



Global University Entrepreneurial Spirit Students' Survey (GUESSS 2008)

Country Report, Finland

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1. Introduction

1.1 Background of the study

The role of intentions as a precursor to set up an entrepreneurial venture has been widely investigated since the late 1980s . Intention is believed to make potential entrepreneurs willing and able to sustain the temporal tension existing between their often idealized view of what a business is expected to achieve and its current state (Bird, 188; Dutta & Thornhill, 2008; Krueger, 1993; Krueger & Carsrud, 2000; Krueger et al., 2000). However, there is also critique on intention-based literature due to the inconsistent definition of entrepreneurial intent across studies. Furthermore, entrepreneurs' initial intentions are likely to be very heterogeneous, covering a wide range of factors that affect intention formation and differences in initial conditions across ventures (Dutta & Thornhill, 2008).

There are also several recent Finnish studies on students' entrepreneurial intentions and entrepreneurship in schools (Huovinen, 2008; Kuvaja & Saurio, 2009; Pihkala, 2008; Seikkula-Leino, 2007; Wilska, 2005). These indicate that students appreciate entrepreneurship and understand well its meaning in society and economy. The amount of entrepreneurial courses and other activities of entrepreneurial education and training have increased over the past few years at various levels of the educational system, too. One unexpected outcome of this development has been, however, that some students attending this education and training begin to outline entrepreneurship against their own shortcomings and gaps in knowledge as "maybe entrepreneurs" more clearly. Entrepreneurship tends to appear as a deterministic and even a somewhat frightening phenomenon from their point of view (Leskinen, 2001; Pihkala, 2008). Questions have been also posed about 'entrepreneurship movement's' ethical base (Pursiainen, 2001).

Studies covering a wider range of young people (16-29 years of age) give very similar picture: entrepreneurship appears to young people as something positive but not something they try to attain. A great majority of them seems to also aware about the support and for maybe entrepreneurs, such as incubation and development centres, local

services and other resources for young people (Paakkunainen, 2007; Korhonen & al., 2008). Qualitative analysis of the writings about entrepreneurship theme has demonstrated that interpretations of young people are tensional in relation to the existing cultural model and current positive and sometimes idealizing discourse about entrepreneurship introduced by the educational system. There seems to be a constant identified element to understand entrepreneurship as individual traits considered ‘virtues’. One reason for this is that the educational system bases to a large extent on the comparisons between individual ability differences (Korhonen et al, 2008).

In spite of a number of positive evaluations about Finnish entrepreneurship education system and practices (Stevenson and Lundström, 2001; Lundström, 2005; Routamaa and Mäki-Tarkka, 2005; Yrittäjyyskasvatuksen suuntaviivat, 2009) positive attitudes and intentions don’t turn to become real entrepreneurship. For example, a longitudinal case study conducted in two Finnish polytechnics showed that accelerating factors involved in entrepreneurship education did not effect changes in students’ entrepreneurial intentions, but their intentions appeared to be relatively constant during studies. Students considered entrepreneurship education an important part of their studies and education heightened awareness of entrepreneurship at a general level. Furthermore, entrepreneurship education tended to trigger uncertainty as to students’ confidence in their own entrepreneurial skills in this study (Pihkala, 2008). It may be that this uncertainty is caused by the oversized objectives set for the entrepreneurship education, lack of encouragement and intellectual support for entrepreneurship, the quality of entrepreneurship studies and the timing of these studies. More generally, the large middle-class in Finnish society has not created entrepreneurship enough so far. A special problem seems to exist in higher education where certain decline can be noticed compared for example with outcomes in vocational education.

The annual report by the Ministry of Employment and Economy “The Entrepreneurship Review” (Yrittäjyyskatsaus 2009) has provided an overview of operating conditions and trends in entrepreneurship and entrepreneurial activity in Finland. This report published since 2003 includes basic information on numbers of entrepreneurs and enterprises and

their business activities per line and business area with a particular focus on SMEs, business start-ups, the growth of enterprises, enterprise turnover and entrepreneurship in provinces. The latest review (2009) indicates that the total number of entrepreneurs at the end of 2007 represents a slight decrease from the previous year for the first time since 2001. On the other hand, the number of start ups has maintained stable in 2008, 2009 and early 2010, respectively.

The number enterprises has increased in some areas such as in construction, property and business services, social and health services and in industries providing other personal services. Popularity of franchising-based businesses has grown recently. Habitual and serial entrepreneurship has also increased in Finland. Entrepreneurs make up 9 per cent of the total labour force. At the end of 2008, female entrepreneurs numbered one third of all entrepreneurs. Exceeding the European average in number female entrepreneurs in Finland are on average younger and have attained a higher level of education than their male counterparts. Two thirds of female entrepreneurs are self-employed.

1.2 Goals of the study

The main goal of this study was to compare the entrepreneurial intention and activity of students in higher education (university and polytechnics) on an international level. This was the third round of data collection after 2004 and 2006 surveys. Finland didn't participate in the 2004 survey, but was one of the collaborators in the 2006 one. The main goals of the GUESSS 2008 survey were as follows:

- *The start-up process.* GUESSS helps to record the founding intention and activity of students on a long-term basis, and therefore allows temporal and geographical comparisons.
- *The university.* Provides temporal and geographical comparisons of the offers of the students on a long-term basis, and therefore allows temporal and geographical comparisons.

