
THE ENTREPRENEURIAL ENVIRONMENT OF THE UNIVERSITIES AND THE CAREER EXPECTATIONS OF STUDENTS IN HUNGARY IN INTERNATIONAL COMPARISON

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INTRODUCTION

In this paper we present the results of the “International Survey of Collegiate Entrepreneurship 2006” organised by the University of St Gallen and conducted in 14 countries, mostly in EU countries. We investigated two fields: students’ career expectations and the conditions and environment for starting a business at universities. About student career expectations we have found that there is a significant difference between the first 5 years after graduation and the following period, and that the differences between the various fields of study are surprisingly small. As regards the entrepreneurial environment of universities, we concluded that the conditions provided by the universities are “quite good” overall in the view of students, and that the differences among domestic universities are greater than among individual countries.

The economic impact of micro, small and medium-sized enterprises is very diverse. According to Hungarian statistics, by 2003 SMEs already employed more than 70% of the workforce in the private sector (Román 2006), and the relative importance of the big companies in terms of employment is continuously decreasing. No less important is the contribution of the smaller-sized companies in generating GDP: 53% of the value added tax created in Hungary is produced by SMEs.

SMEs are—from the technical point of view—those firms, who have less than 250 employees, whose net asset value is less than 50 million euro, and the annual sales revenue of which is less than 43 million euro. Approached differently, entrepreneurship can be linked to innovation, creativity, increased risk-taking, non-routine decision-making at the individual level and high growth (Szerb, 2004). Moreover, it can even be seen that a specific tight circle, approximately 1-4% of the young entrepreneurial businesses, the so called “gazelles”, are responsible for the critical portion of job creation and economic growth (Autio 2005; Birch, 1987, Csapó, 2006; Szerb et al, 2004, Vecsenyi, 2003). From the

standpoint of the entire national economy, therefore, the number of these dynamically growing businesses is more important than the absolute number of companies.

The entrepreneurial activity of adults (aged 18 to 64), and the relative position of Hungary are well-known from the Global Entrepreneurship Monitor research analysis (Szerb et al. 2004; Szerb, 2004, Szerb et al. 2006). On the basis of the indicators, Hungary occupies a middle-to-low position on the rankings list, although close to the other post-socialist countries (Croatia, Poland, Latvia and Slovenia), and not far removed from the other European Union countries. From the point of view of the future development of Hungary, the increase in low-level early phase entrepreneurial activity, and with this, the increase of the number of the opportunity-motivated enterprises with high potential have primary importance.

What are the characteristics of the people establishing rapidly-growing businesses? According to Autio's analyses (2005), these young entrepreneurs have a high income and are university or college graduates. They are almost exclusively opportunity-motivated to start up a business. The businesses expected to be established in future years by those who are now in their twenties and still, at least partially, involved in university studies, will determine the national economic growth and influence the creation of new jobs in the years following 2010. This means that an analysis, perhaps an international comparison, of the entrepreneurial attitude and entrepreneurial characteristics of university students will enable us to estimate future entrepreneurial activity, and that, in consequence, we will also be able to extract some indirect information about our economic growth prospects.

The entrepreneurial intentions of university students have already been analysed in several countries. Studies were carried out in Australia, in the USA, in the Scandinavian countries and also in the German-speaking area comprising Austria, Switzerland and Germany (Kuratko, 2003, Autio et al., 2001; Franke and Lüthje, 2004; Krueger and Reilly, 2000; Peterman and Kennedy, 2003; Schwarz et al., 2006). They indicated that the prestige of entrepreneurship and the intention to start up one's own business had increased among students who had completed entrepreneurship courses, but still we know little of the entrepreneurial attitudes of the younger age group and of their intentions to establish businesses in the future.

In what follows I describe, first and foremost, the method of data collection, the basic characteristics of the sample, following which I examine students' expectations regarding their future employment and career, and then the universities' entrepreneurial environment. In the final part, I summarise and assess the results.

