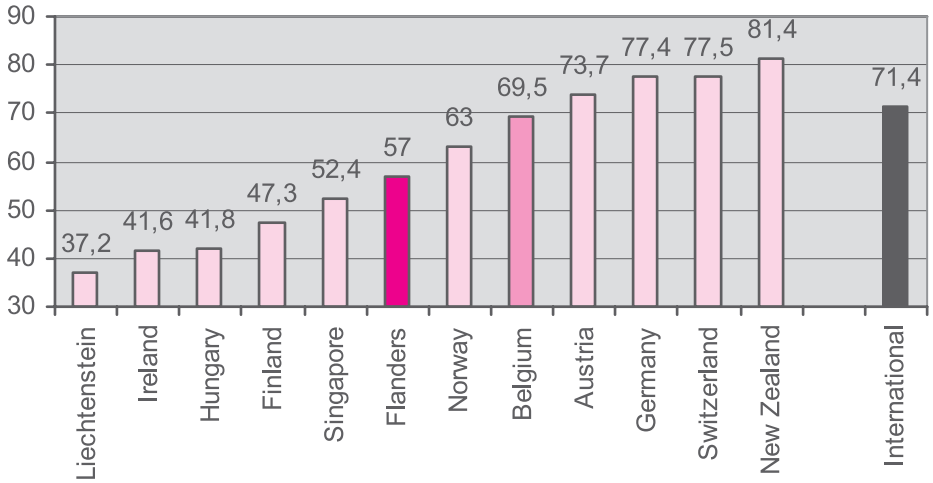
The entrepreneurial environment can be easily explained by examining the diagram below (see Figure 9). This figure shows the number of students who believe that no entrepreneurship-related courses are offered at their university/college. Students were surveyed across all study disciplines. Compared internationally, we can see that the availability of such courses is very much below the average in Belgium and Flanders.

Figure 9 No entrepreneurship-related courses offered



Even when entrepreneurship-related courses are offered by the universities, the students do not necessarily attend them. Figure 10 shows the percentage of students who do not attend any entrepreneurship-related courses, even though such courses are available at their universities. When compared internationally, 57% of the students in Flanders tend not to take such courses. However, we do note that the international average for non-attendance is even higher, at a rate of 71.4 %.

Figure 10 Non-attendance of entrepreneurship-related courses



3.1.2 Detailed results for Flanders

Traditionally, the higher educational system has great freedom in organising and planning its curricula. Thus, there could be large differences amongst the various universities/colleges that still grant the same diploma. Therefore, in addition to an international comparison of Flanders,

it is also interesting to compare the results of the institutions of higher education amongst themselves.

Figure 11 How do you judge the climate and premises for starting a business at your university/ college? Results compared amongst institutions of higher education (only economics and business administration students) (1 = very bad; 6 = very good)

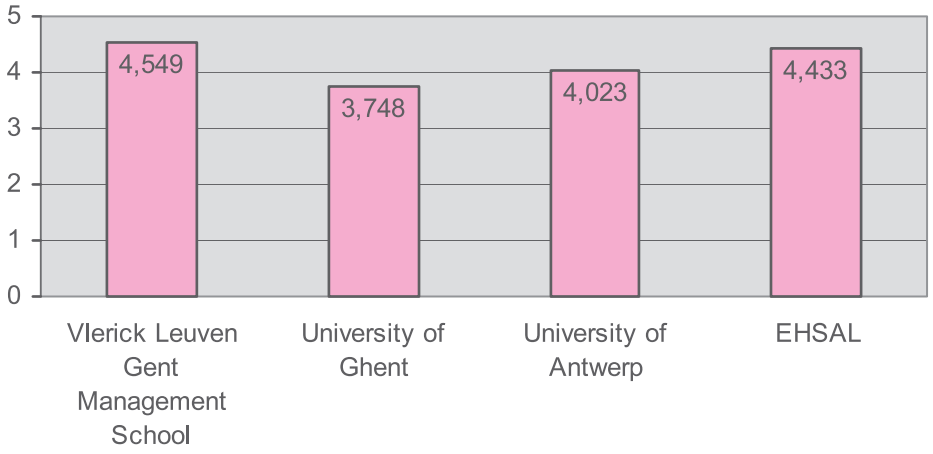
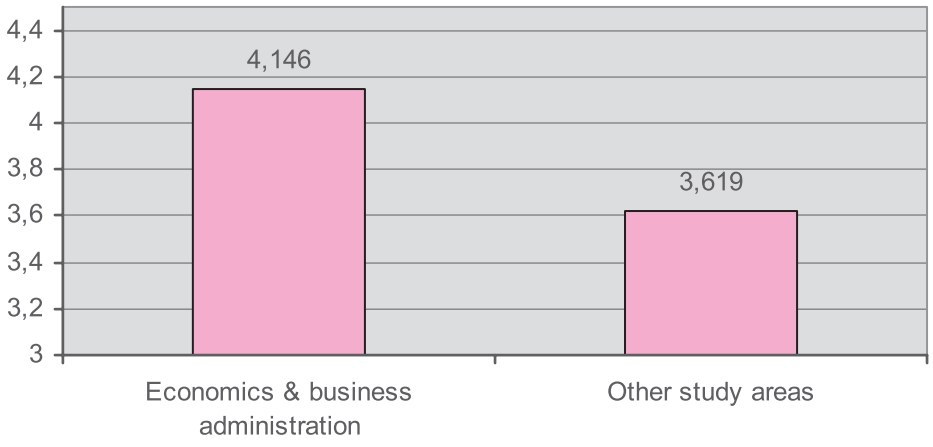


Figure 11 shows the mean value of the Flemish institutions of higher education for the question: "How do you judge the climate and premises for starting a business at your university/college?" This figure focuses on students studying economics and business administration. Figure 11 shows that the differences among Flemish institutions (3.75 to 4.55, or a difference of 0.8) are larger than the differences amongst the countries surveyed (3.92 to 4.2 or a difference of 0.28; with the exception of Liechtenstein). Both Vlerick Leuven Gent Management School and EHSAL score significantly higher than Ghent University and the University of Antwerp (Vlerick's score is comparable to the highest international score: 4.59 for Liechtenstein). Ghent University brings up the rear with an average score of 3.748.

Figure 12 How do you judge the climate and premises for starting a business at your university/ college? Results compared amongst study areas (1 = very bad; 6 = very good)