- *The individual.* GUESSS provides opportunities for both temporal and geographical comparisons of individual-based characteristics that affect the founding intention and other entrepreneurial activities of students.

(Fuehligstaller et al., 2009)

1.3 Research framework

The framework of the GUESSS 2008 study is presented in Figure 1. The first part of the study focuses on the start-up process by examining the career aspirations of the students immediately after their graduation. Students' entrepreneurial intentions and specific activities taken are explored as well as those who have already set up their own business. The level of expectations of students' entrepreneurial intentions and activities in terms of their career aspirations is also examined over time in a perspective of five years after their graduation. The already founded start-ups by students are investigated more closely. For entrepreneurial intention and activity an index is computed to illustrate the entrepreneurial power of students from the participating countries.

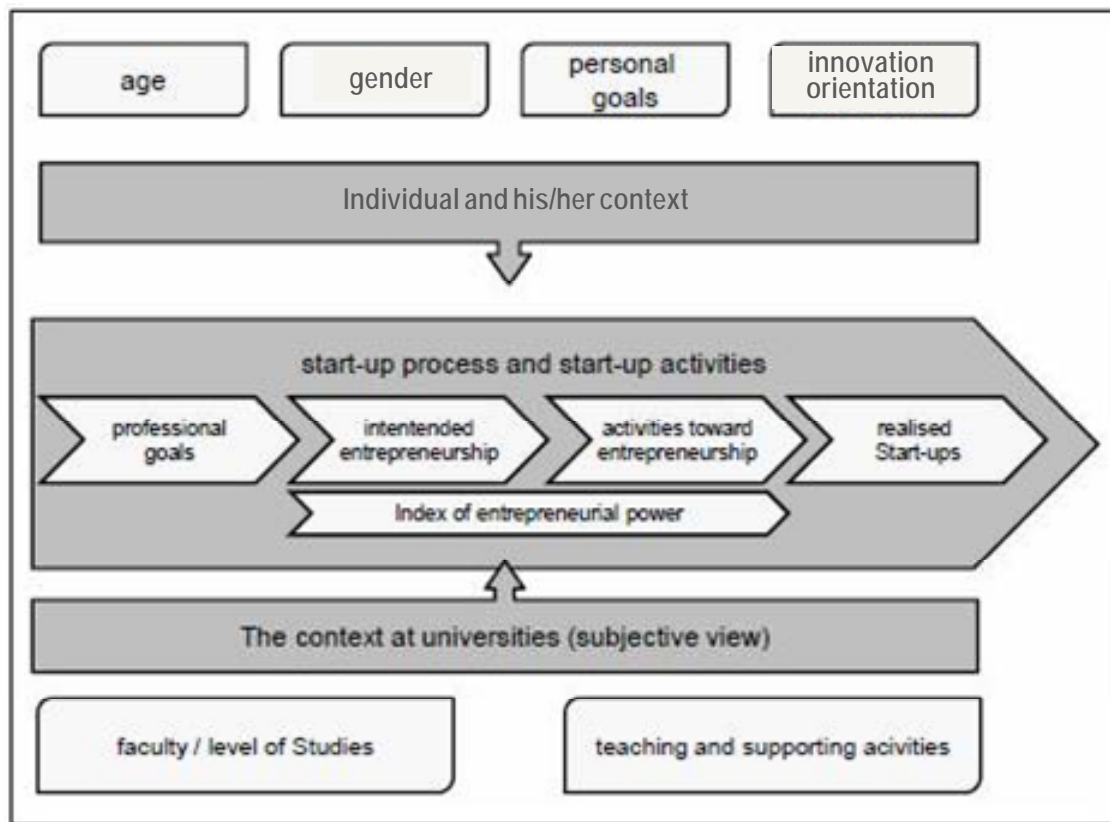


Figure 1: Research framework GUESSS 2008 (Fueglistaller et al., 2009)

Secondly, the importance, existence and quality of university services in the field of entrepreneurship is examined. This includes also a differentiation of analysis among different fields of study and students in universities and polytechnics/ universities of applied sciences. Furthermore, the individual factors are studied. In addition to demographic variables, students' business goals, their attitudes and motives toward entrepreneurship, their personal evaluation of the businesses they would like to set up, family business reference groups etc. are examined.

1.4 Project coordination

The project is coordinated on an international level by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen in Switzerland together with the Chair for Entrepreneurship at the European Business School in Germany. These two institutes were also in charge of coordinating the two previous projects conducted in 2004 and 2006.

Each of the 19 participating countries had one representative responsible for contacting the universities and universities of applied sciences in their home country and were asked to email the link to the questionnaire to the students in the selected sample, encouraging them to attend the survey. Small prize draws (such as memory sticks) amongst respondents were used as an incentive to increase students' participation in the survey.

2 Methodology* and sample

This study is a part of an international research project conducted in 19 countries (Appendix 1). The emanated from a project that was administrated for the first time in 2003 by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG) in coordination with a student initiative called 'START'. The objective of the original study was to create a clear picture of students' career aspirations and future goals and plans. The focus was on the assessment of a foundation which students built to evaluate and decide what field they were going to study. A project with similar goals was being conducted in Germany by the European Business School (EBS) simultaneously. In 2004 the KMU-HSG worked together with the KfW Endowed Chair for Entrepreneurship at the EBS to revise and re-launch another survey. Since roughly the same questions, scales, methods and constructs were employed across different countries and universities, a tangible comparison of tendencies and trends was conducted.

