



**Graduate  
School of Management**

St. Petersburg University



# **Global University Entrepreneurial Spirit Students' Survey**

**National report  
Russia 2016**

Shirokova G.V.    Bogatyreva K.A.    Beliaeva T.V.  
Tsukanova T.V.    Laskovaia A.K.



Russia  
St. Petersburg  
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## Acknowledgements

The National Report GUESSS (Global University Entrepreneurial Spirit Students' Survey) in Russia in 2016 was carried out by researchers professor Galina Shirokova, Karina Bogatyreva, Tatiana Beliaeva, Tatiana Tsukanova, and Anastasiia Laskovaia (Graduate School of Management St. Petersburg State University). The researchers are grateful to the following partners:

- the Charitable Foundation for Graduate School of Management Development, Saint Petersburg State University,

- the Center for Entrepreneurship (Moscow)



Center for  
Entrepreneurship

- Ernst & Young (EY) as the international project partner



In addition, the researchers are grateful to the representatives of Russian universities, the project participants, for taking responsibility and research assistance. Tremendous support was provided by Aleksander Demidenko (Bryansk State Technical University), Sergey Alekseev (Kazan National Research Technological University), Elena Gafforova and Elena Tyurina (Far Eastern Federal University), Svyatoslav Serikov (Stavropol State Agrarian University), Dmitri Shishkin (Perm National Research Polytechnic University), Nikolay Dimitriadi (Rostov State University of Economics), Liudmila Murgulets and Anastasiia Prichislenko (ITMO University) and many others.

Research team also thanks all the students who participated in the Global University Entrepreneurial Spirit Students' Survey in Russia.

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## Executive Summary

What are career choice intentions of Russian students? How many of them are thinking about establishing their own business? How many of them are already active entrepreneurs and manage their own firms? What factors may influence students' entrepreneurial intentions?

The answers to these and many other questions about entrepreneurial potential of Russian students can be found in the present national report GUESSS-Russia 2016. Based on a survey of more than 4000 students from universities all over Russia, the following trends were identified:

- 74% of students plan to work as an employee right after completion of their studies;
- Almost 11% of students plan to work on themselves and become entrepreneurs immediately after graduation;
- 51% of students intend to become entrepreneurs 5 years after graduation;
- In Russia, the proportion of potential entrepreneurs (i.e., those who already try to start their own business) among students is 27%, which is 6% higher than in the international sample, and the share of active entrepreneurs (i.e., those who already manage their own business) is up to 8%;
- Compared to 2011, the number of potential entrepreneurs among Russian students increased by 5%;
- 55% of the students did not attend any course on entrepreneurship at all;
- 19% of students plan to start their business alone, and 32% of students plan to establish a company together with a partner;
- Also, gender differences were identified: the percentage of those wishing to become entrepreneurs right after graduation is higher among men (16% versus 8% of women), but 5 years later, these figures changes, and the percentage of potential entrepreneurs among men and women is equalized;
- More than 25% of students are from entrepreneurial families, and the proportion of students-future entrepreneurs whose parents (at least one) have their own business, constitutes 57%.

The Russian report for 2016 contains important results on various aspects of the development of student entrepreneurship, as well as a comparison with the international sample, that may be of interest to a wide range of readers.

## Introduction

Recent empirical evidence suggests that even though young people are becoming more and more educated, the unemployment rate among them is growing all around the globe (Schøtt et al., 2015). A potential solution to this problem may be to promote entrepreneurship among youth. Entrepreneurial activity is the basis of economic, social, and technological development of the country and plays a crucial role in ensuring stability and innovation. Entrepreneurship is one of the sources of economic growth, competitiveness, job creation, and implementation of social objectives (Linan et al., 2005). Therefore, promotion of youth entrepreneurship is one of the key aspects of economic development strategy as it allows involving the most active group of the population into the labor market and engaging young people into activities with high potential in terms of development of economy and society as a whole (Kvedaraite, 2014).

The efforts in this area certainly contribute to emergence of the phenomenon of an early interest in entrepreneurship (Åstebro et al., 2012; Bergman et al., 2016). Dynamism of the entrepreneurial process, ability to achieve greater personal freedom and bright prospects for self-realization make entrepreneurial career more and more attractive to young people. This is confirmed by recent empirical evidence. In particular, the results of the Global Entrepreneurship Monitor in 2012-2014 indicate that about one-third of young respondents revealed entrepreneurial intentions; moreover, the strongest desire to become self-employed was demonstrated by respondents from 18 to 24 years old (Schøtt et al., 2015). Apparently, most of this age group representatives are students of higher educational institutions. Thus, we can conclude that the formation of attitude towards entrepreneurship as a career choice, emergence of entrepreneurial intentions, and their transi-

tion into actual behavior is likely to occur during university time (Shirokova et al., 2016).

Student entrepreneurship is influenced by both individual characteristics and external environment contingencies related to the University entrepreneurial environment and society as a whole. Consequently, the understanding of the students' entrepreneurial process, their motivation, and the factors shaping their entrepreneurial intentions is crucial to create a highly developed entrepreneurial infrastructure in given universities, regions, and countries.

In order to get an idea about the main sources of entrepreneurial intentions of students, the project Global University Entrepreneurial Spirit Students' Survey was organized. The focus of the research is not only the new venture process by students, but also broader entrepreneurial context and other career intentions of the students. For example, the project examines the intentions of students to succeed in family business or choose the career of a hired manager within an existing company.

The main purpose of this report — to present the results of the Russian part of the project and to compare the national data with the international sample, which includes more than 120,000 respondents from 50 countries.

We are convinced that GUESSSS project, in general, and this national report, in particular, will help to develop a more accurate picture of the career plans of Russian students to identify factors of entrepreneurial intentions and will be useful both to researchers in the field of entrepreneurship, and representatives of universities and governmental bodies in decision-making in the field of education and modernization of university infrastructure that is able to maintain and develop the entrepreneurial potential of Russian students.

## 1. RESEARCH FRAMEWORK

### 1.1. Main Goals of the Study

International research project The Global University Entrepreneurial Spirit Students' Survey (GUESSSS) has been held every two years since 2003. It was originally called the study ISCE — International Survey on Collegiate Entrepreneurship,

but it was renamed in 2008. Seven international panel studies have been held in 2003, 2004, 2006, 2008, 2011, 2013/2014, and 2016. Russia participated in this study for the first time in 2011, when 2,882 students from 23 Russian universities took

part in the survey. In 2016 GUESSS Russian team took part in this project for the third time. Data collection was carried out from April till June 2016, and students from 31 Russian universities took part in the study. From 21,700 students to whom an invi-

tation to participate in the study was sent, 4,152 people answered the questionnaire, accounting for 19.13% of the respondents. Besides, Russia ranked 11th out of 50 countries in the number of students' responses (Table 1).

Table 1

Countries Participating in GUESSS 2016

№	Country	Number of responses	№	Country	Number of responses
1	Australia	2359	26	Mexico	1207
2	Austria	3755	27	Norway	41
3	Albania	70	28	Pakistan	580
4	England	1074	29	Panama	3273
5	Argentina	2625	30	Peru	1297
6	Belarus	716	31	Poland	6388
7	Belgium	771	32	Portugal	4685
8	Brazil	7417	33	South Korea	2603
9	Hungary	5182	34	<b>Russia</b>	<b>4152</b>
10	Germany	15984	35	Salvador	4653
11	Greece	649	36	Slovakia	3266
12	India	37	37	Slovenia	575
13	Ireland	807	38	USA	353
14	Spain	7373	39	Ukraine	73
15	Italy	4446	40	Uruguay	1396
16	Kazakhstan	253	41	Finland	532
17	Canada	297	42	France	714
18	China	3274	43	Croatia	1555
19	Colombia	3832	44	Czech Republic	1135
20	Lithuania	426	45	Chile	6077
21	Lichtenstein	159	46	Switzerland	2943
22	Luxemburg	82	47	Sweden	606
23	Macedonia	124	48	Ecuador	8211
24	Malaysia	137	49	Estonia	811
25	Morocco	2044	50	Japan	1490



The main objectives of the international research project GUESSS are as follows:

- systematic and long-term study of entrepreneurial intentions and entrepreneurial activity of students in different countries;
- identification of the main assumptions and conditions for the creation of new businesses and entrepreneurial career choice;
- study of the role of university infrastructure in shaping entrepreneurial spirit of students.

Thus, the project is of interest to different stakeholders: for countries, as it allows them to understand the conditions for entrepreneurship development and learn about the attitude towards entrepreneurship among students; for universities, be-

cause it allows them to assess whether their training programs and the environment of the university itself contribute to the formation of entrepreneurial intentions; for the state and society, because it attracts their attention to the issue of entrepreneurship and the creation of new businesses, identifying the need for action; for students, as it forces them to think, what career they seek, and to outline their strategic plan for the long term.

GUESSS is one of the most ambitious projects on entrepreneurship, which aims to involve all countries in the world which would allow it to play a crucial role in the research and practice of entrepreneurship.

## 1.2. Theoretical Model of the Research

Theoretical basis of the research as part of GUESSS project is the Theory of Planned Behavior (TPB) (Ajzen, 2002; Fishbein, Ajzen, 1975), according to which any behavior reflects the influence of three groups of factors related to this behavior, subjective norms and perceived behavioral control. The theory of planned behavior includes some key concepts of social and behavioral sciences and defines these concepts so as to provide an opportunity to predict and understand particular behavior in partic-

ular context. Theoretical concept of GUESSS has been slightly extended, because it is assumed that the formation of entrepreneurial intentions of students, in addition to these three groups of factors, is affected by others: personal reasons, university environment, family and socio-cultural context (Sieger, Fueglistaller, Zellweger, 2014). Fig.1 presents a graphical depiction of the GUESSS theoretical model.

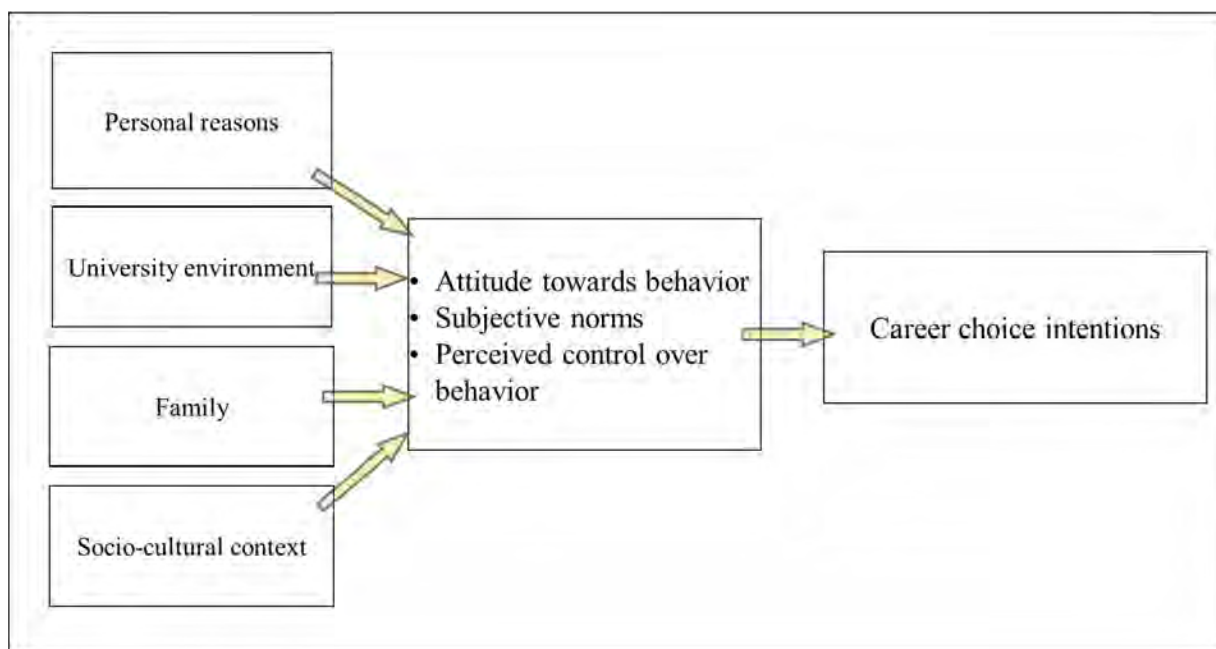


Fig. 1. Theoretical Model of GUESSS Project

GUESSS project focuses on three dimensions related to students and entrepreneurship: 1) individual level (student); 2) university level; 3) the family and socio-cultural context of the development of entrepreneurship in general. Thus, there are three main objectives:

1) analysis of *individual characteristics of students* and their impact on entrepreneurial intentions of students. Age, gender and education can influence the development of entrepreneurial intentions and desire to create their own business. Characteristics of companies set by students are analyzed which could be the basis for the development of new research models in the study of entrepreneurship.

2) study of the *universities* in terms of the infrastructure that supports the development of entrepreneurial attitudes among students: the

presence of courses in entrepreneurship, general business climate in the university.

3) study of the role of *family and socio-cultural context* in the formation of entrepreneurial intentions. It explores the relationship between the desire to choose the career of an entrepreneur and attitude within families and communities to such a perspective. In addition, attention is paid towards risk when choosing a career.

In addition to these tasks, the project also helps to study the overall entrepreneurial spirit of students in the country, to determine the conditions contributing to the development of students as entrepreneurs, and a number of recommendations for infrastructure development of entrepreneurship education.

### 1.3. Project Coordination

At the international level, GUESSS project is coordinated by Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG). Project coordinators are responsible for the search of national representatives in the participating countries, as well as for writing of the international report on the results of the study, which provides comparative analysis of the data received from all countries.

Coordination and management of the project include three levels: *the first level* — head of international project team and key team; *the second level* — the national representative of the country (team); *the third level* — partner universities. The organizational structure of the project is presented in Fig. 2 .

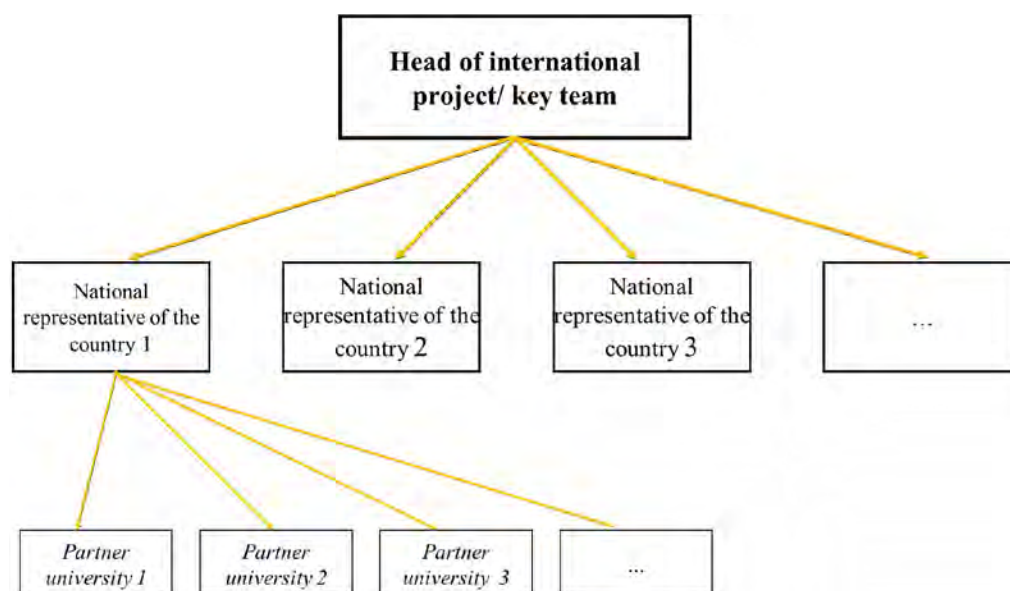


Fig. 2. Organizational Structure of GUESSS Project

National representatives are searching for and involving higher education institutions of the country to participate in the project, communicate with the university, send information on the interim results of the study, and are also responsible for the creation of the national report on entrepreneurial intentions of students. Data is collected via an online questionnaire.

It is worth mentioning that partner universities receive a number of advantages while taking part in this project:

- universities can get database with the responses of partner-university students for further analysis;

- data analysis allows representatives of universities to get in-depth understanding of entrepreneurial attitudes, intentions, actions and desires of its students, as well as their vision of the role of the university in this context; moreover, they have an opportunity to evaluate the effectiveness and quality of university programs in the context of entrepreneurship;

- universities in general may increase the awareness of students in the field of entrepreneurship;

- free access to national and international reports .

Since data on GUESSS project have been collected since 2003, and since 2004 – every two years, we already have a panel data set that allows to track the dynamics on individual factors over the time. International report contains comparative data on entrepreneurial intentions and students activity from different countries. National reports provide an opportunity to see and analyze the national context, as well as individual students characteristics from the country. Furthermore, the analysis of the national context allows to better understand what factors lead to the development, and what — fetter the formation of students' entrepreneurial spirit. We can understand and draw conclusions about what should be done to improve entrepreneurial climate in the country with the help of periodic data collection, their analysis and temporary comparisons.

## 2. NATIONAL CONTEXT OF THE STUDY: ENTREPRENEURSHIP IN RUSSIA

In late 2014, the Russian economy has entered a new stage of development, characterized by structural changes and a decrease in the main economic indicators. According to the Federal State Statistics Service, the economic growth rate in Russia slowed down by 3.7% in 2015 compared to the previous year, the national currency depreciated by nearly 50%, following the drop in world oil prices, the inflation rate reached 12.9%, and the unemployment rate was 5.6%, that led to a significant decline in investments, reduction of household incomes, and changes in consumer behavior (Federal State Statistics Service, 2016). The economic crisis occurs simultaneously with the strengthening of political sanctions against Russia, which increase environmental uncertainty, decrease business confidence, and have negative consequences for the Russian companies. According to the results of the study on economic crisis in Russia, conducted by PricewaterhouseCoopers in 2015, 61% of companies surveyed have experienced the negative effects of the crisis. Among them, 92% of companies have increased production costs, 89% of companies have reduced the volume of sales, and 80% of companies do not have possibilities to finance new projects. The positive consequences of the economic crisis experienced only 13% of the respondents (Russia's current economic downturn, 2015). It is noteworthy that

support and development of small and medium-sized enterprises is one of the elements of the anti-crisis plan adopted by the Russian Government in 2015 and aimed to ensure sustainable economic development and social stability in the unfavorable global economic environment (Russia Economic Report, 2015).

According to the Global Entrepreneurship Monitor 2014, the number of early-stage entrepreneurs in Russia accounted for 4.69% of the adult working population, which is 18% lower compared to pre-crisis 2013. Only 26.5% of the respondents see good opportunities to start a firm in the area where they live, while 39.5% of the respondents indicate that fear of failure would prevent them from setting up a business, which is significantly higher in comparison to the previous year. In addition, there is high proportion of necessity-driven entrepreneurs in Russia: about 39% of the respondents started their business because they could not find alternative sources of income.

Apart from macroeconomic and political instability, conditions within the country may also be one of the explanations for low entrepreneurial activity among the population. According to the report "Doing Business 2016", Russia ranks 51 (out of 189 countries) on the ease of doing business, rising for 11 positions compared to 2015. In the "Global Com-

petitiveness Report 2015/2016” published by the World Economic Forum, Russia ranks 100 (out of 140 countries) on the level of institutional development. The greatest difficulties in the process of establishing a business and its operation are associated with obtaining construction permits, trading across borders, protecting investors, corruption, tax rates and access to financing. The last factor is crucial for young entrepreneurial firms as it is required to ensure their growth, innovation, diversification of activities, and development of competitive advantage.

Development of innovative firms is a direction that is national priority; however, it has not yet received proper development in Russia. The “Global Competitiveness Report 2015/2016” states that Russia is 68th in terms of innovation. Investment in infrastructure for innovation, cooperation of universities and enterprises in research and development, legal protection of intellectual property, the willingness of firms to bear the costs of research — all these areas require further active development.

