

STUDY OF DETERMINANTS OF ENTREPRENEURIAL INTENTIONS OF STUDENTS IN BUSINESS MAJORS AT THE NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE

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Introduction

Entrepreneurship is a leading economic force that drives the development of modern society. The well-being of nations depends largely on current and future entrepreneurial activities. Students can be seen as potential future entrepreneurs. It is therefore very important to explore their intentions for entrepreneurial activity. In this respect, universities play a very important role in creating and developing entrepreneurial thinking among students.

Research in the field of entrepreneurship is becoming increasingly important in Ukraine. Therefore, entrepreneurship is the subject of research on many scientific papers (Cheney, Zolotarev, Wyne and Aridi, 2017); (Williams, 2008); (Romanovsky, 2012). Two of the major surveys in this area are those of Global Entrepreneurship Monitor (GEM) and Global University Entrepreneurial Spirit Students' Survey (GUESSS). Their main task is to provide more in-depth information about entrepreneurial intentions and entrepreneurial activities in Ukraine.

Our research has a more limited scope. It encompasses a sample of students trained in the business majors of the National university of life and environmental sciences of Ukraine - Kiev. Most of the research topics in this study are based on the Global University Entrepreneurial Spirit Students' Survey (GUESSS). Researchers from the Universities in St. Gallen developed the first GUESSS questionnaire in 2003. Since then, the survey is conducted every two years in order to reveal the entrepreneurial intent and entrepreneurial activities of the students. Besides the main GUESSS questions this survey includes additional questions about years of study and overall students' assessment of entrepreneurial learning strength at the university.

The study is theoretically based on the Theory of Planned Behaviour (TPB) (Ajzen, 1991), (Ajzen, 2002), (Fischbein and Ajzen, 1975). The main

argument of this theory is that the intention to perform a specific behavior is influenced by three main determinants: attitude toward the behavior, subjective norms, and perceived behavioral control. The study focuses on career choices intentions in general and on entrepreneurial intentions in particular as specific intentional behavior. In addition, four factors that can influence career choices or entrepreneurial intentions through the three core elements of TBP are considered: the university context, the family context, personal motives, and the social/cultural context. Figure 1 illustrates this theoretical framework (Sieger, Fueglistaller and Zellweger, 2014).

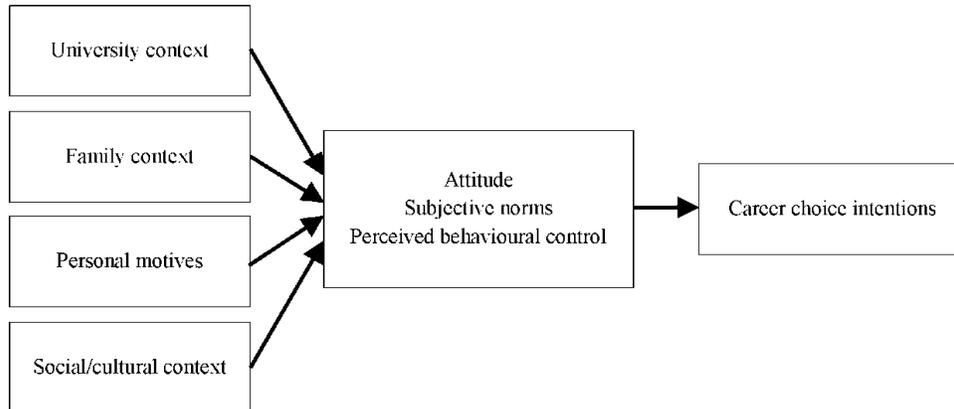


Figure 1. Theoretical framework of the study

Subject of this study is the entrepreneurial intentions of students.

Object of the study are students in business studies at the National University of Life and Environmental Sciences of Ukraine - Kiev.

The objective of the study is to explore the factors that influence the entrepreneurial intentions of students in business studies at the National University of life and environmental sciences of Ukraine - Kiev.

The following research tasks are set to achieve the main objective:

- to analyze the demographic data of the sample surveyed;
- to analyze the students' intentions for career development;
- to analyze the impact of primary determinants according to the Theory of Planned Behaviour on entrepreneurial intentions of students;
- to analyze the influence of the secondary determinants according to the Theory of Planned Behaviour on entrepreneurial intentions of students;

The analysis of demographic data covers age, gender, marital status, the course of study, the subjects studied and study performance.

The analysis of students' intentions for career development includes the following subtasks as follows:

- an analysis of career choices immediately after graduation and five

years later;

- an analysis of career choice intention across gender;
- an analysis of career choice intention across majors of study.

The analysis of the impact of primary determinants according to the Theory of Planned Behaviour on entrepreneurial intentions of students includes the following subtasks as follows:

- an analysis of strength of entrepreneurial intentions across business study majors and gender;
- an analysis of university context;
- an analysis of family context;
- an analysis of personal motives;
- an analysis of social and cultural context.

The analysis of the impact of secondary determinants according to the Theory of Planned Behaviour on entrepreneurial intentions of students includes the following subtasks as follows:

- an analysis of attitude towards entrepreneurship;
- an analysis of locus of control;
- an analysis of entrepreneurial self-efficacy.

The main thesis of the study is as follows: Students' entrepreneurial intentions are the result of the influence of two sets of factors. The first group includes key career choice factors such as attitudes, subjective norms, and behavioral control. The second group covers context factors such as the university context, the family context, personal motives, and the social/cultural context.

At the National University of Life and Environmental Sciences of Ukraine, approximately 500 questionnaires were sent out to all students from undergraduate business study programmes (bachelor) at the University. With 158 fully completed questionnaires, the response rate amounts to 31.6%. Undergraduate business study programs at the university include three majors - management, industrial management and marketing.

The study has the following structure. Demographic data of the sample are presented in topic 1. In topic 2, the main question is about the students' intentions for career development. In topic 3 and topic 4, the primary and secondary determinants of entrepreneurial intention and its relation to other factors of the theoretical framework are examined. At the end, the main results of the study are highlighted.

1. Demographic data analysis

First, we will conduct a general analysis of the demographic data of the survey's sample. Then, based on them, we will carry out a detailed

analysis of the students' career choice and entrepreneurial intentions.

1.1. Age

Figure 2 displays the age distribution of the sample. The majority (98%) of the respondents is 24 years old or younger. Only 2% of the respondents are between 25 and 30 years old.

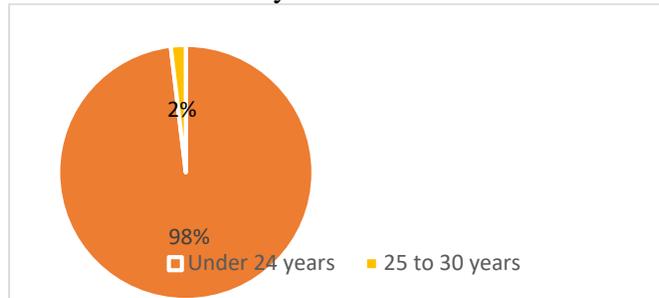


Figure 2. Age structure of the sample

1.2. Gender

In the sample, most students are female (54%) and fewer male (46%) (Figure 3). This distribution resembles the general international sample of GUESSS survey but the share of female students varies significantly across the participating countries (Sieger et al., 2014).

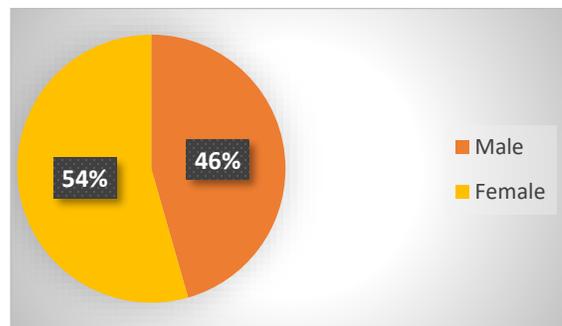


Figure 3. Gender structure of the sample

1.3. Marital status

Most of the respondents in the sample live alone (78%). About one fifth of the students (18%) live together with another person and 4% are married, as shown in Figure 4

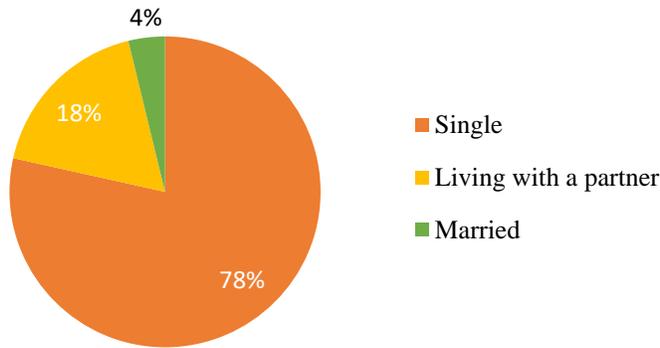


Figure 4. Marital status of the students

1.4. Year of study

Figure 5 shows the distribution of respondents according to years of study. Most respondents are from the third year of undergraduate business study programs (94.3%), followed by the students from the second year (3.80%), from the fourth year (1.27%) and from the first year (0.63%).

