





# Global University Entrepreneurial Spirit Students' Survey

# National report Russia 2018

Shirokova G.V. • Bogatyreva K.A. • Beliaeva T.V. Laskovaia A.K. • Karpinskaia E.O.



St. Petersburg Russia 2019







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# **EXECUTIVE SUMMARY**

The national report GUESSS-Russia is a comprehensive review of the entrepreneurial potential of students from Russian universities. Particular attention is paid to issues of their career choice intentions, attitude towards entrepreneurship, assessment of university and national environment, influence of family on the emergence of entrepreneurial intentions, and features of active entrepreneurs' business.

Based on a survey of more than 2800 students from universities all over Russia, the following trends were identified:

- Immediately after graduation, 74% of students plan to work as employees, 9% of students as entrepreneurs;
- About 50% of students intend to become entrepreneurs in 5 years after graduation that is 15% higher than in the international sample;
- In Russia, the share of potential entrepreneurs (i.e., those who already try to start their own business) corresponds to the international sample and makes up 30% while the share of active entrepreneurs (i.e., those who already run their own business) reaches almost 7%, which is more than 4% lower compared to the international sample;
- 63% of students did not attend any course on entrepreneurship at all which is 17% higher than the rate in the international sample;
- 38% of students plan to start their business alone, which is almost twice higher compared to this indicator in 2016; the share of students who plan to establish a company together with a partner almost has not changed and stands at 31%;
- There are gender differences: the share of those wishing to become entrepreneurs right after the graduation is higher among men (13% versus 7% of women), but 5 years later the gap narrows down (54% versus 49%);
- About 26% of students are from entrepreneurial families, and the proportion of students-future entrepreneurs whose parents (at least one) have their own business, constitutes 58%.
- About 5% of students find entrepreneurial career attractive in terms of the balance of advantages and disadvantages, opportunities and experienced sense of satisfaction.
- In Russia, career as an entrepreneur is assessed by students and people in their environment in a more positive way compared to the international sample.

The Russian report for 2018 contains important results on various aspects of student entrepreneurship development, as well as comparison with the international sample, which may be of interest to a broad audience.

# **INTRODUCTION**

Currently, national governments face a challenge of ensuring sustainable socio-economic development in a complex and unpredictable external environment, which is characterized by accelerating scientific and technological changes, high level of competition among world economies, contradictory processes of globalization and protection of national interests. Stimulating entrepreneurship plays an important role in solving this problem, since it is a source of economic growth, contributes to increasing competitiveness and creating new jobs (Linan et al., 2005).

Particular role is assigned to the development of youth entrepreneurship, since young people, being active, mobile, and ready for changes, are considered to be bearers of the innovative potential of the society, a strategic resource complementing national productive forces. Their entrepreneurial activity solves the problem of bringing the most active social group to the labor market and engaging it in highly potential activity from the perspective economic and social development (Kvedaraite, 2014).

Furthermore, a high level of unemployment among young people remains an important problem to date. It is almost three times higher compared to the rate among adult population and stands at 13% (World Employment and Social Outlook: Trends 2018). Stimulating youth entrepreneurship is designed to solve this problem (Eurofound, 2015). Entrepreneurial activity among young people contributes to their acquisition of practical knowledge and skills that create a solid foundation for their personal and professional development.

At the same time, it should be noted that there is a steady interest in youth entrepreneurship in the world (Åstebro et al., 2012; Bergman et al., 2016). The dynamism of entrepreneurial process, the possibility to achieve greater personal freedom and bright prospects for self-realization make entrepreneurial career attractive to young people. According to Global Entrepreneurship Monitor research results, entrepreneurial intentions for the 18–34 age group are 1.6 times higher than for adult population (Schot, Kew and Cheraghi, 2015), while the share of those who really decide to start entrepreneurial activity is significantly lower. Also, business created by young people is characterized by higher exit rates than business of older entrepreneurs (OECD, 2015).

Thus, youth entrepreneurship development requires implementation of multilateral measures at various levels, including education, industry, and social development. Such measures cannot be established without an understanding of the current state of entrepreneurship among young people. Taking into account that the formation of attitude towards entrepreneurship as a career choice, emergence of entrepreneurial intentions, and their transition into actual behavior is likely to occur during university time (Shirokova et al., 2016), it is important to study entrepreneurial activity among university students. The understanding of the students' entrepreneurial process, their motivation, and 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 students' entrepreneurial intentions, Global University Entrepreneurial Spirit Students' Survey was launched. The focus of this research is not only the process of new venture creation by students, but also broader entrepreneurial context and other students' career intentions.

The main purpose of this report is to present the results of the project for Russia and to compare national data with the international sample, which includes more than 200,000 respondents from 54 countries of the world.

This national report 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.

# **1. RESEARCH FRAMEWORK**

#### 1.1. Main Goals of the Study

International research project Global University Entrepreneurial Spirit Students' Survey (GUESSS) has been held every two years since 2003. It was originally called the ISCE — International Survey on Collegiate Entrepreneurship having been renamed in 2008. Seven international panel studies have been held in 2003, 2004, 2006, 2008, 2011, 2013/2014, 2016, and 2018. 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 2018 the GUESSS Russian team took part in this project for the fourth time. Data collection was carried out from September till December 2018, and students from 14 Russian universities took part in the study. From 16,525 students to whom an invitation to participate in the study was sent, 2,851 people answered the questionnaire, accounting for 17.25% of the respondents. Besides, Russia ranked 20th out of 54 countries by the number of students' responses (Table 1).

Table 1

Nº	Country	Number of responses	№	Country	Number of responses
1	Australia	77	28	Norway	56
2	Austria	1999	29	United Arab Emirates	931
3	Albania	518	30	Pakistan	2389
4	Algeria	979	31	Panama	3564
5	England	465	32	Peru	121
6	Argentina	2691	33	Poland	332
7	Belarus	504	34	Portugal	4178
8	Brazil	20623	35	Republic of Northern Macedonia	398
9	Hungary	9667	36	Russian Federation	2851
10	Germany	10082	37	Saudi Arabia	1641
11	Greece	1157	38	Slovakia	4868
12	Indonesia	1279	39	Slovenia	564
13	Jordan	4564	40	United States of America	64
14	Ireland	1408	41	Sierra Leone	332
15	Spain	33278	42	Turkey	693
16	Italy	7299	43	Ukraine	722
17	Kazakhstan	3425	44	Uruguay	509
18	China	18685	45	Finland	181
19	Columbia	15851	46	France	230
20	Korea	832	47	Czech	1254
21	Kosovo	683	48	Chile	7704
22	Costa Rica	7359	49	Switzerland	9784
23	Lebanon	40	50	Ecuador	3702
24	Lithuania	1059	51	Salvador	641

#### Countries Participating in GUESSS 2018

/

25	Liechtenstein	338	52	Estonia	1303
26	Mexico	5173	53	South Africa	3515
27	New Zealand	1924	54	Japan	4150
				Total	208636

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 creation of new businesses and entrepreneurial career choice;
- study of the university infrastructure's role 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, because 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 new ventures creation, 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, that 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 the GUESSS project is *the Theory of Planned Behavior* (Ajzen, 2002; Fishbein, Ajzen, 1975), according to which any behavior reflects the influence of three groups of factors related to attitude towards 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 particular context.

Theoretical model of GUESSS has been slightly extended, because it is assumed that besides the abovementioned groups of factors the formation of students' entrepreneurial intentions is also 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.

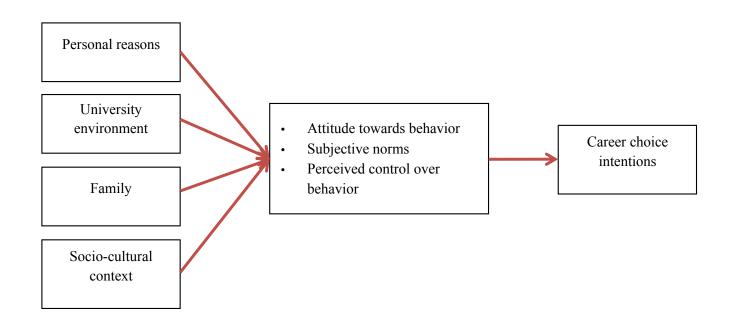


Fig. 1. Theoretical model of the GUESSS project

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

1) analysis of *individual characteristics of students* and their impact on students' entrepreneurial intentions. Age, gender and education can influence the development of entrepreneurial intentions and desire to create their own business. The analysis of characteristics of companies set by students can serve as a basis for new research models development in the entrepreneurship study.

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

among students: existence of entrepreneurship courses, general business climate in a 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 entrepreneurial career and attitude within families and communities to such perspective.

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

#### **1.3. Project Coordination**

The GUESSS project was founded by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen in 2003. Since 2016, at the international level the project is jointly coordinated by the University of St. Gallen and the University of Bern. Project coordinators are responsible for the search of national representatives in the participating countries, as well as for writing 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 representatives of the country (team); the third level — partner universities.

The organizational structure of the project is presented in Fig. 2.

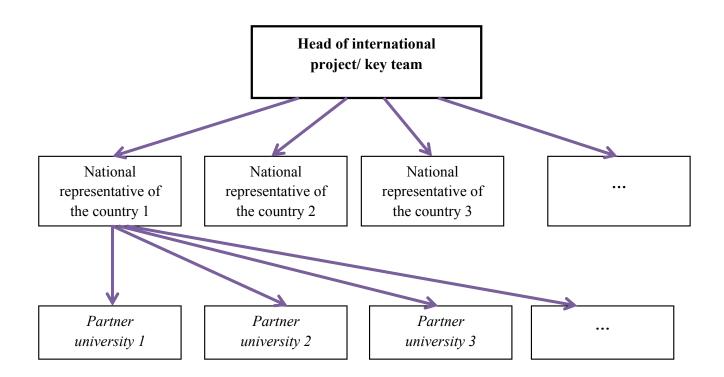


Fig. 2. Organizational structure of the GUESSS project 2018

National representatives are engaged in the search and involvement of higher education institutions in the country to participate in the project, communicate with university representatives, send information on interim results of the study, and are responsible for creating a national report on the entrepreneurial intentions of students. Data is collected through online survey.

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

— universities can get a database with 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 university role in this context; moreover, they have an opportunity to evaluate the effectiveness and quality of university programs in the entrepreneurship context; — 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 has been collected since 2003, and since 2004 — every two years, there is already a panel dataset that allows to track the dynamics on individual factors over the time. International report contains comparative data on students' entrepreneurial intentions and activity from different countries. National reports provide an opportunity to see and analyze a national context, as well as individual characteristics of students of a country. Furthermore, the analysis of a national context provides insight to what factors contribute to the development of students' entrepreneurial spirit versus to those that fetter it. Through periodic data collection, its analysis and comparison over time, conclusions can be made about what should be done to improve the entrepreneurial climate in a country.