Of course, it should be noted that there are positive trends in the development of entrepreneurship in Russia. The majority (68%) of managers of Russian companies expect certain improvements in the economic situation in the country in the nearest future (Russia’s current economic downturn, 2015),

which may positively impact entrepreneurial activity. In addition, there is entrepreneurial potential of the Russian population. According to the “Global Entrepreneurship Report 2015”, conducted by Amway, 71% of respondents in Russia have positive attitude towards entrepreneurship, that is close to the global score (75%) of all 44 countries participated in the survey. Starting a business as a desirable career opportunity was indicated by 43% of the respondents. Besides this, according to the majority of the respondents (56%), the Russian society is entrepreneurship-friendly, which is reflected in the media coverage as well as the opinions of other people.

Entrepreneurship education plays an important role in the formation of entrepreneurial activity. The development and implementation of special training programs in entrepreneurship is one of the main factors that may foster entrepreneurship in Russia. Entrepreneurship education in the Russian context is usually based on seminars, roundtables, discussion clubs, and training courses. At present, different courses on entrepreneurship and educational programs related to entrepreneurship are developed and implemented in many Russian universities. However, despite the positive trend, this direction requires the further development in the Russian education system.

### 3. RESEARCH METHODOLOGY AND SAMPLE

#### 3.1. Data Collection

As it has already been mentioned data collection for the project Global University Entrepreneurial Spirit Students’ Survey (GUESSS) in the 2016 took place in 50 countries. For this purpose online questionnaire has been developed, and each of the participating countries had the right to translate it into their language. In Russia, the participants profile was available in Russian. It took 10–15 minutes to complete the survey.

Graduate School of Management St. Petersburg State University is the national partner of the project. The research team of Graduate School of

Management SPbSU was responsible for finding and attracting Russian universities, translation and dissemination of the links to online questionnaire among national participants. Data was collected in Russia from April till June 2016.

Official contacts of Graduate School of Management SPbSU and the Center for Entrepreneurship of GSOM SPbSU as well as researchers personal contacts were used for data collection. During the period of data collection subtotals of data were sent to the representatives of universities with wishes to intensify efforts to attract students.

#### 3.2. Universities — Project Participants in Russia

The sample included students from 31 universities of Russia. From 21,700 students to whom an invitation to participate in the study was sent, 4,152 people answered the questionnaire, equaling to

19.13% of the respondents. The total sample study for all countries was 122,509 people. The distribution of respondents by Russian institutions of higher education is given in Table 2.

Table 2

## Distribution of Respondents by Universities

No.	List of Partner Universities	City	Number of Students who answered the questionnaire	% of the Total Sample
1	Bryansk State Technical University	Bryansk	383	9.2
2	Far Eastern Federal University	Vladivostok	535	12.9
3	Kazan National Research Technological University	Kazan	346	8.3
4	National Research University Higher School of Economics, Perm	Perm	156	3.8
5	National Research University Higher School of Economics, N.Novgorod	Nizhny Novgorod	169	4.1
6	Perm National Research Polytechnic University	Perm	308	7.4
7	Pyatigorsk State Linguistic University	Pyatigorsk	177	4.3
8	Russian Presidential Academy of National Economy and Public Administration	Moscow	161	3.8
9	Rostov State University of Economics	Rostov-on-Don	227	5.5
10	Samara State University of Economics	Samara	136	3.3
11	Saint-Petersburg State University	Saint-Petersburg	147	3.5
12	ITMO University	Saint-Petersburg	170	4.1
13	North-Eastern Federal University	Yakutsk	136	3.3
14	North-Caucasus Federal University	Stavropol	159	3.8
15	Stavropol State Agrarian University	Stavropol	242	5.8
16	The Ural Federal University named after the first President of Russia B.N. Yeltsin	Yekaterinburg	121	2.9
17	Other universities (+15)*		579	14.0
	<b>Total</b>		4152	100

\*Note: amount for 15 universities who received less than 2% of the total number of respondents, and questionnaires, where the university was not specified (178 replies)

### 3.3. Sample Profile

The overwhelming majority of respondents in Russia were undergraduate students (87.36% answered the questions), 16.4% of respondents were enrolled in graduate (master) programs and 4.77% were students from the other programs. In the international sample the number of students enrolled in master programs is slightly higher, and the number of undergraduate students is slightly lower, which is clearly shown in Fig. 3.

In Russian sample 75 people (1.81%) are exchange students, of whom: 65.33% — undergradu-

ate students, 29.33% — master students, and 5.33% — students from other programs.

The average age of respondents in Russia is 21 years, which is three years younger than the average age of all international participants. It is worth noting that in international sample the share of students under 24 years is nearly 67%, and in Russia — more than 95%, that constitutes the majority (Fig. 4).

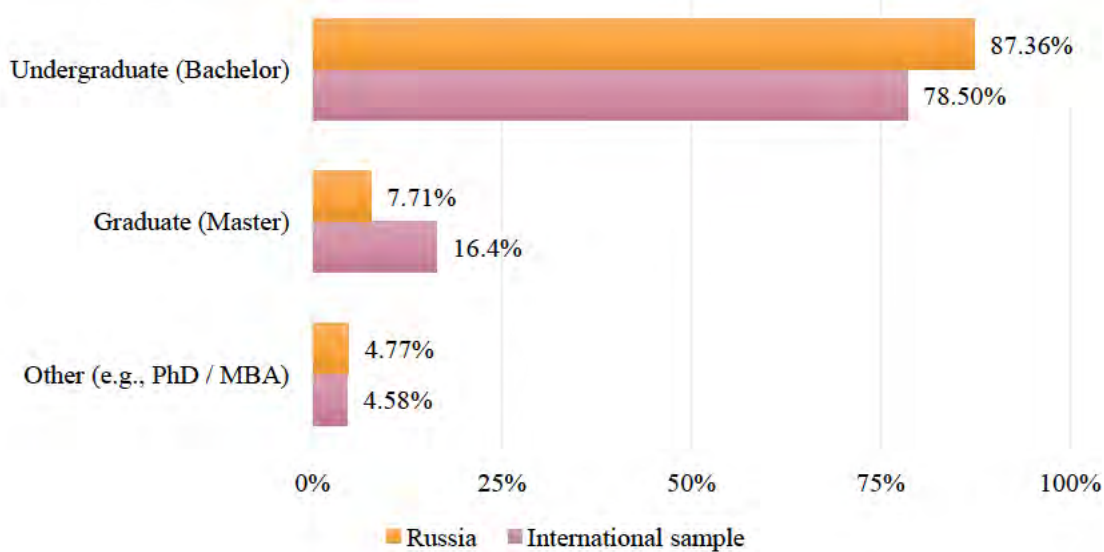


Fig. 3. Students Level of Studies

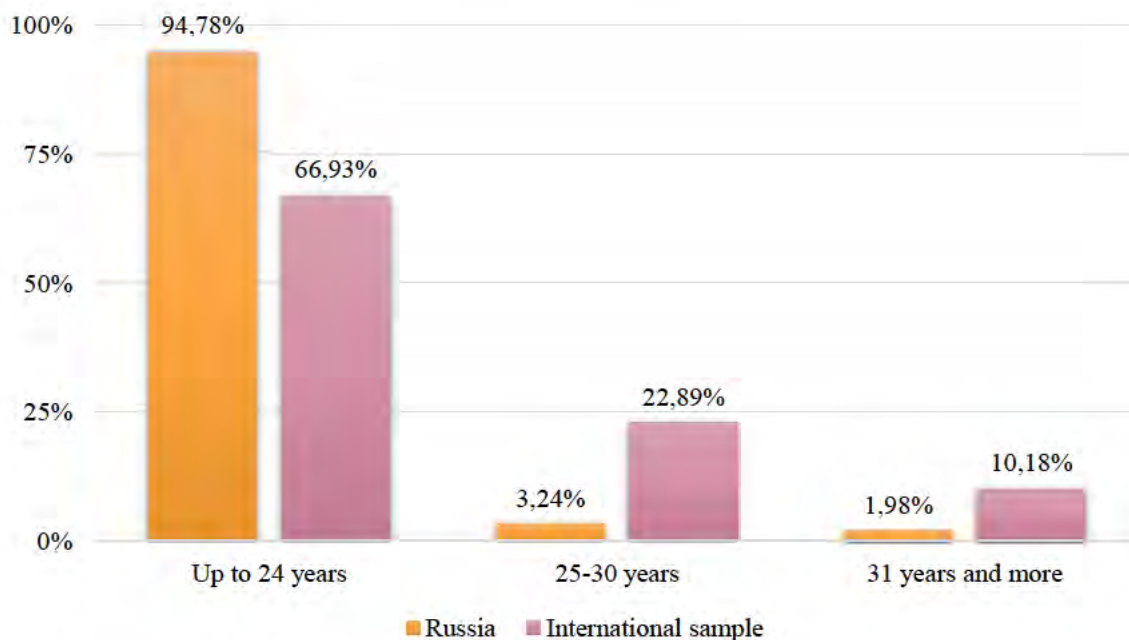
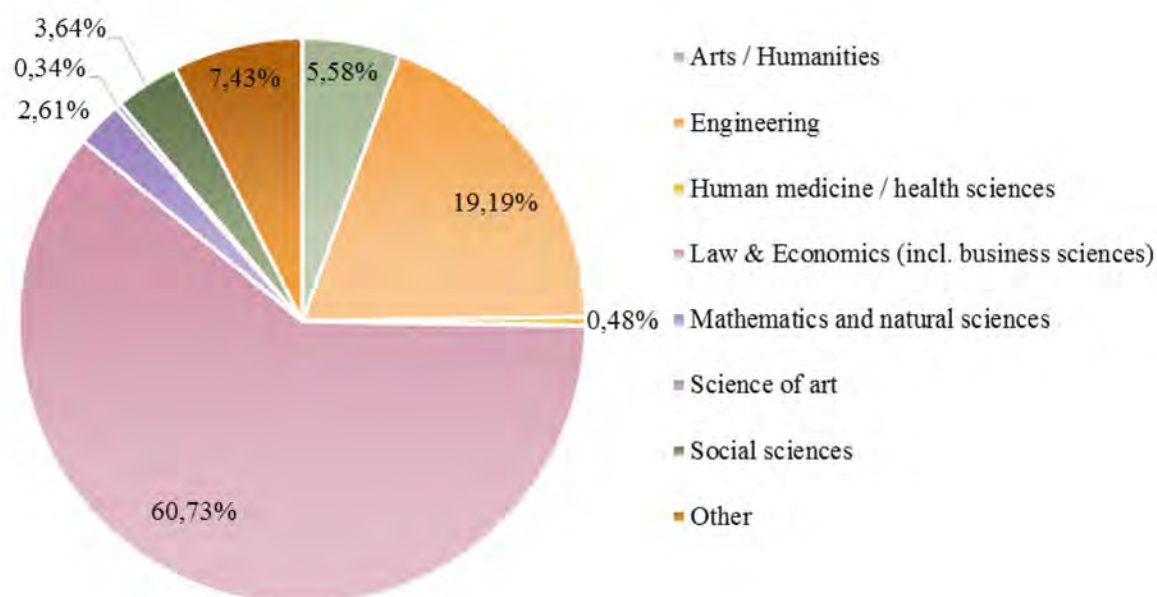


Fig. 4. Students Age in International and Russian Sample

Gender composition of Russian students is presented in the following ratio: 66.8% of women and 32.6% of men. In the international sample the share of women also dominates, reaching to 57.9%. While answering to one of the questions the stu-

dents were asked to indicate an area of knowledge (specialization), in which they are educated. Fig. 5 is a detailed breakdown of students among all fields of studies.



**Fig. 5.** Distribution of Russian Students by Field of Studies

All fields of studies were roughly divided into 4 groups: business and economics, social sciences, natural sciences, and other areas (Table 3). Among survey respondents in Russia most (60.7%) of students study economics and business, 22.3% — natural sciences, 9.2% — social sciences, and 16% indicated the “other”. To compare, on a global scale 31.8% of students study business and management,

natural sciences — 39.2%, social sciences — 16.7%, and 12.3% indicated the “other”. It should be mentioned that in 2016, as in 2013/2014, the number of students studying business and management in Russian sample is twice than for all the other countries. This is primarily due to the fact that professors of business and management expressed their interest in the project in Russian universities.

*Table 3*

Distribution of Respondents by Field of Studies: 2013/2014 and 2016

Field of Studies	Disciplines included	2013		2016	
		Russia, %	International sample, %	Russia, %	International sample, %
<b>Business and Management</b>	Law and Economics (including business and management)	61.5	34.6	60.7	31.8
<b>Natural sciences</b>	Engineering (incl. computer sciences and architecture), human medicine / health sciences, mathematics and natural sciences	14.2	35.1	22.3	39.2

Field of Studies	Disciplines included	2013		2016	
		Russia, %	International sample, %	Russia, %	International sample, %
Social sciences	Arts / Humanities (e.g., linguistics, cultural studies, religion, phylosophy, history), social sciences (e.g., psychology, politics, educational science)	6.5	13.1	9.2	16.7
Other sciences	Science of art (e.g., art, design, dramatics, music) and other	17.8	17.2	7.8	12.3

Fig. 6 shows the ratio between men and women for each field of studies. As it might be expected, most of the male students are trained in natural sciences, while the majority of women are opting for business and management or social sciences.

Finally, about 70% of Russian respondents started their studies in 2014 or earlier. Accordingly, 30% of the participants entered the university in 2015/2016, and they were first year students at the time of the survey.

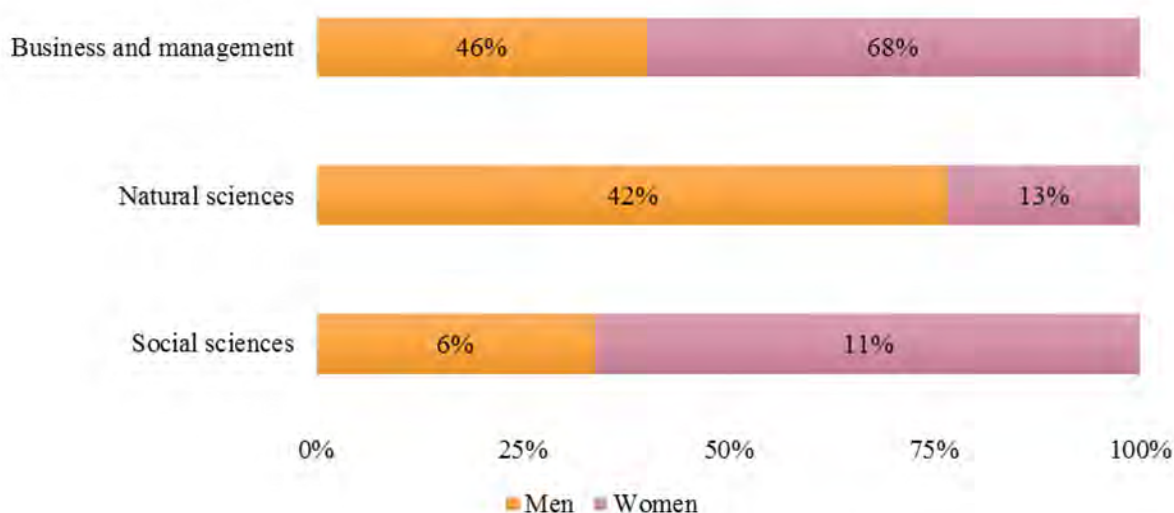


Fig. 6. Gender Composition and Field of Studies in Russian Sample

## 4. MAIN RESULTS OF THE STUDY

### 4.1. Career Choice Intentions

Choosing a career — one of the most important steps in any person's life, which is especially important for students who are just beginning their professional development. Everyone has his/her own plans. Some want to be employed into a huge international company immediately after graduation to gain experience and establish him/herself as a good

specialist. But many students may have different ideas about their career development in 5 years. That is why the study participants were asked to answer two questions: which career path do they intend to pursue right after completion of their studies, and which career path 5 years after completion of studies. One option for each question should be chosen.



Answers to the questions were provisionally classified into four groups depending on the chosen career path: *an employee* (employed or engaged in an existing company), *a founder / entrepreneur* (an entrepreneur who creates a new business), *a successor* (inherits and takes over management of the family business) and *other / do not know yet* (those who are still undecided, or who have other career preferences).

The detailed description set forth below in Table 4 shows that the majority of students in Russia expect to get paid employment immediately after graduation (74.02%), which practically coincides with the answers from the international sample (80.56%). Many students would prefer to work in large companies or medium-sized firms. Only about 13% of Russian respondents are ready to go to work in small firms with up to 50 employees. 10.73 % of students want to create their own business from scratch right after their graduation, which is slightly higher than the world average (8.77%). Career of successor to the existing family business is set for

4.27 % of the respondents in Russia and in the international sample the percentage is even less — 2.60%. 10.97% respondents in Russia have not yet decided their career plans, which is comparable with the international index.

It can be noted that the distribution of the career aspirations of students immediately after graduation in Russian sample is very insignificantly different from the international sample. However, the situation is different if to analyze career preferences 5 years after completion of studies. More than half of Russian students (51.28%) want to found their own company, i.e. become entrepreneurs, and in the international sample the figure equals to 37.77%. The number of students willing to work for wages in Russia reduces almost two times — up to 32.08%, while worldwide the figure drops only to 47.16%. The percentage of students wishing to become successors is almost the same and is just over 4%. The level and the number of undecided voters is also approximately the same: around 12% in the Russian and 10% in international sample (see Fig. 7).

Table 4

Career Choice Intentions: Russian and International Sample Comparison

Which career path do you intend to pursue right after completion of your studies, and which career path 5 years after completion of studies?		Russia		International sample	
		Right after completion of studies, %	Five years after completion of studies, %		Right after completion of studies, %
<b>An employee...</b>		<b>74.02</b>	<b>32.08</b>	<b>80.56</b>	<b>47.16</b>
1	...in a small business (1-49 employees)	12.76	1.42	15.00	3.51
2	...in a medium-sized business (50-249 employees)	24.60	4.10	20.13	7.13
3	...in a large business (250 or more employees)	27.74	20.19	23.69	17.54
4	...in a non-profit organization	2.46	1.74	3.51	3.01
5	...in Academia (academic career path)	4.46	2.97	7.02	6.17
6	...in public service	2.00	1.66	11.20	9.81
<b>A founder (entrepreneur)...</b>		<b>10.73</b>	<b>51.28</b>	<b>8.77</b>	<b>37.77</b>
7	...working in my own business	10.73	51.28	8.77	37.77
<b>A successor...</b>		<b>4.27</b>	<b>4.51</b>	<b>2.60</b>	<b>4.84</b>
8	...in my parents'/family's business	3.09	2.34	1.88	2.35
9	...in another business	1.18	2.17	0.72	2.49
<b>Other / Do not know yet</b>		<b>10.97</b>	<b>12.13</b>	<b>8.07</b>	<b>10.23</b>

Fig. 8 shows visual comparison of the four career groups. The percentage of those willing to work as an employee in small and medium-sized businesses 5 years after completion of studies reduces by almost 10 times, and the share of potential entrepreneurs increases from 10.73% to 51.28%, which may indicate of positive attitude of the Russian students towards entrepreneurial career.

GUESSSS data allow giving a more detailed description of the differences between the students opting for a particular career after graduation. Immediately after graduation, which is presented in Fig. 9, the ratio of career preferences of students in groups of economic, social, and natural sciences is quite the same: the majority (over 67%) see themselves as employees.

Five years after completion of studies, the largest share of those willing to be employed is accounted for students who studied natural and social sciences (39% and 38%), and the lowest — business and management (30%), as in this case 55% see themselves as entrepreneurs (Fig. 10).

In recent years there has been a growing interest among researchers to gender entrepreneurship. Fig. 11 shows that at equal ratio of those willing to become successors and undecided with their choice immediately after graduation, the percentage of those willing to become entrepreneurs is higher among men (16% vs. 8%), while among women the percent of those who intend for a career of an employee is higher (77% vs. 68%).