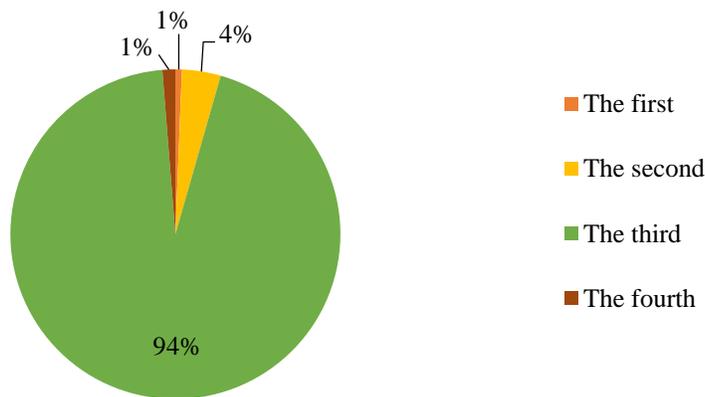


Figure 5. Year of study

1.5. Majors of business study

Figure 6 shows the distribution of the survey participants among the majors of business study. Most respondents are from the major Management (59%), followed by the students from the major Marketing (35%). On the third place are the participants from the major Industrial management (6%).

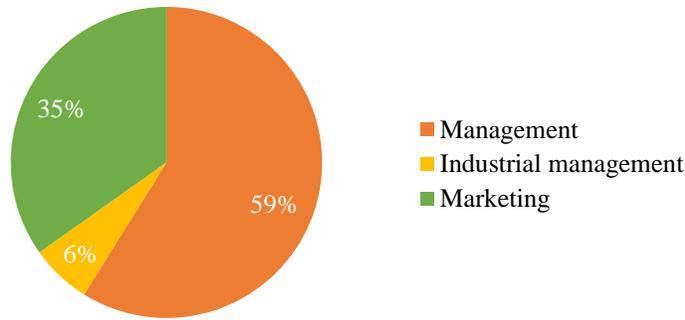


Figure 6. Majors of business study

The gender distribution across the various business majors illustrated in Figure 7 shows that male students dominate only in one major namely Industrial management (70%). Marketing has a relatively even distribution between female (49%) and male students (51%). More female students (60%) are enrolled in business major Management.

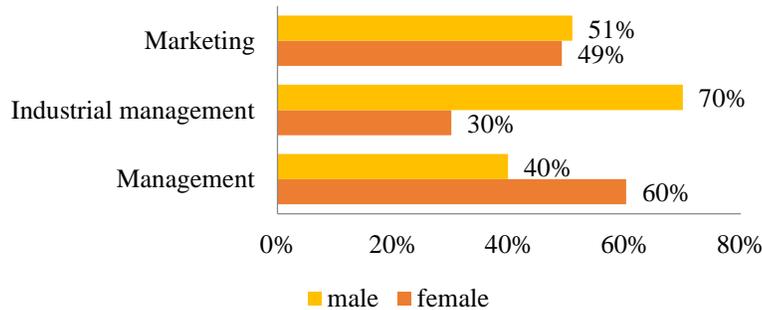


Figure 7. Gender distribution across business study majors

1.6. Study performance

Students were also asked to assess their average study performance on a 7-point Likert scale from 1 (far below average) to 7 (far above average). Table 1 and figure 8 show that 5.9% of the students see their study performance below average. Almost every third student (29.7%) rates himself or herself as performing “average”. More than half of the respondents (63.3%) evaluate their performance as “Above average”. There is a small difference between gender study performances. A significant number of the female students (67.4%) assess their study performance above average whereas 58.3% of the male students rate their study performance above average.

Table 1
Study performance across students' gender

	Study performance						
	Far below average	Pretty below average	Rather below average	Equal	Rather above average	Pretty above average	Far above average
Male	0.0%	1.3%	1.3%	16.5%	13.3%	8.2%	5.1%
Female	0.6%	1.3%	2.5%	13.3%	18.4%	12.0%	6.3%
Total	0.6%	2.5%	3.8%	29.7%	31.6%	20.3%	11.4%

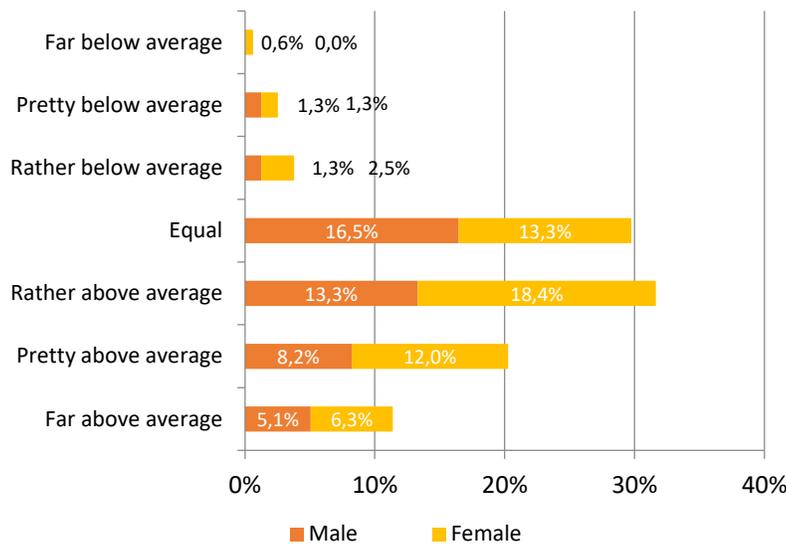


Figure 8. Study performance across students' gender

2. Career choice intentions

2.1 The general level

The students' career choice intention is one of the main questions in the study. Students should indicate what career path they intend to pursue immediately after completing their studies and what career path they have five years after completion of studies.

Figure 9 exhibits respondents' answers to this question. The predefined answers can be grouped into four main categories. The first category includes six predefined responses. It refers to dependent employment in an organization and covers a career in the private sector, non-profit sector, academic institutions or public sector. The private sector includes "an

employee in a small firm (1-49 employees)”, “in a medium-sized firm (50-249 employees)” or “in a large firm (more than 250 employees)”. Students indicate that career path as the most desirable immediately after they finish study. Almost half of the students (47%) want to work as employees in a private company or in small (14%), medium (13%) or large companies (20%).

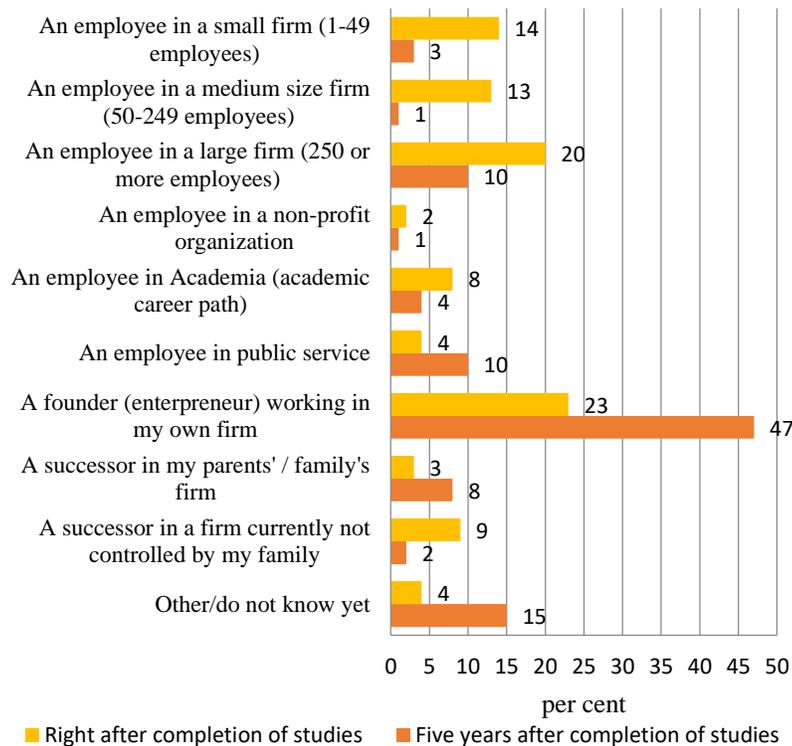


Figure 9. Comparison of career choice intentions

The results of the survey show that an insignificant number of students (12%) want to work in the public sector immediately after their studies, of which 8% intend to be employed in academia and 2% want to work in non-profit organizations.

The second category includes one predefined response – a founder/entrepreneur working in his/her own firm. Immediately after graduation, 23% of students want to become founders, working in their own firm.

The third category includes two predefined responses: a successor in my parent’s firm and a successor in a firm currently not controlled by my family. Immediately after graduation, very few students want also to become successors in the family's firm(3%) or another firm (9%).

The study shows that five years after completing education, there are some serious changes in students' career development plans. On the one hand, less students intend to work in small (3%) and in medium-sized firms (1%). On the other hand, entrepreneurial activities become more attractive and 47% of the respondents want to work in their own firm. Among all GUESSS participating students that want to become founders of their own business is 30.7% (Sieger et al., 2014). However, a small number of students cannot indicate a specific career path immediately after study (4%) or five years later (15%). Probably among them, there could also be some potential entrepreneurs.

It should also be noted that the intention of students to become a successor is very low even in companies that are currently controlled by their own family. Only 3% of students want to become successors right after their studies. After five years, this share increases to 8%.

In order to carry out a comparative analysis and track changes in dependent employment and entrepreneurship according to the time horizon, we follow the GUESSS approach, which identifies three career development options - Employee, Founder, and Successor (Sieger et al., 2014).