DESCRIPTION OF THE DATA-COLLECTION AND THE SAMPLE

The “International Survey of Collegiate Entrepreneurship 2006” was organised by the University of St Gallen. The research group at the University of St Gallen was responsible for coordinating the survey and assembling the questionnaire, together with disseminating the results and organising their publication. Research teams in each of the 14 countries were responsible for designating institutes of higher education to participate in the survey and for keeping contact with the students. The survey itself was carried out via the internet, the link to the questionnaire being given to the students by email. The questionnaire was prepared in 5 languages—English, French, German, Hungarian and Finnish. Hungarian students were allowed to complete the questionnaire only in Hungarian; other language options were not given.

The international (total) sample contains 37,412 completed questionnaires. The most important characteristics are presented in Table 1.

Table 1 Participating countries and the characteristics of the sample

Country	No. of universities interviewed	No. of registered students	No. of completed questionnaires	Response rate (%)	Proportion of full-time students (%)	Year of study of student (average)	Age (average)	Male students (%)	Students of Business and Economics (%)
Australia	3	52,536	67	0.1	79.1	2.28	23.2	44.8	8
Austria	23	122,600	8,857	7.2	74.7	3.64	25.3	47.7	37.9
Belgium	5	21,954	1,612	7.3	92.7	2.75	23.0	51.9	38.6
South Africa	1	12,600	25	0.2	96.0	3.68	22.9	60.0	96.0
Finland	8	45,400	1,566	3.4	85.8	2.48	25.5	48.3	38.9
France	1	2,500	67	2.7	100.0	1.00	21.0	37.3	98.5
Ireland	4	37,000	248	0.7	95.6	3.11	23.8	48.0	62.9
Liechtenstein	1	570	200	35.1	65.0	2.31	26.3	71.5	75.0
Hungary	8	169,025	3,346	2.0	90.6	3.19	23.3	51.6	47.0
Germany	9	111,474	3,189	2.9	96.9	3.23	24.0	48.7	22.9
Norway	6	38,125	1,086	2.9	97.2	3.06	24.4	60.0	22.1
Switzerland	26	55,105	8,825	16.0	84.4	3.10	24.8	62.8	28.3
Singapore	1	3,500	354	10.1	98.3	2.18	22.5	49.4	75.7
New Zealand	2	27,353	7,970	29.1	93.7	2.91	22.8	46.8	17.2
Total	93	690,922	37,412	5.9	86.6	3.15	24.2	52.2	31.4

Source: edited by the Author

It should be noted that the survey cannot be considered representative because of the low number of respondents from France, Ireland, Australia and Singapore. In fact, Australia, France and South Africa were largely omitted from the analysis due to the extremely low number of samples. The majority of students are full-time, typically in their later years of study, and, due to the professional background of the survey operatives, they were in most cases from the Business and Economics fields of study. The Hungarian sample does not differ essentially from those of other countries.

Table 2 shows the Hungarian sample on the basis of the participating Hungarian universities. We note that, in order to provide a homogeneous sample, we confined our questions to universities, although we did try to provide an appropriate regional balance.

Table 2 Hungarian universities participating in the survey and the response rate

Universities participating	Total student numbers	Number of completed questionnaires	Response rate
Corvinus University of Budapest	16,511	543	3.29
Budapest University of Technology & Economics	25,553	387	1.51
Debrecen University	25,230	236	0.94
University of Miskolc	14,335	410	2.86
Pannon University	10,473	358	3.42
University of Pécs	35,326	655	1.85
Széchenyi István University	11,071	346	3.13
University of Szeged	30,526	313	1.03
Others		88	
Totals	169,025	3,346	1.98

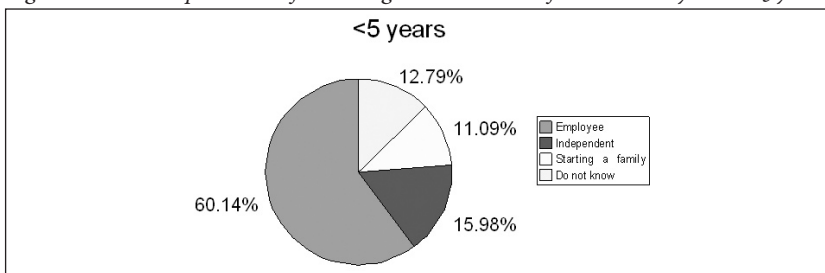
Source: edited by the Author

The average response rate in Hungary (2%) lags well behind those of Liechtenstein, Switzerland and New Zealand, but it is still acceptable. The most active universities were Corvinus University of Budapest, Pannon University and the University of Miskolc.

