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# 1. Background of the Study

This report contains the analysis of the results of the international research project "Global University Entrepreneurial Spirit Students' Survey" (GUESSS). The report consists of five parts, which consistently tell about the study, its goals and objectives, theoretical basis, methods of data collection and sample characteristics, results and analysis.

The Global University Entrepreneurial Spirit Students' Survey (GUESSS) has been held every two years since 2003. It was originally called the study ISCE - International Survey on Collegiate Entrepreneurship, but it was renamed in 2008 after four panel studies had been held in 2003, 2004, 2006 and 2008. Russia first participated in this study in the spring of 2011.

The study's main aim is to examine whether current students are ready for an entrepreneurial career, what their intentions regarding a future career choice are, is the entrepreneurial environment strong among students, what every university provides for the development of entrepreneurial spirit. There is speculation, that it is the entrepreneurial spirit among today's students, who acquire knowledge and competence in the field of entrepreneurship, that in the future

can be transformed into the creation and development of successful entrepreneurial firms. Of particular interest is the entrepreneurial ambience among Russian students, for nowadays, small business is not a dominant economic power in Russia, which calls for a comprehensive study of entrepreneurship in Russia. In addition, there is a high proportion of unemployed young people under 25 years: according to Rosstat, 24.8% in the beginning of 2011<sup>1</sup>.

Students of all disciplines may participate in the survey, confidentiality is guaranteed. The data were collected through online questionnaires. More information about the project (reports, presentations) one can also find at the site <http://www.guesssurvey.org>.

## 1.1. Research Goals and Theoretical Framework

The main objective of this research project, is conducting a longitudinal study and analysis of entrepreneurial intentions of students and their activities in the field of entrepreneurship with the cross-country and temporal comparisons. In the context of the research, the university plays a significant role. GUESSS project focuses on three basic dimensions that are relevant to

students and business: 1) the start-up process, and 2) the university, and 3) the individual (student). Thus, there are three objectives of the GUESSS research project:

1) The project examines the intentions of students to organize a new venture. Students are asked questions about their perceptions of their own careers. Then we study their intentions in starting their own business, expectations of a career of an entrepreneur. Further we study their career priorities, given the different time perspectives: immediately after graduation and 5 years after graduation. Finally, we analyze the characteristics of the firms founded by students that can serve as a basis for the formation of new research models in the study of entrepreneurship.

2) The next task is to study the university in terms of availability of infrastructure of entrepreneurship education: orientation training, the availability of courses and seminars on entrepreneurship, the availability of business-incubators, overall business climate at the university. The

geographical and temporal comparisons are also available.

3) The third task is to explore the individual characteristics of students, and their impact on entrepreneurial activity among students. Age, gender, family characteristics, as well as belonging to certain behavioral patterns may influence the development of entrepreneurial intentions and the desire to create their own business.

In addition to these basic goals and objectives of the study, the project also helps to study the overall entrepreneurial spirit among the country's youth, and establish conditions conducive to the formation of students as entrepreneurs. It is possible to establish and analyze the factors that inhibit the formation of entrepreneurial activity among students, which allows a number of recommendations put forward to develop the infrastructure of entrepreneurship education.

Among the research questions there are questions about the effectiveness of firms founded by students (turnover, number of jobs), which allow one to evaluate the quality firms established by students. The theoretical research model adopted for Russian context from GUESSS research framework is presented in Fig. 1.

## 1.2. Project Coordination

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

National representatives are engaged in search and attract

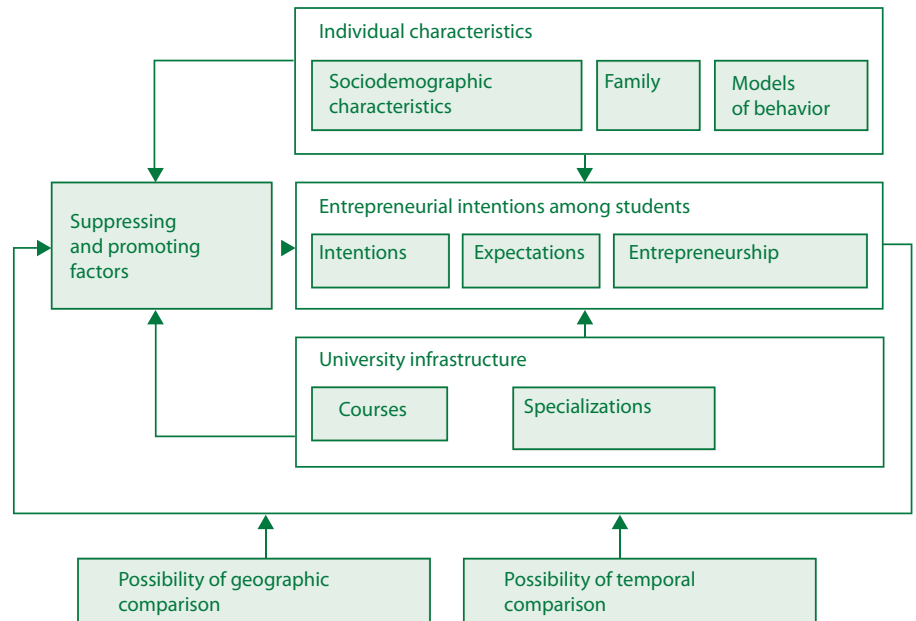


Figure 1. Adopted GUESSS Research Framework

higher educational institutions of the country for participation in the project, they communicate with universities' representatives, disseminate information about the intermediate results of the study, motivate more students to take part in the survey, and account for writing the national report on entrepreneurial intentions among students. Data are collected on-line with the company "Information Factory" (<http://www.information-factory.com/>).