Finland participated in the 2006 survey called 'ISCE' (International Survey on Collegiate Entrepreneurship) together with 13 other countries. The aim of the 2006 ISCE study was to compare the entrepreneurial intentions and activities in an international context. To accomplish this goal, a questionnaire consisting of several parts was developed on the basis of already existing studies in the field. This standardised questionnaire was used by

* The author wants to thank Mr. Sampo Kokkonen for his help in analysing the research data.
all research partners.

The sample of the GUESSS 2008 study consists of 63.527 questionnaires for analysis coming from the following countries: Australia, Austria, Belgium, Estonia, Finland, France, Germany, Greece, Hungary, Indonesia, Ireland, Liechtenstein, Luxembourg, Mexico, Portugal, New Zealand, Singapore, South Africa and Switzerland. Unfortunately the response rate in Australia and Portugal remained so small that these two countries were excluded in the international comparisons. The overall response rate in the GUESSS 2008 was 4.9 per cent

Purposive (judgmental) sampling method was employed in the data gathering process in the case of Finland. The purpose in mind was to get a sample with equal characteristics with the Finnish ICSE 2006 sample added by two special groups (art students and students in health and social care).

The number of observations received was in the Finnish sample was 1,122 giving the response rate of 9.8 per cent, however, which is less than expected. Typically, the response rate in mail-based surveys is between 5 and 30 per cent. In the GUESSS 2008 data, the highest response rate was that of Liechtenstein (46.3 per cent) and lowest 0.7 per cent (Portugal). One special reason for an unsatisfactory response rate in this study maybe the fact that the questionnaire was sent through email. There is so much mail today that also the tendency for low response rate is evident.

Compared with the international data, the Finnish sample is close to averages in terms of gender: 51.7 % females and 48.3 % males (in the international sample: 53.4 % vs. 46.6 %), and average age: 25.4 years (23.0), while there is higher proportion of undergraduate students (bachelors) in the Finnish sample (74.9 % vs. 68.4 %), almost equal of master students (24.9 % vs. 27.4 %) and smaller proportion of post graduate/doctoral students (0.3 % vs. 4.1 %).

The responses for this GUESSS survey in the Finnish sample came between October and December 2008 from the following universities and polytechnics (universities of applied sciences):

- Lappeenranta University of Technology
- Tampere University of Technology
- University of Kuopio
- University of Oulu
- University of Vaasa
- Haaga-Helia Polytechnic
- Kymi Polytechnic
- Saimaa Polytechnic
- Savonia Polytechnic
- Tampere Polytechnic

These are the same educational institutions which were in the ISCE 2006 study. Only the name of one polytechnic has changed (South-Karelia polytechnic is now Saimaa polytechnic). The proportion of respondents from the polytechnics (56.4 %) was somewhat higher than that from the universities (43.6 %).

3. Results

3.1. Students' future career aspirations

The students were asked to which main activity they plan to pursue after they graduate. The two alternatives open to the respondents were 'paid employment ' or 'self-employment'. The choice concern their job expectations for the first 5 years after graduation (< 5 years) or 5 years or more after completing their studies (> 5 years). The results of the Finnish vs. international students can be found in Table 1.

Table 1: Job expectations of Finnish and international students directly after graduation and 5 years later (N = 1.122 and 63.527)

	Directly after studies (%)		5 years or more after graduation (%)	
	FIN	Int	FIN	Int
Micro-enterprise	7.7	5.5	2.9	1.9
Small company	22.1	14.5	10.5	5.7
Medium sized-company	22.5	17.6	16.1	9.1
Large company	17.3	17.9	16.8	15.1
University	1.0	9.3	1.7	6.1
Public sector	4.3	10.0	3.6	8.6
Family business	2.0	2.2	2.7	2.7
Take over	0.9	1.1	3.3	2.5
Franchise	0.6	0.6	0.7	1.8
Stake in a company	1.1	3.7	3.0	5.2
Continuing an own company	1.9	1.1	3.7	2.5
Start-up	5.1	3.8	20.1	19.8
Freelance	4.3	3.1	4.6	7.7
No work	2.1	0.9	2.9	2.1
Don't know	6.0	6.9	6.6	7.8
Other	1.2	1.7	0.9	1.3

The table shows that immediately after graduation the SME option is strong in both groups (much stronger in among the Finnish students) while public sector and university are low particularly in the Finnish sample. The entrepreneurial options (including franchising, freelance etc.) are favoured among about 15 per cent in both groups. As to the expectations after 5 years or more after graduation, the start-up alternative grows up to some 20 per cent in both groups and all entrepreneurial options added together up to about 40 per cent. The attractiveness of the public sector and the university remain low in the Finnish sample.

The popularity of small and medium-sized enterprises as an employer among the students challenges institutes of higher learning, because SMEs for the vast majority of firms in Finland. Future expectations are set high: more new jobs, increasing share of employment and a more agile adjustment to changing business environment compared to

large companies. This creates a growing demand for example for technical and engineering skills in the ongoing structural change of the economy. A recent web inquiry in SMEs emphasised that methods methods of “learning by doing” should be more strongly included in the education together with entrepreneurship education, quality teaching and personal guidance. (Uudistavaa otetta insinöörikoulutukseen, 2009)

In an international comparison, large companies are favoured among students in France (42.9 %) and Indonesia (40.5 %), while substantially below the international average this is the case in Estonia (4.3 %), Belgium (12.4 %), New Zealand (14.2 %) and Hungary (14.4 %). Working for the public sector is especially attractive in Greece (20.8 %) and Luxembourg (19.3 %). (Fuleingstaller et al., 2009)

Another comparison is seen in Table 2 indicating the students’ preference in terms of dependent and independent employment directly after graduation and 5 or more years later.