STUDENTS' CAREER EXPECTATIONS

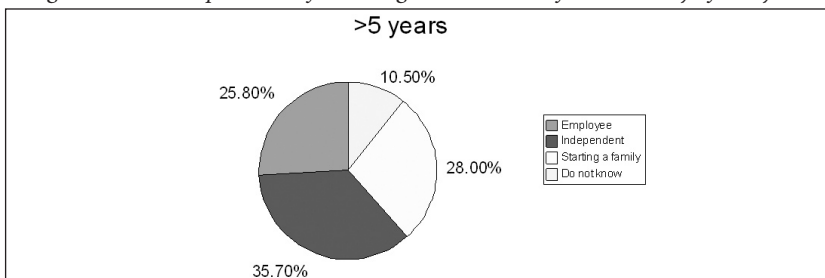
Naturally, students' future job expectations do vary. It happens quite frequently that, immediately after graduation, the first job is not exactly the preferred choice of the student. However, respecting labour market conditions, the prospect of further training and of the acquisition of new skills, some form of compromise could be rationalised. Therefore, the questionnaire separates career expectations for the first 5 years after graduation and for the years thereafter. Table 3 shows the results of the international comparison.

Figure 1. Career expectation of the Hungarian students after university within 5 years.



Source: edited by the Author

Figure 2. Career expectation of the Hungarian students after university after 5 years



Source: edited by the Author

Immediately following graduation, students can mainly envisage life as employees, 12,25 % of them would prefer to be an entrepreneur, and at the same time, there are a number of students preferring to establish a family (5.4%) and also who still have no firm ideas (15.4%). 5 years after graduating the balance shifts in favour of those who prefer an entrepreneurial position, since now more than half (50.1%) of those who have clear preferences would prefer not to work as an employee. At the same time there is a

large number of students preferring family foundation (13.5%) and 17% who still have no firm idea, or who are hesitating.

Table 3: Career expectations of the Hungarian students within 5 years after the university in specific fields

	Economics	Technology	Natural sciences	Humanities	Other
Employee	64%	58%	60%	47%	54%
Independent	15%	16%	15%	21%	21%
Starting a family	10%	11%	12%	16%	12%
Do not know	11%	16%	13%	16%	13%
Total	100%	100%	100%	100%	100%

Source: edited by the Author

Table 4: Career expectations of the Hungarian students after 5 years after the university in specific fields

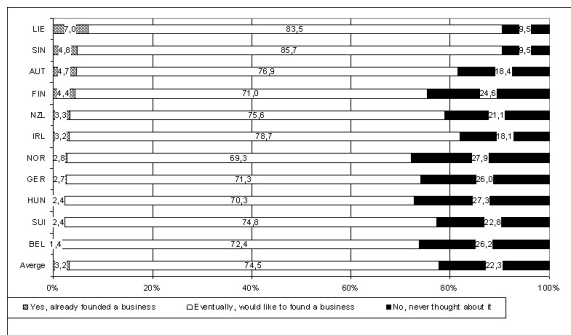
	Economics	Technology	Natural Sciences	Humanities	Other
Employee	26%	23%	26%	24%	27%
Independent	37%	37%	36%	33%	30%
Starting a family	27%	30%	26%	33%	32%
Do not know	10%	10%	12%	10%	11%
Total	100%	100%	100%	100%	100%

Source: edited by the Author

The differences between the various fields of study are surprisingly small with perhaps only the Humanities being somewhat out of line. This can presumably be explained by the very poor job opportunities open to an employee with a Humanities background, so much so that, on graduation, 21% of students from these fields would like to have a job with independent status. The equivalent figures are 15% for both the students of Economics and of Natural Sciences and 16% for students of the Technologies. In terms of job opportunities after 5 years, it is again students of Technology (37%) and those of Economics (also 37%) who lead the way in terms of a preference for independence. Very slightly behind (at 36%) follow the students of the Natural Sciences, whilst those from the Humanities occupy the last place with 33%. Variations from field to field are minimal.

The following figure shows the current entrepreneurial activities of students compared internationally.

Figure 3. Entrepreneurial activities and intentions of all students in individual countries.