Figure 10 presents the transition in career categories. 61% of the respondents intend to work as an employee right after the education. After five years, a smaller share of them (29%) intend to become an employee. Of all the students whose intention is to work five years later as employees, 24% of them want to become entrepreneurs or something else. Only 23% of the students desire to become an entrepreneur right after graduation. However, the number of these students has changed five years after study and their share becomes 47%. This development, at first to be an employee and after that become an entrepreneur, is compatible with the GUESSS survey (Sieger et al., 2014) and previous international surveys (Sieger, Fueglistaller and Zellweger, 2011).

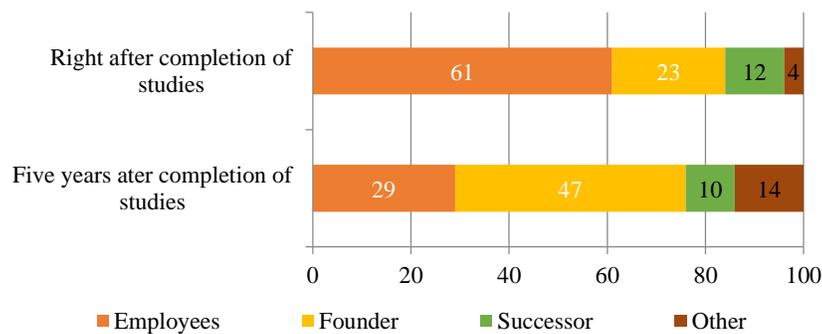


Figure 10. Comparison of students' career intentions by categories

Compared to the international GUESSS sample students from the National University of Life and Environmental Sciences of Ukraine have a similar founding intention - both right after completion of studies and five years later. Figure 11 displays the founding intentions of the students at the National University of Life and Environmental Sciences of Ukraine in comparison with the international GUESSS sample. At the National University of Life and Environmental Sciences of Ukraine 23% of students want to become founders right after graduation while the international average is 10.6% for students in the field of “Law & Economics (incl. business sciences)”. The difference between Ukrainian and international students five years later is similar. 47 per cent of the Ukrainian respondents intent to become a founder, while the international average of the international sample is 44.6% for students in the field of “Law & Economics (incl. business sciences)”.

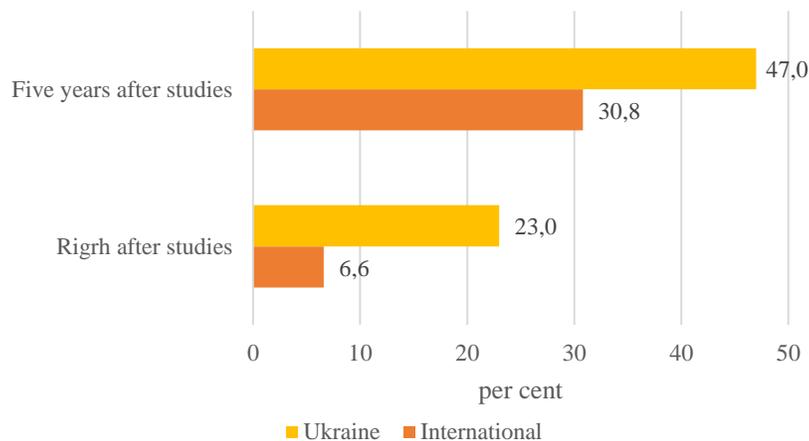


Figure 11. Founding intentions of the students at the National University of Life and Environmental Sciences of Ukraine in comparison with the international average of GUESSS survey

2.1.1. Career choice intentions across gender

The gender structure of entrepreneurship has always been the subject of wide-ranging discussions. International surveys have revealed a sustainable dependency, namely that a larger proportion of males are engaged in entrepreneurship than females (assessed as intention to begin a new business) (Amoros et al, 2014).

Based on the survey results, it can also be analyzed to what extent

gender can differ in career choices and entrepreneurial intentions. Figure 12 shows the gender distribution of career choices immediately after graduation. Most of the male students (56.94%) and a large number of female students (66.28%) intend to start working as employees in private or public organizations. The share of intentional entrepreneurs among males is slightly higher than among females (27.78% vs. 18.60%). Becoming a successor as a career path is almost equally attractive to male students (5.56%) and female students (5.81%).

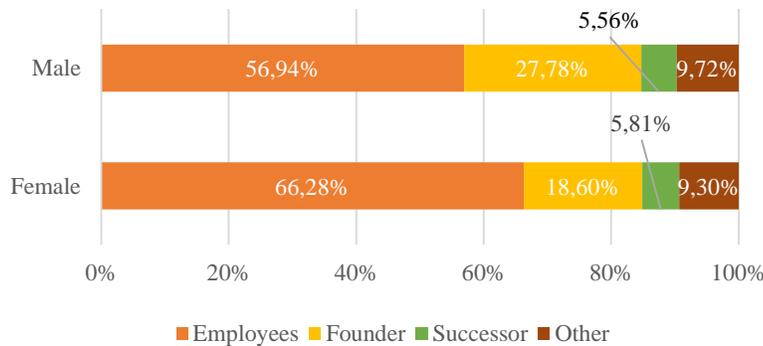


Figure 12. Career choice intentions by gender right after studies

The study also shows that after five years, career intentions for both genders have changed significantly (Figure 13). The share of students of both genders who intend to become employees five years after graduation decreases, and the share of male (27.78) and female students (27.91) has become almost equal. The intention of creating one's own company increases five years after graduation. The main difference is that a larger proportion of female students (50.00%) want to become founders of a company, compared to male students (44.44%). In addition, more male students (13.89%) want to be a successor in their parent's or another company in five years than female students (5.81%).

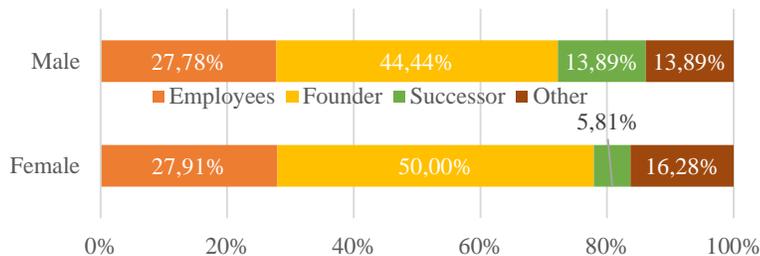


Figure 13. Career choice intentions by gender five years after graduation

2.1.2. Career choice intentions across majors of study

The majors of business study is an important factor when it comes to career choice intentions. Figure 14 and Figure 15 show students' career choices right after studies and five years later by categories and across the majors of business study.

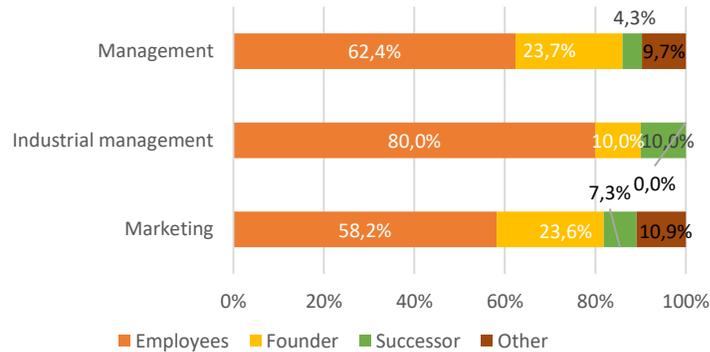


Figure 14. Career choice categories by majors of business study directly after studies

The distribution among the categories and across the study majors is almost similar. The major share is of the students who want to become employees, a significant share of students want to found their own firm and a minor share of students have no plans. The smallest share of students wants to become a successor in their family's or another firm. In detail, we observe that the share of intentional founders is of similar size among major Marketing (23,6%) and major Management (23,7%). Among the students in Industrial Management, this share is significantly lower (10%).

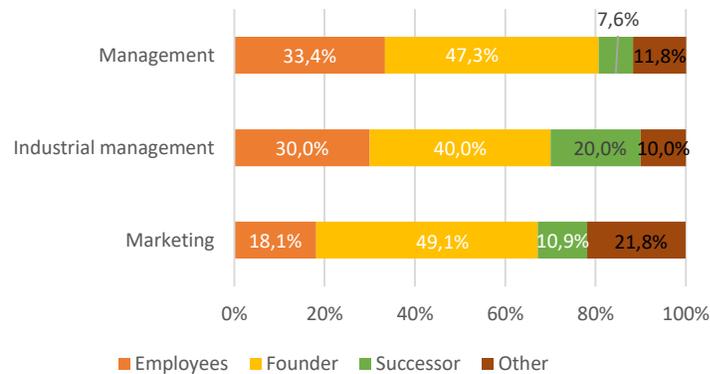


Figure 15. Career choice categories by majors of business study five years after graduation

Five years after study, the career development intentions have changed for all categories. The main difference is that fewer students intend to become employees and most of them plan to become founders and successors. The intention to found one's own firm increases in all study majors. More than every second student in the majors Management (47.3%) and Marketing (49.1%), and 40.0% of the students of Industrial management find self-employment as a career path five years after they have completed their studies (Figure 15). The proportion of students who want to be a successor has also enlarged, but is still lower (between 7.6% and 20%).