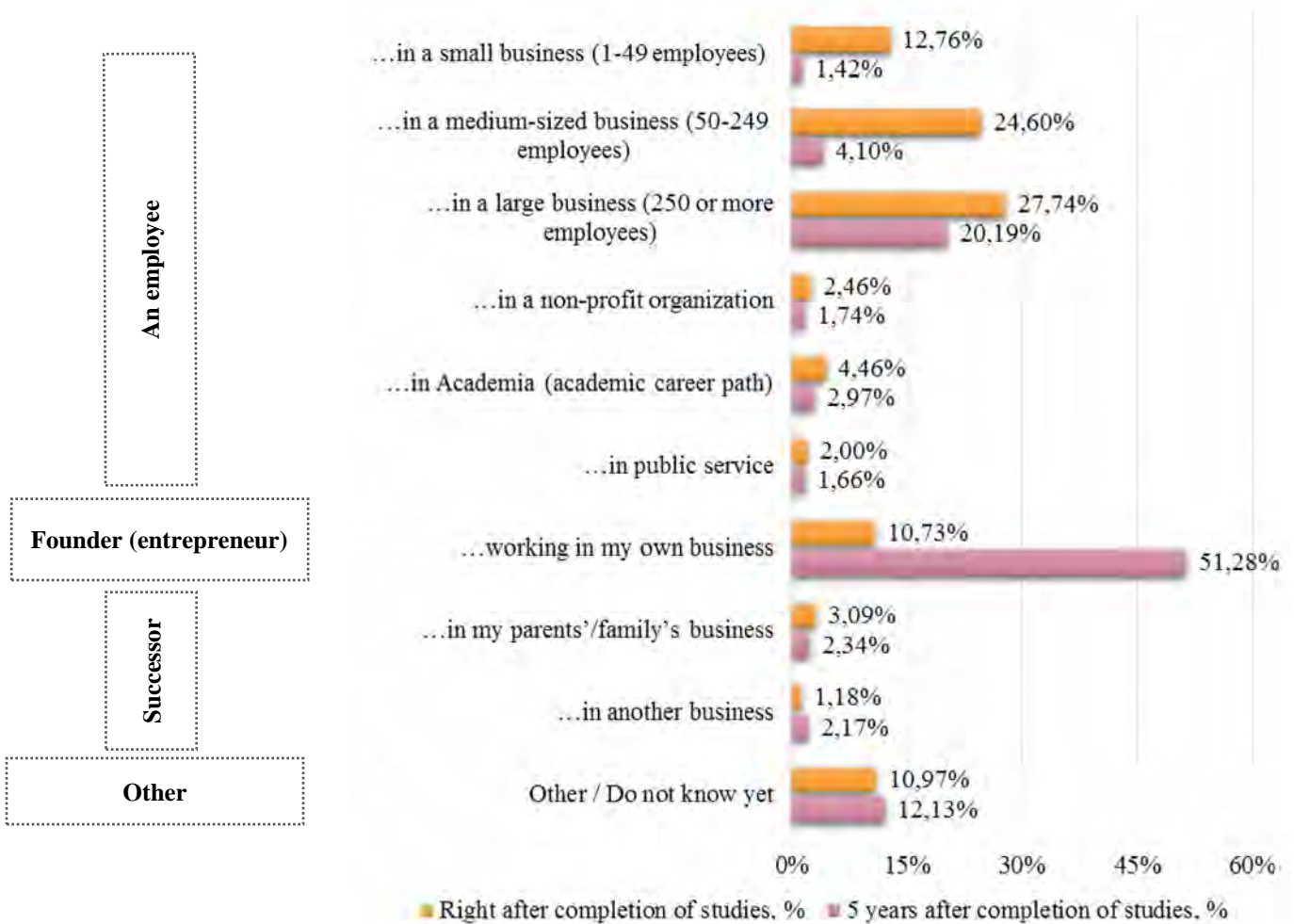
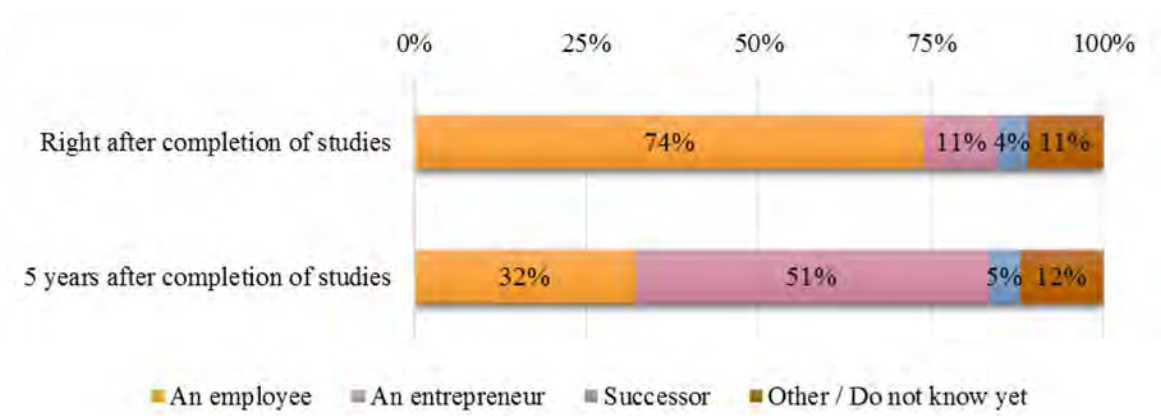
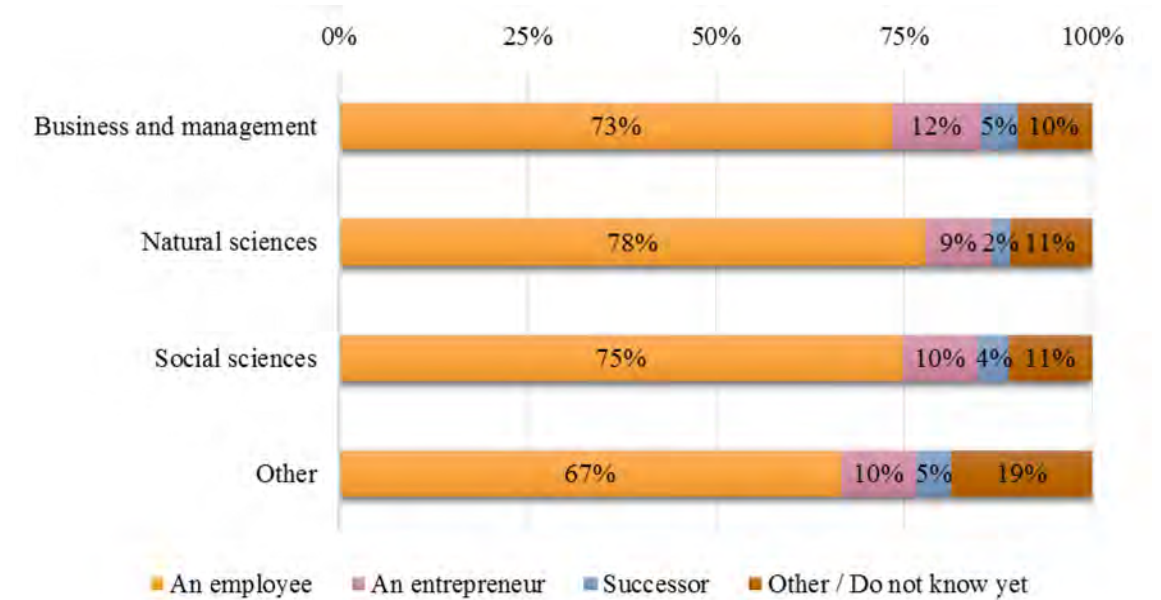


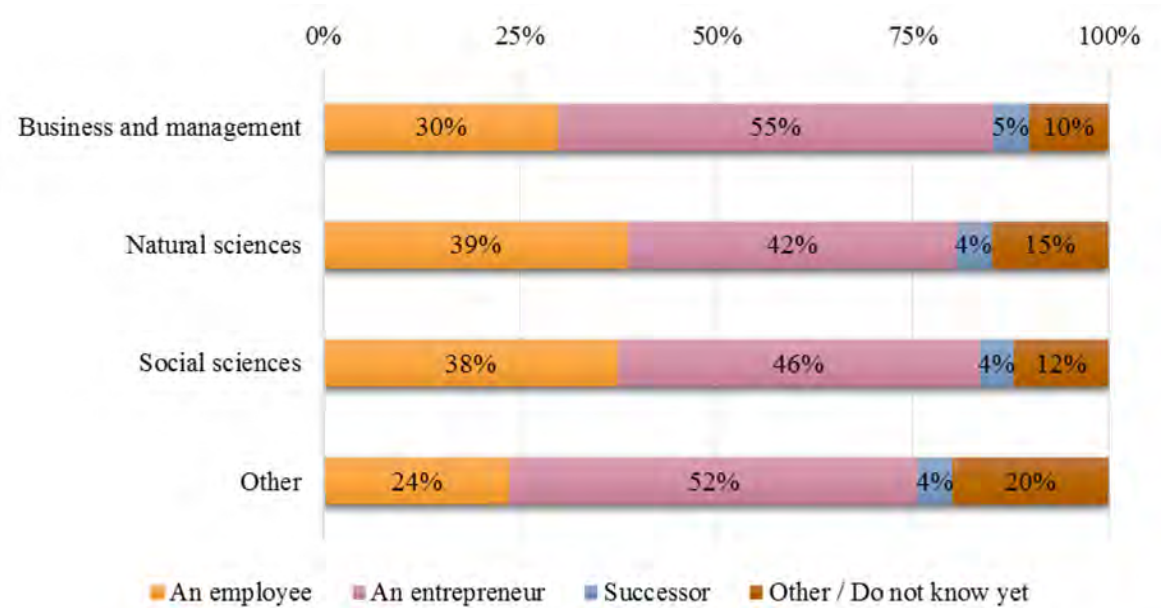
Fig. 7. Changes in Career Choice Intentions among Russian Students



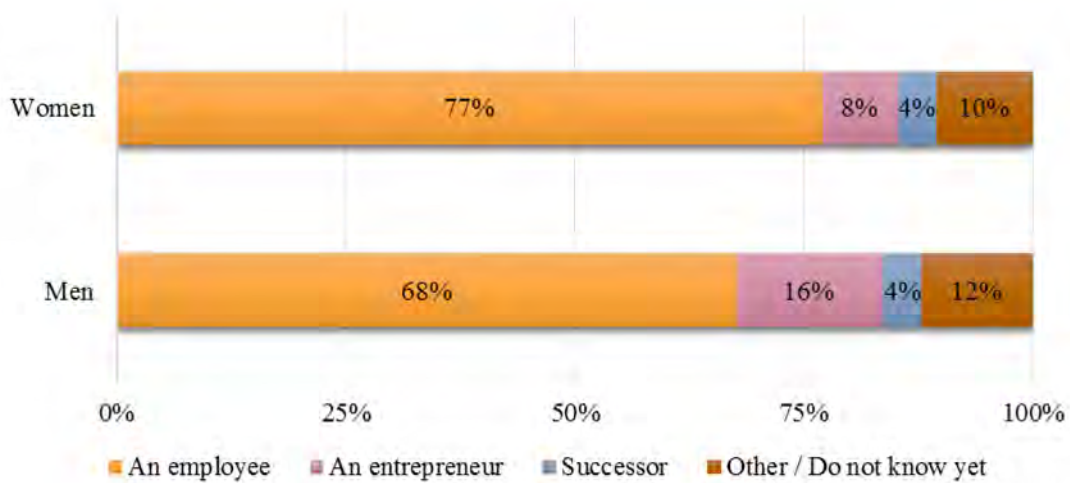
**Fig. 8.** Career Choice Intentions in Groups of Russian Students



**Fig. 9.** Career Choice Intentions of Russian Students Right after Graduation and their Specialization



**Fig. 10.** Career Choice Intentions of Russian Students 5 Years after Graduation and their Specialization

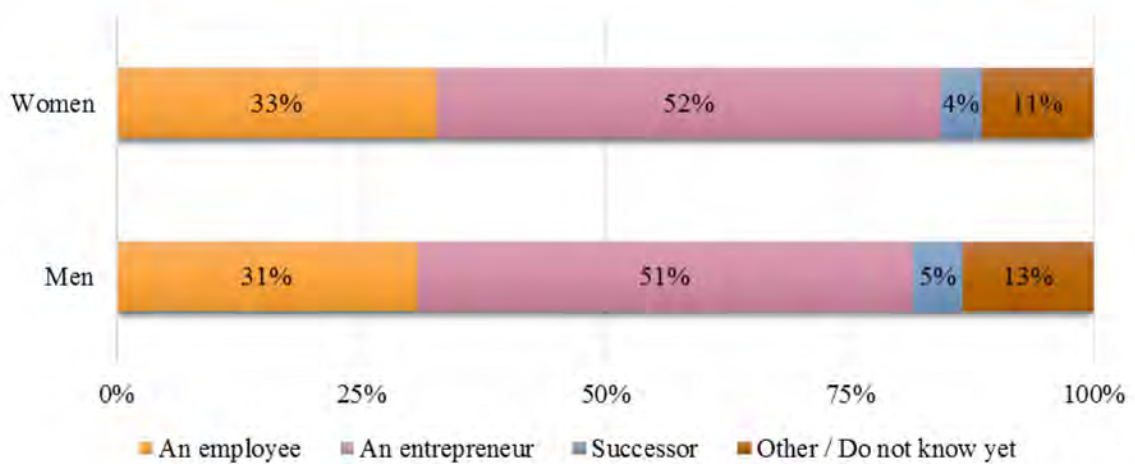


**Fig. 11.** Career Choice Intentions of Russian Students Right after Graduation and Gender Composition

Five years after completion of their studies, career choice intentions of students change (Fig. 12). Regardless of gender, only about 30% of respondents see themselves as employees, and the percentage of potential entrepreneurs among men and women becomes almost equal.

As Russia was involved in the two previous GUESSS projects, it is important to understand how the career choice intentions of students changed

since the last survey. Table 5 shows comparative figures for 2013/2014 and 2016, which allows to track the dynamics of career preferences among students. Note that the percentage of students who are considering a career of entrepreneur for themselves 5 years after completion of their studies, in Russia slightly decreased by 1.3%, while in the international sample it increased by 7.1%.



**Fig. 12.** Career Choice Intentions of Russian Students 5 Years after Graduation and Gender Composition

Table 5

Career Choice Intentions: Comparison of Russian and International Sample for 2013/2014 and 2016

Career choice intentions	Russia				International sample			
	2013/2014	2013/2014	2016	2016	2013/2014	2013/2014	2016	2016
	<i>Right after completion of studies, %</i>	<i>Five years after completion of studies, %</i>	<i>Right after completion of studies, %</i>	<i>Five years after completion of studies, %</i>	<i>Right after completion of studies, %</i>	<i>Five years after completion of studies, %</i>	<i>Right after completion of studies, %</i>	<i>Five years after completion of studies, %</i>
Employee	75.3	28.3	74	32.1	79.6	50.6	80.5	47.2
Founder (entrepreneur)	9.4	52.6	10.7	51.3	6.6	30.7	8.8	37.8
Successor	4	4.9	4.3	4.5	1.8	4.3	2.6	4.8
Other / Do not know yet	11.3	14.2	11	12.1	12	14.4	8.1	10.2

## 4.2. Drives of Entrepreneurial Intentions

### 4.2.1. Entrepreneurial Intentions

Since the focus of GUESSS study is the entrepreneurial component, before moving on to consider as a whole the main factors of career choice intentions development among students, it is necessary to draw attention to “entrepreneurial intentions” themselves. Personal characteristics, person’s willingness to take action play a crucial role in the development of entrepreneurial intentions. Rating entrepreneurial intentions allows to evaluate “the entrepreneurial spirit” of students, avoiding their differentiation from the responses “yes” or “no” to the question whether students are going to become entrepreneurs or not. Such an approach is justified (Zellweger et al., 2011) since, otherwise, it is difficult to identify those who are already serious about the entrepreneurial career, but consider it as “plan B”.

Entrepreneurial intentions were measured using six statements: “I am ready to do anything to be an entrepreneur”, “My professional goal is to become an entrepreneur”, “I will make every effort to start and run my own firm”, “I am determined to create a business in the future”, “I have very seriously thought of starting a business”, “I have the

strong intention to start a business someday” (Linan, Chen, 2009). Students were asked to assess the degree of their agreement with these statements on a 7–point scale: 1 — strongly disagree, to 7 — strongly agree. Based on the responses, indices of entrepreneurial intentions were calculated as the arithmetic average of all responses. As Fig. 13 shows, the highest index is typical for emerging economies (Ecuador, Salvador, Panama, Peru, and Mexico), and the lowest — for developed economies (Japan, Sweden, Norway, Germany, and Austria). Russia ranks as number 22 (out of 50 countries) on the index of students’ entrepreneurial intentions. In Russia, the index equals to 4.45, which is higher than the average for the entire sample (4.33), but lower than the index of 2013/2014 (4.59). The largest index of entrepreneurial intentions is typical for students studying business and management — it is 4.61, and the lowest (4.18) — for social sciences (Fig. 14).

Considering gender differences, the general trend may be noted: on average the index of entrepreneurial intentions is lower among female students (Fig. 15).