Source: edited by the Author

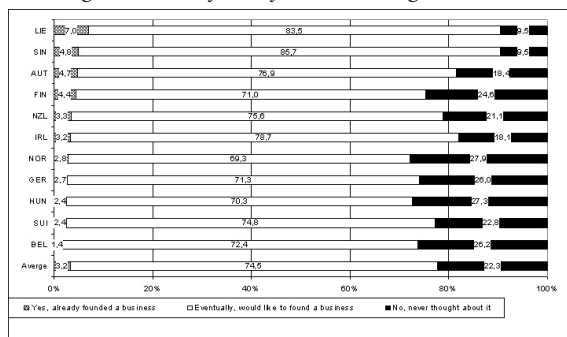
As the above figure shows, the majority of students have not yet established their own company. In Hungary, in fact, only 81 students (2.4% of the respondents) have their own enterprise—at which level we lie at the bottom of the list along with Switzerland and ahead only of Belgium. (Belgium led in terms of job preference!) The proportion (27.3%) of those who have not yet thought about establishing a business is relatively high and in this we are ahead only of Norway. At the same time, some three-quarters of the total number of students (70% in Hungary) do not exclude ultimately the possibility of forming their own company at some point during their career.

If we examine more closely this 74.5% who did not exclude establishing a business, we can also note that in reality most (45.5% of the total) do not think about it too seriously, 11.5% do, a further 7.7% have decisive ideas about their own business and 2.2% have already started the process and have taken specific steps. Moreover, 7.2% thought seriously about starting a business earlier but abandoned the plan.

What might also indicate the level of seriousness of entrepreneurial intent is the time when students want to start an enterprise (Figure 4). In total, some 10–11% of students want to establish a business during their studies, although, in fact, more than half only wish to do so some years after graduation, when they will already have some appropriate experience. Hungary comes second—after Finland—from the point of view that a good proportion of students, almost 43%, have no idea of when they will

start their business. Perhaps one special relevant factor is the current uncertainty in respect of future macroeconomic conditions.

Figure 4. Time-frame for establishing a business.



Source: edited by the Author

It is natural that there should be a number of external and internal obstacles to establishing a business—which is why we asked students to evaluate on a scale from 1 to 6 the difficulties which they face. Figure 5 shows the responses, with the Hungarian and international results viewed separately. Clearly, students consider the financial risk (4.51) and the lack of initial capital (4.46) as their most serious problems with the lack of credit occupying the 4th place (4.18). This, however, is in accordance with the results of other studies analysing self-employment preferences (Román 2004). A weak negative correlation between the financial resources and the ability of students to set up a business is evident, and so we may assume that whoever considers the financial risk as important is likely to start an enterprise of more modest potential.

Figure 5. Obstacles to establishing a business abroad and in Hungary as a percentage of students



Source: edited by the Author

The lack of suitable business ideas (4.21) and the lack of contacts with clients (3.98) must be linked to the relatively limited practical and professional experience of students. The lack of a suitable founding partner (3.78) and complicated regulations (3.95) were considered less important obstacles by students in most countries. The lack of personal entrepreneurial skills (3.75) and the fear of failure (3.71) were given almost equal points (slightly above average). At the same time, the business environment (3.46), the lack of time (3.41) and the lack of support from family and friends (2.65) belong to the category of less critical obstacles.

