Attitude of university students to entrepreneurship

Abstract. As Joseph Schumpeter once put it, direct outcome of the efforts by the entrepreneurs is to do new things or do things differently. Promotion of the entrepreneurship plays an important role in the society and there is proven direct relationship between entrepreneurship and economic growth. Universities should be one of the pillars to build business environment and support the students in business. The aim of the article is to evaluate the students’ relationship with business. Attitudes by the students and barriers they face when starting business are examined, as well as different types of the students’ relationship with business activities. With this regard a survey has been taken out among 739 students of Tomas Bata University in Zlín in 2016, and three hypotheses connected to the subject of research have been identified and tested.

Majority (about 90%) of the students stated that they never had their own business. 4.7% of the students own business during their study period, and 3.4% were in business in the past, but had already left it. There is a significant group of the students without any personal experience with entrepreneurship, who do not have entrepreneurs in their family. This group represents 67.4% of all the respondents. We may presuppose that this group is less inclined to run business. Such an assumption is in line with the practical findings of other experienced mentors.

We also found a sound difference in the interest to start own business between undergraduate and graduate students: more students at the bachelor’s programmes are interested in kicking up their business (about 40% «no» and 60% «yes») than those in the master programmes (70% «no» and 30% «yes»).

Results obtained led us to the conclusion that there is a need for large extension of entrepreneurial education and support for the university students in the Czech Republic.

Keywords: Entrepreneurship; Students; Entrepreneur; Start-up; University; Business Education; Entrepreneurship Education (EE)

JEL Classification: M20; A20; J40

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Отношение студентов высшей школы к предпринимательству

Аннотация. Развитие предпринимательской деятельности является важным фактором экономического роста. Прямым результатом деятельности предпринимателей является увеличение создания новых предприятий и рабочих мест, поэтому подготовка студентов к предпринимательской деятельности и поддержка их первых шагов в бизнесе должны стать одними из главных задач высшей школы.

В статье исследованы особенности отношения студентов высшей школы к бизнесу в Чехии. Проанализированы мотивации студентов заняться предпринимательством, а также препятствия, с которыми они сталкиваются на этом пути. Прослежено влияние, которое академический уровень обучения и выбранная специальность оказывают на отношение к предпринимательству.

Ключевые слова: предпринимательство; студент; предприниматель; старт-ап.

1. Introduction

Policymakers in Europe and in the United States believe that more entrepreneurship is required to reach higher economic growth. As Srdojevic (2005) stated, entrepreneurship and entrepreneurship education (EE) are the basis of economy and starters of economic growth. Education also plays an important role in the process of building new and wider entrepreneurial capacity (Hannon, 2008).

The empirical research shows the positive links between entrepreneurial activity and economic outcomes (Van Praag & Versloot, 2007). It should be emphasized that entrepreneurship is a widely used word nowadays. Therefore, the development and support of entrepreneurship, especially in the segment of small- and medium-enterprises, is the subject of increasingly wider support by both private investors and venture capital, as well as by public institutions.

2. The aim of the paper is to determine the students' attitudes to entrepreneurship and evaluate the education level for entrepreneurship among selected groups of the students at the Tomas Bata University in Zlin. To meet the paper objective, we defined two main research areas:

- survey of individual experiences of the students with business (either their own or e.g. in the family),
- assessment of the level of training and education of the students at the university for their own potential business.

3. Brief Literature Review

The importance of entrepreneurship has been identified (Schumpeter, 1912) and widely discussed during the last decades. The entrepreneurial activities create new technological innovation, provide employment opportunities and increase competitiveness (Reynolds, 1987; Zahra, 1999). Question of whether and how entrepreneurial skills and competences can be raised during university studies was raised by Cantillon (1931; 1959) and Cotrugli (1990). Although some scholars view entrepreneurship as innate ability (Thompson, 1999), others believe that it is an attitude which can be learned through education and stimulated through specific activities (Karini et al., 2016; Basu & Virick, 2008).

The studies influence career choice of the students, hence, universities can be seen as the potential sources of new entrepreneurs. Today, most universities spend money and time to design an effective entrepreneurship education for their students (Lihán, 2004a, 2004b). This led to the emergence of a new field - Entrepreneurship Education (EE). The field comprises different disciplines, including economics, management, education and technical studies (Davidsson, 2008).