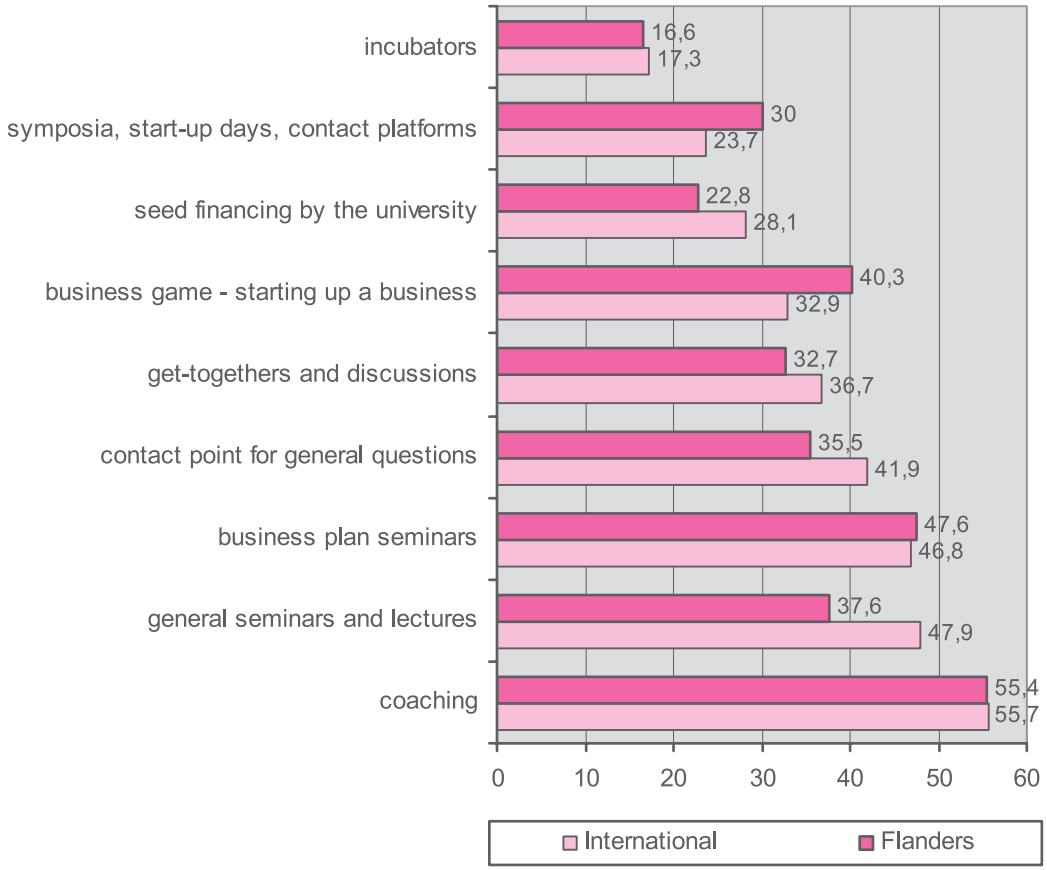


In addition to differences amongst the institutions of higher education, there could also be differences amongst study areas. Consequently, we compared the results for the question "How do you judge the climate and premises for starting a business at your university/college?" between students studying economics & business administration and students in other study areas (see Figure 12). Apparently, the entrepreneurial culture within economics & business administration is significantly more developed than the entrepreneurial culture within other study areas. This is quite likely the result of the recently increased attention paid to entrepreneurship in those study areas that wish to prepare their students for business life. Such study areas frequently have more students with a family background in entrepreneurship, which often causes greater interest in a more entrepreneurially oriented education. On the other hand, in other study areas that also attract large numbers of students (e.g. law, exact sciences, medical sciences, …), entrepreneurship is rarely offered at all. The majority of students in these areas of study are not in touch with the operation of companies to the same degree. Furthermore, many faculties in these other areas are wary of introducing entrepreneurial education, as they prefer to keep business life and professional life separate.

3.2 Activities students would like to see offered at universities

Finally, the students were asked what activities they would like to see offered by their universities, as well as any other sources of support, that would help them establish their own business during their studies, or immediately after graduation. The international average shows that most students would like to see coaching courses on offer, followed by general business-oriented seminars and lectures and business plan seminars (see Figure 13). The results for Flanders are in line with the international findings: for Flanders as well, the entrepreneurial support that the students want most is coaching for the start-up of their own business. This is followed by business plan seminars and business games for launching a business.

Figure 13 Support students would like to see offered at universities



4 ENTREPRENEURIAL ACTIVITIES AND GOALS

4.1 Students' professional expectations

4.1.1 International comparison

When we compare the countries, there is considerable variation in the students' expectations with respect to becoming an entrepreneur. Table 5 ranks the countries according to the students' expectations of becoming an entrepreneur. The percentages are based on the total sample. These rankings show that the entrepreneurial expectations for students in Flanders are quite high. In fact, for the "within 5 years after graduation" category, Belgium scores the highest of all participating countries (16.6%), while Flanders ranks fourth with 15.1%. The international average stands at 12.2%. After more than 5 years after graduation, when students have obtained some experience on the labour market, 44.7% of Belgian students and 40.8% of Flemish students expect to have an entrepreneurial position. Here, the international average stands at 34.8%. For purposes of comparison, we have included the countries' Total Entrepreneurial Activity (TEA), which indicates the percentage of adults (from 18 to 64 years old) in the total population who are either actively involved in starting a new business or are managing a business that is younger than 42 months old.

Table 5 Rankings of expected entrepreneurial position

Immediately after graduation (< 5 years)			After a few years of work experience (> 5 years)			Total Entrepreneurial Activity (TEA)		
Country	value in %	rank	Country	value in %	rank	Country	value in %	rank
Belgium	**16,6**	**1**	Singapore	46,9	1	Norway	9,14	1
Hungary	16	2	Ireland	44,8	2	Ireland	7,35	2
Ireland	15,7	3	**Belgium**	**44,7**	3	Hungary	6,04	3
Flanders	**15,1**	4	**Flanders**	**40,8**	4	Finland	4,99	4
Austria	14,2	5	Liechtenstein	37,5	5	Singapore	4,85	5
Liechtenstein	13	6	New Zealand	37,4	6	Germany	4,21	6
New Zealand	12,6	7	Hungary	35,7	7	**Flanders**	**3,05**	7
Singapore	12,4	8	Austria	35,5	8	**Belgium**	**2,73**	8
Norway	12,2	9	Norway	34	9	Singapore	n.a.	n.a.
Finland	9,8	10	Switzerland	32,5	10	Liechtenstein	n.a.	n.a.
Switzerland	9,5	11	Finland	29,2	11	New Zealand	n.a.	n.a.
Germany	8	12	Germany	26,8	12	Austria	n.a.	n.a.
International	12,2		International	34,8		Switzerland	n.a.	n.a.

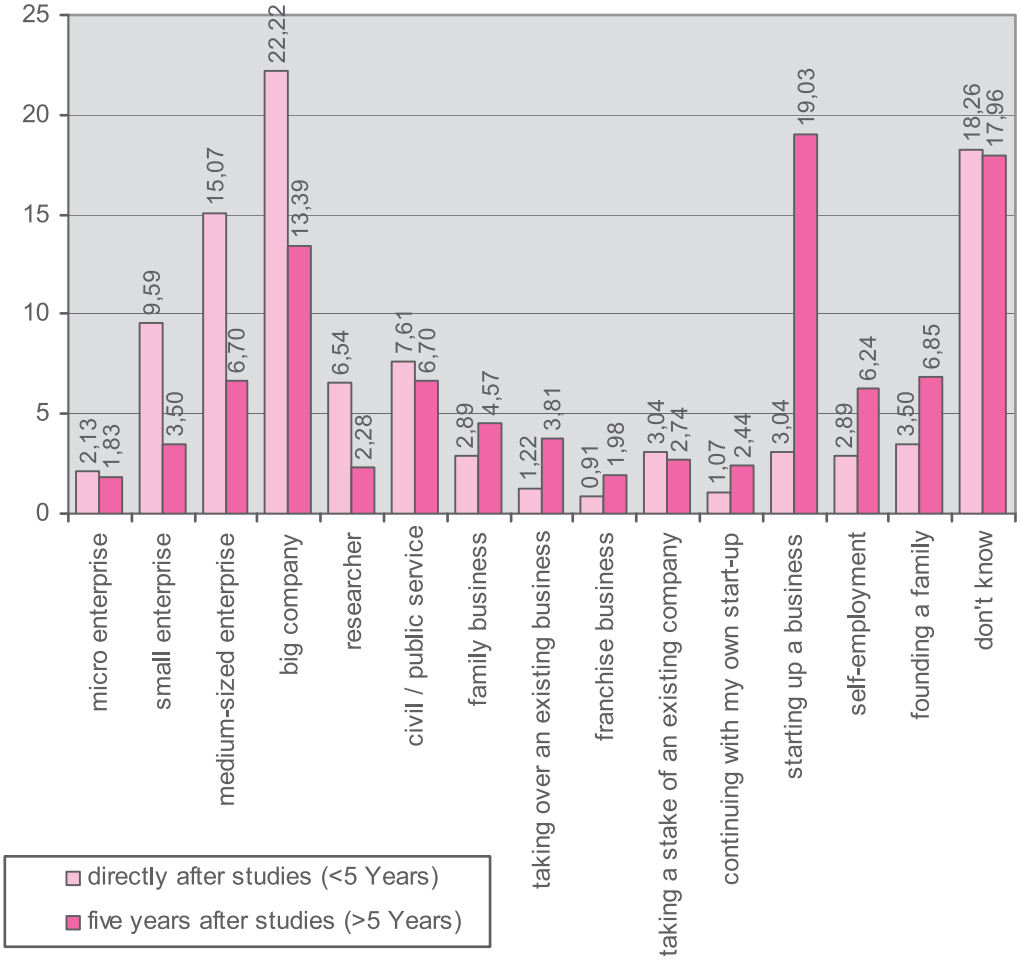
For more detailed information, see Figure 14. Besides showing the students' expectations of becoming an entrepreneur, Figure 14 also shows the students' expectations of becoming an employee and their preference for starting their family life.

Figure 14 Activities after graduation

4.1.2 Detailed results for Flanders

The aims of students in relation to their professional expectations can be quite diverse. At the same time, however, it must also be said that the first job that students obtain following graduation does not necessarily correspond with their job status after several years. We can assume that many students view their first job after graduation as a matter of finding their way around the job market as well as a first step towards further training and education. As a result, we distinguish between two question categories in Figure 15. In the first category, we asked students what their job expectations were for the first 5 years following graduation (< 5 years). The second category relates to the time after the students' first professional occupations (> 5 years after graduation).

Figure 15 Average of job expectations following graduation in Flanders



As Figure 15 shows, the Flemish averages for students who intend to enter the job market after graduation are as follows: entry into a large company (22.2%), a medium-sized company (15.07%), or a small company (9.59%).[1] Students also view public service (7.61%) and research (6.54%) as important activities. This overview clearly shows that two-thirds of the students expect their first job to be in the employ of someone else (total = 63.16%). In addition, 18.26% of the students surveyed were unable to state their preferences.