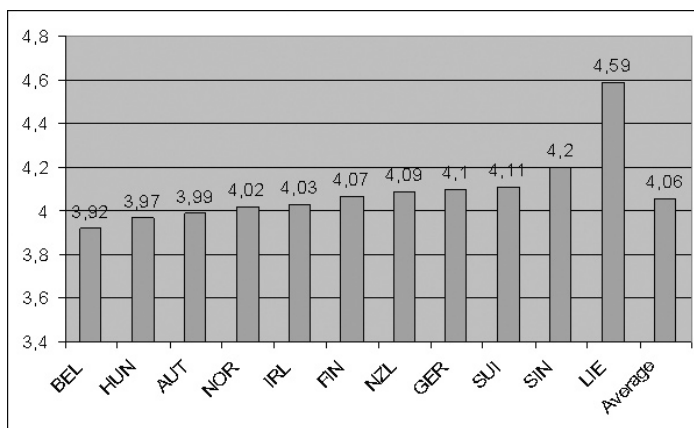
Comparing the Hungarian results with international experience, the general picture is very similar: Hungarian students also consider that financial problems have prime importance, scoring these even more highly than their foreign peers. Complicated regulations (4.33) and the lack of know-how in relation to a business start-up (4.25), however, go well beyond the international average, and this result seems to underpin the data from the World Bank when analysing and comparing the entrepreneurial environment, on the basis of the “Doing Business Index”. In terms of the effects on business of the regulatory environment in Hungary, the country slipped 6 places (to 66th out of 175 countries) in one year. From the point of view of starting up a business, the position is even more unfavourable, in that we occupy 87th place; whilst, in respect of obtaining licences, we are 143rd on the list. The clear warning sign is not only the basic fact of our lower evaluation, but the fact that all other countries in the region overtook us.

CONDITIONS AND ENVIRONMENT FOR STARTING A BUSINESS AT UNIVERSITY

In addition to the analysis of the students’ entrepreneurial attitudes, it is also worth analysing what conditions are provided by the universities for students to start a business. Nowadays, it is already expected of universities that, besides providing traditional education, they should foster students to become entrepreneurs in various ways. This, however, is a two-sided affair in that it is not merely a matter of what opportunities are offered by universities; the students should be able to make use of them. We should highlight the analysis made by Roman (2006) among the domestic analyses relating to entrepreneurial education, and in this work we offer a comparison of the entrepreneurial conditions offered by means of courses and other facilities by universities—not only at the international level but also among Hungarian universities (Roman, 2006).

There were several questions in the questionnaire attempting to examine how students considered the opportunities offered by the universities and the general atmosphere – from the standpoint of becoming a successful entrepreneur. To the question of how the student considers the atmosphere in his/her institute and the conditions for starting up a business enterprise, it was possible to reply by using the 6-grade Likert scale where values range from 1 = “very bad” to 6 = “very good”. (Figure 6)

Figure 6. The entrepreneurial environment at universities by international comparison



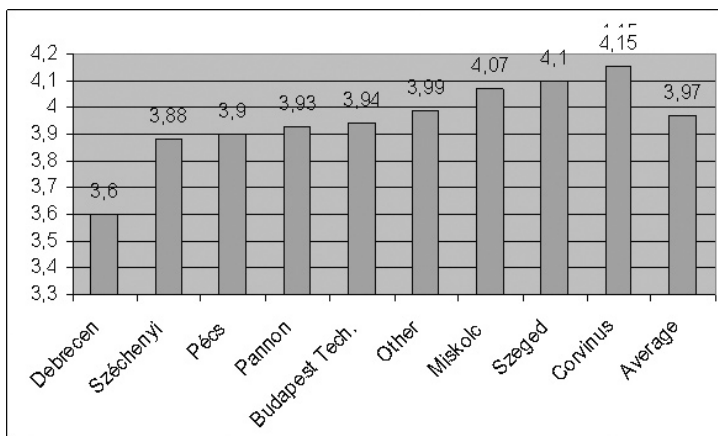
Source: edited by the Author

The entrepreneurial conditions provided by the universities are “quite good” overall in the view of students. The differences among individual countries are relatively small, only Liechtenstein (the top of the list) having an outstandingly high value (4.59). The average of the others varies from 3.92 to 4.20. A further interesting fact to be mentioned is that the correlation between entrepreneurial potential and the entrepreneurial environment is very small—not significant.

Examining the entrepreneurial environment in those of our domestic universities which took part in the survey, we can see larger differences than at the international level. The two extreme values (“very good” and “very bad”) represent a very small proportion, on average 3.6% and 1.7%, respectively, in each institution. The greatest proportion is represented by other alternative replies: “rather good”, “relatively good” or “rather bad”. On the basis of this, we can say that most students participating in the survey do not consider the university atmosphere as being bad in overall terms. The highest assessment was given to Corvinus University of Budapest (4.15), whilst

the worst was awarded to Debrecen University (3.60). Slightly below the average we find the Széchenyi István University (Győr), the University of Pécs, the University of Pannonia (Kaposvár) and the Budapest University of Technology and Economics, whilst above the average come the University of Miskolc and the University of Szeged.