3. Primary determinants of entrepreneurship intentions

3.1 The general level

Several factors influence the intention to become an entrepreneur. In order to examine the relationship between the factors influencing the students' entrepreneurial intentions, a survey construct of six statements has been used. Students are asked to mark their level of accordance to these statements that capture their general intention to become an entrepreneur in the future (Linan and Chen, 2009). Table 2 displays the six statements, responses to which were ranged from 1 (strongly disagree) to 7 (strongly agree).

Table 2
Entrepreneurial intention survey construct

Item number	Statement
1	I am ready to do anything to be an entrepreneur.
2	My professional goal is to become an entrepreneur.
3	I will make every effort to start and run my own firm.
4	I am determined to create a firm in the future.
5	I have very seriously thought of starting a firm.
6	I have the strong intention to start a firm someday.

The entrepreneurial intention scale is determined by calculating the average of all six answers. The outcome for our study demonstrates that on average, the entrepreneurial intention among students at the National University of Life and Environmental Sciences of Ukraine is above the average, compared to the international GUESSS sample data - mean=3,70 (Sieger et al., 2014).

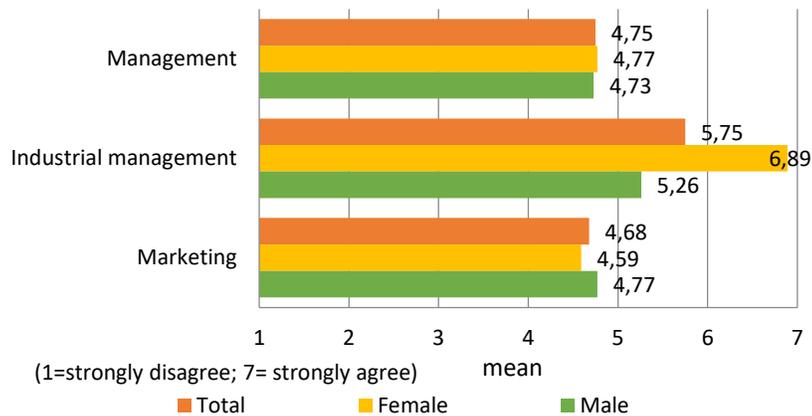


Figure 16. Strength of entrepreneurial intentions across business study majors and gender

An analysis based on the majors of business study (Figure 16) presents that the average entrepreneurial intention is highest for students in majors Industrial Management (5,75; n=10), followed by Management (4,75; n=93). The lowest entrepreneurial intention can be discovered among Marketing students (4.68; n=55).

A test for gender differences discovers a different average value for female students compared to male students across three business study majors. The level of entrepreneurial intention is lower for female students than for male students only in major Marketing (4.77 – male, 4.59 - female). The largest difference between female and male students can be observed among Industrial management students (5.26 - male versus 6.89 - female). The general conclusion, however, is that entrepreneurial intentions in our sample are slightly higher than the international sample for male and female students. The aggregated entrepreneurial intention index of international survey GUESSS shows lower average values for female students compared to male students (3.5 compared to 4.0) (Sieger et al., 2014).

3.2. The university context

3.2.1. Attendance of entrepreneurship courses

Another important issue that is the subject of this study is the influence of the university context on entrepreneurial intentions of the students. How universities affect entrepreneurial intentions has been a subject of interest for other researchers (Lima, Lopes, Nassif and da Silva, 2014).

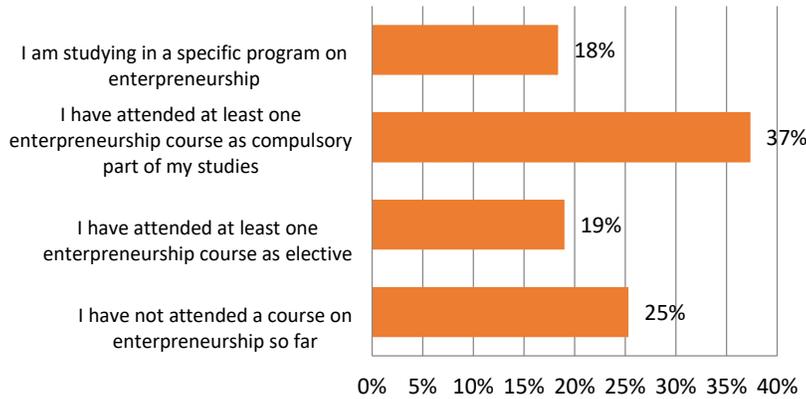


Figure 17. Attendance of entrepreneurship courses

Students should state in the questionnaire to what extent they have been attending courses and offerings at their university related to entrepreneurship. Figure 17 exhibits that about half of the students in the sample (37%) have attended at least one entrepreneurship course as compulsory part of their education. Only 18% of the students study a specific program on entrepreneurship; 25% have not attended a course on entrepreneurship and 19% have attended at least an elective entrepreneurship course.

3.2.2. Strength of entrepreneurial climate at the university

Students were also asked about the entrepreneurial climate at their university indicating the extent to which they agree to three statements - Table 3 (Luethje and Franke 2004). The answers about the entrepreneurial climate were ranked from 1 (strongly disagree) to 7 (strongly agree).

Table 3
Entrepreneurial climate scale

Item number	Statement
1	The atmosphere at my university inspires me to develop ideas for new businesses.
2	There is a favourable climate for becoming an entrepreneur at my university.
3	At my university, students are encouraged to engage in entrepreneurial activities.

The entrepreneurial climate scale is determined by calculating the mean of all three answers. On average, the entrepreneurial climate at the National University of Life and Environmental Sciences of Ukraine is relatively good (mean=4,07; n=158). The global average is 4.0, which is the middle of the scale. Almost 30% of all students demonstrate a level of agreement of 3 or lower. Almost half of all students assess the entrepreneurial climate at their university as being between 3 and 5 (Sieger et al., 2014). This shows possibility for some improvements. Figure 20 exhibits the calculated average for the entrepreneurial climate scale across fields of study and by gender.

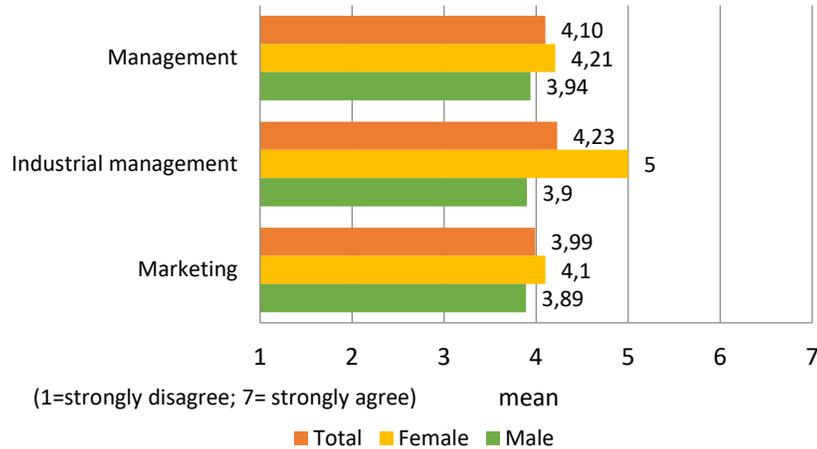


Figure 18. Strength of entrepreneurial climate across business study majors and gender

The average entrepreneurial climate is estimated highest by Industrial management students (4.23; n=10). The other business study majors do not differ very much. Management (4.10; n=93) and Marketing (3.99; n=55) demonstrate similar average entrepreneurial climates.

3.2.3. Detailed assessment of entrepreneurial learning strength at the university

It is also important to examine to what extent students have learned something after attending entrepreneurship courses and classes at the university. Thus, students were asked to point the extent to which they agree to five statements about their learning process and outcome - Table 4 (Souitaris, Zerbinati and Al-Laham, 2007). Those statements show to what extent students esteem that the attended courses would increase their capabilities or enhance their understanding of entrepreneurial issues. The answers of the

entrepreneurial learning statements were ranked from 1 (strongly disagree) to 7 (strongly agree).

Table 4
Entrepreneurial learning scale

Item number	Statement The courses I attended...
1	...increased my understanding of the attitudes, values and motivations of entrepreneurs.
2	...increased my understanding of the actions someone has to take to start a business
3	...enhanced my practical management skills in order to start a business.
4	...enhanced my ability to develop networks.
5	...enhanced my ability to identify an opportunity.

The entrepreneurial learning scale is determined by calculating the mean of the five answers. On average the entrepreneurial learning at the National University of Life and Environmental Sciences of Ukraine is perceived as relatively good (mean=4,53; n=158). The global average is 4.0. The distribution of the different agreement levels seems to be similar to that of the entrepreneurial climate question (Sieger et al., 2014).

Figure 19 exhibits the calculated average for entrepreneurial learning across majors of business study and by gender. The average entrepreneurial learning is perceived highest among Industrial management students (4,66; n=10). The other majors of business study do not differ very much. Entrepreneurial learning among Management students is on average 4.62 (n=93) and among Marketing students 4.36 (n=55).

The survey showed that there are no major gender differences in terms of entrepreneurial education. The mean values for female students compared to male students are slightly higher (4,68 versus 4,36). Between the different majors of business education, the level of entrepreneurial learning is examined differently among Management students. Management male students perceive the entrepreneurial learning weaker (4,25) than male students (4,86). There is also a small gender difference in Marketing students: male 4.39 and female 4.34. Among major Industrial management female students rate the entrepreneurial learning on average at 4.27. The male Industrial management students perceive it slightly bigger (4.83).