Still, potential job aims also include (albeit in a small way) wanting to become an entrepreneur. These ranged from participating in a business, to taking over a business, to establishing a business of one's own. A total of 15.06 % of all students surveyed expressed the intention of entering the job market following graduation as entrepreneurs. This percentage includes a range of variations: e.g., establishing a business, participating in a business, taking over a family

[1] Definition: micro-enterprise = 1-9 employees; small enterprise = 10-49 employees; medium-sized enterprise = 50-249 employees, large company = more than 250 employees; SME = small and medium-sized companies = 0-249employees.

business, or opening a franchise. On the other hand, the remaining 3.5% wanted to start a family or to continue with their family lives.

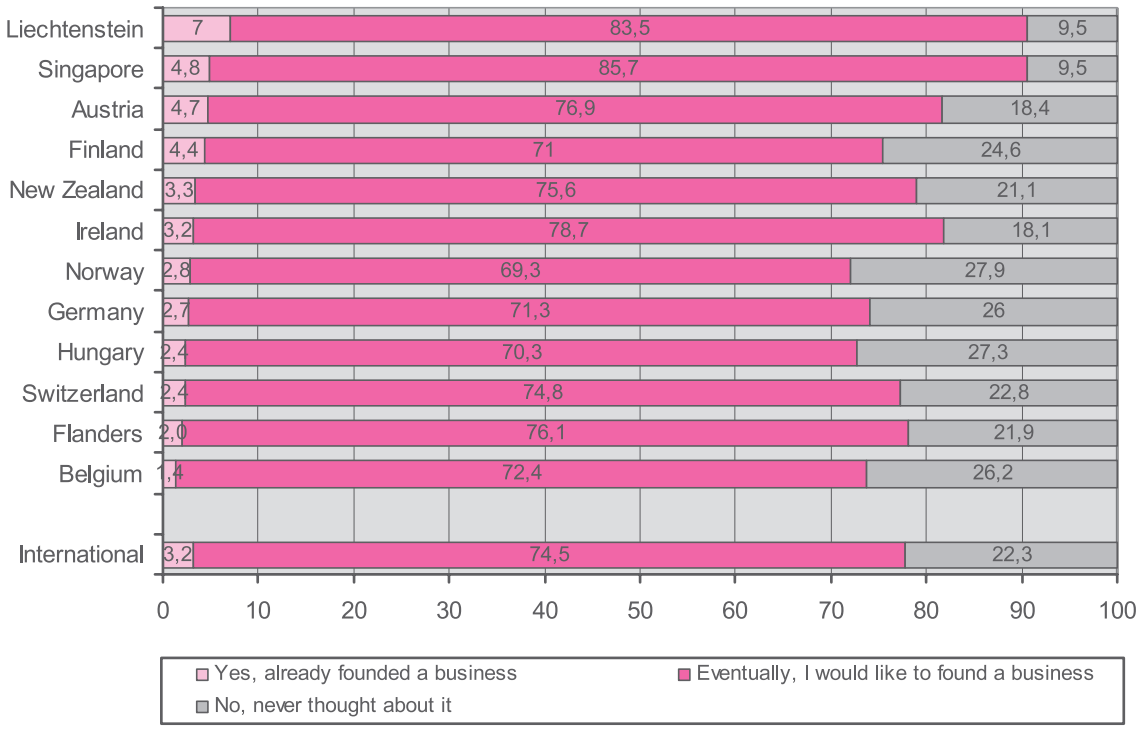
As can be expected, students' professional expectations change over time. For example, more students intend to become an entrepreneur after having gained several years of professional experience than those who intend to do so directly after graduation. In this context, establishing a business (19.09%) is accorded the highest preference. This option is preferred to a job in someone else's employment (i.e., in small and medium-sized businesses or large companies). Finally, there is no significant increase in the number of students who still have no specific job expectations after their first few years in a professional position.

4.2 Current entrepreneurial activities and intentions of students

4.2.1 International comparison

Figure 16 shows students across all disciplines and their possible intention to start a business. When compared internationally, an average of 3.2% of all of the students have already established a business. This group can be divided into 2.0% of students who are still actively involved in the business, and 1.2% who are no longer actively involved in the business, even though they created it. These entrepreneurial activities are examined in more detail in Chapter 4.3. Amongst the group of countries surveyed, Flanders (2.0%) and Belgium (1.4%), appear at the bottom.

Figure 16 Entrepreneurial activities and intentions of all students



The large majority of students have still not established a business. First, we considered all students across all disciplines (see also Figure 16). Compared internationally, 22.3% of all students indicate that they have never considered becoming an entrepreneur. With 26.2% for this category, Belgium occupies third place in the list of countries. This means that 1 out of 4 of the students surveyed in these countries has no entrepreneurial potential.

The other 3 out of 4 students in the study (74.5% international average) would like to establish a business in the near, or not so near, future – or at least they have considered doing so. This issue, and more detailed results for Belgium and Flanders, are examined in Chapter 4.4.

4.2.2 Detailed results for Flanders

Table 6 compares the entrepreneurial intentions and activities of economics and business administration students with students from other fields of study. This table shows that a higher percentage (29.76%) of students in other study areas have never even thought about the possibility of starting up their own entrepreneurial enterprise. These results are in line with the conclusions drawn in Figure 12, where it was stated that the entrepreneurial environment for economics and business administration students scores significantly higher than the entrepreneurial environment for students studying other disciplines. Furthermore, 13.09% of economics and business administration students are bound and determined to start their own business, compared to 4.76% of students in other study areas.

Table 6 Have you personally ever thought concretely about building up your own entrepreneurial enterprise (i.e. being self-employed)?

	Economics & business administration	Other study areas	Total
no, never	17,04%	29,76%	21,92%
yes, sketchily	44,69%	38,49%	42,31%
yes, rather concretely	13,33%	16,67%	14,61%
yes, but I turned away from it	6,67%	6,75%	6,70%
yes, I am bound and determined to be self-employed	13,09%	4,76%	9,89%
yes, I have already taken the first steps	2,72%	2,38%	2,59%
yes, I am already self-employed	1,73%	1,19%	1,52%
yes, I was self-employed, but I am not any longer	0,74%	0,00%	0,46%
Total	100%	100%	100%

4.3 Businesses established by students

Establishing a business may be advantageous, but the added value it implies is often questioned at the societal level. Therefore, we will now take a closer look at businesses already established by students (see Table 7). It is important to note, however, that the significance of some of the findings needs to be treated with caution, in particular for countries such as Liechtenstein, Singapore, Ireland, and Belgium, since the sample size for these countries is too small. Data for France, South Africa, and Australia were not analysed.

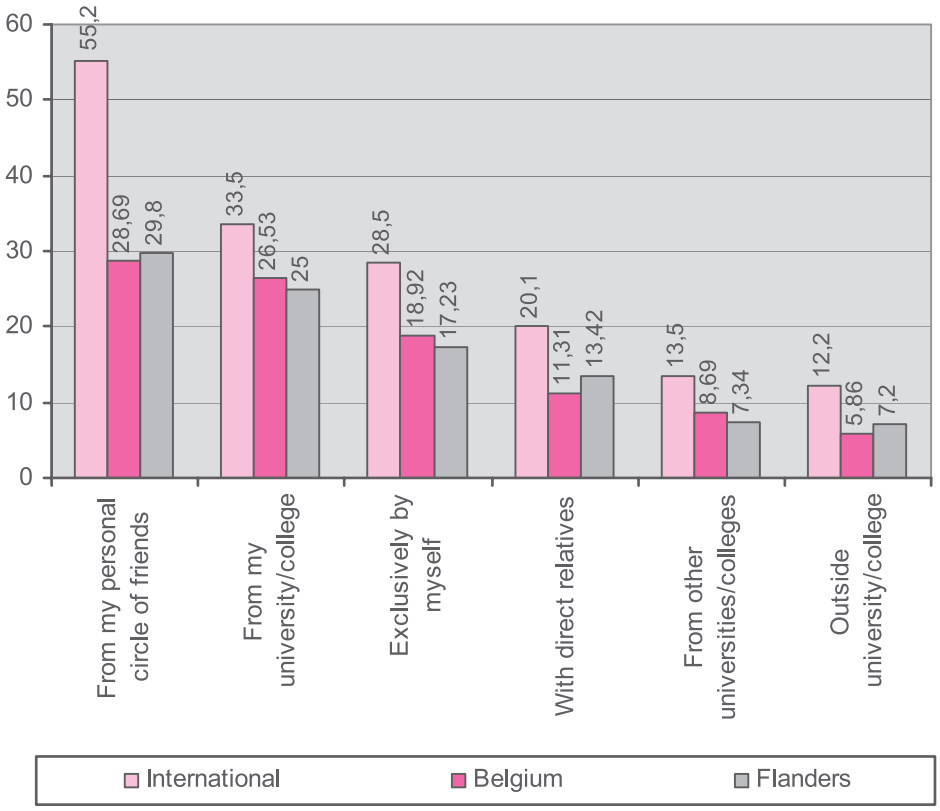
Table 7 Businesses established by students (* = findings need to be treated with caution)