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

The entrepreneurship development is an important challenge for Russian economy in order to increase competitiveness as well as to ensure sustainable economic growth and development of the country. According to the latest Global Entrepreneurship Monitoring report (Global Entrepreneurship Monitor 2018), the number of early entrepreneurs in Russia accounts for 5.55% of the adult working-age population that is 0.77% lower in comparison with 2016, but 0.86% higher compared to the crisis year of 2014.

It is worth noting that the level of entrepreneurial activity in Russia is lower than in other BRICS countries. In addition, the share of necessity-driven entrepreneurs remains high in Russia: 39.9% of respondents created their business because they could not find alternative sources of income. Among the respondents, only 22.81% see entrepreneurial opportunities in the external environment for creating their own business, which is slightly higher than in 2016 (17.88%). At the same time, more than 40% of respondents say that fear of failure stops them from starting their own business.

Conditions within a country can be one of the reasons for the low contribution of entrepreneurial activity to national competitiveness and economic growth. Russian environment is characterized by the inferior level of institutions development related to new business creation and property rights protection, which are specially important for entrepreneurship development.

According to the Doing Business report (Doing Business 2018), Russia ranks 31 (out of 190 countries) on the ease of doing business, rising for 9 positions compared to 2017. In the Global Competitiveness Report (Global Competitiveness Report 2018) published by World Economic Forum, Russia ranks 72 (out of 140 countries) on the level of institutional development and shows an improvement over the previous year. The greatest difficulties in the process of business creation and development are associated with international trade, securing minority investors, resolving insolvency, taxation and obtaining construction permits (Doing Business 2018). Protecting investors' rights is crucial for young entrepreneurial firms, since this is directly related to their ability to attract the capital needed for growth, innovation, diversification of activities and development of competitive advantages.

Fostering activity of innovative firms is one of the priorities for the development of Russian economy. The Global Competitiveness Report — 2018 notes that Russia ranks 36 in terms of innovative capabilities and improves its position in comparison with the previous year. Infrastructure investments for innovation, cooperation of universities and firms in the field of research and development, legal protection of intellectual property, willingness of firms to finance research activity — all these areas receive increasing attention, and this work requires further active development.

Positive trends should be highlighted in the development of Russian business. Among them, there is a large and actively growing consumer market. According to the Global Competitiveness Report — 2018, Russia ranks 6 in terms of market size, which can contribute to the development of entrepreneurship in the country. In addition, it is worth noting that Russian population is characterized by entrepreneurial potential.

The majority of Russian people (68%) highly appreciate the status and attractiveness of entrepreneurial career (Global Entrepreneurship Monitor 2018), which reflects public opinion about entrepreneurship as an attractive choice of an individual. According to the Amway Global Entrepreneurship Report — (Global Entrepreneurship Report — 2018), 39% of those surveyed in Russia consider creating business as a career opportunity they want. In general, society is friendly towards entrepreneurial activity, which is reflected in the media and public opinion. Business incubators, thematic industrial parks, business communities, mentoring programs, and other forms of entrepreneurship support are developing in Russia, which is beneficial to business development.

The main activities for improving environment for the entrepreneurship development includes the simplification of procedures for creating and running a business, as well as interaction with regulators. Thus, the question of what would be most useful for creating one's own business, 20% of respondents indicated support in finance attraction and 15% noted support in corporate finance, taxes and regulatory documents (Global Entrepreneurship Report — 2018).

Studying the conditions for entrepreneurship development in Russia, it should not be overlooked that there are significant differences among regions.

It highlights that fostering entrepreneurship needs the development and implementation of policies tailored to the specificity of certain regions.

In addition, an important role in entrepreneurship development is given to entrepreneurship education. The development and implementation of special training programs in entrepreneurship is one of the main factors that may foster entrepreneurship in Russia. In the Russian context entrepreneurship education 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 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 Global University Entrepreneurial Spirit Students' Survey (GUESSS) in 2018 took place in 54 countries. For this purpose, online questionnaire was developed, and each participating country had the right to translate it into its language. In Russia, the participants had access to the questionnaire in Russian. Filling out the questionnaire took about 10–15 minutes.

Graduate School of Management St. Petersburg State University (GSOM SPbU) is a national partner of the project. The research team of GSOM SPbU 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 September to December 2018.

Official contacts of GSOM SPbU and the Center for Entrepreneurship of GSOM SPbU as well as personal contacts of researchers were used for data collection. During this period, interim results of data collection were sent to representatives of universities with a view to intensify efforts to attract students.

## 3.2. Universities — Project Participants in Russia

The sample included students from 14 universities of Russia. From 16,525 students to whom an invitation to participate in the study was sent, 2,851 people answered the questionnaire, equaling to 17.25% of the respondents.

The total sample study for all countries was 208,636 people.

The distribution of respondents by Russian institutions of higher education is presented in Table 2.

## Distribution of Respondents by Universities in Russia

No.	List of Partner Universities	City	Number of Stu- dents Who An- swered the Ques- tionnaire	% of the Total Sample
1	Voronezh State University	Voronezh	93	3.3
2	Far Eastern Federal University	Vladivostok	760	26.7
3	Kazan National Research Technical University named after Tupolev	Kazan	25	0.9
4	National Research Tomsk State University	Tomsk	234	8.2
5	National Research University Higher School of Eco- nomics. Perm	Perm	52	1.8
6	Novosibirsk State University	Novosibirsk	64	2.2
7	Perm National Research Polytechnic University	Perm	14	0.5
8	Rostov State University of Economics	Rostov-on-Don	586	20.6
9	Samara State University of Economics	Samara	42	1.5
10	St. Petersburg University	Saint- Petersburg	252	8.8
11	ITMO University	Saint- Petersburg	98	3.4
12	Peter the Great St. Petersburg Polytechnic Univer- sity	Saint- Petersburg	9	0.3
13	St. Petersburg University of Management Technolo- gies and Economics	Saint- Petersburg	384	13.5
14	The Ural Federal University named after the first President of Russia B.N. Yeltsin	Yekaterinburg	191	6.7
15	Other universities*		47	1.6
	Total		2851	100

*Note:* \*University is not specified.

#### 3.3. Sample Profile

The overwhelming majority of respondents in Russia were undergraduate students (85.39%), 12.75% of respondents were enrolled in graduate (master) programs and 1.86% were students from the other programs. In the international sample, there is almost the same share of master students, a slightly lower rate of undergraduate students and a higher rate of students from other programs, which is clearly shown in Fig. 3.

students, of whom: 60.00% — undergraduate students, 36.67% — master students, and 3.33% — students from other programs.

The average age of respondents in Russia is 20, which is three years younger than the average age of all international participants. It is worth noting that the share of students under 24 is nearly 73% in the international sample while in Russia it is more than 95%, that constitutes the majority (Fig. 4).

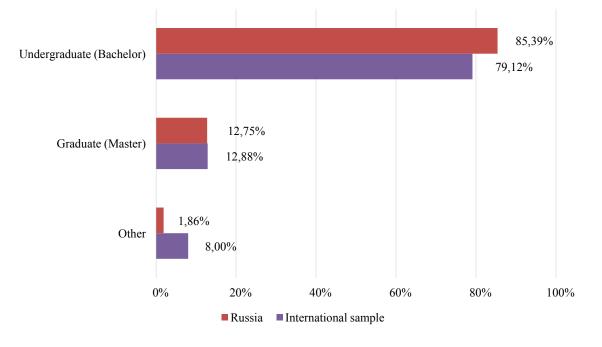


Fig. 3. Students Level of Studies

Note: \* The "Other" category includes MBA, postgraduate and other students.

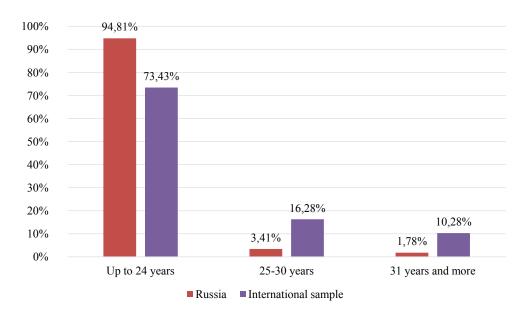


Fig. 4. Students Age

In Russian sample, 60 people (2.10%) are exchange

Gender composition of Russian students is presented in the following ratio: 69.5% of women and 30.5% of men. In the international sample the share of women also dominates, reaching to 54.57%. While answering one of the questions, the students 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.

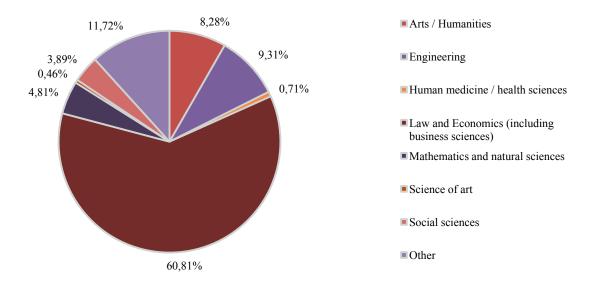


Fig. 5. Distribution of Russian Students by Field of Studies

All fields of studies were roughly divided into 4 groups: economics and management, natural sciences, social sciences, and other areas (Table 3). Among survey respondents in Russia most (60.8%) of students study economics and management, 14.8% natural sciences, 12.6% — social sciences, and 11,7% indicated the "other". To compare, on a global scale 34.0% of students study economics and management, natural sciences — 39.3%, social sciences — 19.0%, and 7.7% indicated the other. It should be mentioned that both in 2016 and 2018 the share of students studying economics and management in Russian sample is twice more than for all other countries. This is primarily due to the fact that professors in economics and management showed interest in the project in Russian universities.

Table 3

			2016	2018	
Field of Studies	Disciplines included	Russia,%	International sample,%	Russia,%	International sample,%
Economics and management	Law and economics (including business and management)	60.7	31.8	60.8	34.0
Natural sciences	Engineering (incl. computer sciences and architecture). human medicine/ health sciences. mathematics and natural sciences	22.3	39.2	14.8	39.3

#### Distribution of Respondents by Field of Studies: 2016 and 2018

			2016	2018		
Field of Studies	Disciplines included	Russia,%	International sample,%	Russia,%	International sample,%	
Social sciences	Culture. humanities (e.g linguistics. cultural stud- ies. philosophy). social sciences (e.g psycho- logy. political science)	9.2	16.7	12.6	19.0	
Other sciences	Science of art and other sciences		12.3	11.7	7.7	

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 opt for economics and management or social sciences. Finally, about 65% of Russian respondents started their studies in 2017 or earlier. Accordingly, 35% of the participants entered university in 2018/2019, and they were first year students at the time of the survey.