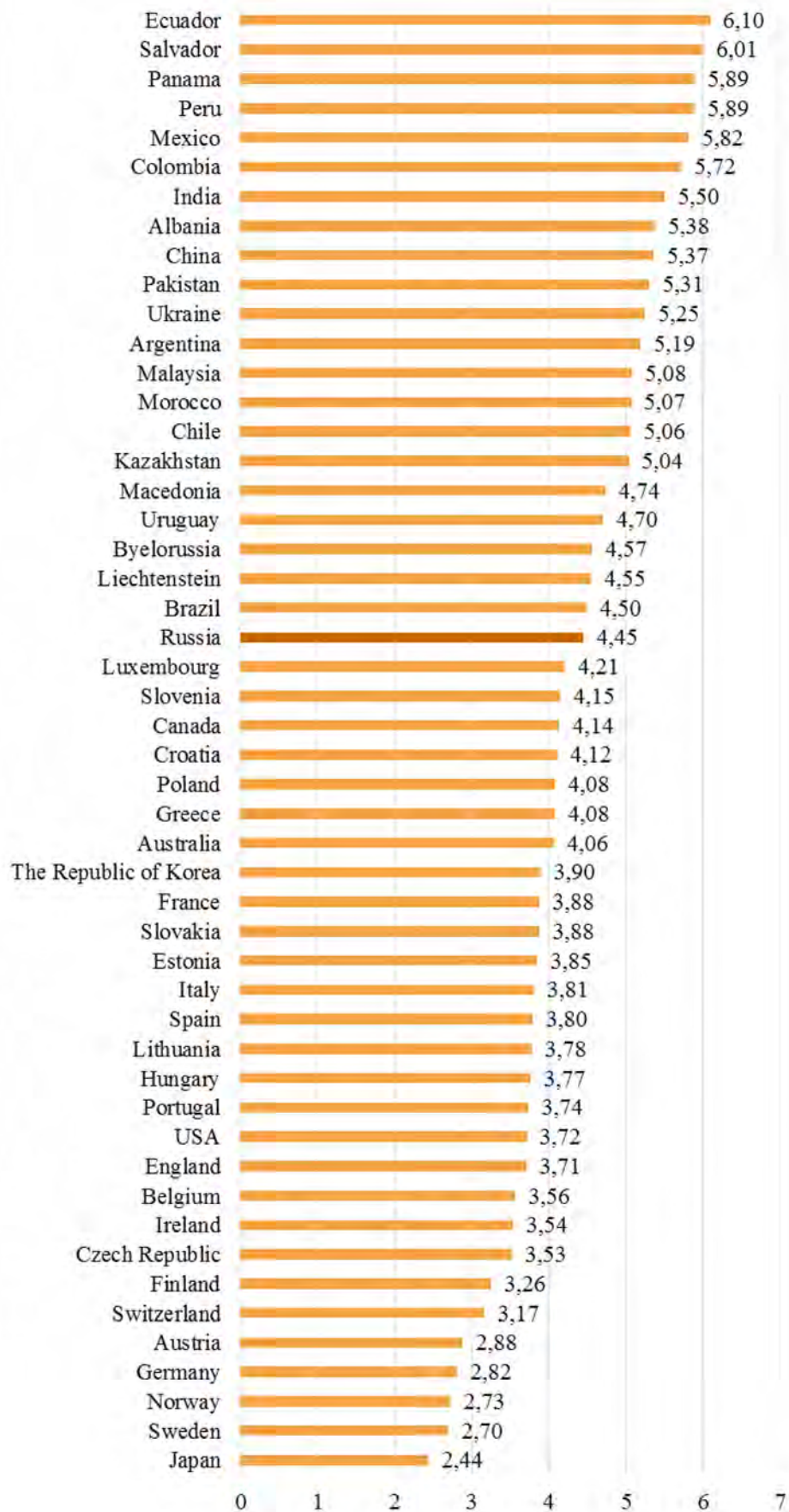
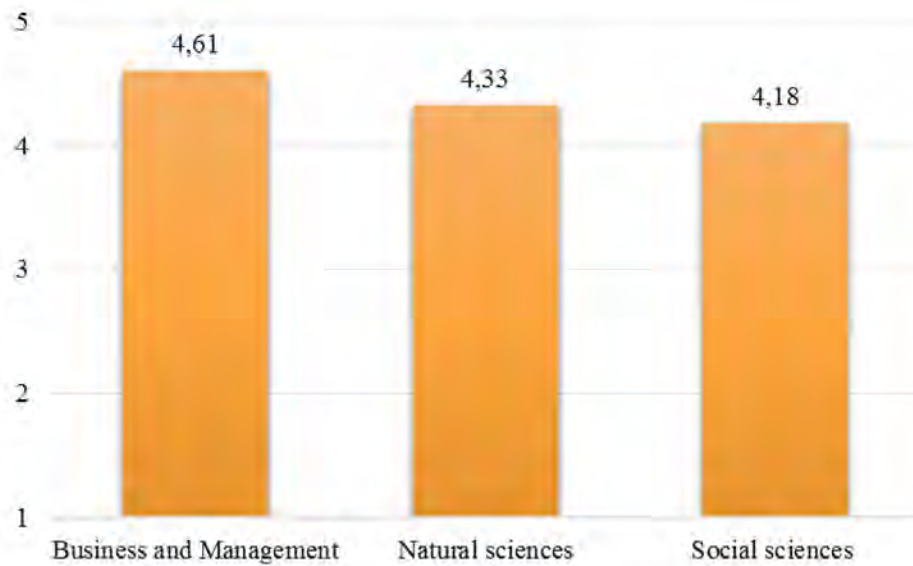
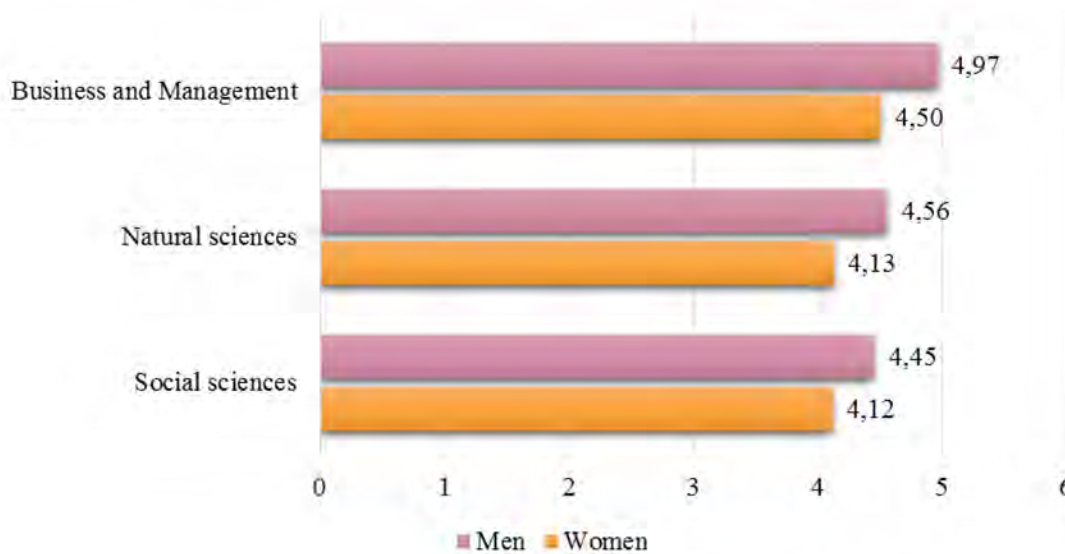


Fig. 13. Entrepreneurial Intentions Index by Country



**Fig. 14.** Entrepreneurial Intentions of Russian Students and their Specialization



**Fig. 15.** Entrepreneurial Intentions of Russian Students and Gender Composition

#### 4.2.2. The University Environment

Students are traditionally the most dynamic part of a society that has a high entrepreneurial potential. In Russia, every second student, who participated in GUESSS study, is going to become an entrepreneur in 5 years after completion of their studies, but only 10.73% are ready to start their own business right after graduation. This may indicate a positive assessment of students' own abilities to become an entrepreneur only after a certain experience as a hired employee. Thus, the entrepreneurial potential of students is "deferred" for some time. This

situation can be caused by two reasons. First, young people do not have enough skills and knowledge on how to organize their business and they are not willing to take risks associated with entrepreneurial activity. Second, the schools, in which students are taught, do not always take into account the need to develop entrepreneurial skills. In this regard, GUESSS project is focused on the role of the university as a learning environment can partly cause entrepreneurial intentions and foster entrepreneurial skills development.

Entrepreneurship education is one of the most important elements in building entrepreneurial ecosystem, but in existing educational programs this is often not covered. As Fig. 16 shows, 55% of students have not attended a course on entrepreneurship so far, although the rest had at least one course as elective. Around 7% of students are studying in a specific program on entrepreneurship. It should also be noted that the data obtained in Russia are consistent with the International sample data. The survey results indicate a fairly low intensity of studying subjects related to entrepreneurship. Students were also asked how important for them when choosing a university is its entrepreneurial reputation. Everyone is familiar with vivid examples of Stanford University, Harvard University, and Massachusetts Institute of Technology, which were able to establish entrepreneurial university ecosystem. According to the survey, strong entrepreneurial reputation of the university is important to only 11% of students in Russia and 12% in the international sample.

University environment can promote the development of entrepreneurial potential of students, however, it is typical only for few universities that take into account this trend in the organization of the educational process. Students were asked to indicate on a 7-point scale (1 — not at all, 7 — very much) the extent to which they agree with the following statements about the university environment: “The atmosphere at my university inspires me to develop ideas for new businesses”, “There is a favorable climate for becoming an entrepreneur at my university”, “At my university, students are encouraged to engage in entrepreneurial activities”. Based on these three items, the average indicator characterizing the entrepreneurial environment of the university was calculated. The lowest rate was among the students studying the social sciences, and the greatest — business and management (Fig. 17). The overall rate in the international sample was 4.21, which is slightly below the index estimating the university environment in Russia, which was 4.48.

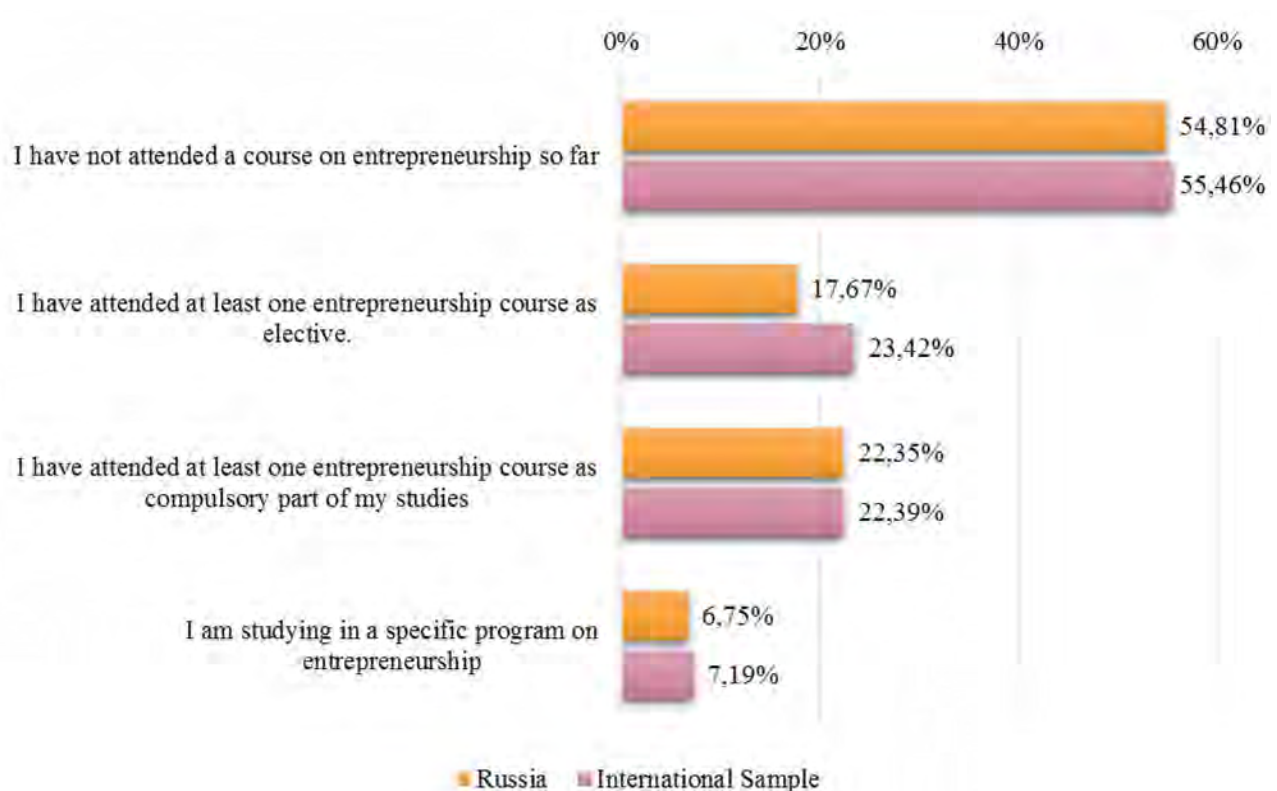
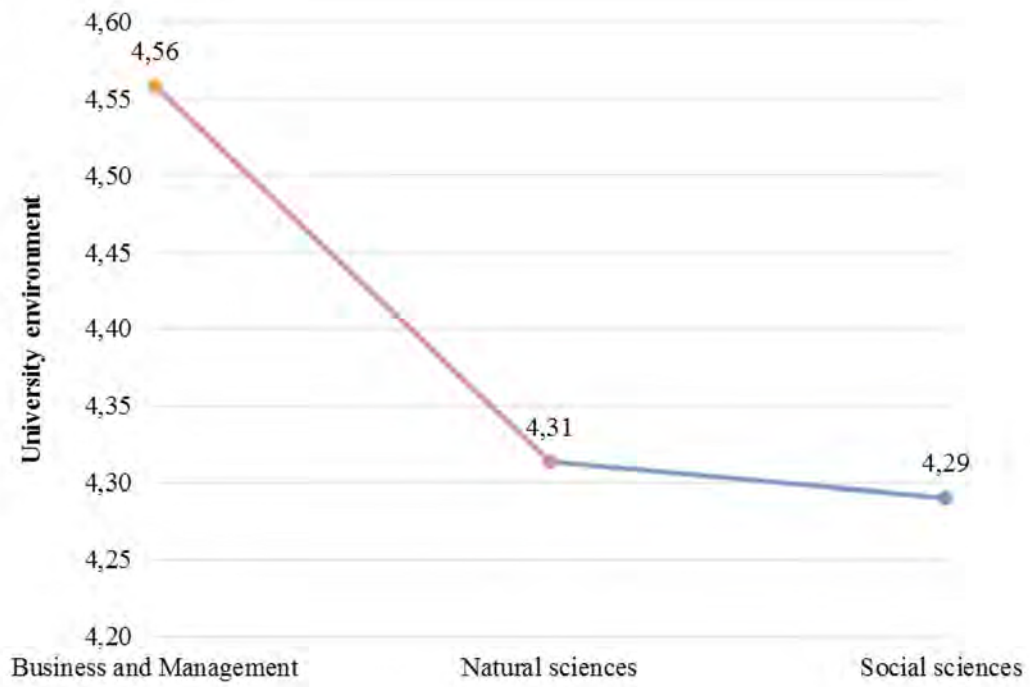


Fig. 16. Courses in Entrepreneurship at the University

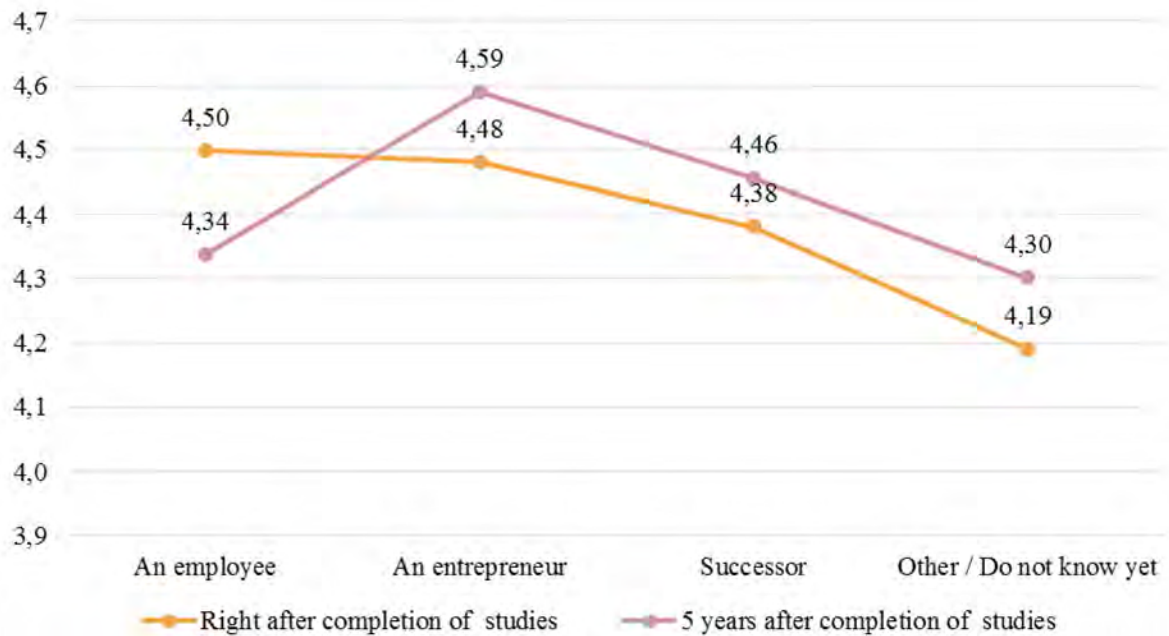




**Fig. 17.** University Environment and Specialization of Russian Students

Fig. 18 shows the comparison of university entrepreneurial environment perceived by Russian students between four groups of career choice intentions. The index of entrepreneurial environment of the university is roughly the same among the potential entrepreneurs who are going to start their own

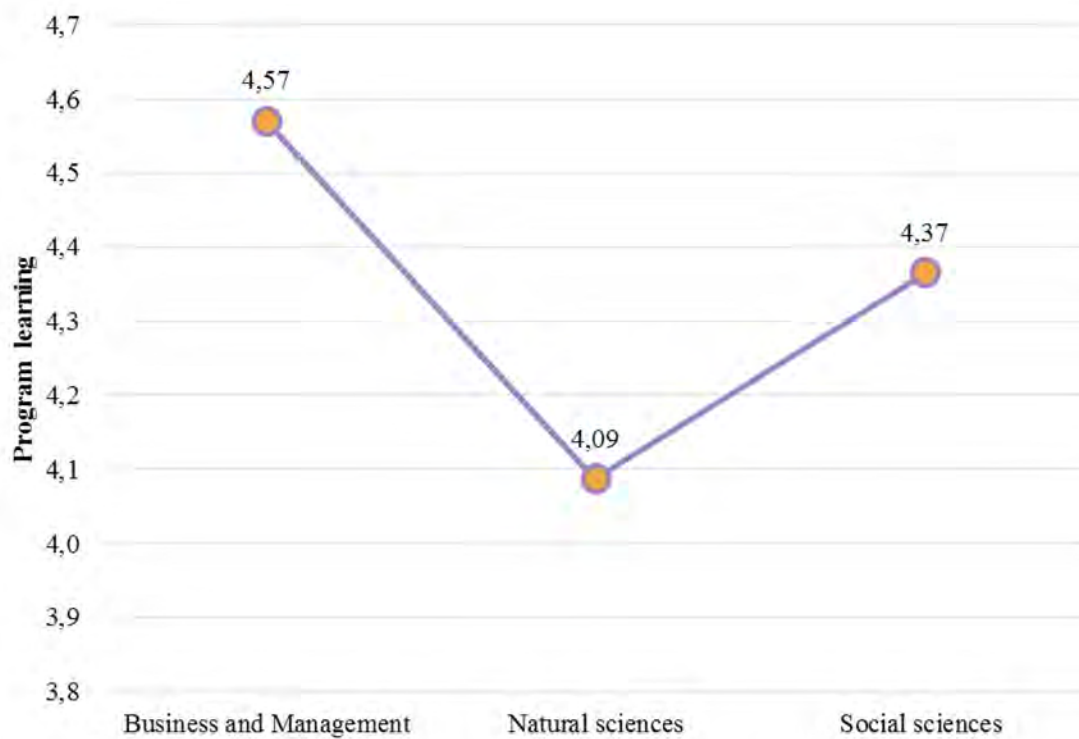
business right after the completion of their studies and among those who plan to work as employees. However, among students who want to become entrepreneurs in 5 years, the average index was higher which reveals quite contradictory trends.



**Fig. 18.** University Environment and Career Choice Intentions of Russian Students

In GUESSS project we are interested not only in the availability of courses in entrepreneurship and assessment of business climate at the university, but also how the courses and offerings attended contribute to the development of entrepreneurial component. Similarly to the university environment assessment, an aggregated indicator was established to assess the role of education on the basis of the degree of students agreement with the statements: “The courses and offerings 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” (Souitaris et al., 2007). Indexes could range from 1 to 7. On average, it was 4.23 in the international sample, while in Russia — 4.47. The highest index was among students trained in “Business and Management”, and the lowest — among those studying natural sciences (Fig. 19).

When comparing indexes and career choice intentions, it could be noted that the evaluation of the role of education is higher for those students who plan to become entrepreneurs right or 5 years after completion of their studies, which may be due to the established notion of the future career and understanding of what knowledge they need to get this at the university (Fig. 20). However, on the whole, this figure for all categories is in the range from 4.13 till 4.62, indicating a fairly moderate evaluation of the learning component in the development of important entrepreneurial skills. It is also interesting to note that among those Russian students who see themselves as employees right after completion of their studies, many agree that the training helped them to improve the ability to develop personal contacts. Those students who see themselves as entrepreneurs also believe that studies helped them better understand how to identify business opportunities, and enhanced their practical management skills in order to start a business.