Country	n =	rate of founders	founded … years ago	number of employees	number of founders	average age of founders
Liechtenstein*	14	7	4,2	2,5	2,8	31,9
Singapore*	17	4,8	2,5	2,4	2,3	24,1
Austria	424	4,7	5	4,1	1,6	30,8
Finland	68	4,4	5,2	1,8	1,6	29,1
New Zealand	260	3,3	5,3	4,1	1,8	30,6
Ireland*	8	3,2	8,2	1,3	2,4	35,3
Norway	31	2,8	4,4	2,0	1,8	28,9
Germany	84	2,7	3,3	1,9	1,8	26
Hungary	81	2,4	3,6	3,9	2	27,9
Switzerland	210	2,4	4,4	4,1	2,3	28,2
Flanders*	**13**	**2,0**	**7,0**	**4,1**	**2,1**	**30,4**
Belgium*	**22**	**1,4**	**7,1**	**4,3**	**2,1**	**29,8**
International	1224	3,2	4,8	3,7	1,9	29,6

As mentioned previously, the international average percentage for establishing a business was 3.2%. On average, such businesses were established 4.8 years ago. With regard to the average age of the students at the time they established their business (29.6 years), we can see that it is significantly higher than the average age of all students (24.2 years). This leads to the conclusion that such businesses were either established very early on during their studies or that the students established their business prior to commencing their studies.

Findings for Belgium and Flanders are not discussed here, as the samples for these regions are too small to draw solid conclusions.

Figure 17 Partners of business founders (indications in %, multiple options possible)



In addition, we also asked business founders where members of their team were drawn from at the time they established their business, allowing for multiple answers (see Figure 17). Since the amount of data collected for most countries is too small, we have not provided an analysis or commentary at the international level. Compared internationally, students who formed an entrepreneurial team to establish a business in Flanders drew people mostly from their circle of friends (29.8%) and from their own university/college (25%).

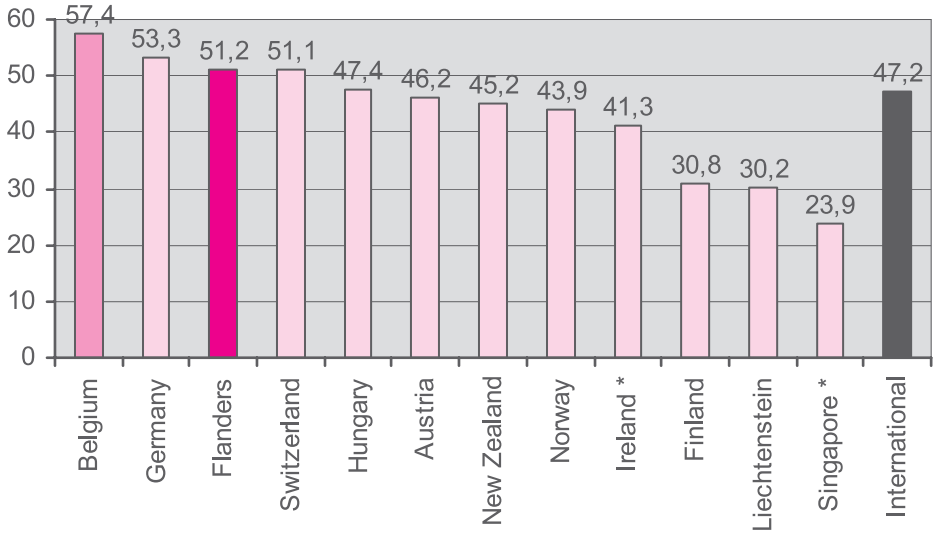
4.4 Intention of students to establish a business

4.4.1 Activities in relation to establishing a business

Following the previous closer examination of students who have already established a business, we will now turn to potential founders of businesses. The key focus for this analysis is on all those students who have at least considered establishing a business (see also Chapter 3.2). In order to identify how serious these students are in this regard, we asked a series of questions regarding potential steps that could lead to establishing a business, allowing for multiple answers.

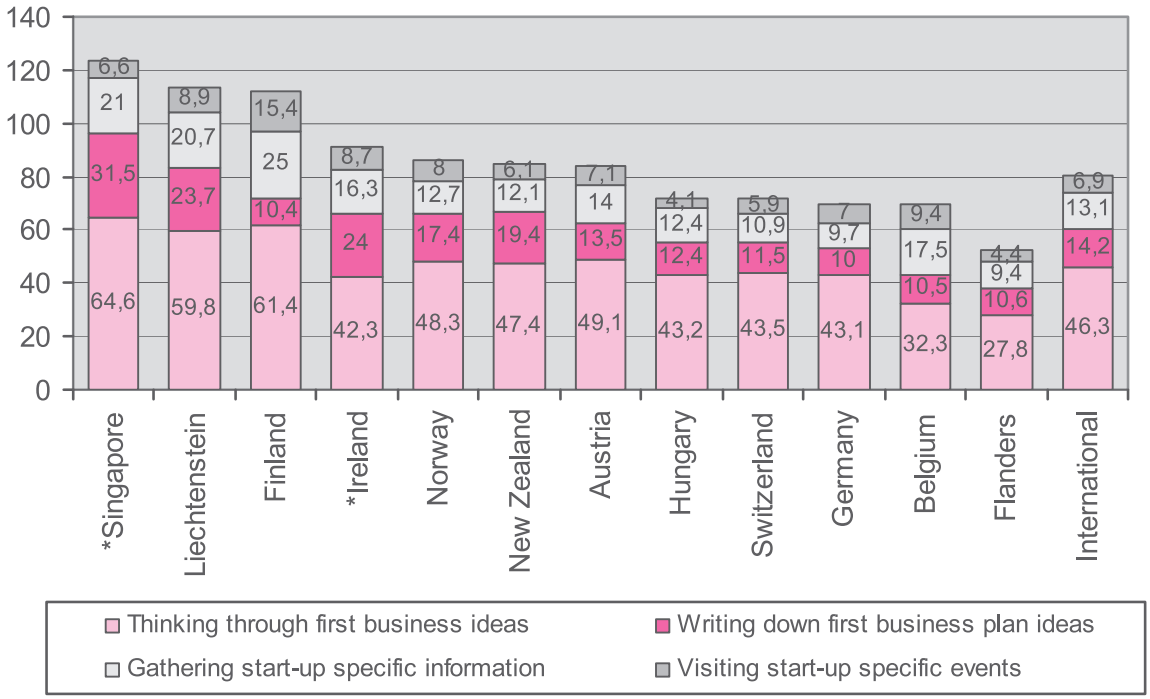
The international average showed that 47.2% of all students had not yet carried out any specific steps to establish a business (see Figure 18). This means that, although the students had already thought of establishing a business, half of them had not taken any serious steps towards becoming entrepreneurs. Compared internationally, Flanders (51.1%), occupies third place. This means that Flemish students are amongst the least likely to establish their own business, although they have considered it.

Figure 18 Students taking no specific steps to establish a business



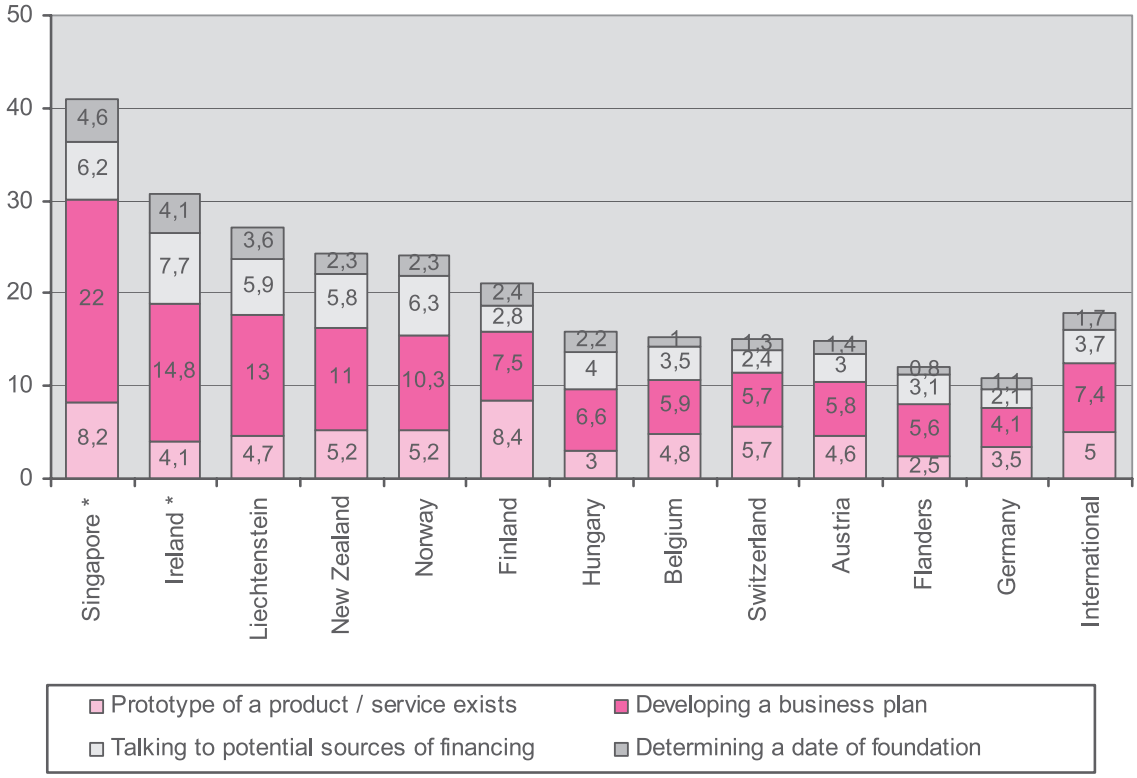
In addition to non-binding contemplation of the topic in general, the first thing that can lead to establishing a business is the gathering of information (see Figure 19). Another significant number of students (46.3%) indicate that they have at least thought carefully about their initial business ideas. A significantly smaller percentage of students have put such considerations into writing (14.2%). Accordingly, 13.1% of all students gathered information that specifically related to establishing a business, and 6.9% indicate that they have attended one or more events inside or outside the university in relation to establishing a business. Once again, we can see that, when compared internationally, the students from Flanders sit on the lowest rung of the ladder. However, when the activities are compared, the results for Flanders are proportionally comparable to the international results.