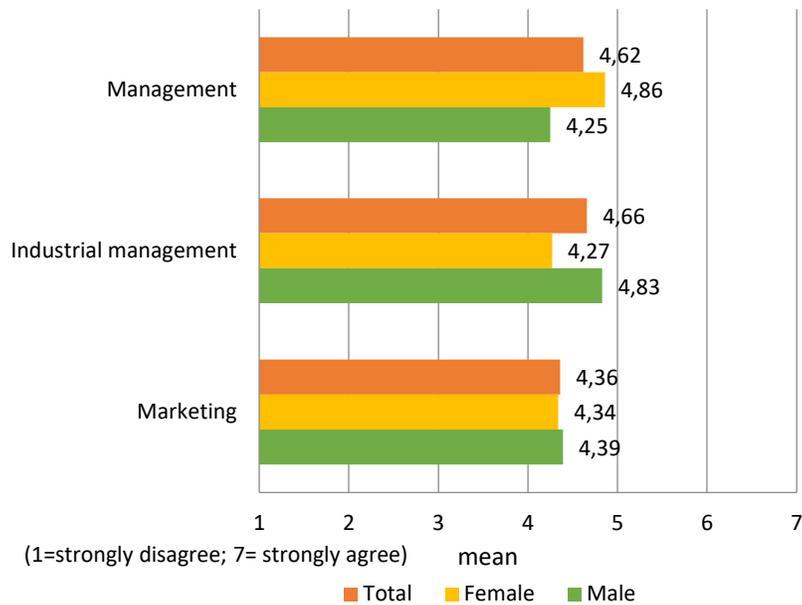


Figure 19. Aggregate assessment of entrepreneurial learning strength across business majors and gender

3.2.4. Overall assessment of entrepreneurial learning strength at the university

Our survey includes an additional question about overall students' assessment of entrepreneurial learning strength at the university. The students were asked to point out the extent to which they agree to a statement about their overall entrepreneurial learning process - Table 5. The statement indicates to what extent students think that all the attended courses in their education programme would increase their understanding of entrepreneurial issues. The answers for the entrepreneurial learning statement were ranked from 1 (strongly disagree) to 7 (strongly agree).

Table 5

Overall assessment of entrepreneurial learning process

Item number	Statement
1	The courses I have studied so far help me to create my own business

Overall entrepreneurial learning at the National University of Life and Environmental Sciences of Ukraine is perceived as relatively good (mean=4.06; n=158). This assessment looks similar to the detailed assess-

ment of entrepreneurial learning strength (mean=4.53, n=158).

Figure 20 exhibits the calculated average for entrepreneurial learning across majors of business study and by gender. The entrepreneurial learning is rated highest among Industrial Management students (4.60; n=10). Entrepreneurial learning among Management students is 4.14 (n=93) on average. The average entrepreneurial learning is examined lowest among Marketing students (3.84; n=55).



Figure 20 Overall assessment of strength of entrepreneurial learning across business study majors and gender

In terms of entrepreneurial education, gender differences are not very large, either. The average values for male students are slightly higher than female students (4.11 versus 4.02). Between the different majors of business study, the level of entrepreneurial learning is estimated differently among genders. Management female students assess the entrepreneurial learning weaker (4.09) than male students (4.22). There is also a similar gender difference among Marketing students: male 3.89 and female 3.78. For the major Industrial management the male students' evaluation is lower than female (male – 4.43 versus female 5,00).

The comparison between the detailed evaluation and the overall evaluation shows slight differences between different majors. For Management major detailed rating is 4.62 and for the overall one – 4.14. For Industrial Management major detailed rating is 4.66 and overall one – 4.60. For Marketing major detailed rating is 4.36 and overall rating is 3.84.

3.3. The family context

3.3.1. Students with self-employed parents

Family has played an important role in choosing a student's career environment. From the literature, we know that most of the students of self-employed parents choose to become entrepreneurs (Laspita, Breugst, Heblich, Patzelt and 2012). As a result, students were asked whether their parents (father, mother or both) were self-employed.

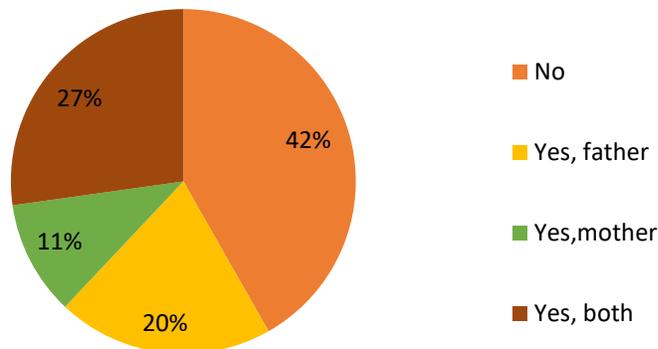


Figure 21. Students with self-employed parents

In figure 21, the percentage of students whose parents are self-employed is shown. Most of them (42%) don't have self-employed parents. 58% of the students have a father, mother or two self-employed parents. 27% of respondents reported that both are self-employed, mothers of 11% of all students are self-employed and fathers of 20% are also self-employed.

3.3.2. Career choice intentions by family background five years after study

Similar to the study by Sieger et al. (2014), we expect that there is a connection between students' career choices and whether or not they have parents - entrepreneurs. Figure 22 shows the intentions of the students to choose a career five years after their graduation with or without entrepreneurial parents. Half of the students with entrepreneurial parents (64.2%) intend to be the founder or successor of the parents' (or other) company five years after graduation.

This figure also describes that there is a difference between share of students who intend to found their own firm with entrepreneurial parents and those without an entrepreneurial family background (first category is 52.2% and second category is 40.9%).

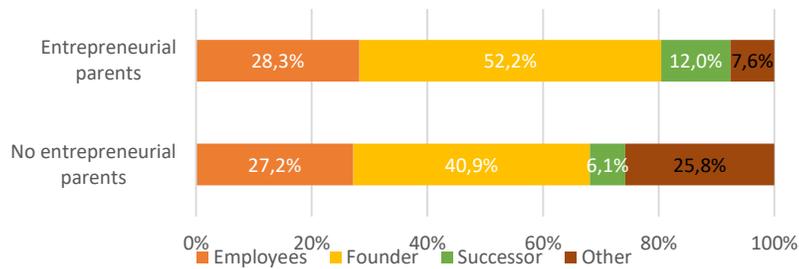


Figure 22. Career choice intentions by family background five years after study

3.4. Personal motives

3.4.1. Importance of different career motives

On the basis of the TPB study, the researchers found a positive correlation between motives for achieving something and the behaviour of a person (Laspita et al., 2012); (Zellweger, Sieger and Halter, 2011). Therefore, career intentions are also an important decisive factor for career choices. Students were asked to appreciate the meaning of ten different motives when deciding about their future career. Responses were fixed from 1 (not important at all) to 7 (very important).

Figure 23 describes the average means of ten different career motives among students at the National University of Life and Environmental Sciences of Ukraine. Their most important career motive is “to realize my dream” with 5.93 points, followed by “to have power to make decision” (5.5 points) and “to make advantage of my creative needs” with 5.42 points. The smallest score is “to have a challenging job” (3.89 points). It is also less important, but it is still considered to be quite important “to have authority” (5.35 points).

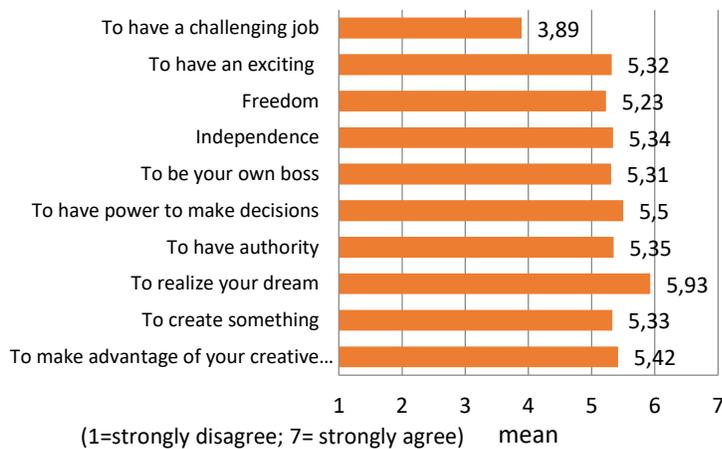


Figure 23. Importance of different career motives

3.4.2. Importance of career motives across different career groups

In figure 24, the distribution of the importance of career choice and the career as an employee, founder or successor is shown. For purposeful founders, the most important motives are “realize my dream” (6.22 points), “have authority” (5.89), “create something” with 5.58 points, “being your own boss” (5.47 points) and “have power to make decision” (5.44 points). For successors, more important motives are “realize my dream”, and “have power to make decisions” than other.