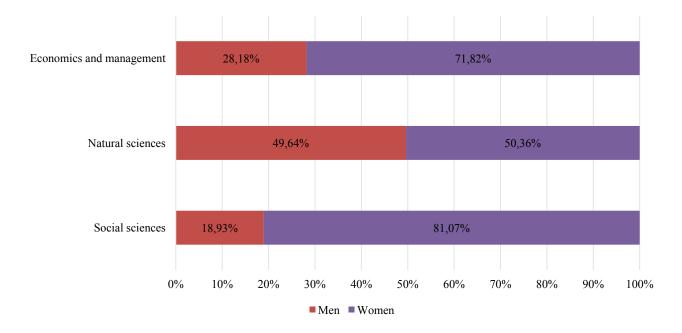


Fig. 6. Gender Composition and Field of Studies in Russian Sample

# 4. MAIN RESULTS OF THE STUDY

#### 4.1. Career Choice Intentions

Choosing a career path is one of the most crucial 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 in a huge international company immediately after graduation to gain experience and establish themselves as a good specialist. But many students may have different ideas about their career development in 5 years. That is why in the study participants were asked to answer two questions: which career path do they intend to pursue right after the graduation and after 5 years? 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 by 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%), which almost coincides with the answers from the international sample (79%). Many students would prefer to work in large companies or medium-sized firms. Only

about 14% of Russian respondents are ready to work in small firms with up to 50 employees. 9% of students want to create their own business from scratch right after their graduation, which is the same as the world average. The career successor of the existing family business is determined by 4.60% of respondents in Russia, and in the international sample the percentage is even less — 2.50%. Undecided with career plans in Russia is 12.40%, which is slightly higher than the international rate.

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 (50.40%) want to found their own company, i.e. become entrepreneurs, and in the international sample the figure equals to 34.70%. The number of students willing to work for wages in Russia is reduced by more than two times to 30.20%, while globally this rate drops to only 50.40%. The percentage of students wishing to become successors in 5 years after graduation increases up to 6.10% in Russia and 4.30% in the world. The level of undecided becomes approximately the same: around 13.30% in the Russia and 10.60% in the international sample (see Fig. 7).

Table 4

		Rus	sia	International sample		
	reer will you choose right after n and 5 years after graduation?	Right after graduation,%	Five years after gradua- tion,%	Right after graduation,%	Five years after gradua- tion,%	
An employ	yee	74.00%	30.20%	79.00%	50.40%	
1	in a small business (1–49 em- ployees)	14.00%	1.70%	14.10%	3.80%	
2	in a medium-sized business (50–249 employees)	22.80%	3.70%	18.40%	6.70%	
3	in a large business (250 or more employees)	24.90%	17.80%	22.60%	16.60%	
4	in a non-profit organization	3.10%	1.80%	3.10%	3.10%	
5	in Academia (academic career path)	6.20%	3.40%	9.30%	8.90%	
6	in public service	3.00%	1.80%	11.50%	11.30%	

#### Career Choice Intentions: Russian and International Sample Comparison

What career will you choose right after		Rus	sia	International sample		
	on and 5 years after graduation?	Right after graduation,%	Five years after gradua- tion,%	Right after graduation,%	Five years after gradua- tion,%	
A founder	r (entrepreneur)	9.00%	50.40%	9.00%	34.70%	
7	working in my own business	9.00%	50.40%	9.00%	34.70%	
A successo	A successor		6.10%	2.50%	4.30%	
8	in my parents'/family's busi- ness	3.00%	2.20%	1.80%	2.10%	
9in another business		1.60%	3.90%	0.70%	2.20%	
Other / Do	o not know yet	12.40%	13.30%	9.50%	10.60%	

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 9% to 50.40%, which may indicate of positive attitude of Russian students towards entrepreneurial career.

GUESSS data allows 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, natural and social sciences is closely the same: the majority (over 71%) see themselves as employees, which represents 85% in natural sciences. 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 (42% and 39%), and the lowest — economics and management (25%), as in this case 56% see themselves as entrepreneurs (Fig. 10).

In recent years, there has been a growing interest among researchers to gender issues of the entrepreneurship. Fig. 11 shows that at almost 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 (13% vs. 7%), while among women the percent of those who are set to a career of an employee is higher (76% vs. 69%).

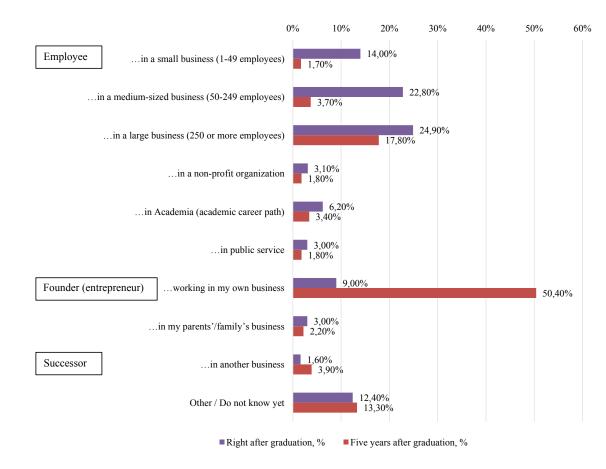


Fig. 7. Changes in Career Choice Intentions among Russian Students

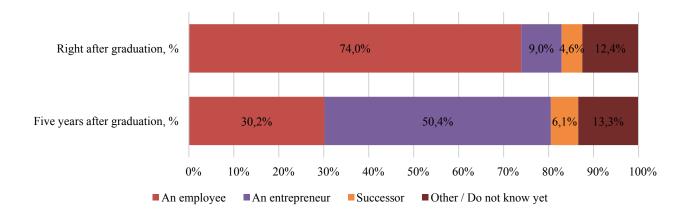


Fig. 8. Career Choice Intentions in Groups of Russian Students

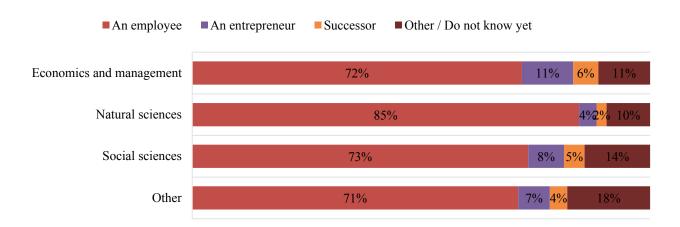


Fig. 9. Career Choice Intentions of Russian Students Right after Graduation and their Specialization

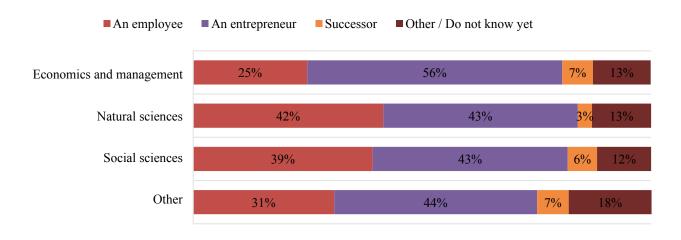


Fig. 10. Career Choice Intentions of Russian Students Right after Graduation and Gender Composition

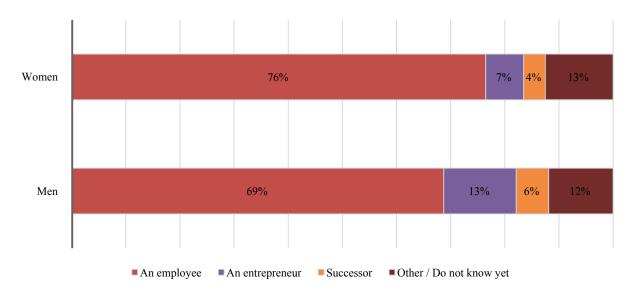


Fig. 11. Career Choice Intentions of Russian Students Right after Graduation and Gender Composition

Five years after completion of their studies, students' career choice intentions change (Fig. 12). Only about 27% of men and 33% of women see themselves as employees, while the percentage of potential entrepreneurs among both gender groups increases up to 54% and 49%, respectively.

As Russia was involved in previous GUESSS projects, it is important to understand how career choice

intentions of students changed since the last survey. Table 5 shows comparative figures for 2016 and 2018, which allows tracking the dynamics of career preferences among students. It should be noted that the proportion of students considering a career as an entrepreneur 5 years after graduation has declined slightly in Russia (by 0.9%) and slightly more in the international sample (by 3.1%).

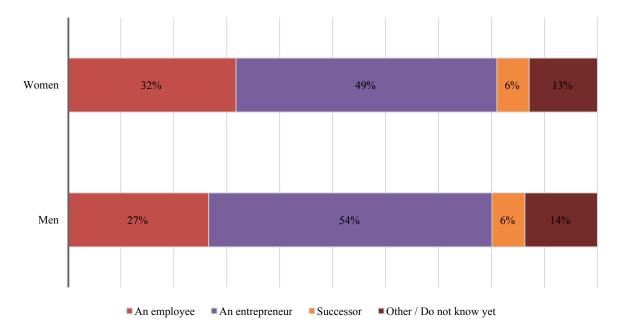


Fig. 12. Career Choice Intentions of Russian Students Five Years after Graduation and Gender Composition

		Rus	ssia		International sample			
-	2016	2016	2018	2018	2016	2016	2018	2018
Career choice intentions	Right after gradua- tion,%	5 years after gradua- tion,%						
Employee	74	32.1	74	30.2	80.5	47.2	79	50.4
Founder (entrepreneur)	10.7	51.3	9	50.4	8.8	37.8	9	34.7
Successor	4.3	4.5	4.6	6.1	2.6	4.8	2.5	4.3
Other / Do not know yet	11	12.1	12.4	13.3	8.1	10.2	9.5	10.6

Career Choice Intentions: Comparison of Russian and International Sample for 2016 and 2018

#### 4.2. Drivers of Entrepreneurial Intentions

#### **4.2.1.** Entrepreneurial Intentions

Since entrepreneurial intentions are a key stage of the entrepreneurial process and stimulate the involvement of individuals in business creation and development (Shirokova et al., 2016; Bogatyreva et al., 2019), within the framework of the GUESSS project, attention is paid to the assessment of students' entrepreneurial intentions as well as its driving factors. Intentions are a cognitive state that forms the desire of a person to achieve a specific goal (Bird, 1988). Evaluation of the entrepreneurial intentions level allows us to characterize students' "entrepreneurial spirit" and their potential readiness to create their own business.

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. Such an approach is justified (Zellweger et al., 2011), since otherwise it is difficult to identify those who think about an entrepreneurial career, but consider it as a "plan B".