Figure 7. The ranking of the entrepreneurial environment at Hungarian universities



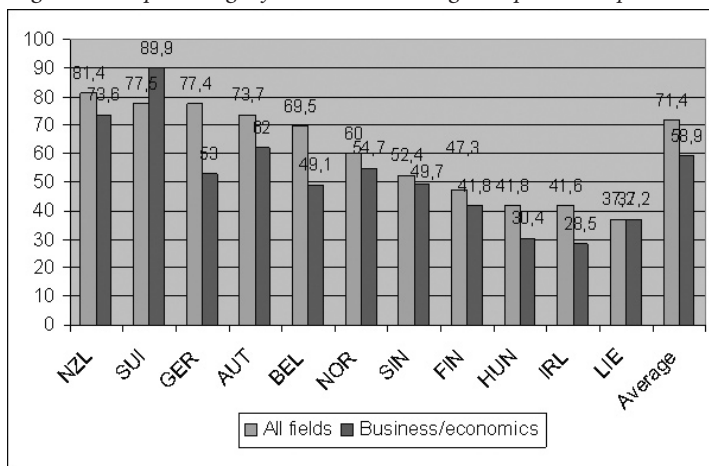
Source: edited by the Author

If we examine university environmental factors from the point of view of the four major academic fields, then what is clear is that the replies from the Economics field were much more optimistic (4.15) than the overall average. Those from the students involved in the other academic fields the replies are relatively uniform. The average assessment for Natural Sciences was 3.80, for Technology 3.74 and for the Humanities 3.73. The outstanding position of Economics can be explained by the fact that, in this area, subjects involving the teaching of business planning and other relevant entrepreneurial knowledge are given much greater emphasis than in other academic fields, and students are, therefore, more familiar with the related issues.

The entrepreneurship courses themselves, acquiring entrepreneurial skills and fostering new business start-ups are important not merely for students in fields related to Economics and Business; in recent decades we have experienced a boom in the growth of entrepreneurial-related courses in the USA (Kuratko, 2003), even though, at the same time, Europe and other parts of the world did not follow this trend. We should not forget that, under the influence of entrepreneurship courses, the number considering self-employment as an alternative to the employed status

may well grow. Besides analysing potential opportunities, what is also worth a closer examination is the activity shown by students in taking an entrepreneurship course. The international comparison is provided by Figure 8.

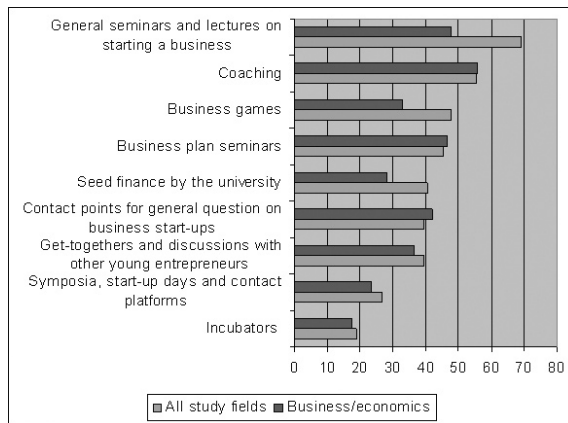
Figure 8. The percentage of students not taking entrepreneurship courses



Source: edited by the Author

Hungary's position is not bad considering that opportunities provided to take courses in entrepreneurship were used most effectively by the Hungarian students after those from Liechtenstein and Ireland. Our situation is even better in respect of students involved in Business/Economics studies, where we hold the second place. Both surprising and, at the same time, incomprehensible, is the extent to which the entrepreneurship courses offered by universities in New Zealand and in the German-speaking countries (Switzerland, Austria and Germany) are unused. One aspect of the issue is of course what the universities actually offer, but it is also important to take into account what students believe that they need. Figure 9 shows these student preferences in relation to all fields of study and, separately, to the fields of Business and Economics.