Figure 19 Information gathering for establishing a business



Finally, there are the 'preparatory activities', which point specifically, and in a goal-oriented way, to the intention of establishing a business (see Figure 20). These activities refer to the availability of prototypes of products or services (5.0%), preparation of a business plan (7.4%), talks with possible sources of financial support (3.7%), and/or agreeing on specific time lines in relation to establishing the business (1.7%). Compared internationally, Flanders is in second-to-last place.

Figure 20 Preparatory steps for establishing a business

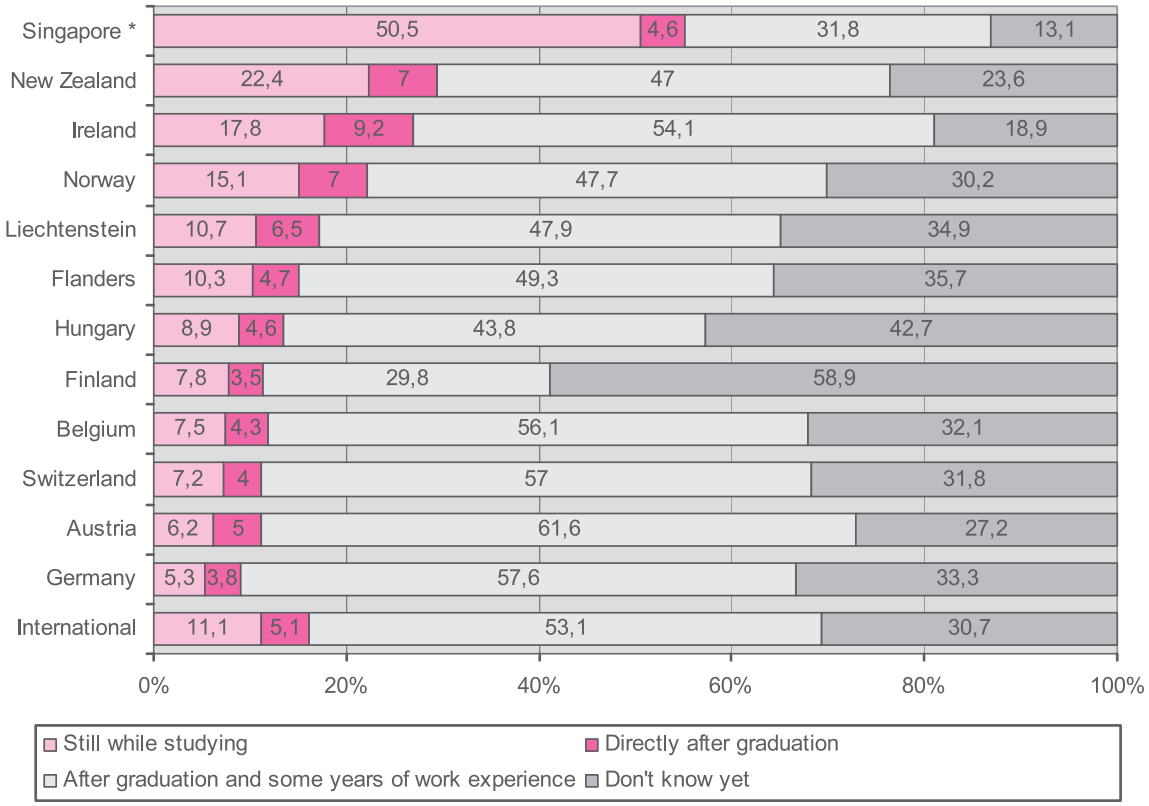


We can conclude that only a small percentage of students who intend to establish their own business have taken any concrete steps in that direction with a specific time frame in mind. This is certainly the case for Flanders, as it usually scores at the lower end of all of the participating countries.

4.4.2 Possible time frame for establishing a business

We also asked potential business founders about the potential time frame for establishing their business (see Figure 21). Compared internationally, for 11.1% of those surveyed this matter has already become an issue during their studies. For 5.1% of the students, this is an issue to be considered after graduation. About half (53.1%) of the potential business founders make the conscious decision to first obtain several years of professional experience prior to taking steps to establish their own business. This corresponds with our analysis in Chapter 3.1. Almost one-third of all students (30.7%) remain uncertain as to when to establish their own business.

Figure 21 Time frame for establishing a business



Compared internationally, we see that a rather low percentage of students in Belgium (7.5%) indicate that they want to establish a business during their studies. For Flanders, this percentage comes to 10.3%, which is almost the same as the international average. The differences are smaller with regard to students establishing their own business immediately following graduation, where Flanders shows a percentage of 4.7%. The percentage of Flemish students that wish to establish a business after some years of work experience (49.3%) is lower than the international average (53.1%). Furthermore, more than one third of the Flemish students claim that they don't yet know when they will establish their business.

4.4.3 Details of potential business establishments

As we did above with the already established businesses, we will now examine potential business formations in more detail (see Table 8). The analysis per sector shows that an insignificantly small percentage of students (1.4%) intends to become active in the primary sector (agriculture, hunting, fishing, forestry, and mining). 22.3% of the potential business founders are interested in starting a business in the secondary sector. As expected, the tertiary sector (75.4%) is the predominant area for entrepreneurial activity. The most important industries within the tertiary sector once again include the provision of company-related services (15%) and communication

(10%), followed by the health and social sectors (11%) and the provision of social or personal services (10%). Comparing the various countries, not many significant distinctions can be identified. However, one noteworthy finding is that Flanders shows one of the highest interests in the tertiary sector (81%).

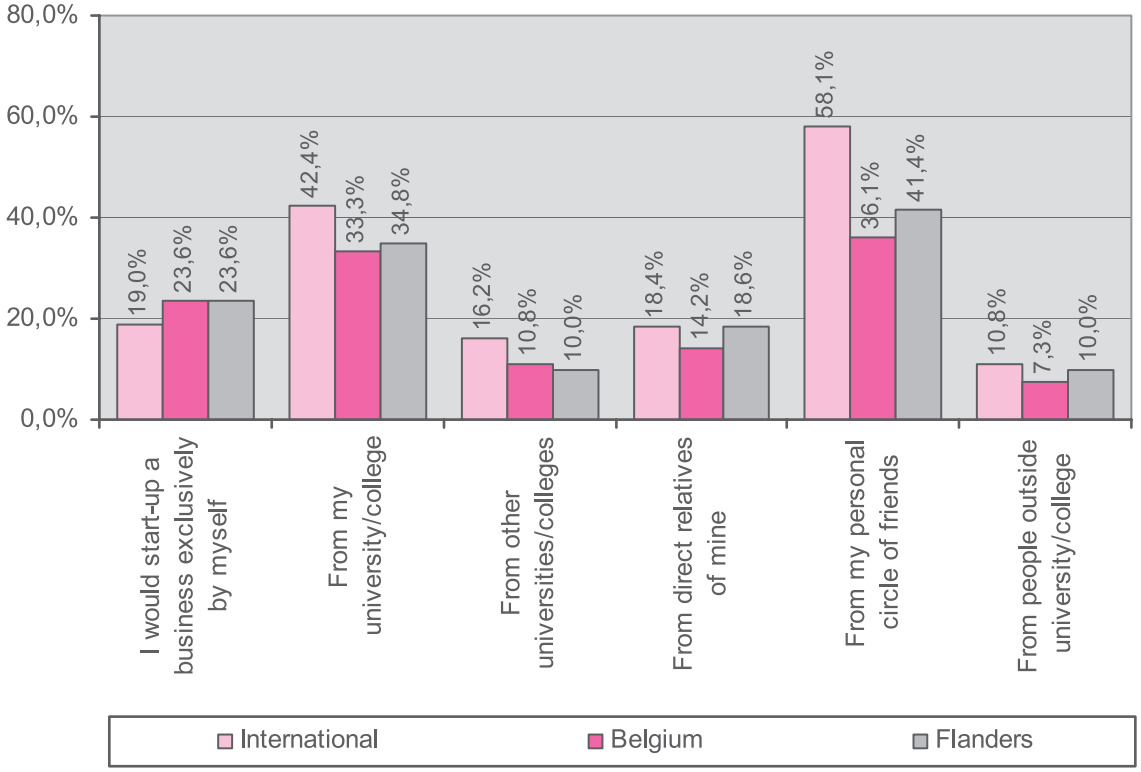
Table 8 Potential business formations by students