**Fig. 19.** Learning at the University and Specialization of Russian Students

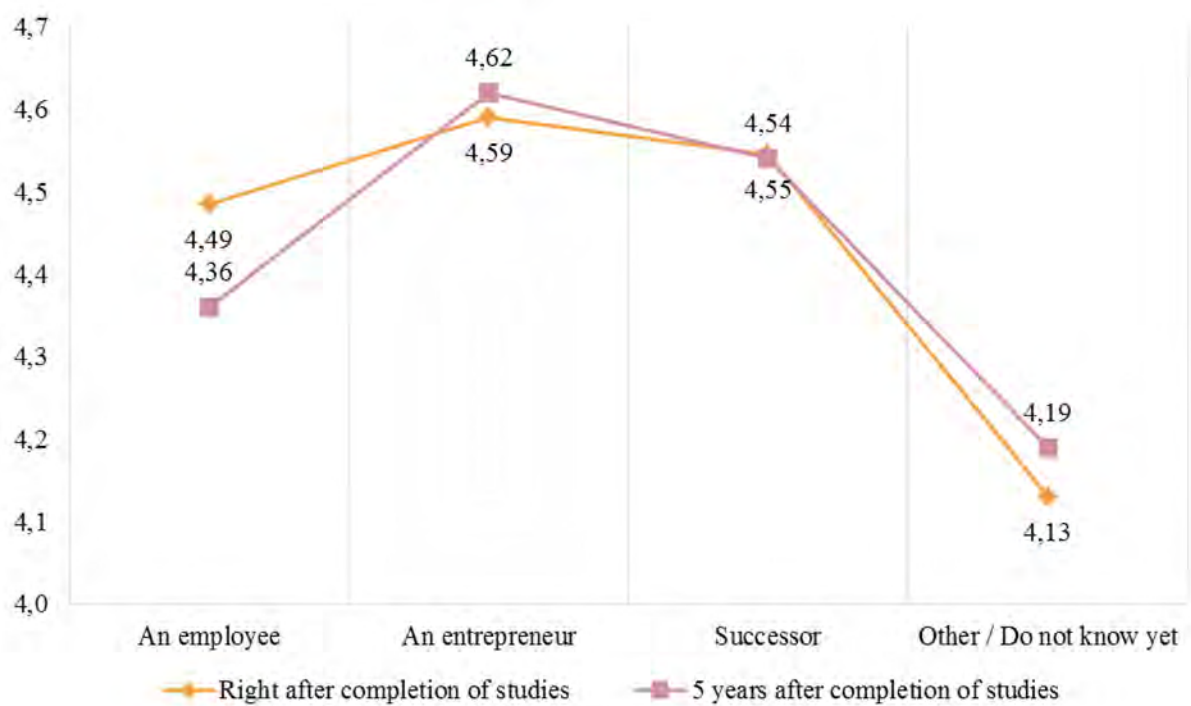


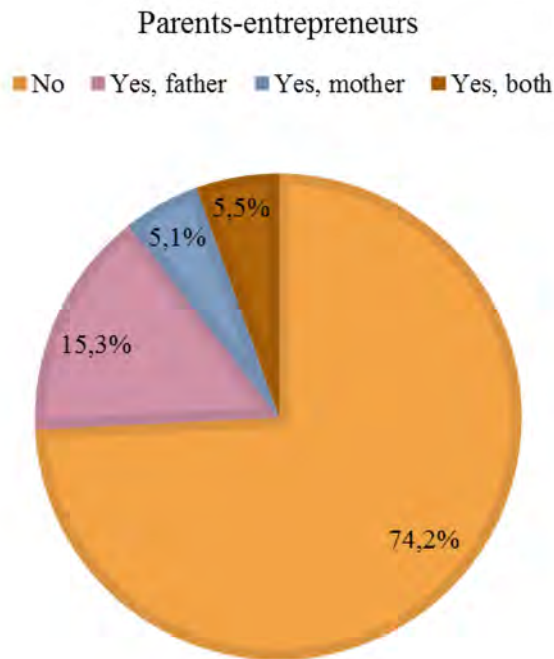
Fig. 20. Learning at the University and Career Choice Intentions of Russian Students

### 4.2.3. Family

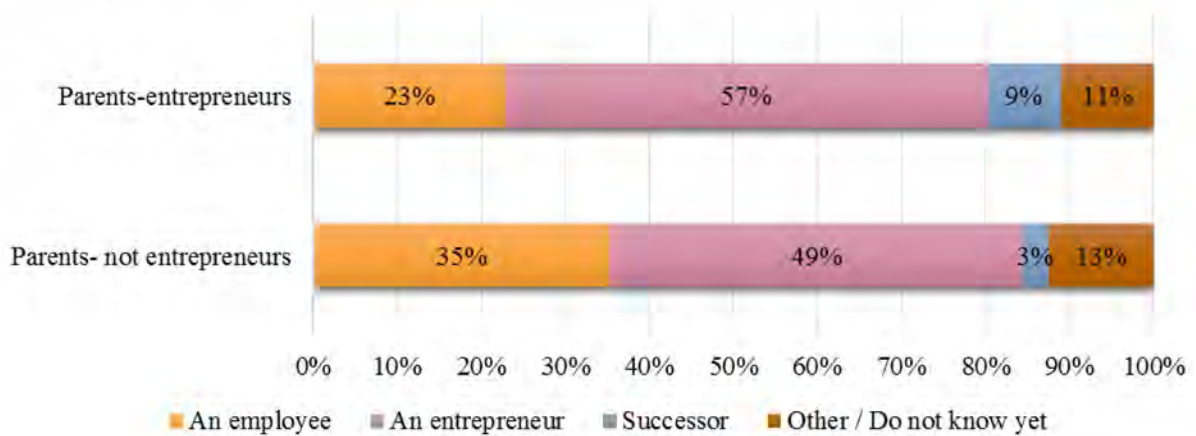
In the academic world the debate on the influence of professional orientation of parents on the formation of career choice intentions of their children does not stop. In general, the studies usually prove the fact that, if the parents are entrepreneurs, it is more likely that their children will follow their example (Laspita et al., 2012).

GUESSS questionnaire included questions whether students' parents, or at least one of them, are currently entrepreneurs (Fig. 21). For most of them (74.2%), the activity of parents is not related to entrepreneurship, that repeats the trends of the international sample (63.3%). In Russia, for 5.5% of students both parents are entrepreneurs, which is also close to the overall index for all participants, which is 12.5%.

Fig. 22 shows the comparison of career choice intentions of students 5 years after graduation in two parts of the sample — those whose parents are entrepreneurs, and those whose parents are not entrepreneurs. Being consistent with the expectations, the percentage of students who intend to become entrepreneurs in five years is higher if their parents are also entrepreneurs (57%), compared to non-entrepreneurs (49%). Similar results are found in case of a successor career intention. In the international sample, the picture is slightly different: among entrepreneurial families 44% of the students see themselves as founders of their own businesses, and in non-entrepreneurial families the percentage of those who wish drops to 34%.



**Fig. 21.** Parents-entrepreneurs in Families of Russian Students



**Fig. 22.** Parents-entrepreneurs and Career Choice Intentions of Russian Students 5 years after Graduation

#### 4.2.4. Social and Cultural Context

Most scholars agree that the process of decision-making is closely linked with the social and cultural context of the individual. In other words, social and cultural factors may have some influence on the formation of entrepreneurial intentions. GUESSS project focuses on two aspects: the role of the immediate social environment and the national culture. Using the estimate of “subjective norms” in

the theory of planned behavior (Ajzen, 1991), we can estimate the expected response of our relatives to the selected career path. In the theory, it is believed that the higher is the positive assessment of the reaction of people in the environment on certain actions, which is expected by an individual, the more likely planned activities will be implemented.

In the questionnaire, students were asked how people in their environment (close family, friends and fellow students) would react, if they would pursue a career as an entrepreneur. They were asked to evaluate the reaction on a scale from 1 (very negatively) to 7 (very positively) (Linan, Chen, 2009).

Comparative results presented in Table 6 show that students expect a positive reaction of their environment when selecting entrepreneurial career, and the average index for all three questions is slightly higher among Russian students equaling to 5.77 (compared to 5.60 in the international sample).

Table 6

Choosing a Career of an Entrepreneur and Reaction of the Environment

Attitude of the environment to entrepreneurial career	Russia	International sample
Family	5.89	5.64
Friends	5.9	5.7
Fellow students	5.53	5.46
Index*	5.77	5.60

Note: Table presents average values; scale from 1 to 7: 1 – very negatively, 7 – very positively; \* - Index is calculated as the arithmetic average based on the evaluation of the reaction represented by three categories: family, friends and fellow students

The second aspect in studying the social and cultural context —national culture. National culture may play an important role in formation of students' entrepreneurial intentions as cultural norms and values shared in the society may indirectly influence their perception of various career choices. In GUESSS project, the national culture has been studied based on four main characteristics: in-group collectivism, uncertainty avoidance, power distance, and performance orientation. In-group collectivism refers to the extent to which individuals express pride and cohesiveness in their families and close environment. Uncertainty avoidance describes the extent to which individuals tend to alleviate unpredictable future events by establishing social norms, rules, and procedures. Power distance characterizes the degree of tolerance of individuals to an uneven distribution of power in a society. Performance orientation reflects the extent to which a community encourages and rewards innovation, high standards, excellence, and performance improvement [House et al, 2004.].

To operationalize in-group collectivism, students were asked to indicate their level of agreement on a 7-point scale (1 – strongly disagree, 7 – strongly agree) with the following statements: “In my society, children take pride in the individual accomplishments of their parents”, “In my society, parents take pride in the individual accomplishments of their children”, “In my society, aging parents generally live at home with their children”, “In my society, children generally live at home with their parents until they get married”. To measure the level of un-

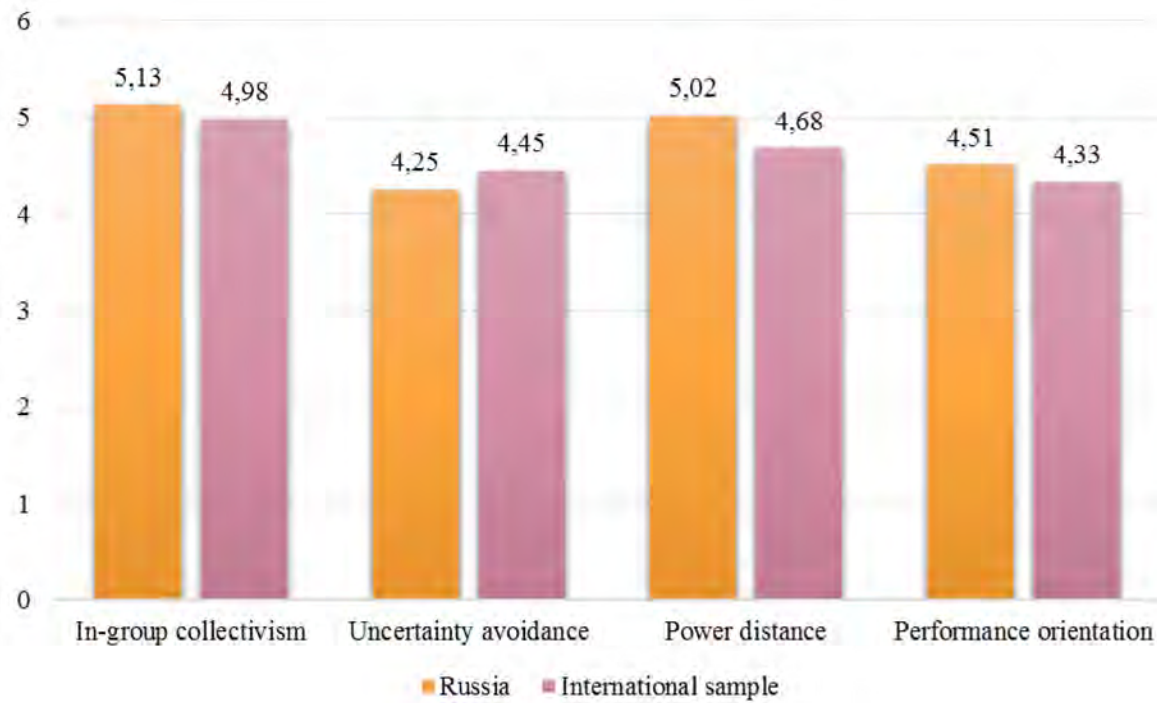
certainty avoidance, the respondents evaluated a number of statements which characterize the attitude of a society to unforeseen events: “In my society, orderliness and consistency are stressed, even at the expense of experimentation and innovation”, “In my society, most people lead highly structured lives with few unexpected events”, “In my society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do”. The level of power distance in a society was accessed based on the degree of agreement with the statements about power and leadership: “In my society, a person's influence is based primarily on authority of one's position”, “In my society, followers are expected to obey leaders without question”, “In my society, power is concentrated at the top”. For operationalization of performance orientation, students were asked to indicate their level of agreement with the following statements: “In my society, individuals are encouraged to strive for continuously improved performance”, “In my society, major rewards are based on only performance effectiveness”, “In my society, being innovative to improve performance is generally substantially rewarded”.

Then, based on the arithmetic mean of the responses for each of the characteristics of the national culture, the aggregate indexes were calculated, which described the cultural context of the society. Fig. 23 shows the cultural indices for Russia in comparison with the international sample.

The results demonstrate that the national culture is perceived by Russian students mostly as collectivistic (5.13) and high power distance (5.02) cul-

ture, that is slightly higher than in the international sample. Besides this, Russian society is also performance oriented (4.51), which encourages innovativeness and improvements in performance. The lowest value belongs to the uncertainty avoidance index (4.25). It is worth noting that this figure is

lower than in the international sample, which may be caused by the increased uncertainty of the crisis environment, as well as the insufficient development of the institutional systems and rule of law to regulate social interactions.



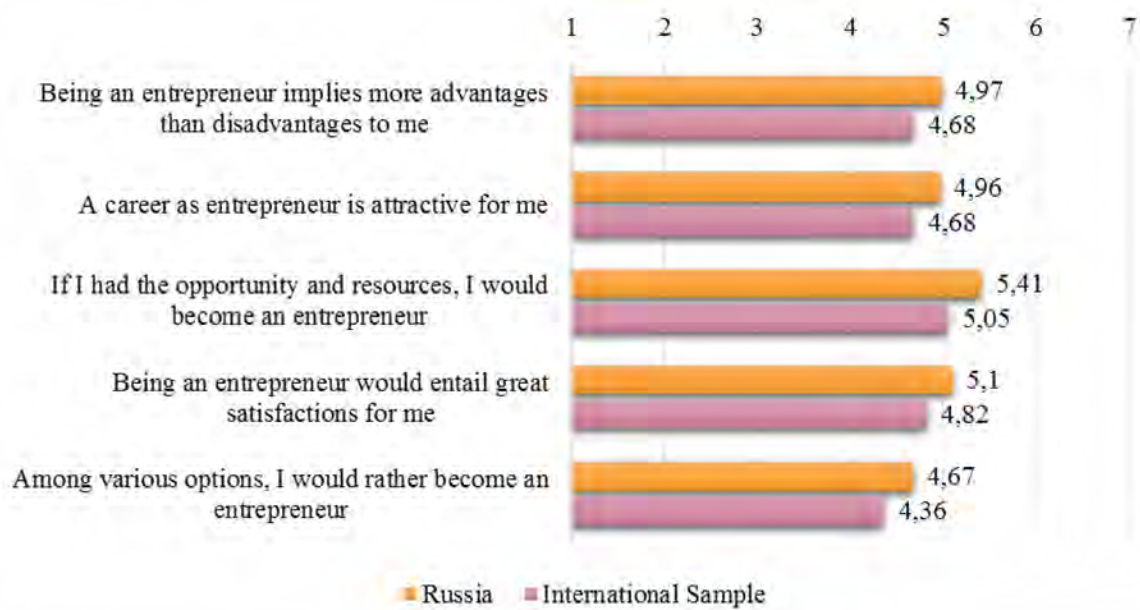
**Fig. 23.** Subjective Assessment of the Cultural Context of Surrounding Society by Students

#### 4.2.5. Attitude towards Entrepreneurship

According to the theoretical model of the research (Fig.1), the attitude towards behavior (Linan, Chen, 2009) is among the major factors that may influence the formation of entrepreneurial intentions of university students and strengthen their “entrepreneurial spirit”.

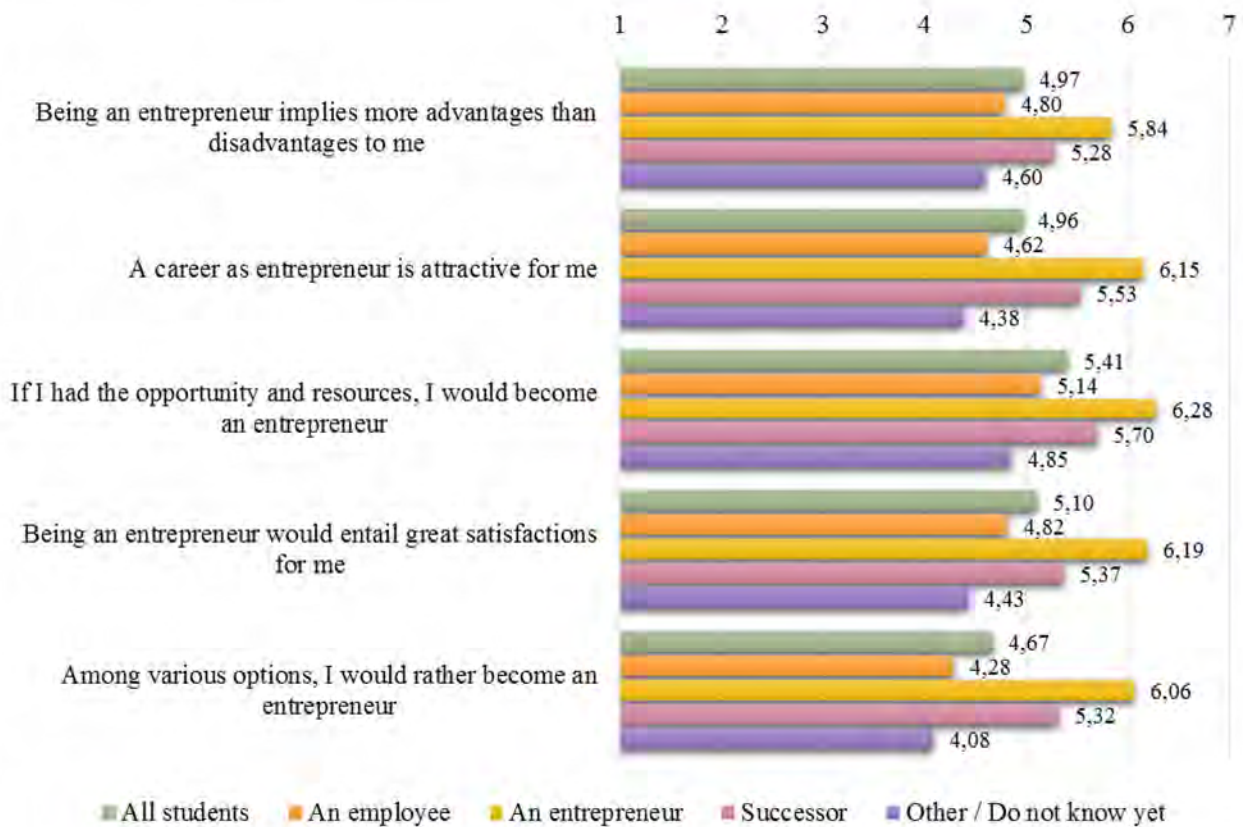
Work of an entrepreneur involves constant motion forward, improvement, development, ability to plan, set ambitious targets, organize work, find necessary resources and achieve new goals. Not eve-

ryone is ready for responsibility and independent decision-making, some people feel more comfortable as employees, which is confirmed by the study. Fig. 24 shows that among Russian students positive attitude towards entrepreneurship is strongly expressed in general. Note that many of the respondents in Russia largely agree that they do not have enough resources in order to realize their entrepreneurial potential.



**Fig. 24.** Attitude towards Entrepreneurship

Note: Figure shows average indexes; scale from 1 to 7: 1 — strongly disagree, 7 — strongly agree.



**Fig. 25.** Attitude towards Entrepreneurship and Career Choice Intentions of Russian Students Right after Graduation

Note: Figure shows average indexes; scale from 1 to 7: 1 — strongly disagree, 7 — strongly agree.

Future entrepreneurs and successors largely agree that being an entrepreneur implies more advantages than disadvantages, and consider a career as entrepreneur to be attractive for themselves. In the Russian subsample of students who intend to become employees, there is a more positive attitude towards the career of an entrepreneur compared with the international sample, but they believe that they do not have sufficient resources to start a business. This factor can be considered as one of the obstacles

for building a career of an entrepreneur that is recognized both by future entrepreneurs and successors, however, this does not discourage them from the realization of their planned career choices. It should be added that Russian students agree that being an entrepreneur would entail great satisfactions for them, which indicates not only the positive attitude towards entrepreneurship, but also the availability of the latent entrepreneurial potential among students.