Table 2: Students’ preference towards dependent and independent employment

	Directly after studies (%)		5 years or more after graduation (%)	
	FIN	Int	FIN	Int
Dependent activities	75.7	76.1	52.0	47.1
Independent activities	16.1	16.0	38.4	42.8
No employment	2.2	0.9	3.0	2.1
Do not know	6.0	7.0	6.7	7.9

Table 2 gives about the same outcome: the search for more independent career seems to increase clearly in five or more years from graduation. A vast majority of the students would like to gather experience as employees before considering an independent career option. Compared internationally, this proportion is considerably high in Germany (83.3 %), Switzerland (83.0 %) and Liechtenstein (81.2 %), while the opposite appears in Mexico (66.0 %), Estonia (66.8 %) and Hungary (69.2 %). (Fueiligstaller et al., 2009)

Independent career directly after studies is highly preferred in Mexico (28.0 %) and South Africa (25.6 %), but the opposite situation can be seen in Switzerland and Germany (10.2 % in both cases).

The trend of career aspirations after some years of working experience changes in the same way in all countries: the preference for dependent employment becomes lower and independent employment systematically more attractive. Yet it is known that this describes the intent of the students rather than their actual behaviour. The differences between the participating countries are large, too. The highest proportions are in Mexico (72.7 %) and Indonesia (71.5 %) and the lowest ones can be found in Finland (38.4 %), Switzerland (35.4 %) and Germany (29.1 %).

Looking at the figures from the gender perspective in terms of students' career preferences (dependent vs. independent employment) shows that males prefer the self-employment opportunity somewhat higher than their female counterparts in the international sample (16.9 vs. 15.1 %) directly after studies. These gender are lowest in Switzerland (0.1 %), South Africa (0.9 %) and France (1.5 %), but highest in Austria (6.3 %), Finland (5 %), Hungary and Singapore (4.6 % in both countries). This situation not only maintains five or more years after graduation, but the difference tend to increase. It is then 4.8 per cent in the international sample: highest in Greece (13.1 %), Estonia (10.9 %), Singapore (9.7), Liechtenstein (9.4 %) and Finland (7.4 %) in favour of male students. The only exception where the proportion is slightly higher for female students is Mexico.

3.2 Entrepreneurial intentions and activities

One of the important questions in this study was whether the respondents have ever seriously thought about starting up their own business. The results for Finland and the international sample are given in Table 3.

Table 3: Entrepreneurial intentions and activities of the students (%)

	FIN	Int
No, never	31.9	26.0
Yes, briefly	42.4	39.8
Yes, quite specifically	6.4	11.6
Yes, but I dropped the idea	7.3	6.5
Yes, I am determined to become self-employed in the future	6.7	10.9
Yes, I am just starting to do so	1.2	2.5
Yes, I am already self-employed	2.2	1.8
Yes, I was self-employed, but no longer	1.8	0.9

About a quarter (26.0 %) of the students in the international sample have never thought of becoming self-employed. As to Finland, she belongs to the countries where the proportion of “no, never” answers belonged to the highest ones together with Germany (37.2 %) and Switzerland (36.9 %). On the other hand, the proportion of active founders is slightly above the international average in the Finnish sample (2.2 % vs. 1.8 %). The highest proportion of active founders can be found in Estonia (3.7 %), Indonesia (2.6 %) and Hungary (2.5 %), while the lowest figures are in France (0.4 %), Belgium (0.6 %) and Switzerland (0.8 %). It is worth mentioning that in the Finnish data the gender difference is clearly seen: the proportion of “never” respondents is 25.5 per cent in the case of male students and 37.9 per cent in the case of their female counterparts. There are 3.0 per cent of male students already self-employed while the proportion of their female counterparts is 1.6 per cent.

Students’ various preparing activities for entrepreneurship were also explored in this study. The potential founders were asked what particular steps they have taken to set up their possible ventures. The aggregated answers of Finnish students and those in the international sample are seen in Table 4.

Table 4: Entrepreneurial steps already taken to set up a business (%)

	FIN	Int
No steps taken	29.0	46.7
Thinking through initial business ideas	65.0	44.6
Writing down initial business ideas	12.0	14.7
Developing a business plan	6.5	8.1
Gathering start-up specific information	27.4	18.1
Visiting start-up specific events	14.5	8.2
Talking to potential sources of financing	2.8	5.2
Determining a start-up date	2.4	2.7
A prototype of the product /service exists	6.3	6.1
Other	3.1	2.6

Internationally, almost of a half of the students (46.7 %) in the sample who have indicated to become self-employed have taken no steps to start up their own business. This proportion is much lower in the case of Finnish students. A good number of them (65.0 %) have already started thinking through initial business ideas. This proportion is clearly higher than that of their international counterparts (44.6 %). The Finnish students have also gathered more often start-up specific information than their international fellow students. However, in terms of determining a start-up date and providing a prototype of the product/service the figures about the same. A general notion about these data is that a vast majority of the students are only in the initial steps of their business foundation process.