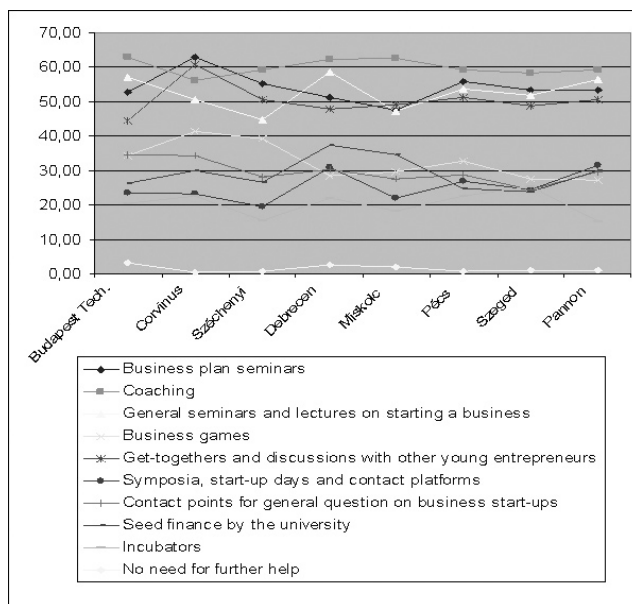
Figure 9. Supports students would like to see offered at university—international comparison by percentage of respondents



Source: edited by the Author

The lowest demand from students is for the last 2 categories—Incubator Services, and Symposia, Start-up Days and Contact Platforms. On the other hand, the most popular are the general seminars and lectures on Starting a Business and on Coaching (again, to start a business). Business Games and Business Plan Seminars are also highly evaluated, although there is less respect for the Forums and for Meetings with Other Young Entrepreneurs. Some 40% of students think that Seed Finance should be available from universities, but with students of Economics, this expectation applies to only 28.1%. There is no significant difference in the demands of Hungarian students and those from other countries, but the Hungarians like Business Games less and Meeting Other Young Entrepreneurs rather more. In connection with the domestic situation, we show those activities which students would like to see offered at the universities in Figure 10.

Figure 10. Supports students would like to see offered at university at the different universities (as a % of respondents within the given category)



Source: edited by the Author

This can be easily shown with a simple visual presentation, but the cluster analysis also proves that there are 3 well-differentiated groups of needs. The first is the most obvious: 0.2-3.1% of students require no more help. In the second group, 15-41% of students need business games on starting a business; symposia, start-up days, forums for general questions, consultation points; seed finance from universities or colleges; and incubator services. In the third group 44-63% of students need a business planning course, a preparatory course for individual business start-up, general seminars on starting a business and meetings with young entrepreneurs.

CONCLUSION

This paper has presented the results of the “International Survey of Collegiate Entrepreneurship 2006”, organised by the University of St Gallen. The research was made in 14 countries, the sample contains 37,412 completed questionnaires. We investigated two fields: student career expectations and the conditions and environment for starting a business at universities.

With regard to the students' career expectations we have found that in the first five years after graduation graduates prefer to be an employee but after 5 years 35.7% of them would like to become independent. Additionally there is a stable 25-30%, who either would like to start a family or do not know yet. The differences between the various fields of study are surprisingly few, with perhaps only the Humanities being somewhat out of line. This can presumably be explained by the very poor job opportunities open to an employee with a Humanities background. Consequently, some three-quarters of the total number of students do not exclude ultimately the possibility of forming their own company at some point during their career. The crucial obstacles are lack of suitable business ideas and the lack of contacts with clients. At the same time, the business environment, lack of time and lack of support from family and friends belong to the category of less critical obstacles.

As regards the university as an entrepreneurial environment we concluded that the conditions provided by the universities are "quite good" overall in the view of students, and the differences among individual countries are relatively small. Amongst those of our domestic universities which took part in the survey, we can see larger differences. The students have rather good opportunities to take entrepreneurship courses but it is also important to take into account what students believe that they need. The cluster analysis proves that there are three well-differentiated groups of needs. The first is the most obvious: 0.2-3.1% of students require no more help. In the second group 15-41% of students need business games on starting a business; symposia, start-up days, forums for general questions, consultation points; seed finance from universities or colleges; and incubator services. In the third group 44-63% of students need a business planning course, a preparatory course for individual business start-up, general seminars on starting a business and meetings with young entrepreneurs.

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CHAPTER 3

BRAIN-CIRCULATION AND OTHER ASPECTS OF MIGRATION IN THE EU OF 27