#### 4.2.6. Locus of Control

Not only the attitude towards entrepreneurship affects career preferences, but also the perception of how people assess their ability to take control over the situation. Internal locus of control describes the tendency of individuals to believe that they control the events in their lives, rather than attribute them to external circumstances. The questionnaire asked students whether they agree with the following statements (on a scale from 1 — strongly disagree to 7 — strongly agree): “I am usually able to protect my personal interests”, “When I make plans, I am almost certain to make them work”, “I can pretty much determine what will happen in my life” (Levenson, 1973). Fig. 26 shows the distribution of the average values of the responses to each state-

ment among Russian students compared to the international sample.

Based on the responses, the locus of control index was also calculated as arithmetic mean of all three statements. Changes in indices for career groups are shown in Fig.27. The obtained results demonstrate that the index of locus of control is higher among entrepreneurs and successors, and lower among employees. According to the results, locus of control is least characteristic of those who have not made their career choice yet. It should be also noted that confidence in their ability to control the situation was lower among Russian students than the average for the international sample, which may be due to the influence of external factors hardly amenable to prediction and control.

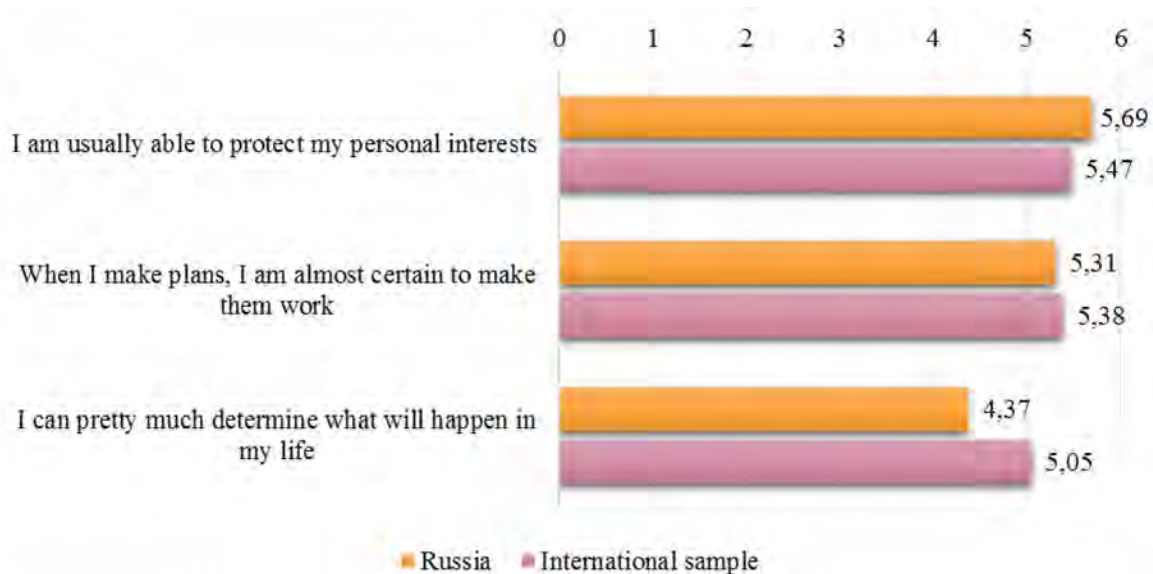


Fig. 26. Internal Locus of Control





Fig. 27. Internal Locus of Control and Career Choice Intentions of Russian Students Right after Graduation

#### 4.2.7. Entrepreneurial Self-efficacy

The formation of entrepreneurial intentions is largely determined by presence of specific competencies required for the creation and running a business. Entrepreneurial self-efficacy describes perceptions of individuals about their abilities to carry out the entrepreneurial tasks and achieve the desired results. When planning their career, students evaluate and relate their skills to the requirements of various professions. Thus, high level of self-efficacy in relation to the tasks important for the entrepreneurs may increase the chances of selecting an entrepreneurial career by students.

To measure the level of entrepreneurial self-efficacy, students were asked to indicate their level of competence in performing the following tasks: “Identifying new business opportunities”, “Creating new products and services”, “Managing innovation within a business”, “Being a leader and communicator”, “Building up a professional network”, “Commercializing a new idea or development”, “Success-

fully managing a business”. Students assessed their competences on a 7-point scale (1 – very low competence, 7 – very high competence). Fig. 28 shows the distribution of the average level of competences among Russian students in accordance with their career choice intentions. Being consistent with the expectations, future entrepreneurs and successors have higher level of competences in performing all tasks that are important for entrepreneurship, compared with employees.

On the basis of the responses for each task, an aggregated index of the entrepreneurial self-efficacy was calculated. Data analysis showed that in Russia the overall level of entrepreneurial self-efficacy of students (4.58) is lower than in the international sample (4.62). The obtained results underscore the need to develop entrepreneurial competences and skills that can be largely achieved by entrepreneurship education.

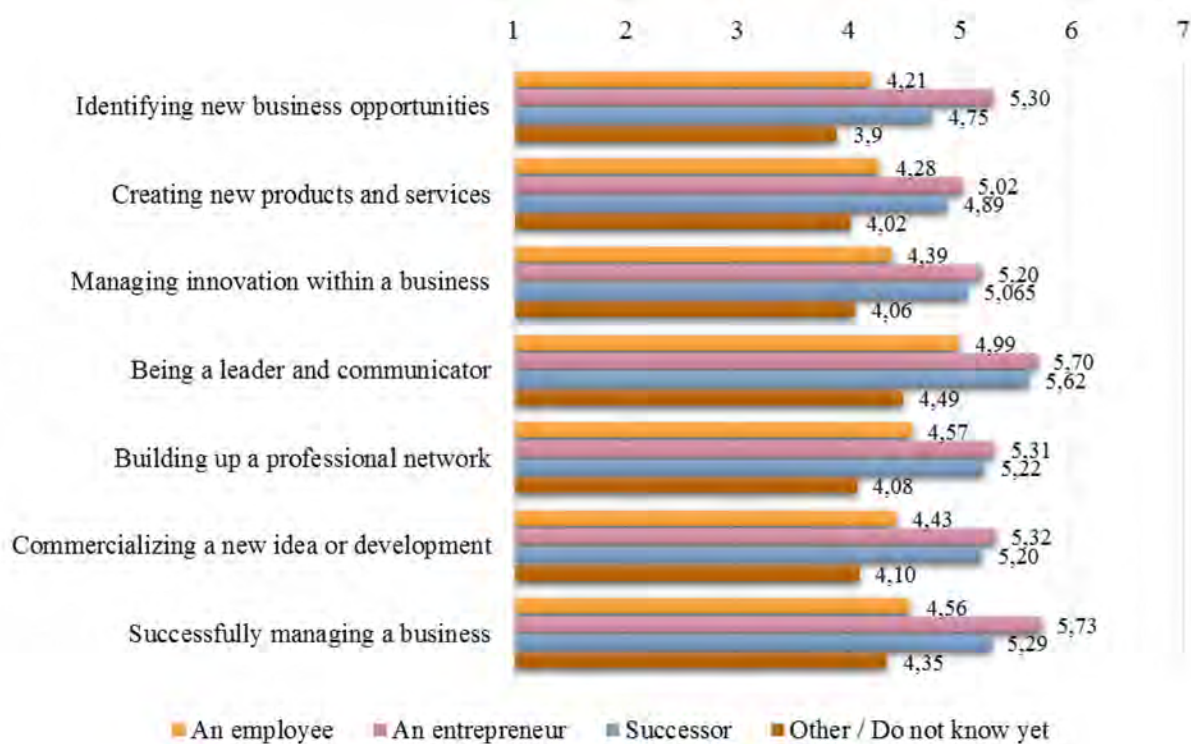


Fig. 28. Competences and Career Choice Intentions of Russian Students Right after Graduation

### 4.3. Entrepreneurship among Students

A number of additional questions in the study allows to study career plans of the students, based not only on the four groups presented in Table 5, but also on other typology. Based on the questions of the questionnaire we can distinguish active and potential entrepreneurs among all respondents. Active entrepreneurs are students who have started their own business; potential entrepreneurs — those who tried to start their own business during the period of stud-

ies. It should be noted that the percentage of potential entrepreneurs among students in Russia is higher than in the international sample (Fig. 29) and equals to 27%. However, the percentage of active entrepreneurs is quite low, both in Russia and in the international sample: only 8% of students in Russia founded their business during their studies at the university (8.87% — in the international sample).

#### 4.3.1. Potential Entrepreneurs

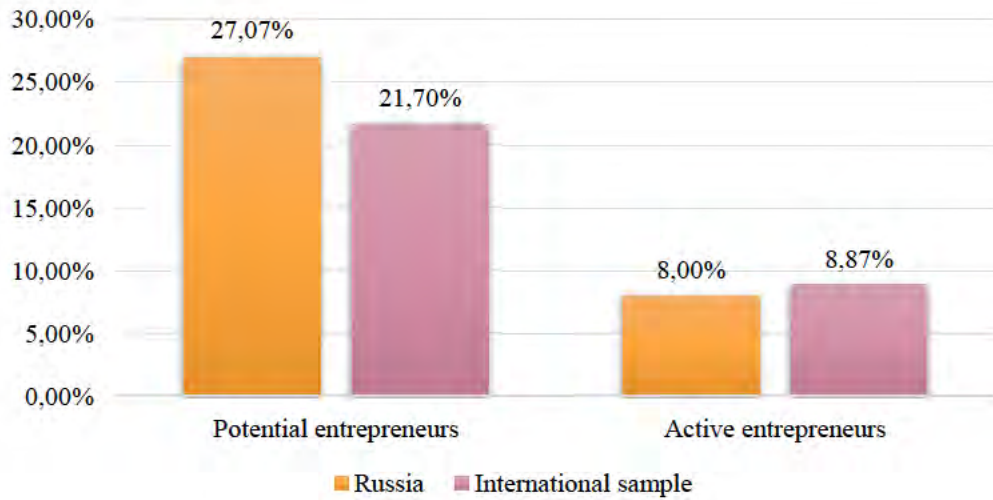
This part of the report includes the analysis of the students who are already going to start their own business. In the total sample their number reaches 25,683 people, equivalent to 21.70% of the total sample, and in Russian one — 1124, or 27,07%.

The average age of potential entrepreneurs in all countries is 25 years, while in Russia — 21 years. The most significant difference is seen in the percentage of students under the age of 24 years: if in Russia this category consists of more than 93% of the respondents, in the international sample this figure almost reaches 60%. At the same time the majority of students (about 65%) have parents who are not entrepreneurs, so the presence or absence of entre-

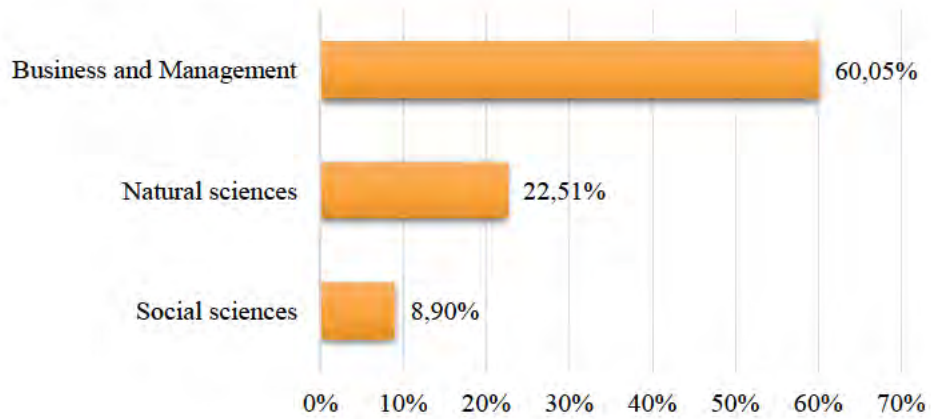
preneurs in the family is not the deciding factor in choosing a career. Most of the potential entrepreneurs study business and management (Fig. 30).

To examine this category of students in more detail let us turn to gender differences (Fig. 31). Among the students studying business and economics and social sciences, most are women (65%), and in the natural sciences greater interest in entrepreneurship is shown by men (73%).

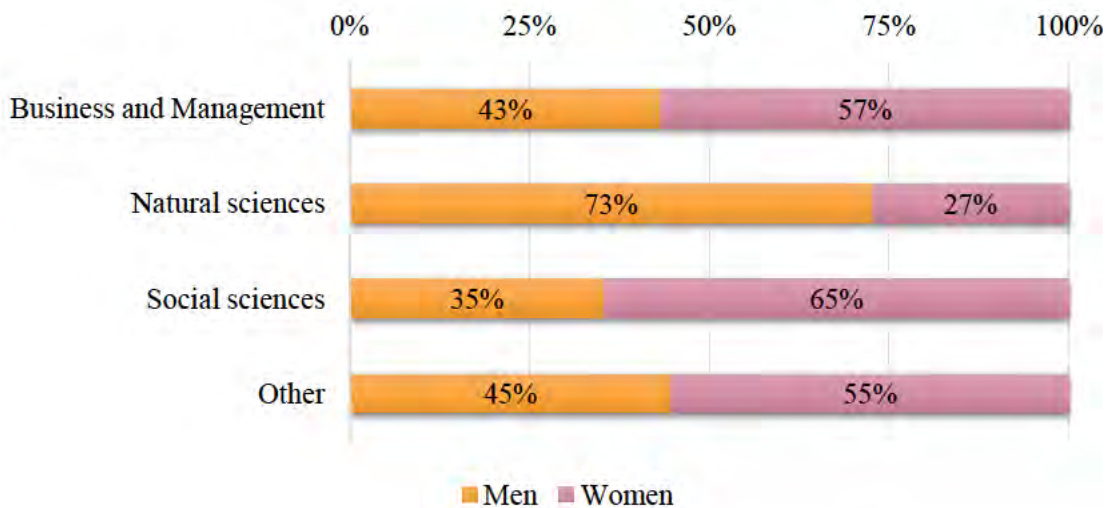
In Russia, more than 50% of students believe that they can open their own company in a 1.5-2 year, and about 27% — in the next 1-1.5 years, but on average for the entire sample opening of their own business is planned not earlier than in 1 year.



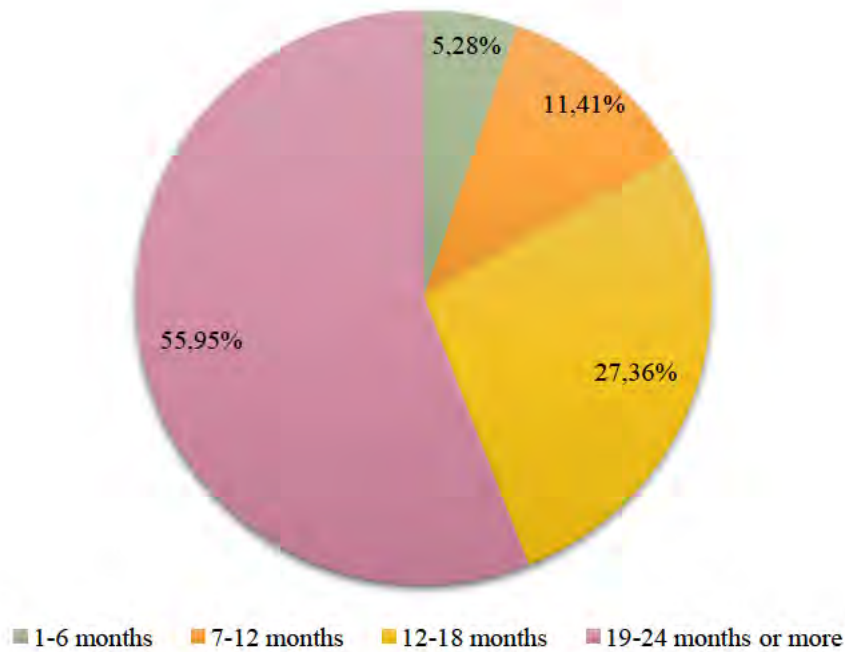
**Fig. 29.** Start of Own Business during Studies at the University



**Fig. 30.** Potential Entrepreneurs among Russian Students and their Field of Studies



**Fig. 31.** Potential Entrepreneurs among Russian Students, their Gender Composition and Field of Studies



**Fig. 32.** Time Lapse before Starting Business by Russian Students – Potential Entrepreneurs

Majority of Russian students – potential entrepreneurs indicates an absence of previous experience of business launching (Fig. 33). Fig. 34 presents the classification of future firms in Russia by sector. About 22% of potential entrepreneurs are aimed at opening a business in wholesale or retail trade (which exceeds the index in the international sample – 13.7%). The second in popularity is advertising/marketing/design, the third - manufacturing.

Among those who are studying business and management, in addition to trade, many are focused on the activities in the field of advertising/marketing/design and manufacturing. Students, intending to start a business in the field of infor-

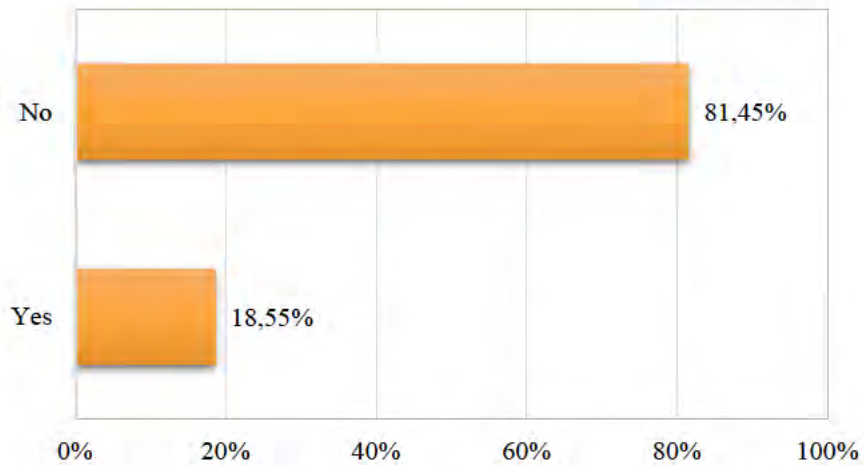
mation technology and communications, are trained, in most cases the field of “natural science”. The field of education/training, and advertising/marketing/design is interesting for those who specialize in “social sciences”.

Since opening a company is associated with a high rate of risk, and many would like to reduce it, one of the outputs — share risks with a partner (or partners). In Russia 32% of potential entrepreneurs believe to open their own company with one partner, 19% of respondents are ready to a fully independent activity, which is consistent with index in international sample (Table 7).