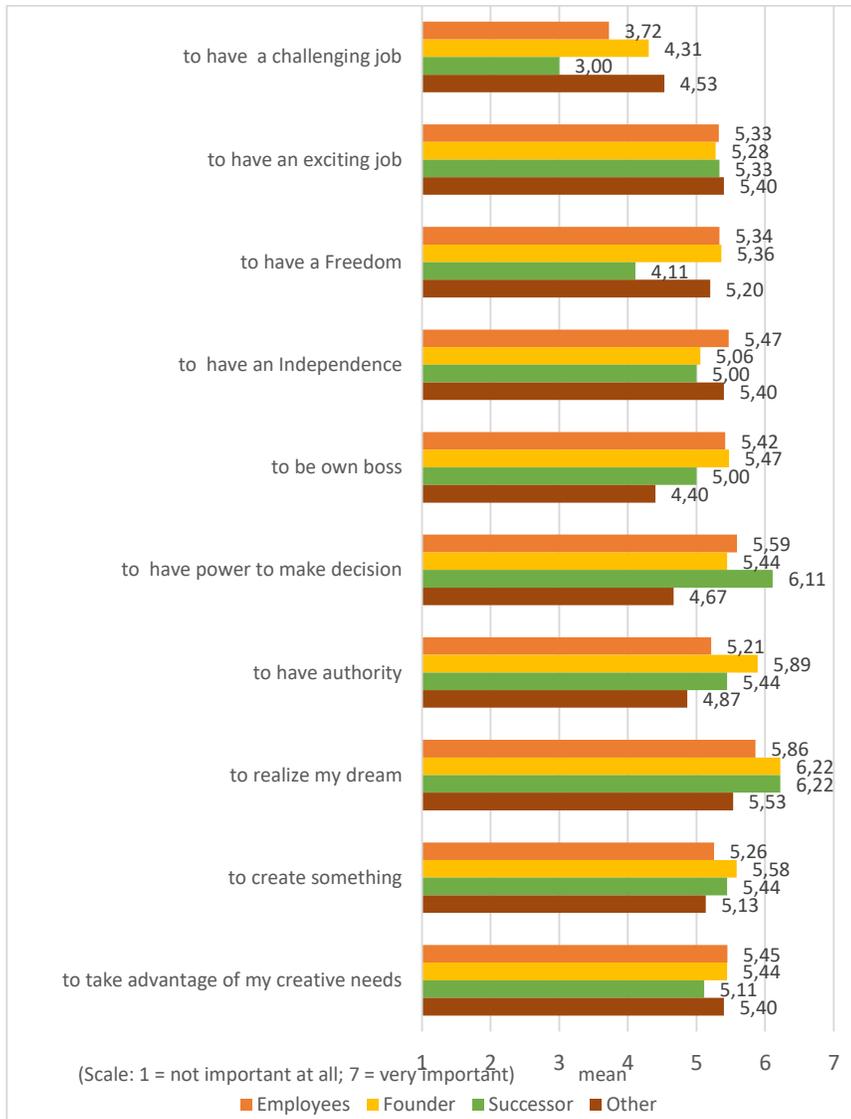


Figure 24. Importance of career motives across different career categories

3.5. Social and cultural context

3.5.1. Reaction of people from the close environment

According to a number of researchers, the people in their studies are positive about becoming a founder of a company (Souitaris et al., 2007); (Zellweger et al., 2011), while the negative effect of the research groups on entrepreneurial activities is less studied and understood. We also investigate the subjective norm or social tensor that is done by close relatives.

We found that the more positive the expected response from these peers is, the more likely it is to behave as intended. That is why the students were asked how many positive or negative differences in their reactions would be if they were pursuing a career as an entrepreneur. Students should evaluate the response of three groups of people: close relatives, friends and classmates (Linan at al, 2009). Responses were fixed from 1 (very negative) to 7 (very positive). A subjective rule scale by calculating the average of the three responses has been generated.

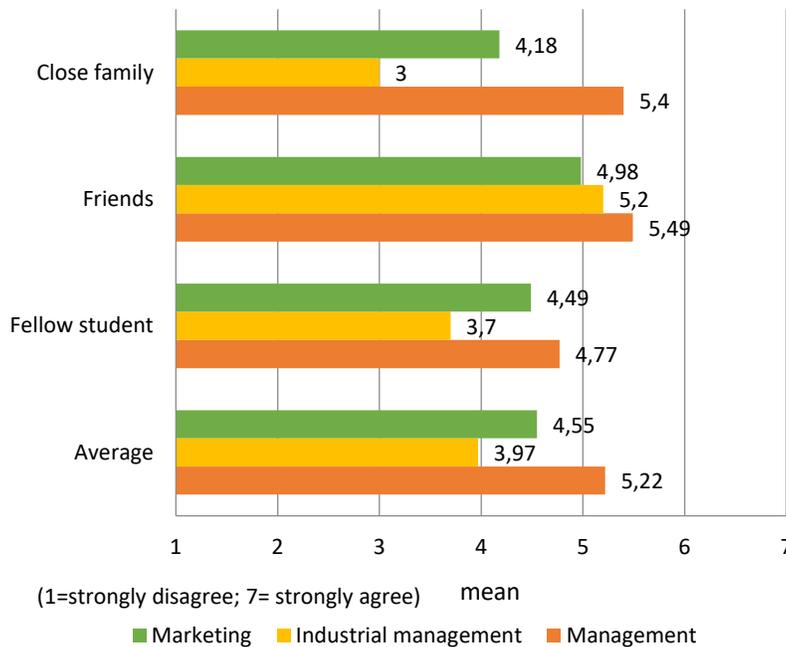


Figure 25. Reaction of people from the close environment across business study majors

The global average is 5.3 points (Sieger et al., 2014). The average subjective norm among students is slightly under the global one (average =

4.9 points, $n = 158$). Also, in all business majors friends have the most positive reaction among students at the National University of Life and Environmental Sciences of Ukraine.

3.5.2. Assessment of perceived risk to start an own business

The risk is another significant social and cultural factor of entrepreneurship. For this reason, our study explores the extent to which students are at risk when deciding to become entrepreneurs. Students were pleased to show their degree of agreement with the three statements in table 6 (Pennings and Wansink, 2004). Responses were fixed from 1 (strongly disagreement) to 7 (strongly agree).

Table 6
Perceived risk scale

Item number	Statement
1	I consider starting up my own business to be very risky.
2	I think it is dangerous to manage your own business.
3	I believe that business ownership has high risk.

The average perceived risk for starting a business with the students of the National University of Life and Environmental Sciences of Ukraine is very low (mean = 4,22, $n = 158$). Global average is 4.85. This rating is among the five lowest risk perceptions of GUESSS. The other four countries are Mexico (4.09), Brazil (4.31), Romania (4.36) and Estonia (4.37) (Sieger et al., 2014).



Figure 26. Assessment of perceived risk to start one's own business

4. Secondary determinants of entrepreneurial intentions

4.1. Attitude towards entrepreneurship

One of the key factors that can influence the formation of entrepreneurial intentions of students and strengthen their “entrepreneurial spirit” is the attitude towards behaviour (Linan, et al, 2009), according to the theoretical model of the study (Figure 1).

The entrepreneur's work involves continuous progress, improvement, development, planning ability, setting ambitious goals, organizing work, finding the necessary resources and achieving new goals. However, not everyone is ready for responsibility and self-decision, some people feel more comfortable as employees, which is confirmed by the study.

The attitude towards entrepreneurship is made up of five elements, including whether an entrepreneur is considered to have significant merits or disadvantages for the students themselves; whether to become an entrepreneur is an attractive prospect; and whether, the student would become an entrepreneur among the given opportunity and capital (Linan and al, 2009).

Students are required to choose their degree of agreement with five statements covering their general attitude towards entrepreneurship (Linan et al, 2009). These five statements, which were fixed from 1 (strongly disagree) to 7 (strongly agree) are shown in Table 7. The attitude to the scale of entrepreneurship is obtained by calculating the average of all five responses.

Table 7
Attitude toward entrepreneurship scale

Item number	Statement
1	Being an entrepreneur implies more advantages than disadvantages to me
2	A career as entrepreneur is attractive for me
3	If I had the opportunity and resources, I would become an entrepreneur
4	Being an entrepreneur would entail great satisfaction for me
5	Among various options, I would rather become an entrepreneur

The positive attitude towards entrepreneurship is strongly expressed among students at the National University of Life and Environmental Sciences of Ukraine (Figure 27). Many respondents strongly agree that they do not have enough resources to realize their entrepreneurial potential.

Our survey shows that the average attitude towards entrepreneurship among students at the National University of Life and Environmental Sciences of Ukraine is 4.86 points. It is slightly above the average compared to the international data set of GUESSS (4.72).



Figure 27. Attitude towards entrepreneurship

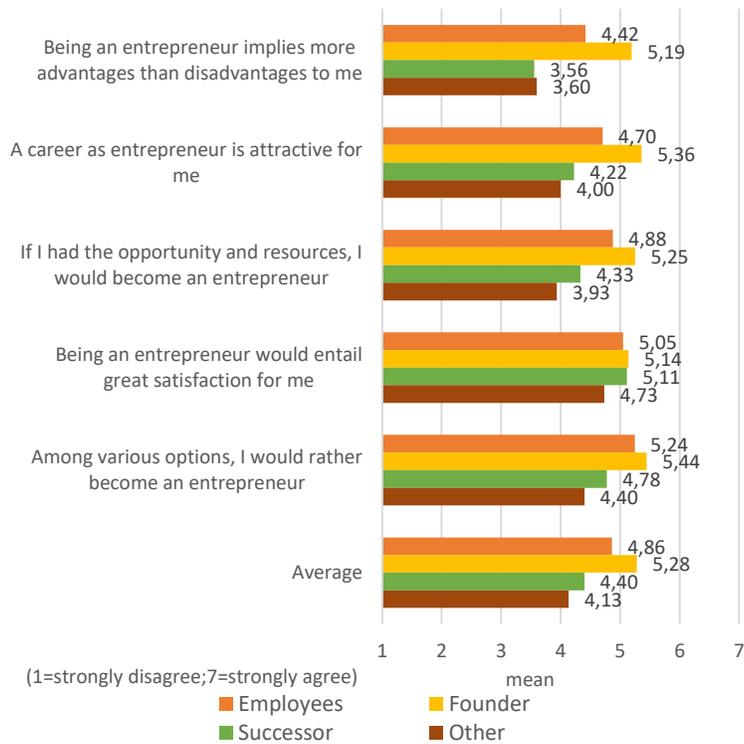


Figure 28. Attitude towards entrepreneurship and career choice intentions right after the studies

Future entrepreneurs and heirs largely agree that being an entrepreneur has more advantages than shortcomings and think that a career as an entrepreneur is attractive for them.