EE aim is to provide the students with skills necessary for successful entrepreneurship (Gorman et al., 1997), encouraging them to develop relevant human capital skills (Gupta and York, 2008). EE the students with self-confidence, enterprise skills and knowledge are assumed to be able to deal with uncertainty, address social and institutional factors, and make entrepreneurial decisions provided with theory, techniques and tools to take risks, and with new approaches to collect and analyse information (Westhead & Solesvik, 2016). Welsh et al (2016) stated that entrepreneurship education at university must develop proper attitudes, motives, intentions and grit to meet failure with a determination to start all over again and win. The objectives of entrepreneurship education are aimed to change the students' behaviour and even intentions: this helps them to better understand entrepreneurship, to become entrepreneurial and to start new businesses (Keat et al, 2011). To achieve these goals, entrepreneurship education has to be creative, innovative and imaginative, and must link academic learning to the real world (Robinson & Haynes, 1991).

There are several studies about the impact of entrepreneurship education/ training programmes on entrepreneurial behaviour (Turker & Selcuk, 2008; Wu & Wu, 2008; Wang & Wong, 2004). Lee et al. (2005) in their cross-cultural research found that young university students are likely to take the step into entrepreneurship if their country can provide customised entrepreneurship education. As Morris et al (2017) stated, this trend requires efforts beyond simple growth of universities' entrepreneurial ecosystems. While these ecosystems simply offering entrepreneurship related programs and activities without tailoring the design and delivery of the associated programs to reflect both the characteristics of the students involved and particular activities related to the start-up ventures, effectiveness of university efforts will be limited. Against this, Wolf (2017) presented the results of case study at Stony Brook, which confirmed the benefits to the students in simultaneous learning about start-ups and helping start-ups grow. The mutual benefit comes from the student’s understanding and the start-up’s managing - the complementary roles of inventor, entrepreneur, and investor.

On the other hand, Gelderen et al. (2008) discovered that the student’s intention to be an entrepreneur is influenced by parents, peers and other trusted individuals. This is confirmed by Robertson (2000). The study showed that family was an important factor influencing the career choice of respondents: second only to their personal experience. The literature on family background provides evidences of positive relationship between the presence of role models in the family and the emergence of entrepreneurs. Collins, Moore & Unwalla (1964) and Veciana (1988) verified through empirical research that the influence over a new venture idea goes back to childhood and the family conditions of the entrepreneur.

Johannisson et al. (1998) presented insights on how providing the students with the opportunity to explore their entrepreneurial skills has an impact on the students’ capability towards entrepreneurship. They claimed that the students participating in educational programmes with focus on entrepreneurship show higher action capability than those joining traditional programmes. Study also showed that the students enrolled in entrepreneurial programmes with an engineering bearing orientation have higher action capability than the students in parallel business programmes. Pruett & Şeşen (2017)
found significant faculty-student differences regarding entre-
preneurship motives and barriers, university environments, and personal aspirations. An especially important finding was that, across six countries with different cultures, economies, and entrepreneurial environments, the students consistently saw themselves as more entrepreneurial than respective faculty perceived them to be. Papayannakis et al. (2006) stated that entrepreneurship has emerged as an important me-
chanism for economic growth and job creation. Entrepreneur-
ship education is something new in Europe, and the debate about the need and the way of introduction of specific entre-
preneurship courses in higher education institutions is on-
going. Silva et al. (2009) presented an integrative approach to bridge the gap between industry and university by discussing a course on product development and entrepreneurship at the graduate level.

4. Methods

In our survey, we draw attention to the entrepreneur-
ship attitudes of business among the students at Tomas Ba-
ta University in Zlín (TBU). The method for collecting data was «questioning» via filling out a questionnaire. The questionnaire was composed of 22 questions, divided into the following sections: general information about the student, relationship with the business, business environment and support for entre-
preneurship, relationship to the activities of the Technolo-
gy Innovation Centre (TIC) and support to entrepreneurs, and relationships to support higher education at TBU. The survey was carried out from September to December 2016 by per-
sonally addressing the students. Employees of TIC asked the students to fill out questionnaires during the study process (Winter semester 2016/2017) at TBU in Zlín. In this way, we managed to get data from 739 students. The total count of the students in full-time study (undergraduate and graduate) at TBU is 5,442 (as of October 31, 2016). The number of the students surveyed is 13.6% of full-time study (bachelor, mas-
derate). We consider that the number of the students is repre-
sentative for the research. To fulfill the main objective of the pa-
per, we used 8,129 (25%) data from a total of 32,516 statisti-
cal model of normal distribution statistical characters, as well as a sufficiently large scale sample of the students, con-
firmed to us that the conditions imposed on the embodiment of Z-test were met. All calculations were carried out and im-
plemented through statistical software SPSS Statistics.

In our research we decided to use the Pearson’s coefficient of contin-
gency intensity (using the Pearson’s coefficient of contin-
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cal data from the survey.