An index or indicator called ‘entrepreneurial power’ based on two particular items in the questionnaire was provided to show the strength of students’ entrepreneurial intentions and activities (Fuehligstaller et al., 2009). The minimum number of points that a student could get on this particular scale was 1 (for ‘non-founders’, i.e. students who had never considered establishing their own business) and the maximum 10 (for students who had previously set up their business). The results are seen in Table 5.

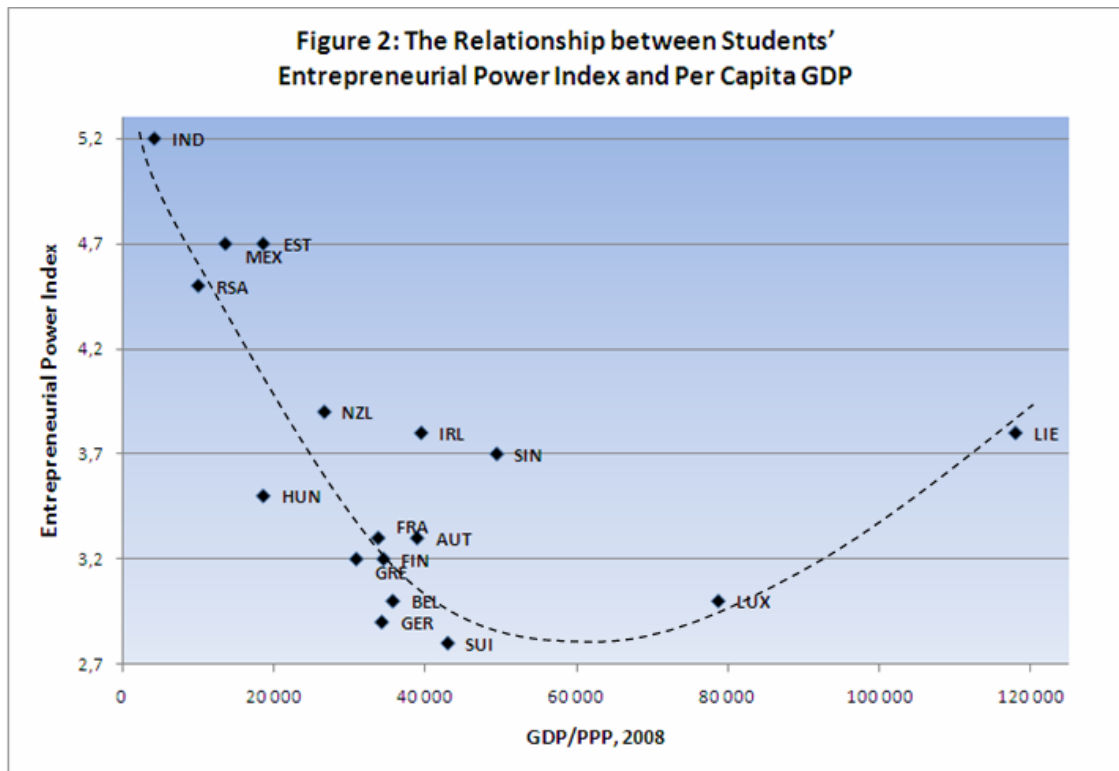
Table 5: Index of students' entrepreneurial power

Country	Power Index
Switzerland	2.8
Germany	2.9
Luxembourg	3.0
Belgium	3.0
Greece	3.2
Finland	3.2
France	3.3
Austria	3.3
Hungary	3.5
Singapore	3.7
Ireland	3.8
Liechtenstein	3.8
New Zealand	3.9
South Africa	4.5
Estonia	4.7
Mexico	4.7
Indonesia	5.2
International	3.3

The international average of the index is 3.3 points with highest values in Indonesia (5.2), Mexico and Estonia (4.7) and South Africa (4.5) while the lowest scores of entrepreneurial power are shown in Switzerland (2.8) and Germany (2.9). Finland ranks just below the median value. It is easy to recognize that the highest values in low income countries in the international sample and lowest in some affluent countries such as Switzerland and Germany. By calculating the correlation (Spearman's ranking correlation rho) between the entrepreneurial power index and GDP (adjusted to purchasing parity power, year 2008) for 17 countries, a strong negative association (-.57*; $t = 2.71$ $df = 16$) exists. This correlation is significant at the 5 per cent level with tied ranks.

This association between entrepreneurial power and country's GDP/PPP Per Capita appears to be a U-shaped pattern. (without Lichtenstein and Luxembourg it looks more like a J-shaped pattern). GEM reports (43 countries in 2008) have demonstrated same

type of U-shaped relationship between country's level of economic and its level of and type of entrepreneurial activity. (Bosma et al., 2008: 22; Stenholm et al., 2008).