Compared to the international sample (4.72), more students intending to become employees have a positive attitude to the entrepreneur's career (4.86). In addition, they feel that they do not have enough resources to start a business. This factor can be seen as one of the obstacles to an entrepreneur's career, which is recognized by future entrepreneurs and successors. Ukrainian students agree that entrepreneurship would bring great satisfaction to them. This shows that there is not only a positive attitude towards entrepreneurship but also entrepreneurial potential among students.

4.2. Locus of Control

Adopting the way people appreciate their ability to take control of the situation also affects career preferences, not just entrepreneurial attitudes. The internal place of control describes the tendency of individuals to believe that they control the events in their lives instead of attributing them to external circumstances.

Through the questionnaire, we asked the students whether they agree with three statements that capture the students' general perception of how they assess their ability to take control of the situation (Levenson, 1973). In table 8 the responses to the three statements from 1 (strongly disagree) to 7 (strongly agree) are presented. The internal location of the control scale is generated by calculating the average of these three responses. In addition, figure 29 shows the distribution of average responses to each item and their average value among students at the National University of Life and Environmental Sciences of Ukraine compared to the global sample.

Table 8
Perception of how students assess their ability to take control over the situation

Item number	Statement
1	I am usually able to protect my personal interests
2	When I make plans, I am almost certain to make them work
3	I can pretty much determine what will happen in my life

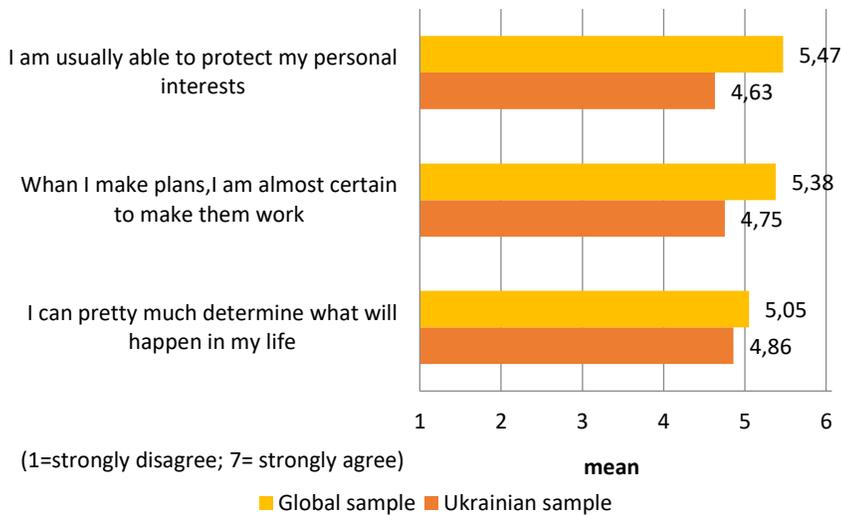


Figure 29. Internal locus of control

In figure 30 as arithmetic average of all three statements for career choice intentions groups, based on the responses, the locus of control index was also calculated.

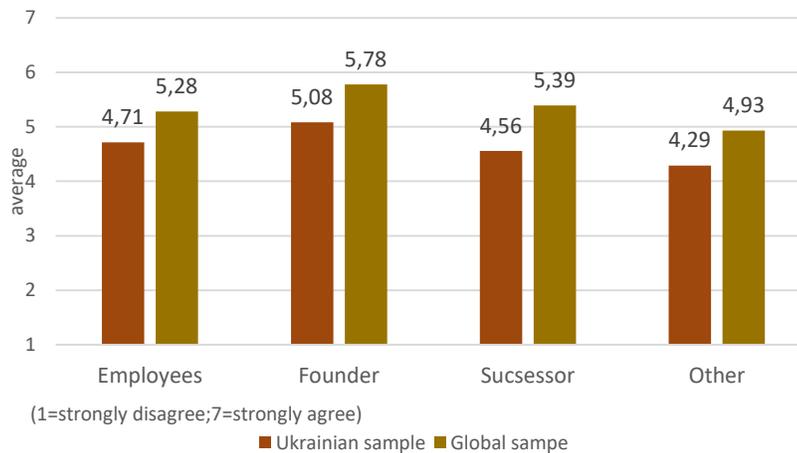


Figure 30. Internal locus of control and career choice intentions right after the studies

The results that have been obtained show that the index of the place of control is higher among entrepreneurs and others and is lower among employees and successors. Moreover, the confidence in their ability to control the situation is lower among Ukrainian students than the average for the international sample. This may be due to the influence of external factors that can hardly be predicted and controlled.

4.3. Entrepreneurial Self-efficacy

For the creation and management of one's own business, specific competencies such as presence or formation of entrepreneurial intentions are needed. Entrepreneurial efficacy describes the perceptions of individuals about their ability to perform entrepreneurial tasks and achieve the desired results. Students assess and relate their skills to the requirements of different professions when they plan their careers. In addition, a high level of self-esteem in terms of tasks that are important to entrepreneurs can increase the chances of choosing an entrepreneurial career on the part of students.

With the aim of indicating their level of competence in performing seven tasks students were asked to measure the level of entrepreneurial autonomy. Table 9 lists the seven statements from which polls ranged from 1 (very low competence) to 7 (very high competence).

Table 9

Perception of individuals about their abilities to carry out the entrepreneurial tasks and achieve the desired results

Item number	Statement
1	Identifying new business opportunities
2	Creating new products and services
3	Managing innovation within a business
4	Being a leader and communicator
5	Building up a professional network
6	Commercializing a new idea or development
7	Managing a business successfully

Figure 31 shows the distribution of the average level of competence among students at the National University of Life and Environmental Sciences of Ukraine according to their intentions for choosing a career as well as the distribution of the generalized index of entrepreneurial self-efficacy. In line with expectations, prospective entrepreneurs and successors have a higher level of competence in fulfilling all tasks that are important to entrepreneurship as compared to employees.

Composite index of entrepreneurial self-efficacy for all business students, based on the responses to each task was calculated. The analysis of the data showed that for students at the National University of Life and Environmental Sciences of Ukraine the overall level of entrepreneurial autonomy, which is 4.96 points, is slightly higher than in the international

sample (4.62 points). The results are slightly above the average of the global sample and they also show that entrepreneurial skills and competences need to be developed and can be largely achieved through entrepreneurial education.