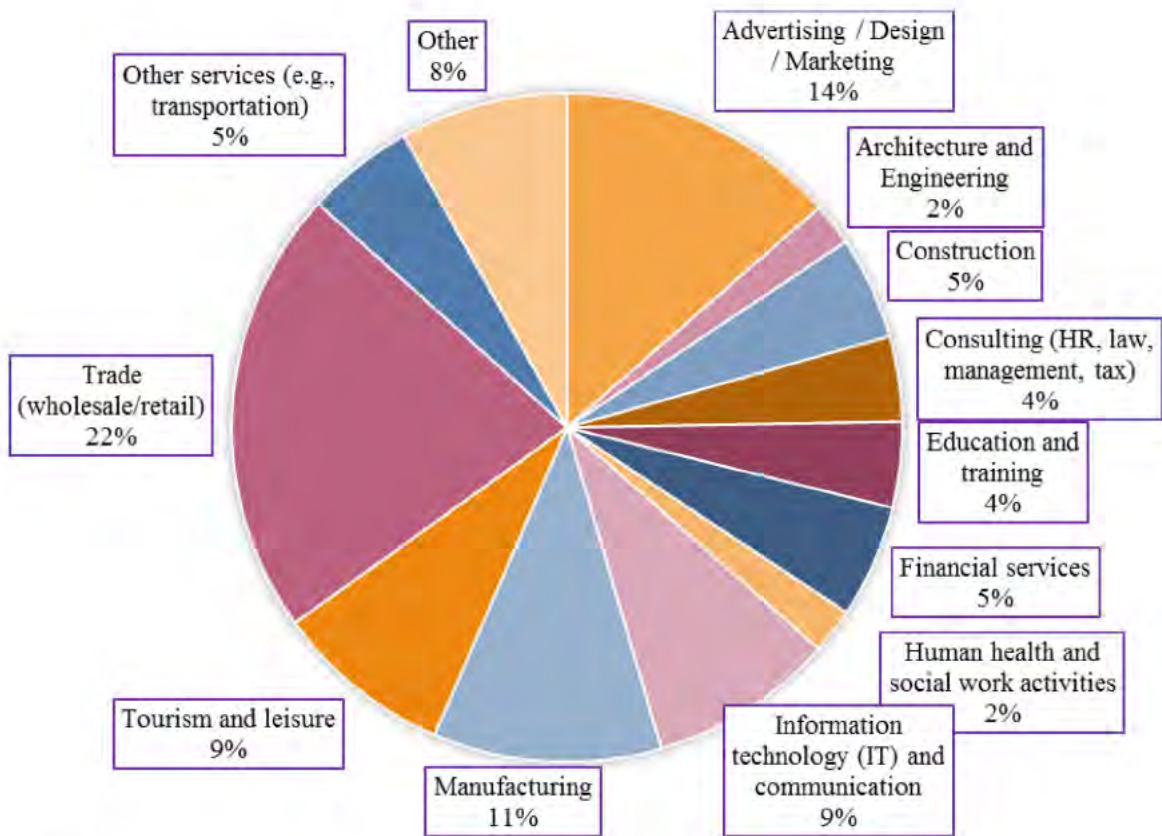
*Table 7*

Partners for Future Business

Amount of partners	Russia, %	International sample, %
<i>No</i>	19%	19%
<i>One partner</i>	32%	28%
<i>Two partners</i>	30%	28%
<i>Three partners</i>	13%	16%
<i>Four and more partners</i>	6%	10%



**Fig. 33.** Experience of Business Creation by Russian Students – Potential Entrepreneurs



**Fig. 34.** Sector of Activities of the Future Company of Russian Students – Potential Entrepreneurs

Thinking about the organization of their own business, Russian students strive to realize their key values and the second motive is reliance on the fact that they can thus achieve financial success. It turned out that students are least interested in solving existing social problems by creating their own business (Fig. 35). At the same time most of them indicates

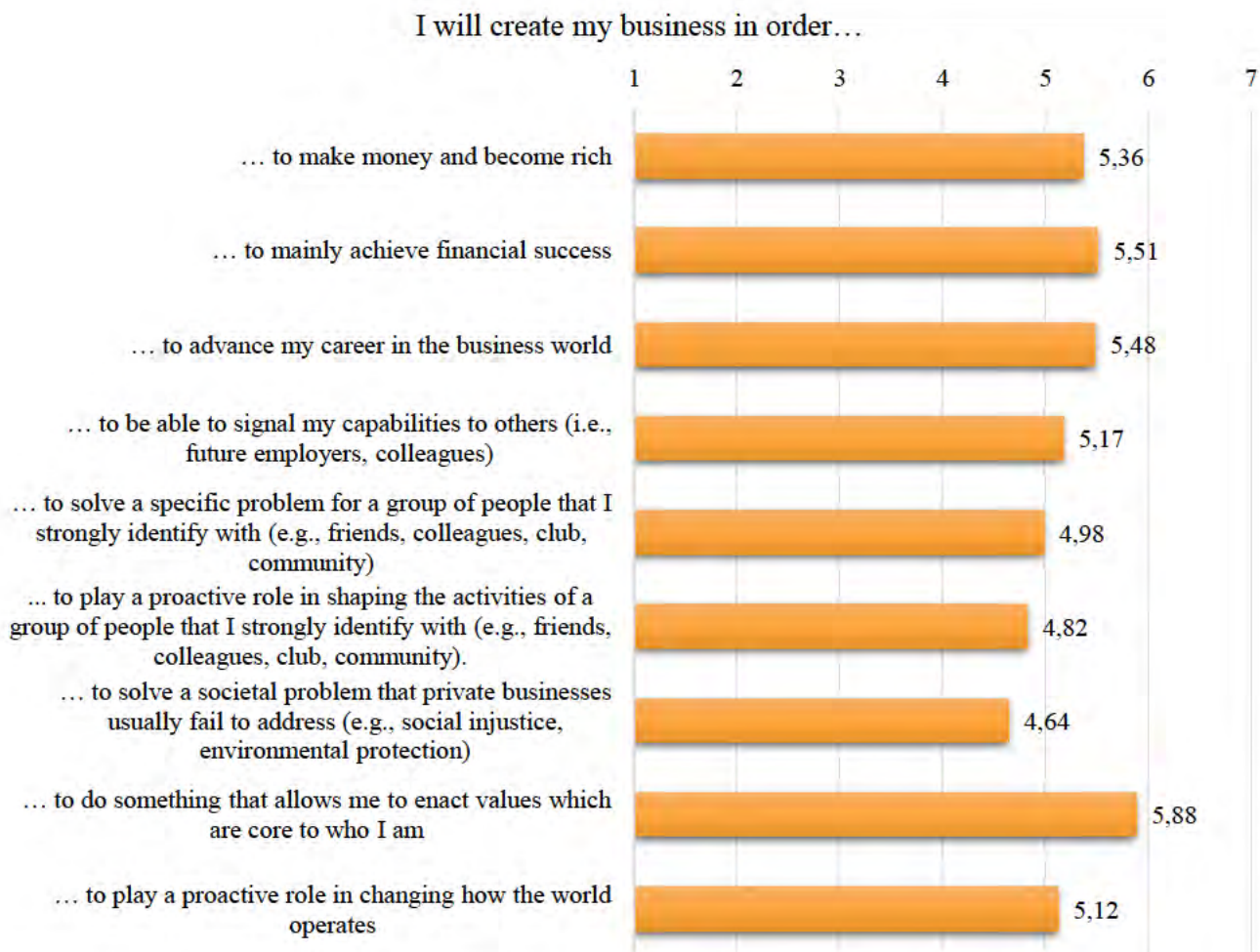
that hobby or recreational pastime became sources for their business ideas. Among the most frequent answers, students also mentioned university studies and job outside the university (Fig. 36).

Since students from the category of potential entrepreneurs noted the fact that they are already trying to start a business, the question arises: what

stage they are in, what steps have already been taken? Approximately one-fifth of potential entrepreneurs among Russian students have not started to do anything (Fig. 37). 29% of students discussed their business idea with potential customers. 43% have collected information about the market and competitors, and about a quarter — have written a business plan and started product /service development.

Number of steps taken to start a business allows us to create another index, which reflects the degree of entrepreneurial activity among those stu-

dents who are focused on the opening of their company. The index is calculated as the sum of the steps taken from 0 (“Nothing of the above done so far”) to 10, 10 — the maximum possible number of the actions presented in Fig. 37. As a result, on the basis of calculations made, the following results were obtained: the highest index of entrepreneurial activity is typical for Lichtenstein, France and India, and the lowest — in Japan, Ukraine and Lithuania. For Russia, the index is 1.6 (see Table 8).



**Fig. 35.** Motivations and Goals of Business of Russian Students (*Likert scale, 1 — strongly disagree; 7 — strongly agree*)

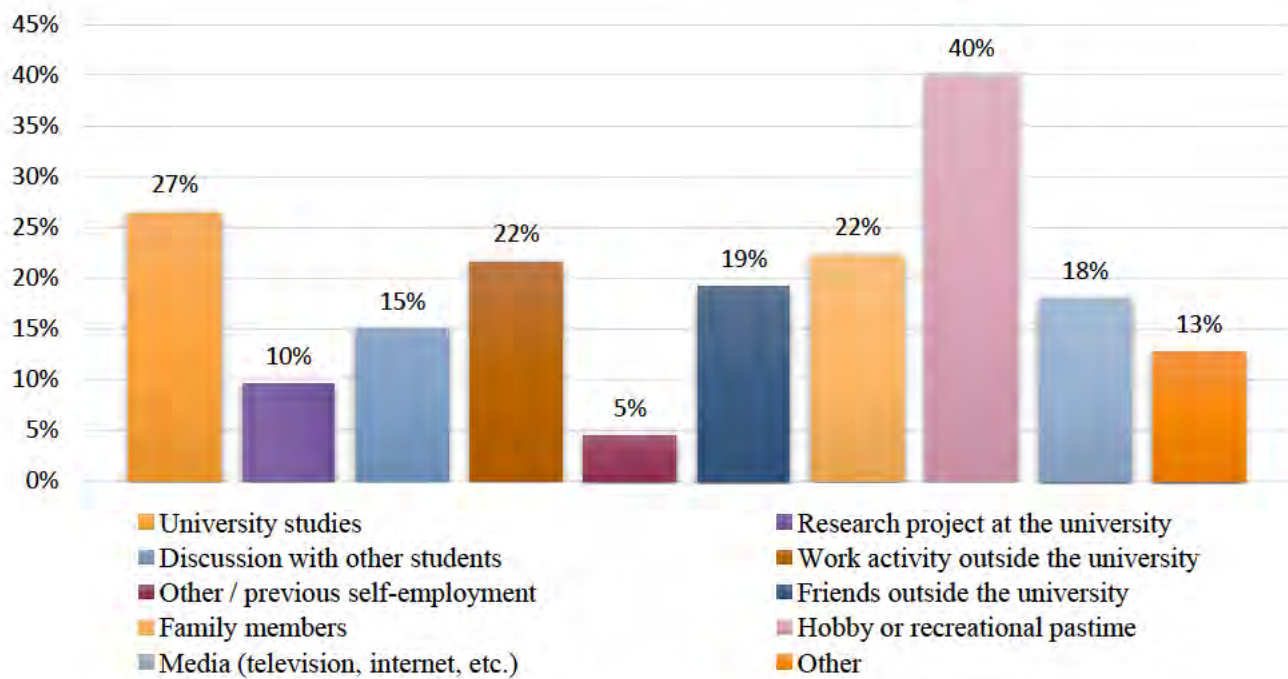


Fig. 36. Sources of Business Ideas of Russian Students – Potential Entrepreneurs

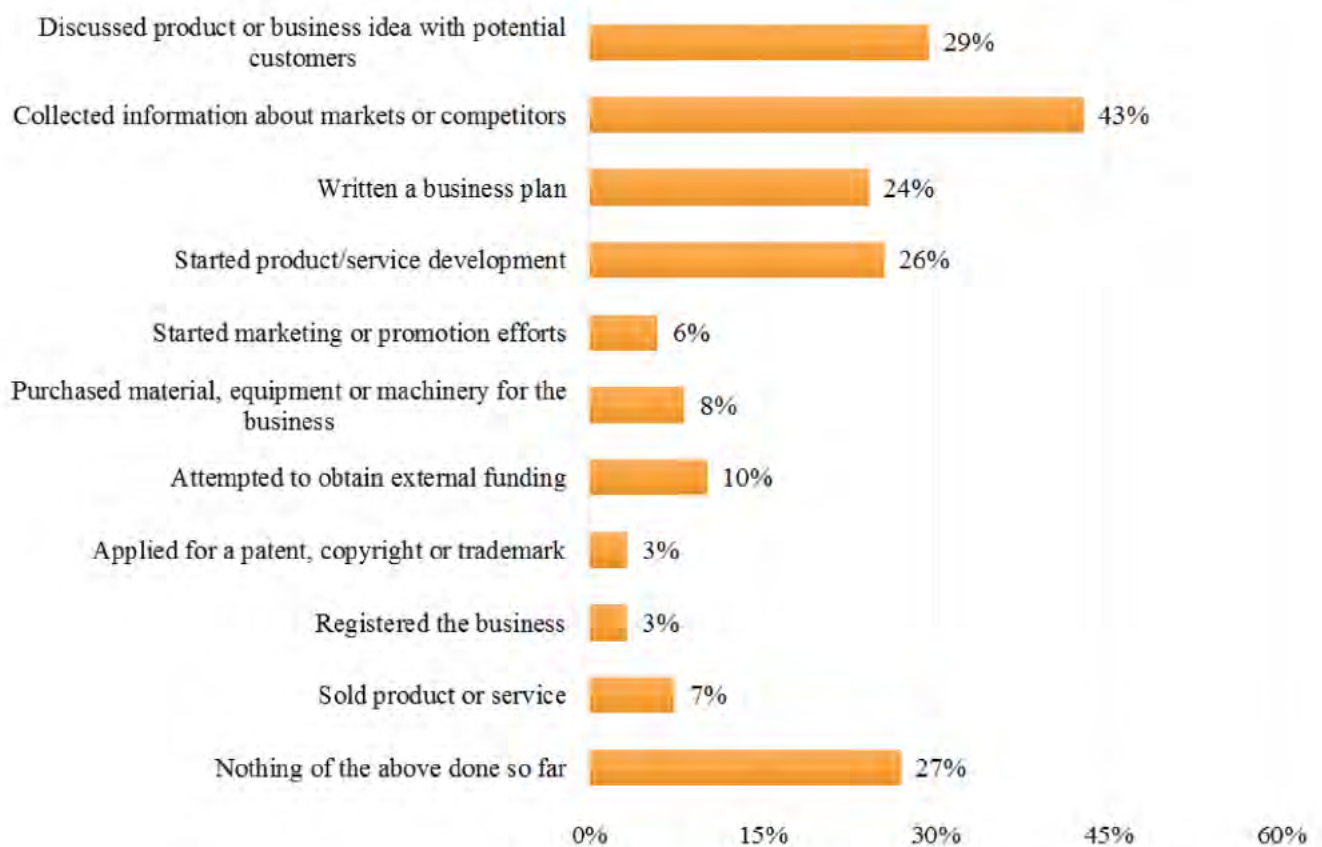


Fig. 37. Steps Taken by Russian Students to Start their Business

## Entrepreneurial Activity Index

№	Country	Index	№	Country	Index
1	Liechtenstein	3.55	25	Peru	2.23
2	France	3.5	26	Italy	2.21
3	India	3.16	27	Morocco	2.21
4	Ireland	2.88	28	China	2.17
5	Portugal	2.8	29	Ecuador	2.13
6	Switzerland	2.79	30	Panama	2.11
7	Austria	2.72	31	USA	2.07
8	Slovenia	2.71	32	Belgium	2.05
9	Luxembourg	2.61	33	Brazil	2.04
10	Czech Republic	2.6	34	Uruguay	2.04
11	Sweden	2.56	35	Salvador	2.01
12	Estonia	2.55	36	Belarus	1.97
13	Macedonia	2.52	37	Pakistan	1.97
14	Australia	2.46	38	Croatia	1.88
15	Slovakia	2.42	39	Greece	1.77
16	Canada	2.36	40	The Republic of Korea	1.68
17	Finland	2.36	41	Hungary	1.6
18	England	2.34	42	Poland	1.6
19	Germany	2.29	43	Russia	1.6
20	Spain	2.29	44	Albania	1.42
21	Argentina	2.25	45	Kazakhstan	1.35
22	Colombia	2.25	46	Lithuania	1.31
23	Malaysia	2.24	47	Ukraine	1.16
24	Chile	2.24	48	Japan	0.83

Note: For Norway and Mexico index was not calculated because of low number of cases (0 and 2 respectively)

### 4.3.2. Active Entrepreneurs

Only 8% of students in the Russian sample and 8.8% in the international one already run their own business (in absolute indicators — 332 and 10,820 respectively). In Russia, the share of active entrepreneurs under the age of 24 years is over 87%, while in the whole sample it is significantly lower — 48%. In other words, in most of the countries older students become entrepreneurs. Most Russian students — entrepreneurs are enrolled in “Business and Management” education field (about 56%), while in the international sample two areas dominate: about 36% are studying business and economics as well,

and a little more than 25% — natural sciences. Approximately 42% of the students’ parents are entrepreneurs, for 22% of whom the father is an entrepreneur. The industry distribution of business for active and potential entrepreneurs is quite the same and most of them are in trade.

Most of the students in Russian sample have founded their company recently: 29% in 2016 and 46% — in 2014–2015. 24% of respondents started their business earlier (Table 9). In the international sample 25% of the students organized a company in 2016, 37% — in 2014–2015, other — in 2013 or



even earlier. In Russia, the company is operated by an average of 14 people, and the average for the entire international sample — 6 persons. Entrepreneurs own the greatest share of their businesses by themselves. Many of active entrepreneurs run business with partners.

Motives “to do something that allows me to enact values which are core to who I am”, as well as “to mainly achieve financial success” remain dominant for active entrepreneurs in Russia during the starting the business (the mean is 5.40 and 5.27 out of 7). Note that in the international sample in the first place is the desire to enact key values (5.29), and the second — the desire to move up the career (5.24).

Since many active entrepreneurs are driven by the motive to earn money from the very beginning, it is a natural interest how to do it. All the respondents rated the success of their business as fairly mild, however, looking at the data presented in Fig. 38, attention should be paid to the fact that among Russian students the evaluation of the business success,

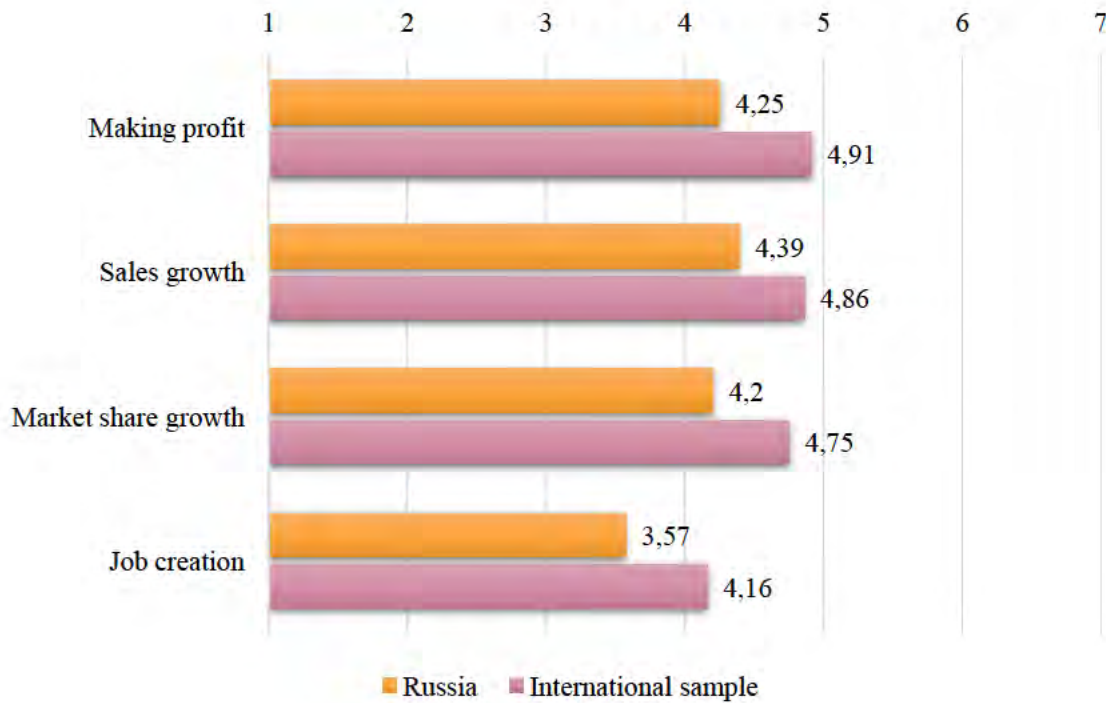
including sales growth, increase of market share, profits and jobs creation, is slightly lower than in the international sample. Nevertheless, the total rate of satisfaction from own business for Russian students is higher than average (4.63 out of 7).