National comparisons of Finnish data reveal some interesting views. By dividing the data according to the main subject of the students the following averages for entrepreneurial power for various groupings were found (Table 6):

Table 6: Index of Finnish students' entrepreneurial power in various groups

University students (n = 489)	3.36
Students in polytechnics (n = 633)	3.13
Male students (n = 542)	3.52
Female students (n = 580)	3.13
Business & economics students (n = 411)	3.36
Engineering students (n = 319)	2.92
Students in computing (n = 131)	3.40
Students in arts & culture (n = 100)	3.78
Students in health and social services (n = 104)	2.79

Surprisingly, students majoring in arts and culture score highest, followed by students in computing and business & economics. These subgroups are above the international average. The high score of students in arts and culture may be due to the fact that a high proportion of them will be self-employed and freelancers, which is presumably also expected in this group after graduation. Unlike in some previous studies, engineering students demonstrate lower entrepreneurial power value than their counterparts in business and economic. Students in health and social services demonstrate the lowest entrepreneurial power value in these data. This is can be also expected, because a vast majority of them will be employed traditionally by the public sector. On the other hand, new business opportunities emerge rapidly also in this particular industry. Further, university students achieve a higher value than students in polytechnics and female students are considerably lower than their male counterparts

3.3 University and its services: existence, importance and use

Entrepreneurship is already a more or less established part of studies in institutes of higher learning in Finland and in great many other countries. Yet, its appreciation may vary from one institute to another considerably both among students and teachers. The

environment in universities and polytechnics can be encourage or hinder students' entrepreneurial potential.

In terms of available services (or those the students were aware of) by the universities, entrepreneurship seminars and lectures were recognised by 60.4 per cent of the respondents, followed by business plan seminars (51.4 %), start-up coaching (40.6 %), start-up games (34.5 %), contacts for general questions (32.8 %) and incubators (29.2 %). All these figures are clearly above international average. Compared with the needs indicated by the respondents in the ISCE 2006 survey, there seems to be a gap in the vase of coaching for the start-up activities mentioned then by 68.5 % of the students. General seminars and lectures were mentioned in the 2006 survey by 38.8 % of the respondents and business plan seminars by 31.4 % of the students (Miettinen, 2006).

It might well be that the need for more individualized instruction such as start-up coaching has become much stronger beyond more established general tools. More individualized instruction naturally calls for more resources and know-how from university staff and those resources might not be available. One solution could be a more intensive cooperation with the mostly local service and support organisations and institutions for start-ups covering the whole country.

The respondents were asked how they value the importance of different services in the field of entrepreneurship. The importance of the services by the students is shown in Table 7. This table demonstrates again the need for start-up coaching, which appeared strongly also in the ISCE 2006 survey.

Table 7: Importance of university services in entrepreneurship
(Scale: 6 = ‘very important’ ; 1 = ‘very unimportant’)

Service	FIN	Int
Entrepreneurship seminars and lectures	3.89	3.83
Regular round tables for founders (e.g. exchange of experiences)	4.11	3.85
Start-up business games, simulations	3.63	3.90
Business plan project seminars	4.13	3.94
Start-up financing through the university	4.03	3.98
Incubator	4.15	4.00
Start-up coaching	4.43	4.11
Contacts for general questions	4.24	4.16

The differences between different services are not big, but rather moderate. It can be noticed that typical services in the beginning of the entrepreneurial process such as ‘contacts for general questions’, ‘start-up coaching’ and ‘exchange of experiences’ are preferred and on the other hand, traditional entrepreneurship seminars and lectures are found less important. This may also reflect indirectly dissatisfaction with the way they are conducted. The evaluation of importance by the Finnish students is also rather close to international averages.

When students were asked about the existence of these services in their universities and polytechnics, some interesting observations came up. In the case of Finland, the most general one was seminars and lectures on the topic. Slightly above 60 per cent have noticed them – and about one third said that they ‘don’t know’. Above a half (51.4 %) have recognised business plan project seminars but at the same time almost a half (43.4 %) noticed not knowing them. At the bottom of the list is start-up financing through university unknown to a majority of students (74.1 %). This is presumably due to the fact that these services are usually delivered by other public agents in Finland.

On the other hand, there are multiple agents and institutions trying to promote start-ups and delivering services for entrepreneurs – maybe too many. Their division of labour is not necessarily clear at all for students or other citizens planning to set up a business. For example, Grilo and Thuric (2008) have recently indicated that perception of administrative complexities can play a negative role under certain circumstances.

In all, Finland seems to be well off in terms of students' awareness of services available compared with their international counterparts. Particularly students in Switzerland, Germany, Austria, Belgium and New Zealand seem to find university-based services less important than their counterparts in other countries. Their awareness of the existence of these services was also below the international average in most cases.

3.4 Entrepreneurial intentions and activities among Finnish students in 2006 and 2008

Data gathered in the same way and from the same universities and polytechnics in Finland for ISCE 2006 and GUESSS 2008 make it possible to do some comparisons. The size of the sample in the ISCE 2006 survey was 1.566 and in the GUESSS 2008 1.122, respectively. It should be noted, however, that there were some new groups included in 2008, such as arts & culture students and health & social services students extending the data base.

A two year interval is not a long period, but there are some considerable changes in the general atmosphere presumably affecting entrepreneurial climate in the country. The year 2006 was still a 'normal' with a rather strong GDP growth rate of 4,4 per cent, while during the latter part of 2008 international financial crisis and its uneasy results for a small, open and export-driven economy such as Finland was already expected (although 2009 was then even worse than expected with a decrease of 7.8 per cent of GDP). Data for GUESSS 2008 were collected in September-December 2008 with gloomy economic outlook, which has very probably influenced the results of the survey. For 2008, the growth was only 1.2 per cent and GDP actually decreased during the last quarter of the year.