Country	n =	1. Sector	2. Sector	3. Sector	with experience	number of founders
Liechtenstein	167	1,2%	15,6%	82,2%	0,0%	2,1
Singapore *	303	0,7%	18,8%	80,5%	13,2%	2,5
Austria	6800	1,5%	19,5%	79,0%	34,0%	2,0
Finland	1112	1,9%	30,5%	67,6%	49,5%	2,0
New Zealand	6028	4,1%	19,4%	76,5%	26,5%	2,1
Ireland *	195	1,5%	20,5%	77,9%	46,8%	2,1
Norway	752	7,5%	42,7%	49,8%	23,2%	2,2
Germany	2277	1,3%	25,4%	73,2%	23,8%	2,1
Hungary	2352	2,6%	21,4%	76,0%	23,5%	2,4
Switzerland	6601	1,4%	24,3%	74,3%	36,0%	2,3
Belgium	1167	3,5%	18,5%	78,0%	29,8%	2,1
Flanders	500	0,8%	18,0%	81,0%	23,0%	2,1
International	72885	1,4%	22,3%	75,4%	30,7%	2,2

Almost one-third of the potential business founders indicated that they already have professional experience in their preferred sector. The results for Flanders are significantly lower than the international average: 'only' 23% of the potential Flemish business founders in this study have practical experience in the industry in which they would want to start a business.

The persons surveyed indicated that the average size of the team desired to establish a business is 2.2 persons. This international average is comparable to the desired team size for Flanders (2.1 persons). Closer examination reveals that cooperation across several universities rates lowest for potential business founders (see also Figure 22). For around 10% of potential Flemish business founders, partners should come from other universities. The percentage of students who want to establish a business solely on their own is quite low as well at 23.6% (while the international average is even lower at 19.0%). As we saw with actual business founders, potential business founders prefer to involve persons from their own immediate circle of friends or acquaintances, followed by persons from their own university.

Figure 22 Partners for potential business founders (indications in %, multiple options possible)



5 OBSTACLES TO ESTABLISHING A BUSINESS

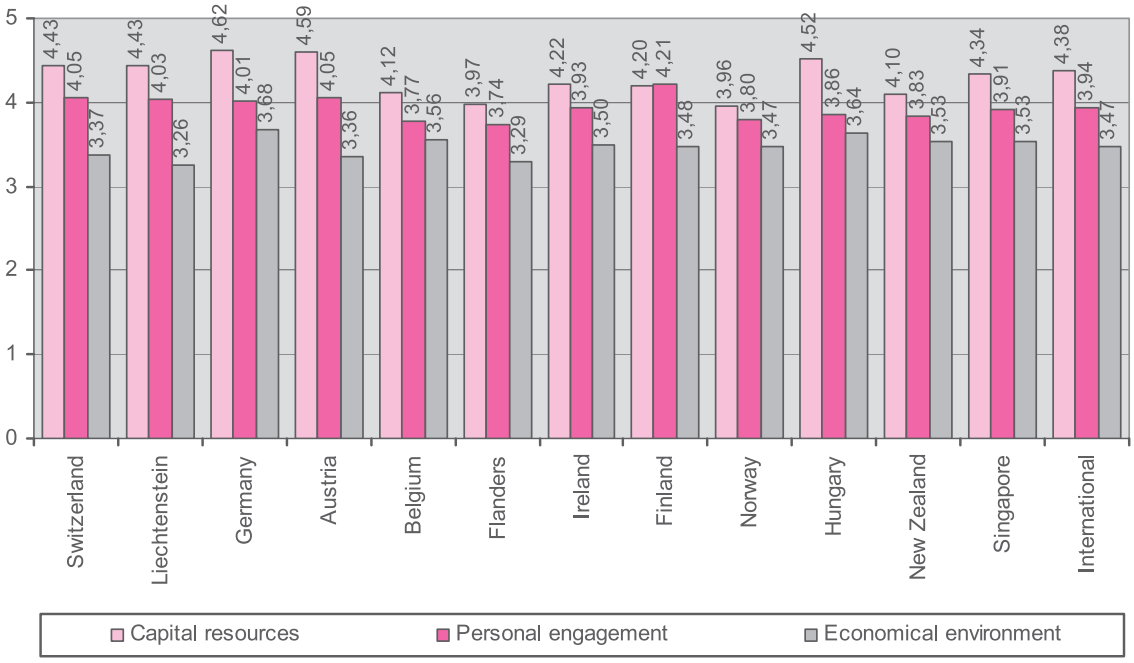
5.1 International comparison

The process of establishing a business may present a number of difficulties. For this reason, we asked the students what types of obstacles they might encounter and how they would rate those obstacles on a scale. Using a factor analysis and reliability test, we have identified three factors for further analysis. We will consider these factors as obstacles in what follows.

The first factor/obstacle may be referred to as 'economic conditions'. This factor includes the business environment and the economic situation. The second factor can be labelled 'financial resources', which includes: lack of private capital, lack of foreign capital, and personal financial risk. The third factor – 'personal engagement' – comprises: lack of courage, fear of failure, and lack of a good business idea.

Thus, we have defined three potential factors, in three different areas, which may have an effect on whether or not students decide to establish a business. The first area deals with an assessment of the *economic conditions*, which involves the environment in which the business is, or will be, established. The financial perspective provides an essential overview of the *capital resources* and relates to the financial strength of the business (to be) established. The last factor relates to the particular person who decides to establish a business and serves as a reference point for the (potential) business founder's *entrepreneurial potential* and ability to handle risk. These three factors are represented in Figure 23.

Figure 23 Obstacles compared internationally



Compared internationally, we can see that financial resources are viewed as the biggest obstacle in all countries, ahead of personal engagement and economic conditions. However, in comparison to the other participating countries, the lack of *financial resources* is seen as a relatively minor obstacle in Flanders. Flanders' score of 3.97 is significantly lower than the international average of 4.38. At the same time, we can observe a weak – but highly significant – negative correlation between the students' potential to establish their own business and financial resources (correlation = -.132**). This means that the more the students regard access to finances as an obstacle, the less potential they have to establish their own business.

When looking at *personal engagement* – such as the lack of courage or the lack of business ideas – the results for Flanders (3.74) are only slightly lower than the international average of 3.94. Here too, we find a weak, but highly significant, negative correlation between the students' personal engagement and their potential to establish their own business (correlation = -.193**). This means that the less the students perceive themselves as an obstacle, the higher their potential to establish their own business. On the basis of these findings, we can conclude that personal characteristics are the most important factor in establishing a business. However, the effect on an individual basis is still relatively small for it to be the sole factor in explaining the entrepreneurial potential of students at the international level.

With regard to *economical environment*, students wanting to establish their own business seem to find it the least obstacle. The score for Flanders (3.29) is quite good in comparison to the international average of 3.47. There is even less of a correlation between the students' potential to establish their own business and economic conditions (correlation = -0.107**). This correlation means that the less economic conditions are seen as an obstacle, the more likely it is (albeit only to a small degree) that the students' entrepreneurial potential will develop.