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 (Sierra Leone, Panama, Ecuador, Peru, and Colombia), and the lowest — for developed economies (Japan, Switzerland, and Germany). Russia is ranked 29 (out of 50 countries) in the index of students' entrepreneurial intentions. In Russia, the index equals to 4.1, which almost corresponds to the average of the sample, but slightly lower than the index in 2016 (4.45). The highest index of entrepreneurial intentions is typical for students studying economics and management — it is 4.4, and the lowest (3.3) is for natural sciences (Fig. 14).

Considering gender differences, a general trend can be noted: the entrepreneurial intention index is on average lower among female students (Fig. 15). This result is consistent with a global trend: entrepreneurial intentions and their transformation into active entrepreneurial actions are more typical for men than women (Henley, 2007; Shirokova, et al., 2016).

Sierra Leone	5,87
Panama	5,87
Ecuador	5,77
Peru	5,61
Colombia	5,61
Salvador	5,52
Indonesia	5,38
China	5,19
Costa Rica	5,13
Pakistan	4,94
Mexico	4,9
Kosovo	4,9
Republic of Northern Macedonia	4,82
Argentina	4,76
Kazakhstan	4,69
Chile	4,69
Jordan	4,64
Uruguay	4,53
United Arab Emirates	4,49
Ukraine	4,48
Albania	4,48
Lebanon	4,45
Saudi Arabia	4,4
South Africa	4,24
Australia	4,12
Russia	4,1
Belarus	3,97
Lithuania	3,93
Liechtenstein	3,88
Brazil	3,88
Ireland	3,85
Italy	3,81
Portugal	3,7
Greece	3,68
Slovenia	3,64
Slovakia	3,61
USA	3,55
Norway	3,54
Turkey	3,53
France	3,52
Spain	3,51
Algeria	3,48
Estonia	3,44
Hungary	3,3
Poland	3,27
England	3,21
New Zealand	3,16
Czech	3,08
Finland	3,03
Austria	2,95
Korea	2,88
Germany	2,78
Switzerland	2,77
Japan	2,23

Fig. 13. Entrepreneurial Intentions Index by Country

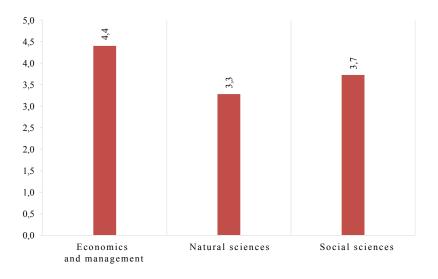


Fig. 14. Entrepreneurial Intentions of Russian Students and their Specialization

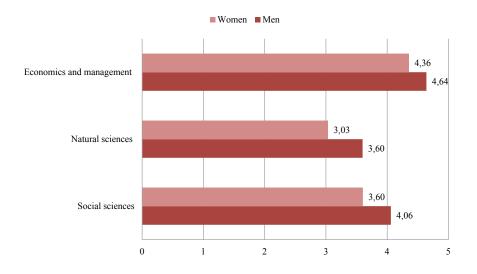


Fig. 15. Entrepreneurial Intentions of Russian Students and Gender Composition

#### 4.2.2. 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 the GUESSS study in 2018, is going to become an entrepreneur in 5 years after graduation, but only 9% are ready to start their own business right after graduation. This may indicate that students see the need to gain work experience as an employee before moving on to create their own business. Thus, the entrepreneurial potential of students turns out to be "deferred" for some time, which can lead to a certain "gap" between intentions and actions. 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 ready to take risks associated with

entrepreneurial activity. Second, education institutions, in which students study, do not always take into account the need to develop entrepreneurial skills. In this regard, the GUESSS project is focused on the role of university, since the 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, 63% of students did not have courses on entrepreneurship at all, although the rest had at least one course as elective. Around 6% of students study in a specific program on entrepreneurship. It should be noted that the data obtained in Russia demonstrates a lower

involvement of universities in the process of creating and introducing disciplines and programs on entrepreneurship in the educational process in comparison with the international sample.

As part of the GUESSS survey, students were also asked to evaluate how the university atmosphere as a whole supports and develops students' entrepreneurial spirit. Everyone is familiar with vivid examples of Stanford University, Harvard University, and Massachusetts Institute of Technology that managed to create sustainable entrepreneurial environment. University environment can contribute to the development of students' entrepreneurial potential, but this is typical only for few universities that take into account this trend when organizing 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 university entrepreneurial environment was calculated. The lowest rate was among the students studying natural sciences, and the greatest among those in economics and management (Fig. 17). The average indicator in the international sample is 4.43, which is slightly lower than the index of university entrepreneurial environment in Russia, which stands at 4.51.

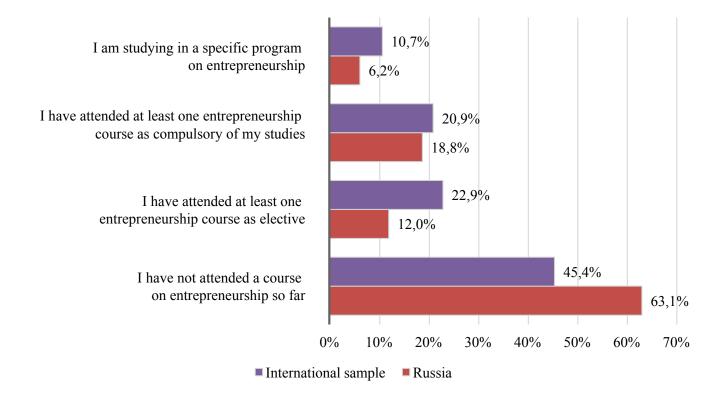


Fig. 16. Entrepreneurship Programs and Courses at the University

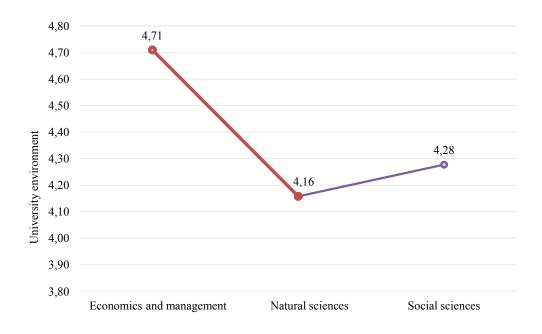


Fig. 17. University Environment and Specialization of Russian Students

Fig. 18 shows a comparison of indicators of the university entrepreneurial environment perceived by Russian students in four groups of career choice intentions. As in 2016, the index of the university entrepreneurial environment is estimated almost equally by potential entrepreneurs who are going to start their business immediately after graduation, and those who plan to work as employees. However, among students who want to become entrepreneurs in 5 years, the average index of environmental estimation is again significantly higher, which reveals rather contradictory trends.

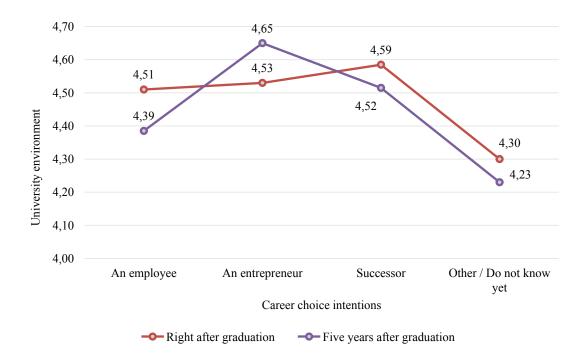


Fig. 18. University Environment and Career Choice Intentions of Russian Students

In the GUESSS project, we are interested not only in the availability of entrepreneurship courses and assessment of business climate at the university, but also in how attended courses and offerings contribute to the development of entrepreneurial activity. Similarly to the university environment assessment, an aggregated indicator was established to assess the role of education based on 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 4.36 in the international sample, while in Russia — 4.33. The highest index was among students trained in economics 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 education role is higher for those students who plan to become entrepreneurs right or 5 years after completion of their studies. It may be due to the established notion of the future career and understanding of what knowledge they need to get at the university for this purpose (Fig. 20). However, on the whole, this figure for all categories is in the range from 4.04 to 4.46, indicating a fairly moderate evaluation of the learning component in the development of important entrepreneurial skills. It is also important 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 and deepened their understanding regarding the motivation and values of entrepreneurs. Those students who intend to create their own business also note that studies improved their ability to identify business opportunities.

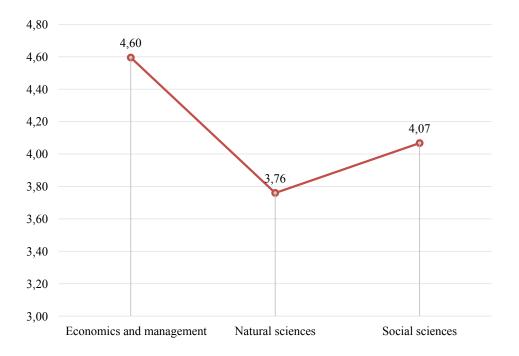


Fig. 19. Entrepreneurial learning at the University and Specialization of Russian Students

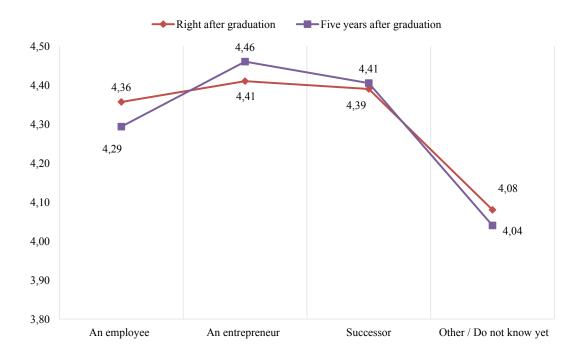


Fig. 20. Entrepreneurial learning at the University and Career Choice Intentions of Russian Students

#### 4.2.3. Family

In the academic world the debate about how parents' professional orientation influences the formation of their children's career intentions does not stop. In general, the studies usually prove the fact that, if 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%), the activity of parents is not related to entrepreneurship. In Russia, 6% of students have both parents as entrepreneurs, which is half of the overall index for the international sample that stands at 12.3%.

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 (58%), compared to non-entrepreneurs (48%). Similar results are found in case of a successor career intention. In the international sample, the picture is slightly different: among entrepreneurial families 39% of the students see themselves as founders of their own businesses, and in non-entrepreneurial families the percentage of those who wish drops to 32%.