Selected statistical characteristics (educational factors) for the students at TBU were:
- type of department (qualitative characteristic) - Faculty of Management and Economics (FAME), Faculty of Multimedia Communications (FMC), Faculty of Applied Informatics (FAI), Faculty of Technology (FT), Faculty of Humanities (FHS), Faculty of Logistics and Crisis Management (FLCM);
- degree of study (qualitative characteristic, verbal character) - bachelor’s, master’s (all full-time study).

We have identified the following statistical hypotheses for further approbation:
H1: Between two selected groups of the students by degree of study there are statistically significant differences in experience with entrepreneurship.
H2: Between selected groups of the students (undergraduates and graduates) there are statistically significant differences in experience with entrepreneurship by the students whose parents are entrepreneurs.

H3: Between selected groups of the students by type of de-
partment there are statistically significant differences in experience with entrepreneurship.

To fulfill the main aim of our research and to check the statistical hypothesis in the present paper, we have used at the first stage descriptive statistical tools, such as descrip-
tive characteristics (frequency, amount, percentage), which is necessary for calculating the Z-score. We used the following methods: simple sorting statistical characters with an em-
phasis on the expression of absolute and relative frequency (graphical analysis: Pie charts), sorting by two statistical char-
acters (Type of table: Pivot table). Then we used the relation-
ship between qualitative attributes (using Pivot Table) and con-
tingency intensity (using the Pearson’s coefficient of contin-
gency, which is based on the Chi-square). Pearson’s coeffi-
cient was calculated and then interpreted because of the de-
cision about the statistical significance of differences between selected groups of the students and their relation to business (model as a whole). For assessment of the level of significance (limit of acceptance or rejection of hypothesis) we used the level of p-value 0.05 (Betakova, Lorko, & Dvorsky, 2014).

Z-score was applied in the process of evaluating and identifying significant statistical differences between the an-
swers to the questions in the selected educational groups of the students and their relation to business.

To evaluate the parameters by Z-score, we used p-value standardization (standardized) normal distribution. Probabi-
listic model of normal distribution statistical characters, as well as a sufficiently large scale sample of the students, con-
firmed to us that the conditions imposed on the embodiment of Z-test were met. All calculations were carried out and im-
plemented through statistical software SPSS Statistics.

Basic descriptive characteristics of the structure of the students surveyed:
- by the type of department - 136 students of FAI, 228 stu-
dents of FAME, 124 students of FHS, 25 students of FLCM, 111 students of FMC, and 115 students of FT;
- by the degree of study - 596 undergraduate students and 143 graduate students.

Graphical analysis of the relative numbers of the students we conducted using a pie chart for analysing the data (Figure 1 and Figure 2).

**Fig. 1:** The relative counts of the students by the type of department and degree of study at TBU

**Source:** Own work

**Fig. 2:** The relative counts of the students by the permanent residence, gender and age

**Source:** Own work
Classification by the year of study:
- Bachelor’s degree: 1st year - 507 (85%) students; 2nd year - 30 (5%) students; 3rd year - 59 (10%) students;
- Master’s degree: 2nd year - 143 (100%) students.

Descriptive characteristics of the students, sorted by:
- count of permanent residence: Zlín region - 386 students, other regions - 350 students;
- gender: 269 male and 467 female;
- age: 495 students from 18 to 21, 238 students older than 21.

In solving statistical hypothesis, we used data only from the students who answered all the questions of the written questionnaire.

5. Results
The number of the students who stated their relationship with the entrepreneurship in the questionnaire was 736. It represents a 99.6% success return rate. Table 1 shows their results, given the examined factor of the degree of study (bachelor, master). While answering «Other», in most cases the students meant business by their friends or family member (brother, sister, uncle, etc.). Four students are running «business» as a non-profit organization. These students’ answers are also included into the «Other» category.

The results in Table 1 show that 91.1% of the students are not in business. During studies at university, only 4.7% of the students run their own business. Together with the students who were in business in the past but ended it, they represent about 8% of the students in total who have experience with active entrepreneurship.

Table 1 also shows that the value of the test criteria has confirmed that there is a statistically significant difference in the overall response of the students in experiences with entrepreneurship divided into groups according to degree of study (p-value = 0.043). So, we can accept the hypothesis H1.

Results also confirmed that there is significant difference between the students who are only beginning university education and those who are studying in their last year of the Master’s programme - and especially the students whose parents (or other members of their family) are entrepreneurs (± Z-score ≥ 2.749), which represents a critical value of the hypothesis acceptance.

Therefore, we rejected the hypothesis H2 that between selected groups of the students in bachelor’s and master’s programmes there exists statistical significance in experiences with entrepreneurship by the students whose parents are entrepreneurs. Hence, we can reject the hypothesis H2. We can say that one of four respondents has a family background in entrepreneurship with their parents (183 from 736). However, it is apparent from results of the comparison between undergraduate and graduate students that there is no connection with the degree of the studies. It means that the statistical attribute «degree of study» does not affect the change in frequency of the students in each group.