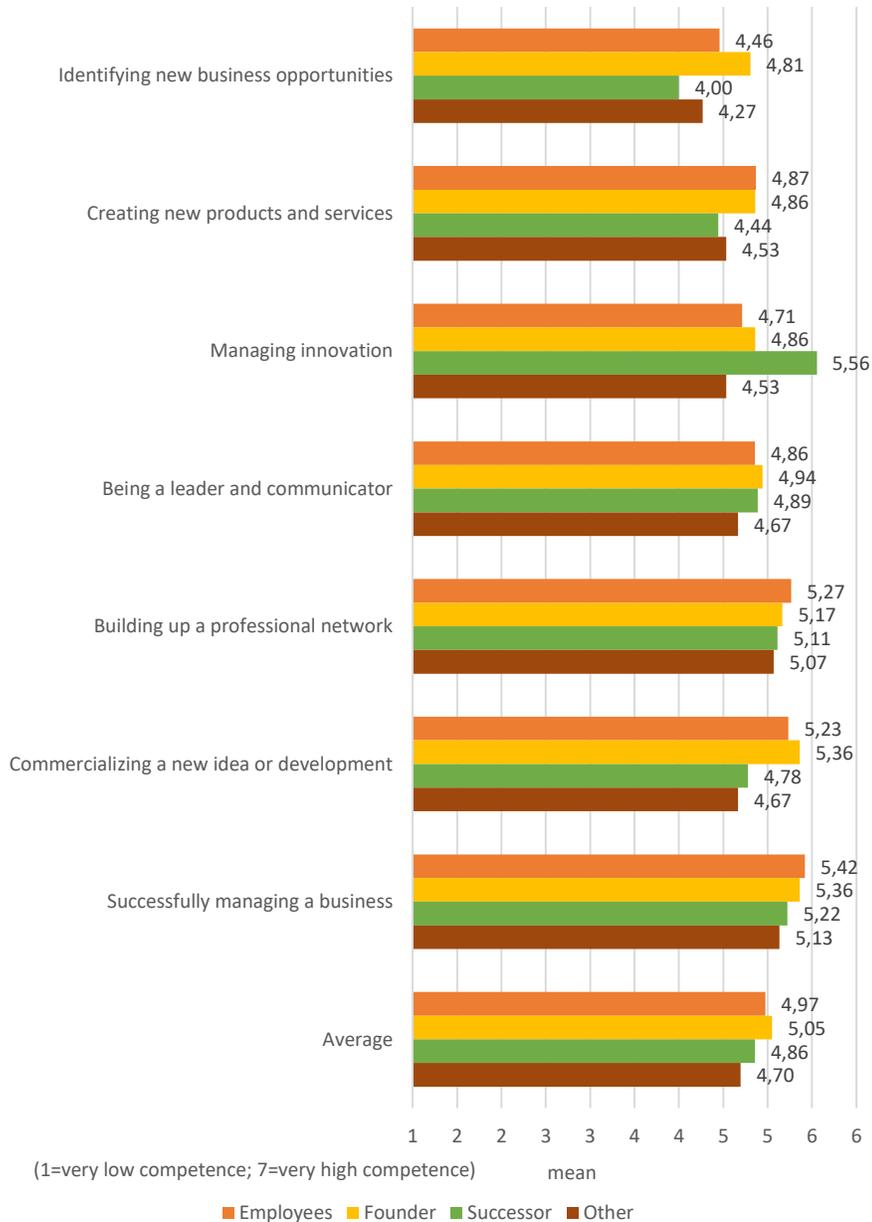


Figure 31. Distribution of the aggregated index of the entrepreneurial self-efficacy across categories

Summary and conclusions

The study of entrepreneurial intentions of students is based on a sample of all business study majors in the National University of Life and Environmental Sciences of Ukraine - Kiev. Surveys were distributed to 500 students, of whom 158 submitted fully completed questionnaires, resulting in a response level of 31.6%.

Below, we will summarize the main results of the survey as follows:

- 61% of all students intend to become employees directly after studies and 29% - five years after studies. The global average is 80.3 % directly after studies and 46.6 % - five years later.

- The study has found that the career development intentions of students in the National University of Life and Environmental Sciences of Ukraine - Kiev were similar to those found in international studies, namely to be employees first, and then - become founders (Sieger et al., 2014). The main reason for choosing such a career path is perhaps the lack of experience as well as the initial capital that they will seek to gain by becoming employees first. Only after gaining confidence in their own strength, they can try to start their own business later.

- 23% of the students in the sample intend to work in their own company immediately after their education. Average percent is 10.5 among international sample in the field of study “Law & Economics (incl. Business sciences)” and 8.2 - among Ukrainian sample in GUESSS survey.

- 47% of all students intend to work in their own business five years after completion of their studies. Five years later, this share increases to 47% of them which is also higher than the global average for the field of study “Law & Economics (incl. Business sciences)” – 44.6% but lower than the Ukrainian GUESSS average – 61.6% (Sieger et al., 2016). Students in the National University of Life and Environmental Sciences of Ukraine - Kiev have a much higher founding intention in comparison with the global GUESSS sample.

- There is a small “gender gap” among intentional entrepreneurs. The relative gender gap is 9.2% directly after studies and 5.6% five years later.

- Students in major “Industrial management” have the strongest overall entrepreneurial intention followed by management students.

- With regard to gender differences, it was found that in all majors, except for major Marketing, female students have a higher entrepreneurial intention than male students.

- 25% of all students have not attended any entrepreneurship offerings at university.

- The entrepreneurial climate at the National University of Life and

Environmental Sciences of Ukraine is examined as relatively good (4.07 versus global average 4.0).

- The detailed (4.53) and general evaluation (4.06) of the students in terms of strength of entrepreneurial education at the National University of Life and Environmental Sciences of Ukraine is relatively good if compared to the global average (4.0). According to the students, the courses offered by the university only partially increase their entrepreneurial knowledge and skills. Taking into consideration all that, it can be concluded that there is enough potential to improve entrepreneurship courses and extracurricular activities of students.

- The study shows that students at the National University of Life and Environmental Sciences of Ukraine with entrepreneurial parents are more likely to become founders of their own companies, as many international studies have shown.

- The most important career motive is “to realize my dream” with 5.93 points, followed by “to have power to make decision” (5.5 points) and “to make advantage of my creative needs” with 5.42 points.

- The social and cultural context plays a particularly important role in choosing a career path. The perceived response from family, friends and companions to Bulgarian students who pursue a career as an entrepreneur is relatively positive (4.9) and it is slightly under global average (5.3).

- In all business majors, friends have the most positive reaction among students at the National University of Life and Environmental Sciences of Ukraine.

- Risk is a proven factor influencing the entrepreneurial intentions. The students at the National University of Life and Environmental Sciences of Ukraine perceived risk for starting a business lower (mean = 4.22, n = 158) compared to the global average 4.85.

The results and conclusions of this study help to improve the entrepreneurial intentions of the students The National University of Life and Environmental Sciences of Ukraine. The study also showed that entrepreneurship education at the university level should be stimulated, and on the other hand, specific courses and activities should be provided for the different groups of entrepreneurs (nascent and active entrepreneurs and potential successors) as well as for students who have not yet decided to be entrepreneurs. The second group of students should be motivated and acquainted with good practices in entrepreneurship in order to induce their interest in an entrepreneurial career.

This survey of students' entrepreneurial intentions contributes to enriching the results of ongoing entrepreneurship research, both at national and international level. The results of the survey can provide interesting ideas and reflection questions for the various stakeholders.

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**ИЗСЛЕДВАНЕ НА ФАКТОРИТЕ, КОИТО ВЛИЯТ
НА ПРЕДПРИЕМАЧЕСКИТЕ НАМЕРЕНИЯ
НА СТУДЕНТИТЕ ОТ БИЗНЕС СПЕЦИАЛНОСТИТЕ
НА УНИВЕРСИТЕТА ПО ПРИРОДОПОЛЗВАНЕ
НА УКРАИНА**

**Проф. дин Надя Давиденко
Проф. д-р Иван Димитров
Гл. ас. д-р Адиле Димитрова**

Резюме

Предприемачеството е водеща икономическа сила, която движи развитието на съвременното общество. Благоденствието на народите зависи до голяма степен от настоящите и бъдещите предприемачески дейности. Студентите могат да бъдат разглеждани като потенциални бъдещи предприемачи. Ето защо е много важно да се изследват техните намерения за предприемаческа дейност. В това отношение университетите играят много важна роля в създаването и развитието на предприемаческо мислене сред студентите. Изследването обхваща извадка от студенти, обучавани в бизнес специалностите на Националния университет по природоползване на Украйна. Целта на изследването е да се проучат факторите, които оказват влияние на предприемаческите намерения на студентите в бизнес специалностите на Националния университет по природоползване на Украйна. За постигане на основната цел са определени следните изследователски задачи:

- да се анализират демографските данни на изследваната извадка;
- да се анализират намеренията на студентите за кариерно развитие;
- да се анализира въздействието на първичните детерминанти според Теорията на планираното поведение върху предприемаческите намерения на учениците;
- да се анализира влиянието на вторичните детерминанти по теория на планираното поведение върху предприемаческите намерения на учениците;

Изследването се основава на теорията на планираното поведение. Основната теза на изследването е следната: предприемаческите намерения на студентите са резултат от въздействието на две групи фактори. Първата група включва ключови фактори за избор на кариера като нагласи, субективни норми и възприеман поведенчески контрол. Втората група обхваща контекстни фактори като университетския контекст, семейния контекст, личните мотиви и социалния / културния контекст.

Ключови думи: предприемачество, предприемачески намерения на студентите, фактори на предприемаческите намерения

JEL: L26, M13, A29

**STUDY OF DETERMINANTS OF ENTREPRENEURIAL
INTENTIONS OF STUDENTS IN THE BUSINESS MAJORS
AT THE NATIONAL UNIVERSITY OF LIFE
AND ENVIRONMENTAL SCIENCES OF UKRAINE**

**Prof. Nadya Davidenko, DSc
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Abstract

Entrepreneurship is a leading economic force that drives the development of modern society. The well-being of nations depends largely on current and future entrepreneurial activities. Students can be seen as potential future entrepreneurs. It is therefore very important to explore their intentions for entrepreneurial activity. In this respect, universities play a very important role in creating and developing entrepreneurial thinking among students. The research encompasses a sample of students trained in the business majors of the National University of Life and Environmental Sciences of Ukraine - Kiev. The objective of the study is to explore the factors that influence the entrepreneurial intentions of students in business studies at the National University of Life and Environmental Sciences of Ukraine - Kiev. The following research tasks are set to achieve the main objective:

- to analyze the demographic data of the sample surveyed;
- to analyze the students' intentions for career development;
- to analyze the impact of primary determinants according to the Theory of Planned Behaviour on entrepreneurial intentions of students;
- to analyze the influence of the secondary determinants according to the Theory of Planned Behaviour on entrepreneurial intentions of students;

The study is based on the Theory of Planned Behaviour. The main thesis of the study is as follows: Students' entrepreneurial intentions are the result of the impact of two sets of factors. The first group includes key career choice factors such as attitudes, subjective norms, and perceived behavioural control. The second group covers context factors such as the university context, the family context, personal motives, and the social/cultural context.

Keywords: entrepreneurship, entrepreneurial intentions of students, determinants of entrepreneurship intentions

JEL: L26, M13, A29

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