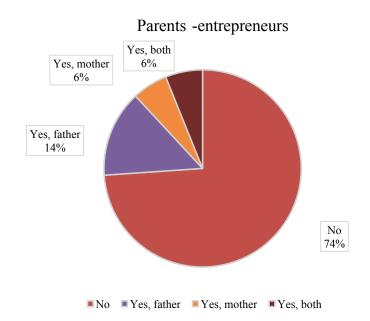


Fig. 21. Parents-entrepreneurs in Families of Russian Students

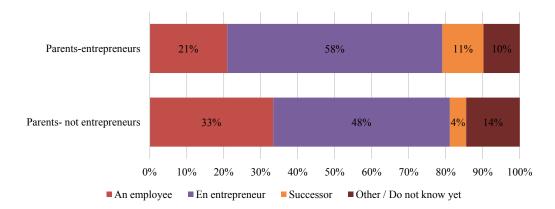


Fig. 22. Parents-entrepreneurs and Career Choice Intentions of Russian Students Five Years after Graduation

#### 4.2.4. Social and Cultural Context

Most scholars agree that the process of decisionmaking is closely linked with the social and cultural context of an individual. Consequently, socio-cultural factors may have a certain influence on the formation of students' entrepreneurial intentions. The 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), one can estimate the expected response of one's relatives to the chosen career path. This theory assumes that the more positive are the expectations regarding the reaction of people in the environment to certain actions, the more likely planned activities will be implemented.

In the questionnaire, students were asked how people in their environment (family, friends and fellow students) would react, if they pursued 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). According to the presented results, it is clear that students expect a positive reaction from their environment if they choose an entrepreneurial career, and the average for all three questions is slightly higher among Russian students equaling to 5.74, (compared to 5.56 for 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	5.84	5.61
Friends	5.89	5.67
Fellow students	5.48	5.40
Index*	5.74	5.56

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 of studying the influence of the socio-cultural context on the entrepreneurial intentions of students is national culture. National culture can play a prominent role in shaping readiness to engage in entrepreneurial activity among young people, since the norms and values shared in society can indirectly affect students' perceptions of various career choices. In 2018, the GUESSS project estimated the effect of such a parameter of the national culture as power distance (House et al., 2004). Power distance characterizes the degree of tolerance of individuals to uneven distribution of power in society. In societies with a significant power distance, individuals often face unequal distribution of resources and chances for success, which impede the formation of readiness to the entrepreneurial activities.

In the GUESSS project power distance was analyzed based on an assessment on the degree of agreement with a number of 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". Then, based on the arithmetic mean of the respondents' responses, the aggregate indexes characterizing their perception of power distance were calculated. Fig. 23 shows the index for Russia in comparison with the international sample.

It is interesting to note that in the previous waves of GUESSS research, Russian respondents gave a higher estimate of the power distance level in the society compared to the average for all the participating countries. However, in 2018 the situation changed: the estimate of the power distance in Russia was 3.74, while in the international sample this indicator was 4.36.

This result may have two potential explanations. First, this indicator could have been influenced by the sampling structure in 2018. In particular, a record high number of students from countries with a traditionally large perceived power distance (for example, China, Brazil, Colombia) took part in this data collection wave. Second, such a result may indicate the beginning of a shift in the perception of social hierarchy degree among Russian young people, which, of course, in the future may positively influence development of entrepreneurship in the country.

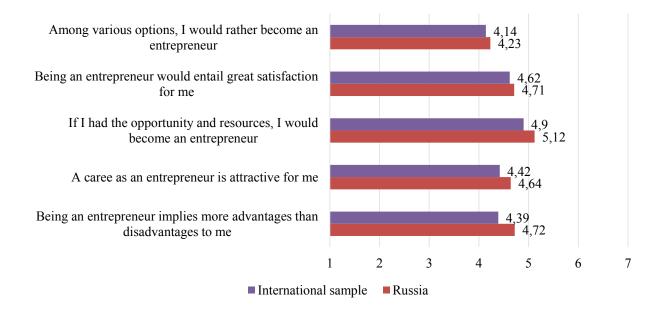
# Power distance

Fig. 23. Subjective Assessment of the Power Distance 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 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 everyone is ready for responsibility and independent decision-making, some people feel more comfortable as employees, which is confirmed by the results of GUESSS research. 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.* 

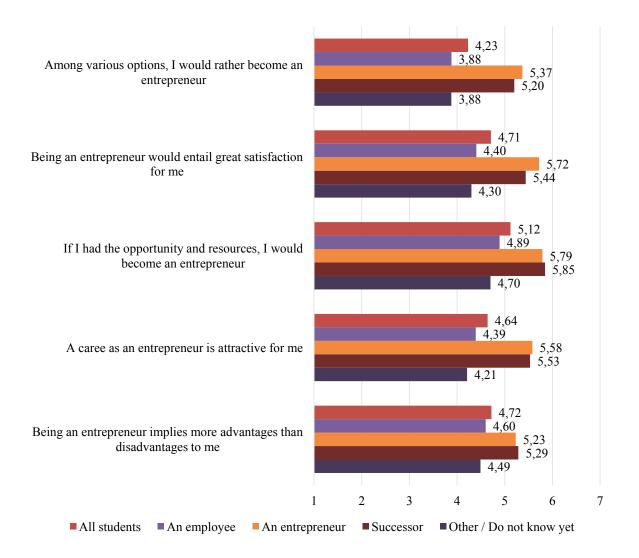


Fig. 25. Attitude towards Entrepreneurship and Career Choice Intentions of Russian Students Right after Graduation

#### *Note: Figure shows average indexes; scale from 1 to7: 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 an entrepreneur to be attractive for themselves. In the Russian subsample of students who intend to become employees, there is a more positive attitude towards a career of an entrepreneur compared with the international sample, but they believe that they do not have sufficient resources to start a business.

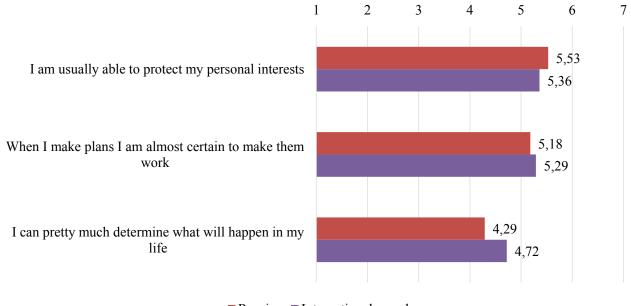
4.2.6. Locus of Control

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 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. 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.

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 statement

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.



Russia International sample

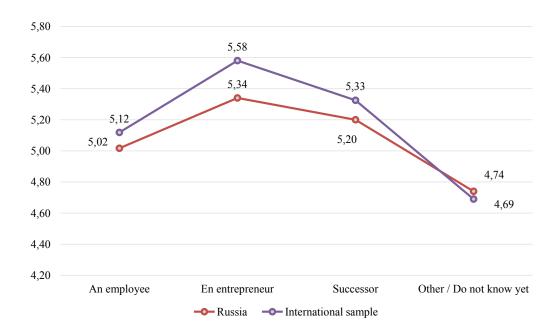
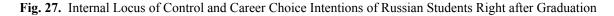


Fig. 26. Internal Locus of Control



#### 4.2.7. Start-up experience

The formation of entrepreneurial intentions is largely determined by presence of specific competencies required for creating 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 tasks important for entrepreneurship can increase the chances of a student choosing an entrepreneurial career.

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", "Successfully 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 to employees.

Based on 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 (4.39) is lower than in the international sample (4.47).

The results emphasize the need to develop students' entrepreneurial competences and skills, which can be largely achieved through entrepreneurship education at university.

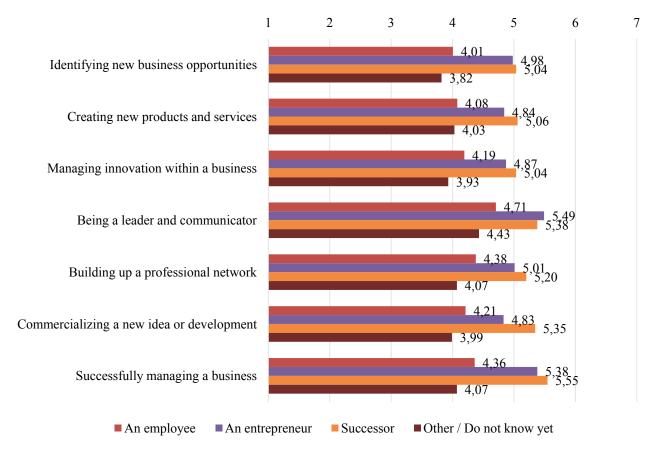


Fig. 28. Competences and Career Choice Intentions of Russian Students Right after Graduation

#### 4.2.8. Start-up Experience

Another factor influencing the formation of students' entrepreneurial intention is related to working experience as an employee in a start-up, that is, a company that was created over the past 5 years. Acquisition of work experience in a young venture, in which a student is not an owner, can give a necessary insight into internal processes of work in an entrepreneurial firm. This becomes especially useful for students who intend to create their own start-up in the future.

Among the surveyed Russian students, about 22% have experience of work in a start-up. In the international sample, this rate is slightly higher and amounts to about 27% (Fig. 29). Also, among students who have work experience in a start-up, the share of both potential entrepreneurs and entrepreneurs is higher than among those who have no such experience (Sieger et al., 2019).

Does the presence/absence of work experience in a start-up affect the career choice intentions of Russian students? The analysis shows that such an experience does not have a strong influence on the general trend in the students' career preferences, which is an increase in the number of students who intend to become entrepreneurs in 5 years after graduation. However, the percentage of students considering a potential career as an entrepreneur or family business successor is higher among students with experience of work in a start-up (Fig. 30). Thus, of all students who have work experience in a firm created over the past 5 years, 68% are willing to become entrepreneurs and successors. Whereas among students with no such experience, only 53% plan to become entrepreneurs and successors 5 years after graduation.

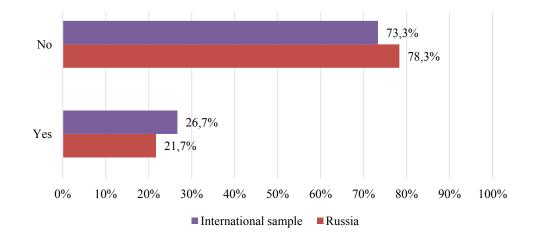


Fig. 29. Working Experience in a Start-up

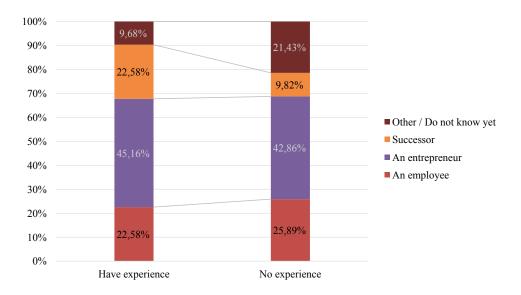


Fig. 30. Start-Up Work Experience and Career Choice Intentions of Russian Students Five Years after Graduation

#### 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 studies. It should be noted that the percentage of potential entrepreneurs among students in Russia is almost the same as in the international sample (Fig. 31) and equals to 30%. However, the percentage of active entrepreneurs is quite low, both in Russia and in the international sample: only about 7% of students in Russia founded their business during their studies at the university (11.2% - in the international sample).