An important characteristic of a business to be taken into consideration is its entrepreneurial orientation. A firm, showing high level of entrepreneurial orientation, will pursue innovations more actively, participate in risky projects and be proactive in relation to its competitors (Miller, 1983). In the GUESSS project, entrepreneurial orientation was measured with Covin’s and Slevin’s scale (Covin & Slevin, 1989). As it shown in the Fig. 39, entrepreneurial orientation of Russian student firms is, on average, lower than in the international sample. At the same time risk taking propensity could be considered as the most clearly expressed dimension of entrepreneurial orientation among Russian firms, while in international sample the dominating role is taken by proactiveness.

Table 9

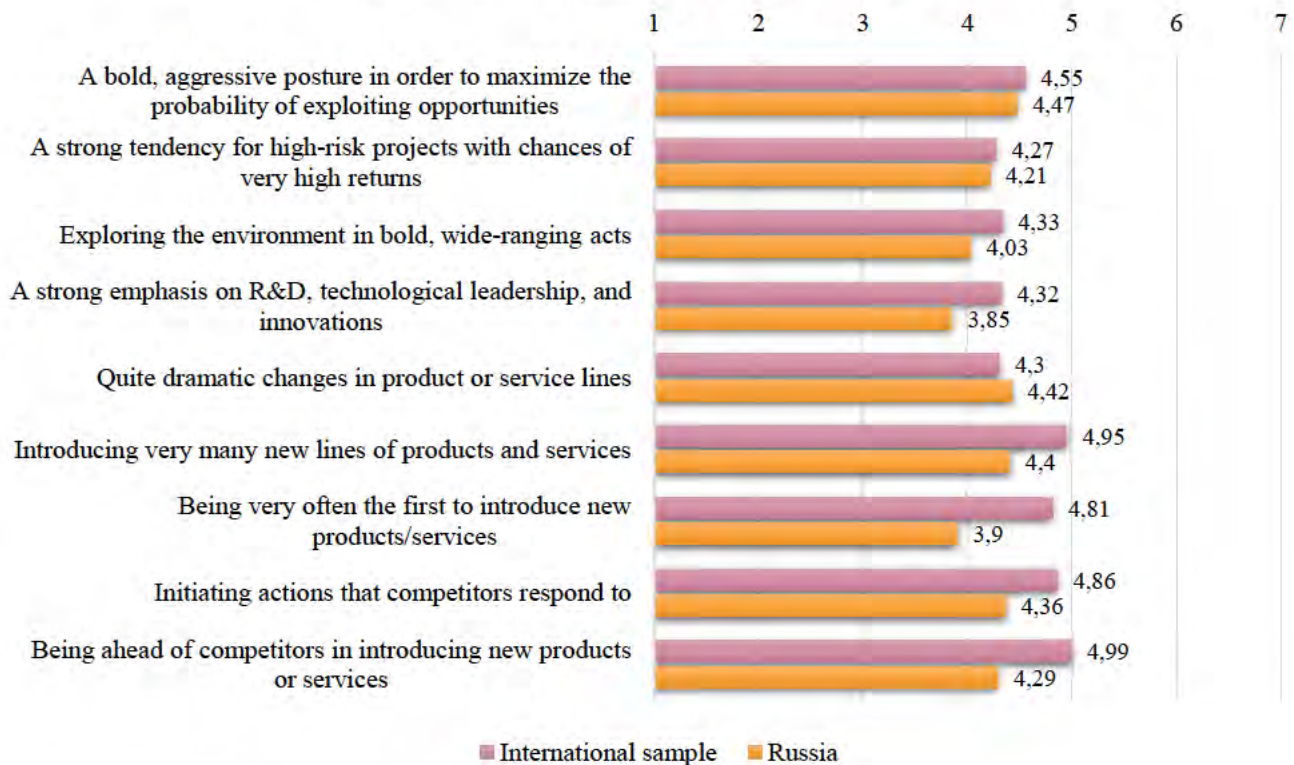
Existing Business Characteristics

	Russia	International sample
<b>When did you found your firm?</b>		
2016	29%	25%
2015	29%	23%
2014	17%	14%
2013	8%	8%
2012	5%	6%
2011 and earlier	12%	24%
<b>Number of employees</b>	14,8	6
<b>Share of total equity of the firm (%)</b>		
0-25%	14%	21%
26-50%	18%	20%
51-75%	15%	13%
76-99%	9%	6%
100%	44%	40%
<b>Number of partners</b>		
No	44%	28%
One partner	27%	24%
Two partners	18%	25%
Three partners	6%	13%
Four and more partners	5%	9%



**Fig. 38.** Business Success of Active Entrepreneurs

In general, my business as a whole favors...



**Fig. 39.** Entrepreneurial Orientation of Student Businesses

### 4.3.3. Potential Successors

Career choice intentions of students may be a consequence of the entrepreneurial environment in their family where the parents have their own business and children develop an idea how to organize their business. Among study participants, about 25% of respondents indicated that at least one of their parents is an entrepreneur, and in most cases — the main business owner. Basic features of family business in Russian and in the international samples are similar: in more than 50% of cases the firm is owned only by parents, in 80-90% of cases — they are managing it at the moment and in around 65% cases — students do not have any personal share of ownership. Approximately 45% of the students already have experience in family business. The main differences between the Russian and international samples is the tenure of the firm and the number of employees. In Russia, the average parents do their business for just around 13 years, and the average indicator for the entire sample is 20 years. The average Russian firm employs more than 280 employees, and the number of employees in international on is twice lower — 136 people.

Distribution of family businesses by industry is presented in Fig. 40. Note that 34% of students in Russia and 24% in the international sample refer to a family business in the trade sector, followed by construction and manufacture (16 and 13%, respectively).

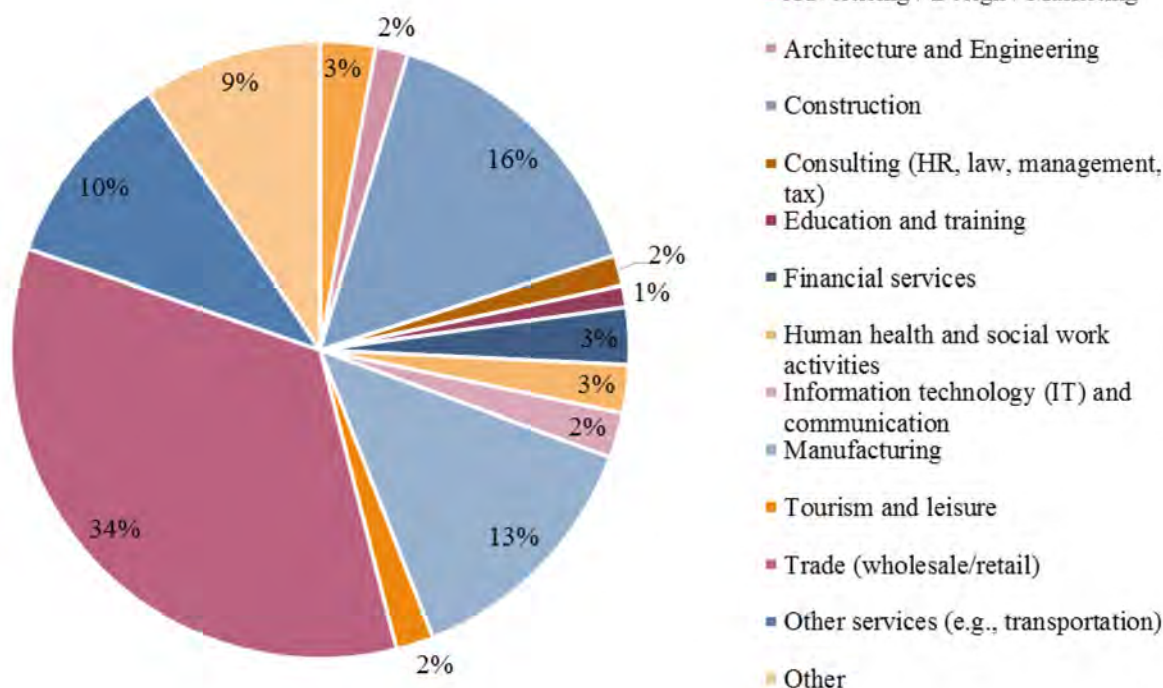


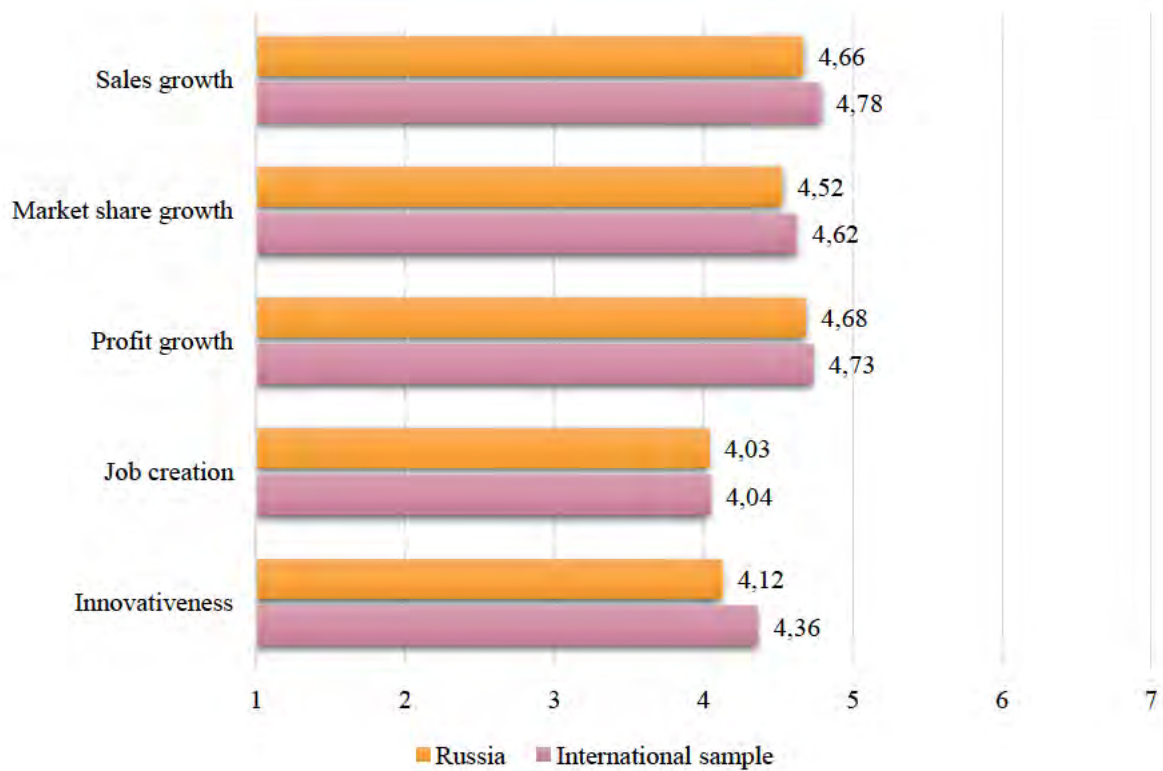
Fig. 40. Family Firm Business Sector

Assessments of the success of the family business were also slightly higher among Russian students (Fig. 41). The closest index between the two groups is job creation, which was estimated slightly above average in both groups.

But how far are the students ready to become the successors of the family business themselves? Despite the fact that, in general, many students associate positive feelings with parents firm, only 8% are willing to devote themselves to the development of the family business (Table 10). This index is comparable to the one in other countries.

Students in Russia are quite neutral in their willingness to invest efforts to become successors, although these figures in the international sample were even lower. On average, the index of “readiness” to become successors among students whose parents are entrepreneurs, is 3 out of 7 in the entire sample, and in Russian one — 3.25.

Nevertheless, the existence of the possibility to succeed gives students a greater sense of confidence. In Russia many of them agree that the prospect of becoming successor carries more advantages than disadvantages, but in the international sample assessment is absolutely neutral, and the lowest level of agreement emerged in relation to the statement: “Among various options, I would rather become a successor in my parents’ firm”. Russian average index is 3.13 out of 7, and in the world — 2.93.



**Fig. 41. Success of Family Business**

*Note: Table presents average values; scale from 1 to 7: 1 — worse, 7 — better.*

*Table 10*

**Attitude to the Career of Successor in Family Business**

	<b>Russia</b>	<b>International sample</b>
Being a successor implies more advantages than disadvantages to me.	4.07	3.57
A career as a successor is attractive for me.	3.45	3.19
If I had the opportunity and resources, I would become a successor in my parents' firm.	3.49	3.17
Being a successor would entail great satisfactions for me.	3.31	3.23
Among various options, I would rather become a successor in my parents' firm.	3.13	2.93

*Note: Table shows average indexes; scale from 1 to 7: 1 — completely disagree, 7 — completely agree.*

## Findings

National report presented the main results of the GUESSS research in 2016, and a comparison of Russia with international sample was done for a variety of characteristics. Many trends appeared to be similar, but a number of features that distinguish the Russian context can be identified. Here are the main findings and revealed differences.

- In the Russian sample, the vast majority of respondents — over 80% — study at undergraduate programs and only slightly more than 8% — at master programs, while at the international sample the share of master students attains 17%. The average age of students is 21 years, in the international sample it reaches 24, which may be associated with the peculiarities of the education system in Russia. Students enter the university at the age of 17–18 years, while in many countries, this threshold is 20–22 years. Most of the survey participants in Russia are trained in “Business and Management” (61.5%) and this figure is almost twice than in the international (34.6%). The reasons for this distribution may be related to the fact that the project coordinator for Russia is the Center for Entrepreneurship of the Graduate School of Management SPbSU, so mostly the invitation to participate in the study was accepted by the universities and faculties in the field of business and economics, having contacts with the Centre. In addition, the invitation to take part in the project was more eagerly accepted by the representatives of economic and business departments at universities, because entrepreneurship is the topic of interest for this particular category of professors and scholars.

- Most of the students in Russia as well as in other countries are planning to be hired immediately after graduation (about 74%), and almost 11% of the students in Russia are ready to create their business from scratch, which is higher by almost 2% than the international index. However, 5 years after graduation the difference in the plans becomes more visible: the number of those wishing to become entrepreneurs among Russian students increases from 11 to 51%, and in the international sample from 9 to 38%. This trend repeats the results of GUESSS 2011 and 2013/2014. One of the explanations is the desire of students to acquire the necessary experience in the existing company, before moving to the organization of their own business.

- However, the career intentions of students say nothing about the readiness of students to entrepreneurship activities. In this regard, an index of entrepreneurial intentions for all countries that participated in the study was calculated. Russia ranks 22nd in terms of the index of entrepreneurial inten-

tions (4.45) out of 50 countries. The first positions on the list are held by Ecuador, Salvador, Panama, Peru, and Mexico. At the end of the list there are countries such as Austria, Germany, Norway, Sweden, and Japan. Such a pattern indicates the presence of certain differences in the development of entrepreneurial aspirations among students from developed and developing economies.

- The study is focused on the factors that can explain the formation of career intentions of students. University environment is one of the key elements in forming entrepreneurial ecosystem. However, in Russia, as well as on average in the entire sample, the degree of implementation of the entrepreneurial component in the curriculum is very low: around 55% of students did not have courses in entrepreneurship. In addition, the role of the learning environment and the corresponding courses in the development of entrepreneurship among students has been evaluated by the latter at relatively low level.

- The presence of parents-entrepreneurs in the family business is often considered as a factor contributing to the development of their children as future entrepreneurs, In Russia, it was found that the percentage of students who are going to become entrepreneurs, is higher if their parents are entrepreneurs as well (57%), in contrast to non-entrepreneurs (49%). In the international sample, the situation is similar.

- As the theoretical model of GUESSS includes social and cultural aspect, it has also been analyzed in details. It turned out that Russian students are more confident in the positive reaction of the inner circle to their anticipated decision to become an entrepreneur. In addition, the study assessed the perception of cultural characteristics of the society in which students live. It was found that the students perceive Russian environment to have a higher level of collectivism, power distance, and performance orientation, as well as a lower level of uncertainty avoidance compared to respondents from the international sample.

- In general, more positive attitude towards entrepreneurship among Russian students than in the entire sample could be noted. Many people believe that the main barrier for their entrepreneurial activities is lack of resources, however, the career of an entrepreneur is attractive to students, and they note that such activities would bring them a greater sense of satisfaction. In addition, Russian students have lower degree of perceived control over their behavior. Moreover, Russian student note that they have a lower level of entrepreneurial self-efficacy in com-

parison to their international counterparts. This highlights the necessity to develop their entrepreneurial competencies and skills.

- In addition to the opportunity of dividing students into 4 career groups there were also questions in the questionnaire to determine who of the students is currently an active or potential employer, and who has a family business. In Russia, the percentage of potential entrepreneurs is slightly higher than in the global sample, and 27% (for the whole sample — 21%). Most (about 65%) studied business and management and plan the actual opening of the company in about 1.5-2 years. Potential entrepreneurs among Russian students are aimed at opening business in the wholesale or retail level, which is almost twice the index from the international sample. It is interesting that many people in Russia are also counting on strong support from the family at the opening of business. Analyzing the actions taken to set a company, it was revealed that many have analyzed the market and tested the idea. Relying on an aggregate index of the steps taken, the index of entrepreneurial activity was compiled, and Russia was ranked 43 with an index of 1.6. However, it should be noted that this index does not exceed 3.55 among all countries.

- The share of active student entrepreneurs in Russia amounted to 8%, slightly lower than in the

international sample. The main motivation of the majority of students is to enact crucial values and the desire to achieve financial success. However, based on the results we can say that Russian students estimate the success of their activities slightly lower than students in all countries in general.

- An important characteristic of a business to be taken into consideration is its entrepreneurial orientation. The results revealed that entrepreneurial orientation of Russian student firms is, on average, lower than in the international sample. At the same time risk taking propensity could be considered as the strongest dimension of entrepreneurial orientation among Russian firms, while in international sample the dominating role is taken by proactiveness.

- Analysis of family businesses showed that the proportion of students from families of entrepreneurs is about 25%. Despite this, only about 8% of Russian and international students think about the career of successor immediately after completion of their studies. It is noteworthy that the attitude to the perspective of becoming successor is quite reserved among the students who have such an opportunity. In Russian sample the rating of such a perspective and willingness to do so is slightly higher — 3.25 (maximum — 7).

## Conclusion

In conclusion, it should be noted that the entrepreneurial intentions of Russian students are higher than on average in the international sample. However, in order to stimulate students for the transition from entrepreneurial intentions to actions, there is a need for full support from the institutional environment. Of particular importance are the initiatives that can be implemented at the university level. The development of the university entrepreneurial infrastructure can be an important factor affecting the emergence of student entrepreneurial intentions and further development of a new enterprise. Thus, the introduction of entrepreneurship courses or the development of educational programs in this area will help to provide students with necessary human capital, i.e., set of knowledge, skills and abilities required in the process of business creation and development. It will also assist in the development of entrepreneurial self-efficacy, i.e., of faith in one self's capabilities and skills. These aspects are extremely important for the development of student entrepreneurship, since they can to a certain extent replace business experience which young students may not possess. Entrepreneurship courses may cover such issues as basics of entrepreneurship, entrepreneurial finance, innovative entrepreneurship, so-

cial entrepreneurship, entrepreneurial marketing, and business planning.

In addition, it is important to develop the overall university institutional entrepreneurial environment. In particular, it includes such initiatives as business plan competitions where students can get constructive feedback from experienced entrepreneurs, organization of university based business incubators, as well as provision of seed funding. The development of mentorship programs implemented by the invited entrepreneurs in the form of meetings, seminars, or practice clubs will form a positive image of an entrepreneur in the eyes of students, as well as contribute to the formation of their social capital. Conducting trainings, seminars with entrepreneurs or venture capitalists, round tables, business games, will also strengthen the students' entrepreneurial spirit.

We strongly believe that it is difficult to overestimate the importance of Global University Entrepreneurial Spirit Students' Survey" (GUESSS) in development of entrepreneurship in the world, as well as in a separate country. Conditions may vary, but the results make it possible to assess the situation and to take measures aimed at creating a more conducive learning environment for the development of entrepreneurial intentions among students.

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