There is a significant group of the students, having no personal experience with entrepreneurship, who do not have entrepreneurs in their family. The group consists of 496 students (401+95), representing 67.4% of all the respondents. Our assumption is that this group is less inclined to run business, which also corresponds to the practical findings of experienced mentors. They report that up to 70% of the population has no relationship with and neither the inclination to business.

Table 2 shows the results of the students’ experience with entrepreneurship according to the type of department.

Based on chi-square, we found that there is statistically significant differences with entrepreneurship experience between the students of different departments (p-value <0.004). We can accept the hypothesis H3.

6. Discussion and conclusion
Based on our research, conducted at Tomas Bata University in Zlín, we found that only 4.7% of the students own business during their study period. Another 3.4% of the students were in business in the past, but had already dropped it. If we compare these results with the previous studies (Novorková, 2013, surveyed 1,500 the students out of which 14% were entrepreneurs or self-employed) the percentage of the students having their own business is even lower. Majority, about 90% of the students, stated that they never had their own business. However, in this major group of respondents a significant group of the students with entrepreneurship potential (24%) still exists - these are the students whose parents are entrepreneurs. Our findings correspond exactly with the long-term observations of experts engaged in supporting start-ups. They state that about 70% of people will never start their own business. And this is despite the fact that almost 60% of the surveyed students said they are interested in having their business in future. Unfortunately, the fact remains that only a few of them will be engaged in entrepreneurship. On the contrary, the findings confirmed that generally only about 4% of people are able to run business voluntarily.

We also investigated whether the students are more proficient in business depending on their field of study. If we look more closely at the results, a higher percentage of entrepreneurially active students was at the Faculty of Applied Informatics (10%) of the students reported their actual

\[ \text{Table 1: Experience of the students with entrepreneurship by degree of study} \]

<table>
<thead>
<tr>
<th>Experience with entrepreneurship</th>
<th>Degree of study</th>
<th>Z-score</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student is in business: 4.7% the students</td>
<td>Bachelor</td>
<td>27</td>
<td>-1.959</td>
</tr>
<tr>
<td>Student was in business, but no longer: 3.4% the students</td>
<td>Master</td>
<td>7</td>
<td>-1.638</td>
</tr>
</tbody>
</table>

\[ \text{Table 2: Students’ experience with entrepreneurship by type of department} \]

<table>
<thead>
<tr>
<th>Experience with entrepreneurship</th>
<th>Type of Department</th>
<th>Experience of the students with entrepreneurship by type of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Still in business but not parents</td>
<td>Bachelor</td>
<td>27</td>
</tr>
<tr>
<td>Student is in business: 4.7% the students</td>
<td>Master</td>
<td>7</td>
</tr>
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<td>Master</td>
<td>7</td>
</tr>
</tbody>
</table>

\[ \text{Chi-square: 3.488, p-value: <0.004} \]

Source: Own work
business activities). The situation of the students’ actual entrepreneurship of the other faculties is about an average of 36%.

While analysing the answers to the question whether the students want to do their own business or not (depending on the department), we discovered the following. Students of FMC showed the highest interest of entrepreneurship (80%). Compared to the answers by the students from other departments (approximately 30%), it is evident that students in the Faculty of Mechanical Engineering show a significant trend towards entrepreneurship. The other standalone department is FAME (approximately 30% «no» and 70% «yes»). Thus, the students with more economy-oriented study programs show higher potential to build their own businesses. Students of technology fields tend to have their own businesses less than the students of the economic field.

There is also significant difference in the interest to start own business between undergraduate and graduate students: more students at the bachelor’s programmes are interested in kicking up their business (about 40% «no» and 60% «yes») than those in the master programmes (70% «no» and 30% «yes»).

In the above-mentioned study by Hovorková (2013) it was stated that only a small number of students tend to realize their own business ideas and dreams. As the study indicates, the cause is in weak support of the entrepreneurship by the universities. 35% of the students think that their universities do not support entrepreneurship at all. Only 29% of the students recognized some help by the universities. It is concluded that most people interested in doing business after graduation are the students of technical colleges (46%), followed by economics (38%) and humanities (32%). The results of our study largely confirmed such conclusions.

Our findings also substantiate the importance of entrepreneurship education at universities, as it may contribute to better entrepreneurial mindset of the students. Survey clearly confirmed the relevance of our efforts for a broad expansion of entrepreneurship education across all faculties within TBU and in the Czech Republic in general.

References


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