In order to study better students' entrepreneurial intentions, GUESSS pays special attention not only to potential and active entrepreneurs, but also to those who have a family business — this category includes students whose parents (or one of them) are entrepreneurs and / or main business owners. Below there is a more detailed description of these three categories.

#### 4.3.1. Potential Entrepreneurs

In this part of the report, the analysis covers the responses of students who are about to start their own business. In the total sample their number reaches 64,078 people, equivalent to 30.70% of the total sample, and in Russian one — 858 people, or 30.10%.

The average age of potential entrepreneurs in all countries is 29 years, while in Russia — 21 years. The most significant difference is seen in the percentage of students under the age of 24 years: while in Russia this category consists of 95% of the respondents, in the international sample this rate reaches 73%. At the same time, the majority of students (about 55%) have parents who are not entrepreneurs, so the presence or absence of

entrepreneurs in the family is not the most crucial factor in choosing a career. Most of the potential entrepreneurs study economics and management (Fig. 32).

To examine this category of students in more detail let us turn to gender differences (Fig. 33). Among students studying economics and management and social sciences, most are women (57% and 72%), and in the natural sciences greater interest in entrepreneurship is shown by men (60%).

In Russia, 40% of students believe that they can open their own company in 1.5-2 years, and about 27% — in the next 1-6 months. On average, for the whole sample, start of own business is planned no earlier than in 1 year (Fig. 34).

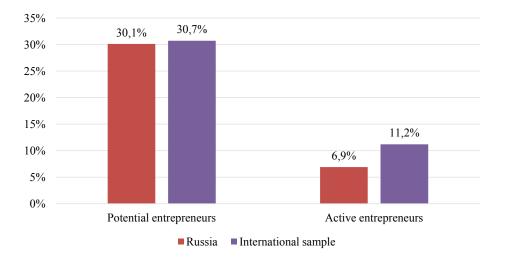


Fig. 31. Start of Own Business during Studies at the University

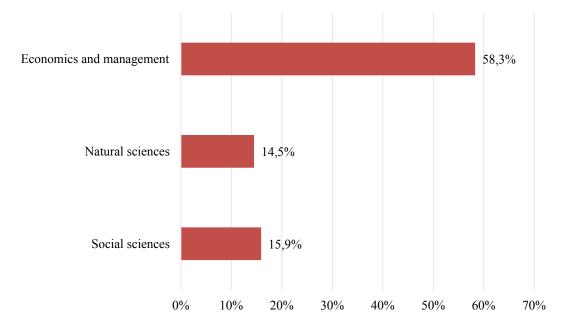


Fig. 32. Potential Entrepreneurs among Russian Students and their Field of Studies

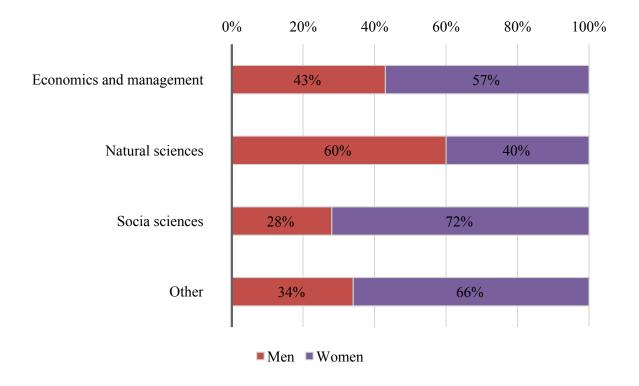


Fig. 33. Potential Entrepreneurs among Russian Students, their Gender Composition and Field of Studies

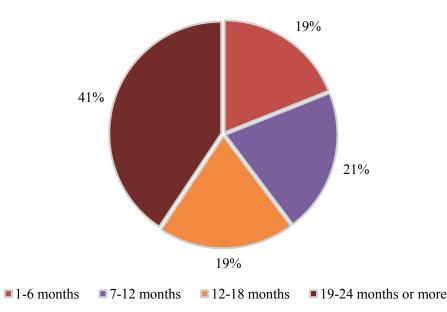


Fig. 34. Time Lapse before Starting Business by Russian Students - Potential Entrepreneurs

The vast majority of Russian students — potential entrepreneurs lack previous experience in business launching (Fig. 35). Fig. 36 presents the classification of future firms in Russia by sector. 17% of potential entrepreneurs are aimed at opening a business in wholesale or retail trade (which is exceeds the index in the international sample — 10.8%). The second in popularity is advertising/marketing/design, the third — education and training.

Among those who receive education in economics and management, in addition to trade, many are focused on activities in the field of advertising/marketing/design and manufacturing. Students, intending to start business in the field of information technology and communications, are mainly trained in the field of information technologies or engineering. Students who study culture and humanities strive to create their own advertising/marketing/design company. Since opening a company is associated with a high rate of risk, and many would like to reduce it, one of the way out is to share risks with a partner (or partners). In Russia 44% of potential entrepreneurs believe to open their own company with one partner (Table 7).

Another 19% of respondents at the time of the survey were in search of a business partner. 38% of Russian respondents are ready for fully independent entrepreneurial activity. At the same time, the majority of students (47%) say that they came up with an idea for their business on their own (Fig. 37). Among students who work in a team, 21% noted that they themselves purposefully sought business partners and collected a team (Table 8). About 17% of respondents noted that their entrepreneurial team somehow formed within the university.

#### Table 7

Amount of partners	Russia,%	International sample,%
No	38%	32%
One partner	31%	26%
Two partners	10%	13%
Three partners	1%	6%
Four and more partners	2%	5%
Looking for a partner	19%	19%

Partners for Future Business

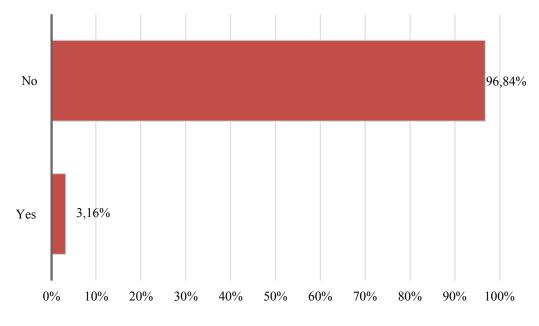


Fig. 35. Experience of Business Creation by Russian Students - Potential Entrepreneurs

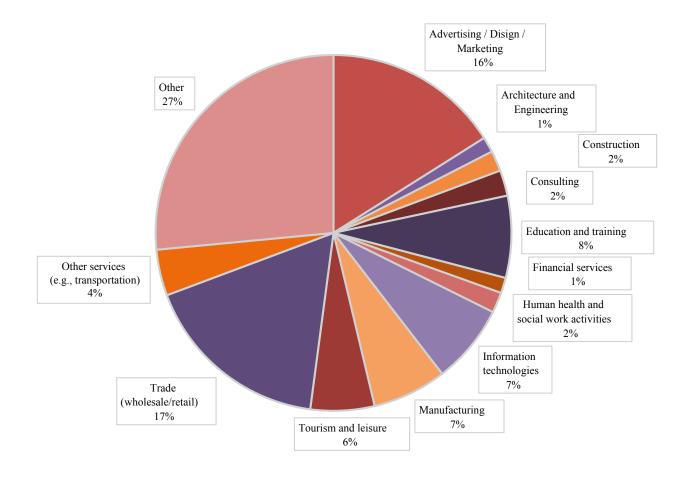


Fig. 36. Sector of Activities of the Future Company of Russian Students - Potential Entrepreneurs

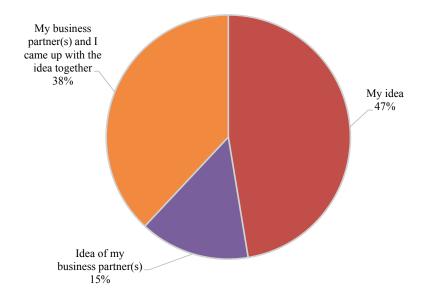


Fig. 37. Source of Business Idea of Russian Students — Potential Entrepreneur

Table 8

Team creation	Russia,%	International sample,%
I intentionally searched for co-founders and put the team together	21%	25%
A fellow student approached me and put the team together	5%	13%
A co-founder from outside the university approached me and put the team together	7%	9%
Nobody took the clear lead. The founding team emerged from a course, project, or activity related to the university	5%	11%
Nobody took the clear lead. The founding team emerged from a course, project, or activity unrelated to the university	11%	8%
None of the above	51%	34%

#### How the Team of Co-founders (Business Partners) Was Created

Since students in the category of potential entrepreneurs noted the fact that they were already trying to start their own business, a question arises: what stage are they at, what steps have they already taken? About 15% of potential entrepreneurs among Russian students have not yet taken any active actions (Fig. 38). 19% of students discussed their business idea with potential clients. 22% collected information about the market and competitors, and about 28% wrote a business plan or started developing a product/service.

The number of steps taken to start a business allows creating another index, which reflects the degree of entrepreneurial activity among those students who are aimed at creating their own venture. Index is calculated as a sum of the steps taken from 0 ("none of the above has been done") to 10, where 10 is the maximum possible number of the actions presented in Fig. 38. Stemming from these calculations, the following results were obtained: the highest index of entrepreneurial activity is typical for Slovenia, Liechtenstein and Indonesia, and the lowest — for Algeria, Albania and Kazakhstan. For Russia, the index is 2.36 (Table 9).