The results in 2008 and 2006 are rather similar (Table 8): a majority the students prefer the SME sector and employment directly after their studies while more entrepreneurial option remain only moderate. The expectations change after five or more years in that more entrepreneurial career choices increase. Starting up one's own business becomes a rather popular preference. 'Founding a family' was an item mentioned in the 2006 survey substituted by slightly different expression 'No work (i.e. founding a family)' in the 2008 survey, which may explain a rather big difference in the '5 years or more after graduation' answers compared to 2008 version of the survey. Another visible difference is a considerably higher proportion of 'Don't know' answers in 2006.

Table 8: Job expectations of Finnish students directly after graduation and 5 years later

	Directly after studies (%)		5 years or more after graduation (%)	
	2008	2006	2008	2006
Micro-enterprise	7.7	5.9	2.9	1.6
Small company	22.1	17.1	10.5	5.0
Medium sized-company	22.5	21.0	16.1	10.7
Large company	17.3	14.3	16.8	12.6
University	1.0	1.7	1.7	1.3
Public sector	4.3	4.3	3.6	3.6
Family business	2.0	1.7	2.7	3.5
Take over	0.9	0.3	3.3	0.7
Franchise	0.6	0.3	0.7	0.5
Stake in a company	1.1	1.2	3.0	3.5
Continuing an own company	1.9	1.5	3.7	2.6
Start-up	5.1	3.5	20.1	16.1
Freelance	4.3	1.4	4.6	3.3
No work	2.1	0.9	2.9	18.7
Don't know	6.0	14.2	6.6	17.3
Other	1.2	1.7	0.9	-

Table 9 shows the differences between dependent and independent career choices. Both are higher in the 2008 survey, due again to high proportion of 'No employment' and 'Don't know' answers in the 2006 survey. This also shows, how sensitive rather small

differences in formulating the questionnaire items actually may be. The general trend is very clear in both services: dependent career paths decrease strongly for more entrepreneurial activities in 5 or more years after studies.

Table 9: Finnish students' preference towards dependent and independent employment

	Directly after studies (%)		5 years or more after graduation (%)	
	2008	2006	2008	2006
Dependent activities	75.7	64.4	52.0	34.8
Independent activities	16.1	9.8	38.4	29.1
No employment	2.2	11.6	3.0	18.8
Do not know	6.0	14.2	6.7	17.3

A high proportion of the Finnish students have never thought of becoming an entrepreneur or self employed or done it only briefly. This proportion has actually grown to almost 75 per cent from 62 per cent from 2006 to 2008. (Figure 10) The share of those who have planned it more seriously or already set up one has remained about the same. The conclusion is that for a vast majority of Finnish students have rather a weakening than a strengthening tendency in terms of their entrepreneurial intentions, although the amount of already self-employed students have remained at the same level. This may be partly due to the nature of the 2008 GUESSS sample: some new female dominated fields of study were added such as health and social services. The public sector has traditionally recruited most graduates from these fields and although there are new opportunities for entrepreneurship in health and social services emerging , 'the glory of the past' is still a strong factor and opportunity recognition seems to be rather weak for the time being.

Table 10: Entrepreneurial intentions and activities of the Finnish students in 2006 and 2008 (%)

	2008	2006
No, never	31.9	24.6
Yes, briefly	42.4	37.1
Yes, quite specifically	6.4	10.5
Yes, but I dropped the idea	7.3	12.4
Yes, I am determined to become self-employed in the future	6.7	8.4
Yes, I am just starting to do so	1.2	2.6
Yes, I am already self-employed	2.2	2.2
Yes, I was self-employed, but no longer	1.8	2.2

As to the steps already taken, there seems to be some improvement in terms of having a prototype of the product or service but the overall picture is much the same as two year earlier. The common entrepreneurship strategy of polytechnics was introduced in 2006 with a goal of each seventh of their graduates has started up his/her own business in ten years from graduation. Some universities have an entrepreneurship strategy, too.

Table 11: Entrepreneurial steps already taken to set up a business, Finnish students in 2006 and 2008 (%)

	2008	2006
No steps taken	29.0	30.8
Thinking through initial business ideas	65.0	61.4
Writing down initial business ideas	12.0	10.4
Developing a business plan	6.5	7.5
Gathering start-up specific information	27.4	25.0
Visiting start-up specific events	14.5	15.4
Talking to potential sources of financing	2.8	5.2
Determining a start-up date	2.4	2.8
A prototype of the product /service exists	6.3	2.4
Other	3.1	-

4. Discussion and conclusions

This explanatory comparative study examines students' entrepreneurial activities and intentions in an international context. In all, 67,500 respondents from 19 countries participated in this survey. The response rate and the structure of the data are not the same in all countries, however, and thus the comparability should be handled with some caution.

The results show that the students' career aspirations favour to a large extent becoming employees directly after their graduation. The Finnish students prefer the SME sector more than their international counterparts and their entrepreneurial orientation (particularly starting up one's own business and becoming a freelance) are above the international average. On the other hand, the public sector appears less attractive in their plans than in the eyes of their international fellow students. A widely shared explanation for the employee option is that they want to gather working experience to manage better the start-up process in the future.

'Dependent activities' become less preferred five or more years after graduation. About 40 per cent of the Finnish students and 43 per cent of international students expect to favour an independent career or entrepreneurial activity with an increasing time perspective. In terms of actual entrepreneurial activities, only 2.2 per cent of Finnish students and 1.8 per cent of their international counterparts were already self-employed. The highest self-employment figures in this study are in Liechtenstein, Estonia and Austria, and the lowest ones in Luxembourg, Greece, France and Belgium. There is also a contradiction in that countries in which students showed a high sensitization degree towards entrepreneurship do not necessarily indicate high founder ratios.