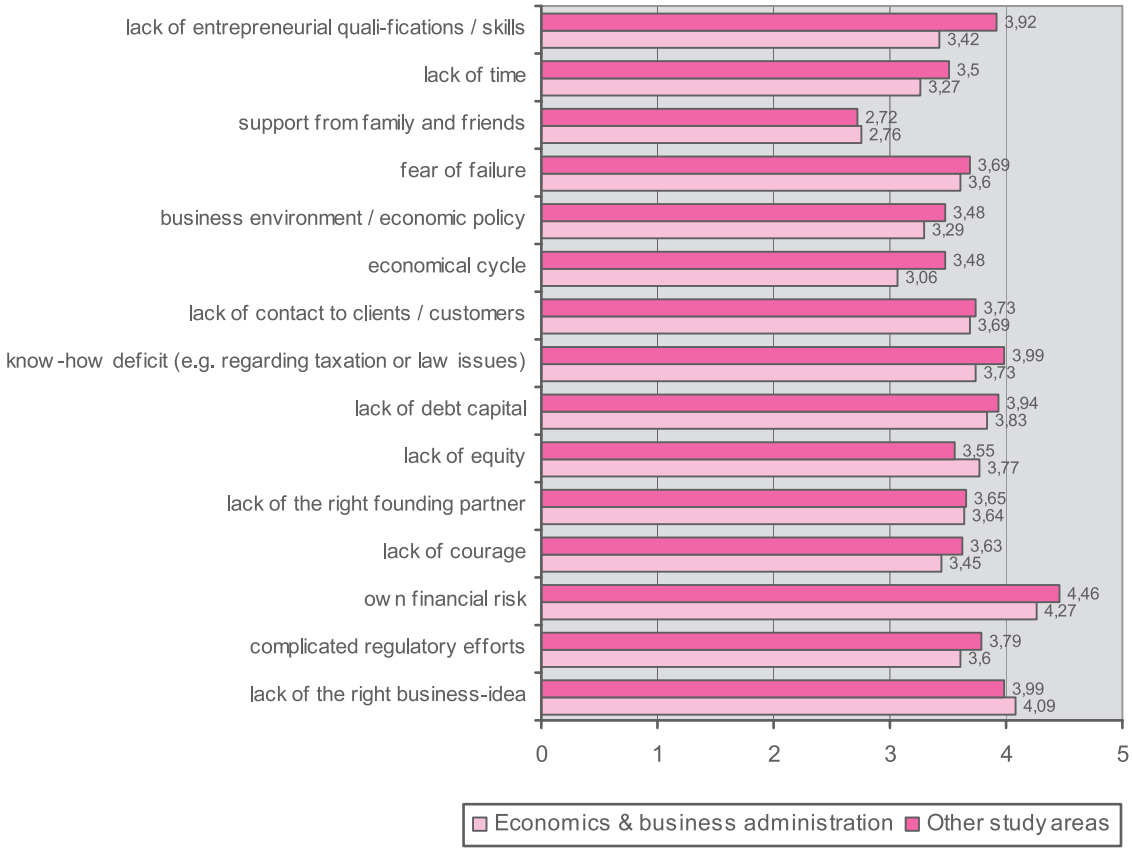
5.2 Detailed results for Flanders

The detailed results for the obstacles to establishing a business in Flanders are shown in Figure 24. This figure illustrates that the personal financial risk and the lack of a good business idea are seen as the main obstacles. This is in line with what was mentioned previously, i.e. that most students perceived taking personal financial risks as the biggest obstacle.

Figure 24 Obstacles to establishing a business in Flanders (6 = very significant obstacle, 1 = very insignificant obstacle)

Figure 25 examines the obstacles to starting a business across study areas. In general, economics and business administration students perceive most of these items as less of an obstacle. The largest differences between economic & business administration students and students from other study areas are for the following variables: lack of entrepreneurial skills and the economic cycle. This indicates that students studying economics & business administration are more self-confident about their skills as potential entrepreneurs. Furthermore, they perceive the economic cycle as less of an obstacle, as they have more insight into the economic environment and therefore might feel they can anticipate it better.

Figure 25 Obstacles to establishing a business compared amongst study areas



6 CONCLUSIONS

6 CONCLUSIONS

6.1 Important findings of this study

Entrepreneurship and entrepreneurial intent are generally considered to be important prerequisites for economic growth and social welfare. However, the GEM results show that scores for Flanders are not encouraging in this regard. In fact, during the year 2006, Flanders even occupied last place amongst all 49 participating countries worldwide in the area of Total Entrepreneurial Activity (TEA). On the supposition that entrepreneurs are not born but made – studies have shown that people who have had entrepreneurship education have twice the likelihood of starting a company – it is crucial to encourage entrepreneurship on the individual level.

In the "Green Paper on Entrepreneurship in Europe", the European Commission reports the following finding: *From the GEM survey, it has become clear that there exists a two to seven times larger chance that people who have faith in their own skills and experience become involved at starting a new venture; for those who know someone who has recently started a company, the chance is three to four times larger. (…) The educational system can ensure both the skills and the familiarisation with entrepreneurship as a contribution to stimulating entrepreneurship.*

While the sample we report on is not representative for the entire student population in Flanders or worldwide, the participation of the various educational institutions and the (sub) project leaders has given us a stable basis from which we can draw solid conclusions on a national and international level.

One of the most important questions in this survey concerned the perceived entrepreneurial environment at the institutions of higher education. The differences among countries are quite large, with Flanders bringing up the rear (3.94 out of a maximum score of 6). When reviewing the results at the institutional level, both Vlerick Leuven Gent Management School and EHSAL score significantly better than Ghent University and the University of Antwerp. The low scores for Flanders in general, and for some of the institutions of higher education, are probably the result of the fact that the number of entrepreneurship courses offered at these universities and colleges is low. An important finding is that the differences amongst the institutions in Flanders are larger than the differences amongst the European countries (with the exception of Liechtenstein). Furthermore, the question of quality and attractiveness arises: even when these courses are offered, 57% of the Flemish students tend not to attend them. While the students think that the entrepreneurial environment is not optimal in Flanders, all of the students in our study have indicated their preferences of what they would like to see offered at their university/college concerning entrepreneurship support. In Flanders, the most favoured choices are coaching for the start-up of a business, followed by business plan seminars and business games for starting a business.

The professional expectations of Flemish students for having an entrepreneurial position are quite high. When it comes to the students' professional expectations immediately after graduation, Flanders ranks 4th out of the 11 countries surveyed. This indicates that the entrepreneurial intent of Flemish students is quite high: i.e., 15.1% while the international average lies at 12.2%. However, the majority of the students (63.2%) expect to be employed by someone else at first.

Then, “after some years of work experience” (more than five years), Flanders again ranks 4th out of the 11 countries in entrepreneurial intent. However, the proportion is now much higher: 40.8% while the international average lies at 34.8%. While these results might be promising, the actual number of companies that are founded by Flemish students during their studies is low (2% of the Flemish sample state that they have already founded a business, while the international average is 3.2%). As expected, the entrepreneurial intent of economics & business students seems to be higher than that of students in other areas of study. More specifically, 13.09% of the economics and business administration students claim that they are “bound and determined to become self-employed”.

When focusing on potential business founders, students in Flanders are among the least likely to establish a business, although they have considered it. 10.3% of the potential business founders wish to establish a business while still studying, whereas 4.7% aim to do this directly after graduation. The majority of Flemish students (81%) would like to start their business in tertiary industry; and the preferred partners for starting a business are people within the students’ personal circle of friends and people from their own university/college.

The hurdles that would keep most students from starting a business are, in order of importance: lack of capital resources, lack of personal engagement and the economic environment. More specifically, the personal risk and lack of the right business idea seem to be the most significant obstacles. The order of importance is comparable throughout the participating countries. A positive note is that these hurdles are found to be less of a problem in Flanders than internationally. Furthermore, economics and business administration students perceive most of these hurdles as less of an obstacle. More specifically, these students seem to be more self-confident about their skills as potential entrepreneurs.

These results indicate that we must not limit ourselves to answering the question: How entrepreneurial are our Flemish students? It is also crucial to question and examine: How entrepreneurial are the educational institutions in Flanders? and How entrepreneurial is the educational environment at these institutions?

6.2 What can be done?

Institutions of higher education are well-placed to assist in the development of entrepreneurship – i.e., to help those students with entrepreneurial intentions to find and use appropriate facilities and resources. This research project indicates that there is a lot of room for improvement in stimulating entrepreneurship at universities and colleges. Entrepreneurship support should be part of the university or college curricula – not only for economics and business students, but for students in all fields of study.

Student entrepreneurs at differing stages of commitment and planning are asking for targeted assistance. In the early stages of commitment, colleges and universities can give educational support to entrepreneurship. This type of support is part of their role as educational institutions. Universities can teach students the general knowledge and skills that are needed to start a company. They can do so in the form of courses, business games, etc. During the later stages of

commitment, colleges and universities could also provide more targeted and specific support. This type of support – which moves away from the traditional teaching role of colleges and universities – can entail providing individual students or groups of students with the support they need to develop their own firm (e.g., business plan seminars and (personal) coaching).

As the results of this study show that some institutions of higher education have a more entrepreneurial climate than others, we suggest that structural attention be devoted to the coordination of actions in the educational system. Joint advice and general action plans for the institutions of higher education could be suggested. Then, policy makers have the responsibility to choose the appropriate actions and to coordinate these actions.

Direct contacts with entrepreneurs (via company visits, for example) should be encouraged to give students and teachers a better idea of how a company works. Also, there is a need for more efficient and better structured relationships between universities/colleges and industry for mentoring and internships.