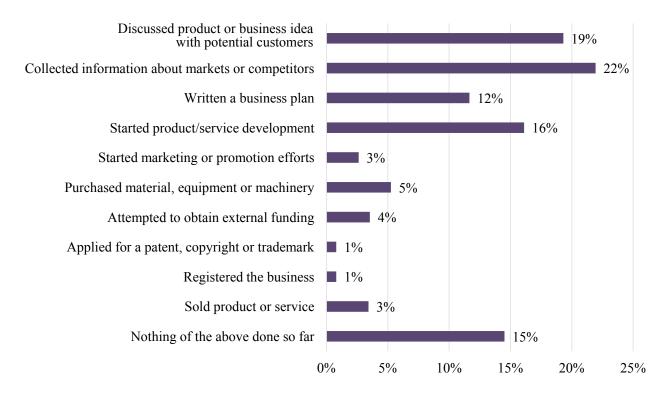


Fig. 38. Steps Taken by Russian Students to Start their Business

Table 9

#### Entrepreneurial Activity Index

N⁰	Country	Index	25	Chile	2.67
1	Slovenia	4.47	26	Spain	2.66
2	Liechtenstein	3.26	27	Republic of Northern Macedonia	2.57
3	Indonesia	3.25	28	Ecuador	2.57
4	Austria	3.06	29	Hungary	2.55
5	Ireland	3.06	30	Panama	2.54
6	Portugal	2.99	31	Korea	2.51
7	Switzerland	2.94	32	Lithuania	2.51
8	Brazil	2.92	33	Uruguay	2.5
9	Slovakia	2.91	34	Greece	2.42
10	South Africa	2.9	35	Sierra Leone	2.39
11	Czech	2.89	36	Russia	2.36
12	Mexico	2.87	37	Salvador	2.33
13	Turkey	2.84	38	England	2.3
14	Estonia	2.84	39	Belarus	2.21

## 40

15	Germany	2.82	40	Saudi Arabia	2.2
16	Argentina	2.8	41	Kosovo	2.19
17	Costa rica	2.8	42	Poland	2.19
18	Italy	2.79	43	China	2.15
19	United Arab Emirates	2.79	44	Ukraine	2.08
20	France	2.77	45	Jordan	1.96
21	Colombia	2.75	46	Japan	1.85
22	Peru	2.75	47	Algeria	1.77
23	Pakistan	2.69	48	Albania	1.74
24	New Zealand	2.67	49	Kazakhstan	1.52

*Note: For Australia, Lebanon, Norway, USA, and Finland index was not calculated because of low number of cases (less than 10)* 

#### 4.3.2. Active Entrepreneurs

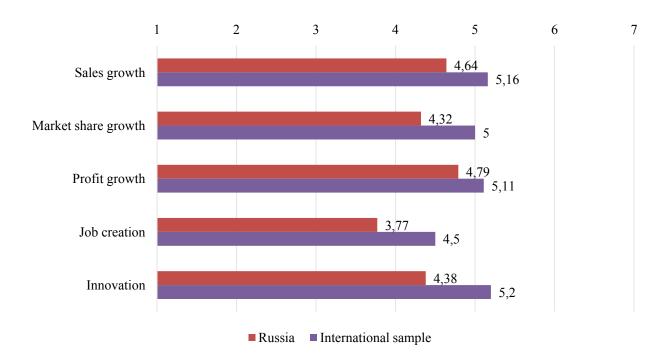
Only 7% of students in the Russian sample and 11% in the international one already run their own business (in absolute indicators — 196 and 23,414 respectively). In Russia, the share of active entrepreneurs under the age of 24 years is 90%, while in the whole sample it is significantly lower — 59%. In other words, in most of the countries older students become entrepreneurs. Most Russian students — entrepreneurs are enrolled in economics and management education field (67%), while in the international sample such fields dominate as economics and management (29%) and art and humanities (15%). 44% of students' parents are entrepreneurs. The industry distribution of business for active and potential entrepreneurs is quite the same and most of them belong to areas of advertising/design/marketing and trade.

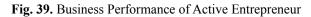
Most of students in the Russian sample have founded their company recently: 41% in 2018 and 37% — in 2016–2017. About 33% of respondents started their business earlier (Table 10). In the international sample around 35% of students launched a company in 2018, 32% — in 2016–2017, other — in 2015 or even earlier. In Russia, the company is operated by an average of 3 people, and 9 people as an average for the entire international sample. Entrepreneurs own the greatest share of their business by themselves. Among active entrepreneurs, about half of the respondents do business together with partners.

Since many active entrepreneurs are driven by the motive to earn money from the very beginning, it is natural to be interested in how well they succeed. All the respondents rated the success of their business as fairly mild, while looking at the data presented in Fig. 39, 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, jobs creation, and innovation is slightly lower than in the international sample. Nevertheless, the total rate of satisfaction with own business for Russian students is at an above the average level (4.38 out of 7).

## Existing Business Characteristics

	Russia	International sample
When did you found your firm?		
2018	41.11%	34.59%
2017	26.11%	18.55%
2016	10.56%	13.09%
2015	6.67%	8.23%
2014	4.44%	5.25%
2013 or earlier	11.11%	20.28%
Number of employees	3	9
Share of total equity of the firm (%)		
0%	2.19%	6.63%
1–49%	9.84%	23.40%
50%	16.39%	23.36%
51–99%	15.30%	12.38%
100%	56.28%	34.23%
Number of partners		
0	47%	35%
1	28%	26%
2	16%	23%
3	4%	10%
More than 3	4%	6%





In 2018, within the framework of the GUESSS project, the commitment of students-owners of start-ups to their business was assessed. Respondents were asked to rate the following statements on a scale of 1 = strongly disagree to 7 = strongly agree: "I feel as if my business's problems are my own", "I do not feel a sense of belonging to my business", "I would be very happy to spend the rest of my career with my business", "I do

not feel emotionally attached to my business", "My business has great personal meaning for me" (Dawson et al., 2014). As shown in Fig. 40, in general, commitment among Russian students is comparable to that in the international sample. It is interesting to note that Russian respondents have a much stronger emotional attachment and a sense of belonging to their business in comparison with students from the international sample.

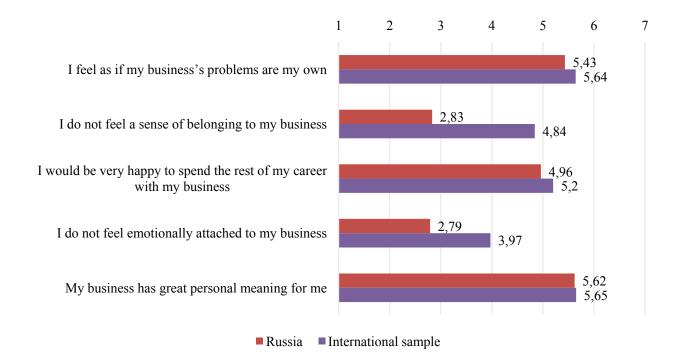


Fig. 40. Commitment to business among active entrepreneurs

An important characteristic of business is the propensity to exploit or explore. Exploration is associated with the identification of new business opportunities and experimentation, which are achieved through high level of entrepreneurial orientation and strong entrepreneurial spirit in a firm. For active exploration a company needs to be innovative, proactive and ready to take risks (Covin, Slevin, 1989). Exploitation covers such elements as investments in internal resources, assessment of resources related to knowledge, organizational learning and transitional organizational changes, as well as organizational changes associated with development (Ivvonen, Shirokova, 2016). In 2018, the GUESSS project attempted to assess the propensity of students' firms to exploration and exploitation. Respondents were asked to determine the importance of the following tasks for the implementation of innovative projects in their business on a scale of 1 = not important at all to 7 = very important: introducing new generation of products/ services, extending product/service range, opening up new markets, entering new technology field, improving existing product/service quality, improving flexibility in producing goods/services, reducing cost of producing goods/services, improving yield or reducing material consumption (He, Wong, 2004).

The first four elements of this scale characterize exploration, whereas the last ones measure exploitation. As shown in fig. 41, both aspects are on average more pronounced in the international sample than in Russia. Nevertheless, it is interesting to note that in Russian student start-ups the propensity to exploration is more evident compared to the propensity to exploitation, while in the international sample the opposite is observed.

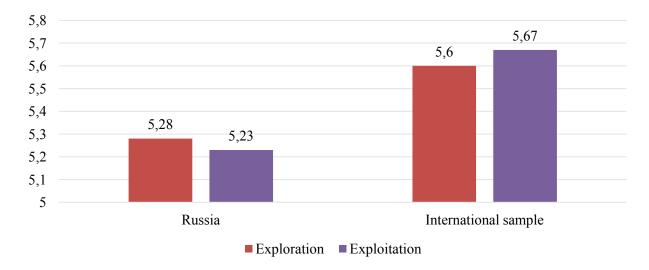


Fig. 41. Propensity to Exploration or Exploitation among Students' Firms

Besides the personal traits of an entrepreneur and the peculiarities of firm's internal environment, the success of business development can also be influenced by the external environment. In 2018, active entrepreneurs were asked to assess the level of dynamism of external environment in economic sectors where their firms mainly operate. Respondents were asked to assess the number of statements on a scale of 1 = strongly disagree to 7 = strongly agree: "Customer preferences are continually evolving in our industry", "Customer demand for our products/services varies continuously", "Other businesses are continually introducing new products to our market", "Other businesses are continually devising new selling strategies in our market". Table 11 presents the average rates obtained for each industry. As can be seen from the data, in the opinion of Russian students-entrepreneurs, the manufacturing industry is characterized by the greatest degree of dynamism of the external environment. Also consulting, tourism and leisure activities, as well as advertising/design/marketing have quite high rates of dynamism.

Table 11

Sector	Index
Advertising / Design / Marketing	4.58
Architecture and Engineering	4.44
Construction	4
Consulting	4.85
Education and training	4.48
Financial services	4.1
Human health and social work activities	4.13
Information technology	4.13
Manufacturing	5.13
Tourism and leisure	4.56
Trade (wholesale/retail)	4.28
Other services (e.g., transportation)	5.04
Other	4.88

#### Level of Dynamism by Sectors

#### 4.3.3. Potential Successors

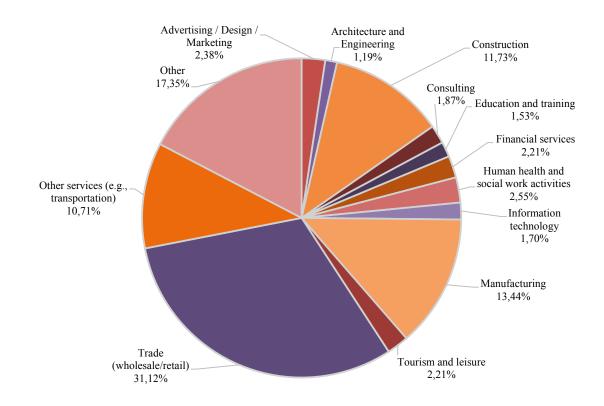
Career choice intentions of students may be a consequence of the entrepreneurial environment in their family because when parents have their own business, children get understanding of how to organize their own business earlier. About 26% of respondents in Russia noted that at least one of their parents was an entrepreneur (this rate was about 24% in the international sample), and in most cases - the main business owner. Basic features of family business in both Russian and international samples are similar: in about 50% of cases firms are owned only by parents, in 80% (in the international sample) / 90% (in the Russian sample) of cases parents are actively involved in the operating management of a firm, and approximately 65% (world) / 75% (Russia) of respondents do not have any personal share of ownership in a family business. In Russia, as well as among all other countries, about 40% of respondents have working experience in a family business. The main differences between the Russian and international samples are the tenure of the firm and the number of employees. In Russia, parents typically do their business for just around 14 years, while the average indicator for the entire sample is 21 years. On average, Russian firm has 25 employees, and in the international sample the average number of employees is significantly higher — 45 people.