A special index of students' entrepreneurial power was created. The highest points are found in Indonesia, Mexico, Estonia and South Africa, while the lowest ones in this study are in Switzerland and Germany. Finland ranks a bit below the international average in this entrepreneurial power measurement. An interesting finding is that the correlation between the entrepreneurial power index and GDP per capita in each is negative (-.57).

The relationship between these two variables also follows a U-curve pattern. Surprisingly, students in arts and culture indicate strongest entrepreneurial power in Finnish sample's internal comparisons followed by students in computing. The lowest value in the Finnish sample was achieved by students in health and social services. Male students demonstrate stronger entrepreneurial power than their female counterparts in this survey. This was also clearly demonstrated in the ISCE 2006 survey. Students in health and social services are predominantly females, which also explains this finding.

Services provided to promote entrepreneurship in universities and polytechnics are appreciated by the students, but there is still a high proportion not knowing about these services. Although Finland is above the international average in terms of awareness of the proportion of those students who don't know such educational tools as lectures, seminars on entrepreneurship and business plan seminars varies from 30 to 50 per cent. This might be the situation because students without entrepreneurial intention don't seek information and training in this area or that the universities and polytechnics fail in communicating these services to their students.

Taking into account the existing intention and future career aspirations among the students, it is clear that there is considerable entrepreneurial potential to be mobilized. There is also room and need for offering more encouragement, support and training. There is also room for improvement in relation to the type of relevant courses on offer particularly for non-business-related students. The study clearly showed that although many students are interested in establishing their own business, they generally fail to take the specific steps in such direction. Another challenge is that co-operation with the business community is not well managed and more 'real life' examples are badly needed. Universities and polytechnics are not the only actors trying to promote entrepreneurship and more networking and exchange of experiences from other agents and information sources would be welcomed.

Data for this survey were gathered in late 2008 when the deep economic recession was already identified to come. Finland is a small, open and strongly export-dependent

economy (the proportion of export in annual GDP is some 45 %). The decrease of exports in 2009 was dramatically 30 per cent and GDP in 2009 decreased by 7.8 per cent. It is hard to say how this will impact the entrepreneurial intentions and activities of students in the near future. Two recent surveys among general public in 2009 and 2010 respectively show that the attitudes toward entrepreneurship have maintained stable and the number of start-ups has also been stable.

However, a majority of employed people (55 %; Haavisto, 2010) experience the risks of entrepreneurs much higher than those of employed ones. On the other hand, entrepreneurship is generally considered 'a must' for the future economy, an alternative to employment. The level of overall entrepreneurial activity in Finland is at the global average among GEM countries (Stenholm et al., 2009). The results of the GUESSS 2008 survey indicate the same position close to the average of participating countries.

This is not enough, however, but there is a lack of innovative, growth-oriented and truly international entrepreneurs. Despite favourable although slow development of entrepreneurial activity in Finland attempts to reinforce this type of entrepreneurship is welcomed. Thus, the major challenge is not the quantity of the entrepreneurs but their quality. This will be very much in the hands of the current students in higher education.

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Appendix 1

Country	University	Representative
Australia	University of New England School of Business, Economics and Public Policy	Prof. Dr. Brian Gibson
Austria	Kepler Universität Linz Institut für Unternehmensgründung und Unternehmensentwicklung	Prof. Dr. Norbert Kailer
Belgium	Vlerick Leuven Gent Management School	Prof. Dr. Hans Crijns
Estonia	Tallinn University of Technology School of Economics and Business Administration	Prof. Dr. Urve Venesaar
Finland	Lappeenranta University of Technology Department of Industrial Management	Adjunct Professor Dr. Asko Miettinen
France	EM Lyon UPR Stratégie et organisation	Prof. Dr. Alain Fayolle
Germany	European Business School (EBS) Chair for Entrepreneurship	Prof. Dr. Heinz Klandt
Greece	University of Western Macedonia Department of Balkan Studies	Associate Prof. Katerina Sarri
Hungary	University of Pecs, Faculty of Business & Economics	Prof. Dr. Lazlo Szerb
Indonesia	Bankrie School of Management	Mr. Taufiq Amir
Ireland	University of Limerick	Dr. Naomi Birdthistle
Liechtenstein	Hochschule Liechtenstein	Prof. Dr. Urs Baidegger
Luxembourg	Institut Universitaire International Luxembourg	Prof. Dr. Pol Wagner
Mexico	Technologico de Monterrey Instituto Tecnológico de Estudios Superiores de Monterrey	Dr. Elisa Cobas Flores
Portugal	Technical University of Lisbon Instituto Superior Técnico	Prof. Dr. João Leitão Prof. Dr. Rui Baptista
New Zealand	University of Otago Department of Marketing	Prof. Dr. Juergen Gnoth
Singapore	National University of Singapore	Prof. Wong Poh Kam
South Africa	University of Stellenbosch Department of Business Management	Dr. Retha Scheepers
Switzerland	Swiss Research Institute of Small Business And Entrepreneurship at the University of St. Gallen (KMU-HSG)	Prof. Dr. Urs Fueglistaller Prof. Dr. Christoph Muller

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