Furthermore, one can question whether the faculty and staff have the necessary expertise to teach the students in this field of entrepreneurship. Is there sufficient conviction regarding the need to encourage entrepreneurship in students? Is there the necessary enthusiasm to excite students about the possibility of becoming entrepreneurs? Specific training courses could be developed to provide faculty and staff with the necessary skills and knowledge to teach students in the specialised area of entrepreneurship.

A final suggestion is to continue to monitor entrepreneurship and entrepreneurial needs at the institutions of higher education (the next international survey on collegiate entrepreneurship is planned for 2008). Such longitudinal studies should also measure the effects of (the various forms of) entrepreneurial education on the establishment of new businesses.

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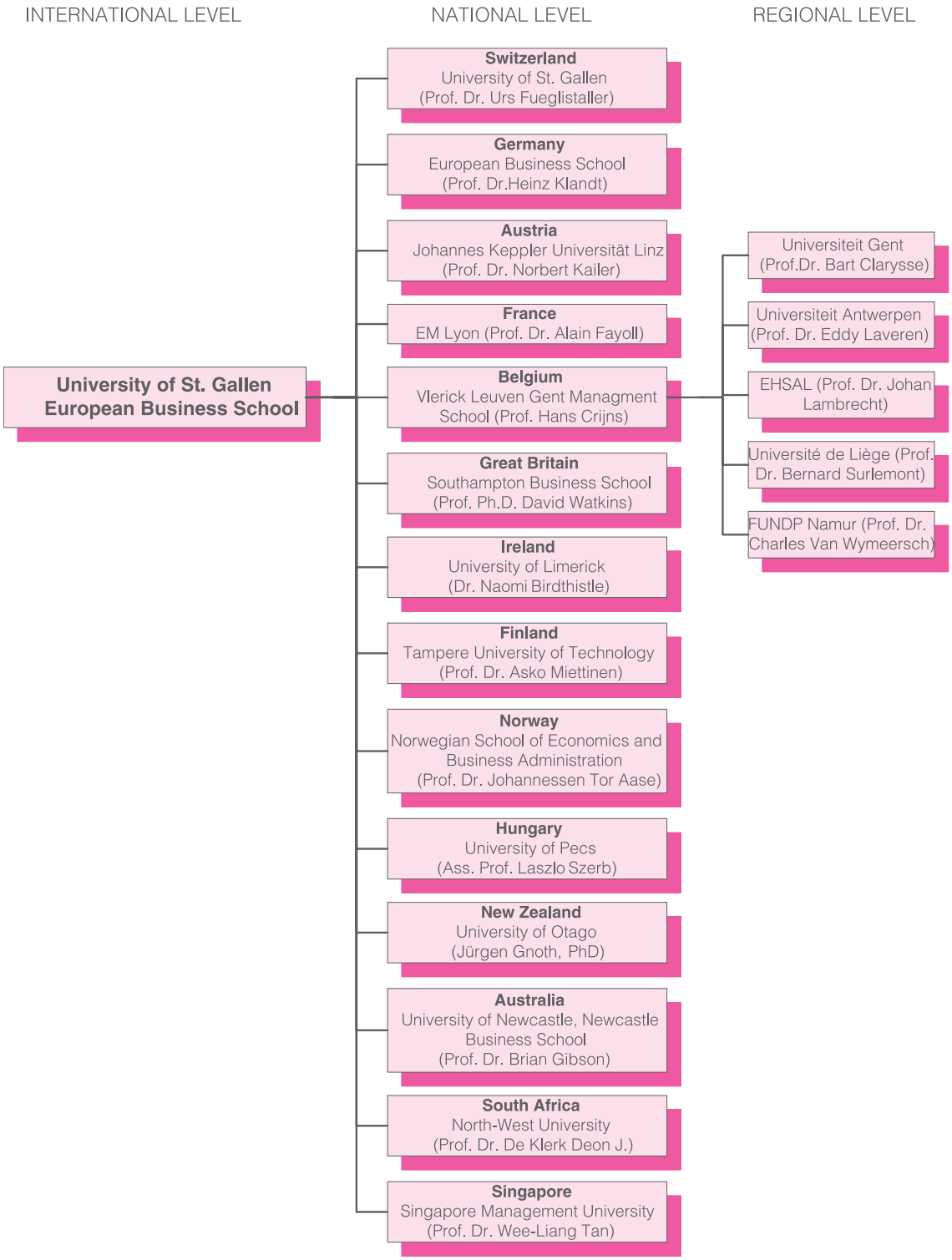
APPENDIX

APPENDIX

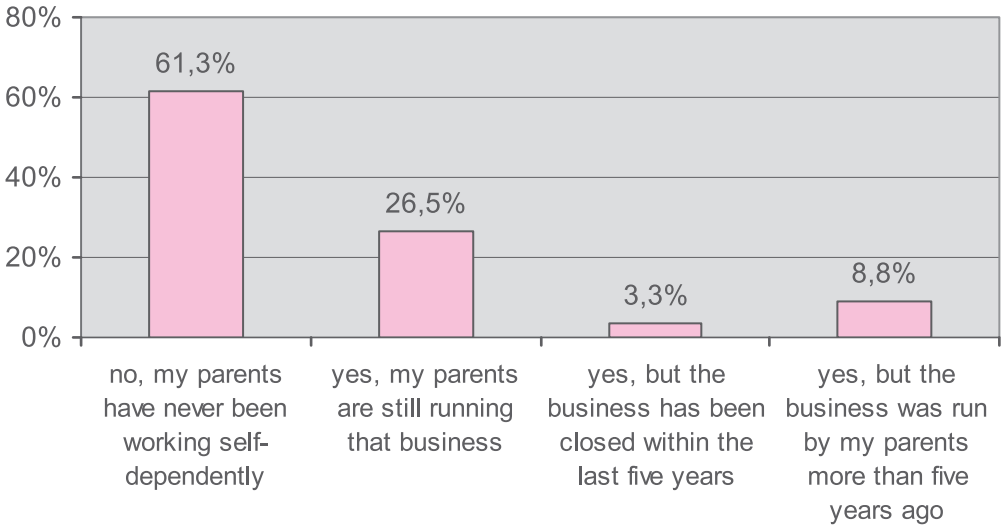
Appendix 1: Framework of ISCE 2006



Appendix 2 Family-Background

One of the socio-demographic factors that was examined is whether or not the respondents had grown up in an entrepreneurial family (i.e. their father and/or mother were self-employed). Figure 26 presents the results of this question.

Figure 26 Did you grow up in an entrepreneurial family?



As Figure 26 indicates, the majority of the respondents (61.3%) have parents who have never been self-employed, and the remaining 38.7% have parents who either have been, or are still, self-employed. Not having entrepreneurial parents does not preclude potential entrepreneurs from establishing a business in the future; however, having entrepreneurial parents does take potential entrepreneurs aware of the demands of running and operating a business. Interestingly, of those parents who established a business (38.7%), some 12.1% have since closed the business.

Whereas the previous figure illustrates how many students come from an entrepreneurial family, Figure 27 shows whether their feelings were positive or negative regarding their family business. A total of 253 respondents answered this question.

Figure 27 The feelings they connect with their family business

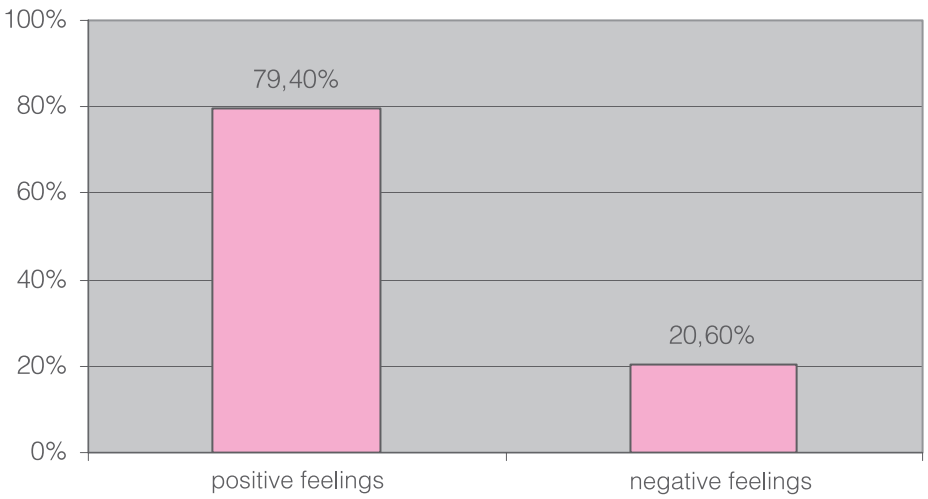


Figure 27 indicates that 79.4% of the respondents have positive feelings about their family business, and 20.6% of the espondents have negative feelings.

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