Distribution of family businesses by industry is presented in Fig. 42. It should be noted that 31% of students in Russia have family business in the trade sector, the second and the third place are taken by other sectors (not identified in the survey) and manufacturing (17 and 13%, respectively). In the international sample, sectors of trade (19%) and construction (10%) dominate. Estimates of family business performance are generally comparable, although a few lower levels can be noted for a number of indicators among Russian students (Fig. 43). The closest indicator between the two groups is job creation, which was estimated slightly above average in both groups.

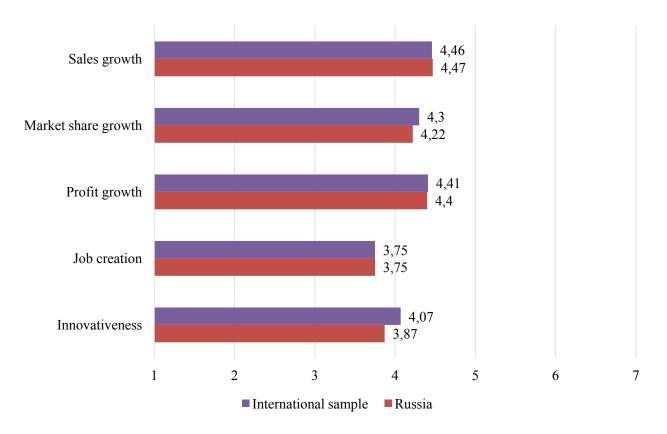
But how far are the students ready to become the successors of the family business themselves? In the Russian sample, only about 5% of the respondents noted that family business management is their professional goal (immediately after graduation and 5 years after graduation). This index is at a comparable level (about 6%) in other countries (Sieger et al., 2019).

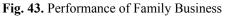
Students in Russia were quite neutral in evaluation of the attractiveness to become successor of a family business, as in the international sample. On average, the rates turned out to be comparable, the index of "readiness" to become successors for the international sample is at the level of 2.7 (maximum — 7), and for the Russian sample it is 2.72.

At the same time, the existence of the possibility of becoming a successor (attitude towards a career of a successor in general) was rated by students higher than the willingness to take over the management of a family business. Both in Russia and in the world, the estimate is absolutely neutral. The lowest level of agreement was shown in relation to the statement: "Among various options, I would rather become a successor in my parents' firm". The average index in Russia was 2.76 out of 7, and in the international sample it was 2.79. Most of all, students appreciated the statement: "Being a successor implies more advantages than disadvantages to me". The index for Russia was 3.74, and for the international sample — 3.5.









Note: average values are presented; scale from 1 to 7: 1 — much lower than competitors, 7 — much higher than competitors

	Russia	International sample
Being a successor implies more advantages than disadvan- tages to me	3.74	3.50
A career as a successor is attractive for me	3.14	3.01
If I had the opportunity and resources, I would become a successor in my parents' firm	3.12	3.01
Being a successor would entail great satisfactions for me	2.94	3.05
Among various options, I would rather become a successor in my parents' firm	2.76	2.79

## Attitude to the Career of Successor in Family Business

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 2018, 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 85% - are involved into undergraduate programs and only slightly more than 13% — into master programs, whereas in the international sample the share of bachelors is about 79% with almost equal share of masters. The average age of students is 20 years old; in the international sample it reaches 23, which may be associated with the peculiarities of the education system in Russia. Students enter university at the age of 17-18 years old, while in many countries, this threshold is 20-22 years old. Most of the survey participants in Russia study in the field of economics and management (60.8%) and this rate is almost twice more than the international one (34.0%). This is related, primarily, to the fact that the special interest to the project was expressed by professors in the field of business and economics.
- The majority of students in Russia expect to be hired immediately after graduation (74%), which corresponds to the answers received in the international sample (79%). The share of students who are ready to create their business from scratch immediately after graduation is 9% in Russia that coincides with the international index. However, the situation changes noticeably for the perspective of 5 years after graduation: the number of Russian students who wish to become entrepreneurs increases from 9 to 50%, and in the international sample from 9 to 35%. This trend replicates the results of GUESSS research in 2011, 2013/2014, and 2016. One of the explanations is the desire of students to acquire the necessary experience in an existing company, before moving to their own business creation. In general, the share of students considering a career as an entrepreneur 5 years after graduation has declined slightly in Russia (by 0.9%) and slightly more in the international sample (by 3.1%) compared to 2016.
- However, the career intentions of students say nothing about the readiness of students to entrepreneurship activities. In this regard, the index of entrepreneurial intentions for all 54 countries that participated in the study was calculated. In Russia this index is 4.1, which is noticeably similar to the average of the whole sample,

but slightly lower than the index in 2016 (4.45). The highest index of entrepreneurial intentions is typical for students studying economics and management and comprises 4.4, and the smallest one (3.3) is for natural sciences. Russia ranks 29th in terms of the index of entrepreneurial intentions (4.45) out of 54 countries. The first positions in the ranking were occupied by Sierra Leone, Panama, Ecuador, Peru, Colombia. Such countries as Japan, Switzerland, and Germany are at the end of the list. Such a pattern indicates the presence of certain differences in the development of entrepreneurial aspirations among students from developed and emerging economies.

- The study is focused on the factors that can explain formation of students' career intentions. University environment is one of the key elements in forming entrepreneurial ecosystem. However, in Russia, the degree of the entrepreneurial component implementation in the curriculum is very low: around 63% of students did not have courses in entrepreneurship. In the international sample, this index is significantly lower and stands at 45%. In addition, the role of learning environment and corresponding courses in the development of entrepreneurship among students has been evaluated by the latter at rather low level.
- Parents-entrepreneurs in the family are often considered as a factor contributing to the development of their children's entrepreneurial intentions. 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 (58%), in contrast to non-entrepreneurs (48%). In the international sample, the picture is slightly different: among entrepreneurial families, 39% of students see themselves as founders of their own business, and in non-entrepreneurial ones, the percentage decreases to 32%.
- 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 in Russia there are changes in the perceptions of the power distance compared to the international sample. While in the previous waves of GUESSS research Russian respondents gave a higher estimate of the power distance level in the society compared to the average for all the participating countries, in 2018 this estimate in Russia (3.74) was lower

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than in the international sample this (4.36). This result requires further investigation. However, it can be assumed that this may indicate the beginning of a shift in the perception of social hierarchy degree among Russian young people, which, of course, in the future may have a positive influence on the development of entrepreneurship in the country.

- There is a more positive attitude towards entrepreneurship among Russian students than in the international sample. Many people believe that the main barrier to their entrepreneurial activities is a lack of resources, however, career of an entrepreneur is attractive to students, and they note that such an activity would bring them greater sense of satisfaction. In addition, among Russian students the degree of perceived control over their behavior is lower. Moreover, Russian students note that they have a lower level of entrepreneurial self-efficacy, which underlines the need to develop their entrepreneurial competencies and skills.
- Respondents were also divided into categories of potential and active entrepreneurs; each of these groups was analyzed separately. In Russia, the percentage of potential entrepreneurs is 30% that almost coincides with the international sample. Most (about 58%) studied business and management and plan the actual opening of their company in about 1.5–2 years. Potential entrepreneurs among Russian students are aimed at opening business in the field of wholesale or retail trade (17% against 11% in the international sample), advertising / marketing / design (16%) are second most popular; the third is education and training (8%). Analyzing the actions taken to set a company, it was

revealed that many analyzed the market (22%), wrote a business plan or started developing a product/service (28%), while about 15% of potential entrepreneurs did not take any entrepreneurial actions. Relying on an aggregate index of the steps taken, the index of entrepreneurial activity was compiled. Russia improved its performance in comparison with 2016 and turned out to be in 36th place with an index of 2.36 (versus 43rd place in 2016 with an index of 1.6).

- The share of active student entrepreneurs in Russia amounted to 7%, slightly lower than in the international sample (11%). Russian respondents are characterized by a much stronger emotional attachment and a sense of belonging with their business in comparison with students from an international sample, although they rate the performance of their activities somewhat lower than students in the whole sample.
- An important characteristic of business is the propensity of its owners or managers to exploit or explore. It was revealed that in Russian student start-ups the propensity to exploration is more evident compared to the propensity to exploitation, while in the international sample the opposite is observed.
- Besides the personal traits of an entrepreneur and the peculiarities of firm's internal environment, the success of business development can also be influenced by the external environment. According to Russian students-entrepreneurs, the manufacturing industry is characterized by the greatest degree of dynamism of the external environment. Also consulting, tourism and leisure activities, as well as advertising/design/ marketing have quite high rates of dynamism.

# **CONCLUSION**

To conclude, currently in Russia there is an environment enabling the development of entrepreneurship among young people. It is characterized by a gradual recovery of economic growth, positive attitude of society towards the entrepreneurial career, decrease in the level of power distance perception, desire of young people to build their professional development towards their own business creation. However, the transformation of this potential into real entrepreneurial activity requires the full support of the institutional environment. Initiatives that can be implemented at the university level are particularly important for the young population. The development of the university entrepreneurial infrastructure can serve as an important factor of students' entrepreneurial intentions and their further implementation as part of new venture creation and development. Thus, introduction of entrepreneurship courses or development of educational programs in this area allows students to develop such an entrepreneurial resource as human capital, namely a set of knowledge, skills and abilities required in the process of business creation and development. It will also strengthen entrepreneurial self-efficacy for overcoming the fear of starting a business.

In addition, these aspects can, to a certain extent, act as a replacement for the necessary business experience that most students do not possess. Entrepreneurship courses may cover such issues as basics of entrepreneurship, entrepreneurial finance, innovative entrepreneurship, social entrepreneurship, entrepreneurial marketing, and business planning.

Moreover, it is important to develop the overall university institutional environment in the field of entrepreneurship support. In particular, it can be facilitated through such initiatives as business plan competitions where students can get constructive feedback from experienced entrepreneurs, establishment of university-based business incubators, as well as provision of seed funding. The development of mentorship programs, which can be implemented by the invited entrepreneurs in the form of meetings, seminars, or practice clubs will not only create a positive image of an entrepreneur in the eyes of students, but also contribute to the formation of their social capital. Conducting trainings, round tables, business games, and seminars with entrepreneurs or venture capitalists will also strengthen the entrepreneurial spirit of students.

We strongly believe that the project Global University Entrepreneurial Spirit Students' Survey (GUESSS) is extremely important for the entrepreneurship study and development in the world, as well as in a separate country. The results, as reflected in the report, provide an opportunity to assess the situation and take measures towards more favorable learning environment for the development and realization of students' entrepreneurial intentions.

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