The GUESSS project data has been collected, starting in 2003, and since 2004, the data have been collected every 2 years. Thus, a panel data is set so, that it allows to track the dynamics of certain variables over time. The international report contains comparative data on entrepreneurial activity and attitudes of students from all countries. National reports allow one to see and analyze the national context, as well as the individual

characteristics of the students. In addition, it allows to better understand, which factors lead to the development, and which factors stifle the development of entrepreneurial spirit among students. Periodic data collection, analysis and comparisons over time allow us to understand and draw conclusions about what needs to be done to improve the business climate in the country.

For the first time in the season of 2010/2011, Russia has taken part in the project "Global University Entrepreneurial Spirit Students' Survey" (GUESSS). In subsequent parts of this report, which will be submitted later, an analysis of data on entrepreneurial intentions of students of Russian universities will be presented. This report is the first document that sought to identify characteristics of infrastructure development of entrepreneurship education in Russia.

## 2. Russian Context

In order to better understand the specifics of business development in Russia, the characteristics of entrepreneurship education, particularly higher education in this country, one must consider the national context of the study. The special focus is made on the following three sections: the first section provides a description of entrepreneurship, small and medium-sized businesses in Russia, the second one characterizes higher education in Russia, and, finally, the third section gives an overview of the situation with education in the field of entrepreneurship in this country.

### 2.1. Entrepreneurship in Russia

The current stage of economic development in Russia is characterized by significant transformational processes and development of newly created institutions. Russia is one of the biggest economies among a diverse group of developing countries in terms of gross value of the market. It is characterized by relative political and macroeconomic stability, as a consequence of relatively stable oil revenue (Sala-i-Martin, 2009). In recent years, the Russian government has issued a number of different laws to fight corruption, to support economic development and protection of human rights (Lathina, 2010). However, despite the official figures, the number of independent studies provided quite a different picture (PriceWaterhouseCoopers, 2009; Riaco, Hodess, Evans, 2008, 2009; Sala-i-Martin, 2009). Reports of International Studies indicate the overall prevalence of corruption in Russia and other illegal business practices (including tax evasion).

Issues of development of small and medium-sized businesses in Russia are a priority for national economic development, as evidenced by activity and state support for various political and civic associations, and ongoing

legislative activity of the Government of the Russian Federation. However, in historical perspective, in Russia, small and medium business has never received sufficient support from the Government or the Russian business circles, or in terms of cultural traditions, as compared to the level of support, which was observed in most developed economies of the world (Zhuplev, Shein, 2008.) To date, according to the Federal State Statistics Service, in small and medium-sized enterprises no more than 15% of the economically active population are involved (Vassilieva, 2010). In this case, it should be noted that according to the 2009 data small and medium enterprises in Russia, create no more than 11% of GDP (for comparison, the U.S. share of small and medium enterprises in the country's GDP exceeds 50%, while China has more than 65%) (Zoidov, Morgunov, Hidzhamova, 2009).

It should be noted that, despite the fact that entrepreneurship is one of the most rapidly developing areas of research in the world, the research on small and medium-sized businesses in Russia is limited, especially concerning the behavior of firms, their business models and small and medium-sized business growth (Djankov et al 2005; Zhuplev, Kiesner, Zavadsky, 2004). Some authors (see, for example, Williams, Round, 2009) noted that much of the activity of small and medium-sized enterprises in Russia is in the zone of gray and unobservable transactions, which complicates their analysis. According to (Williams, 2009) almost 100% of entrepreneurs in Russia are involved in hidden forms of business. However, according to such longitudinal studies of small and medium-sized enterprises in Russia, as (Zhuplev, Stykhno, 2009), for the period of 1994-2009 on the Russian small and medium-sized businesses there is a significant increase in the number of new companies, despite the

hostility of the state and unfavorable institutional environment. In the studies (Zhuplev, Stykhno, 2009, Zhuplev, Kiesner, Zavadsky, 2004) it was also noted that the main force holding back the growth of active businesses, are bribery, corruption of officials and unfair competition.

The level of entrepreneurial activity in Russia is fairly low. Russia ranks last according to this indicator (Verkhovskaya, Dorokhina, 2011). The reason is the complexity and intricacies of the bureaucratic procedures of establishing a new business, as well as the complexity of interaction with partners and regulating institutions, as well as the overall level of uncertainty, associated with the weak development of institutions that support small business. In addition, one can note a weak innovative component in business, resulting not from the lack of ideas or skills, but from the implementation capacity. Despite that, most (70% according to the GEM report) Russian entrepreneurs are striving to grow, that is, through a variety of factors are hoping to develop their business and grow.

In the monograph "Features of the evolution of small and medium-sized innovative business crisis economy in the post-Soviet space," it was noted that "in Russia in 2007, there were 2485 organizations implementing technological innovations, for comparison, in 2006 there were 2490. At the same time in the U.S. 25 million small businesses, 6 million of them give more than 40% of national GDP (4 trillion U.S. dollars), they employ more than 50% of the workforce. Small business provides 75% of net jobs, which provide 41% of all sales in the country and 55% innovation and 35% of federal contracts, 38% of jobs in the technology sector" (Zoidov, Morgunov Hidzhamova, 2009). It is believed that the two largest Russian cities, Moscow and St. Petersburg, are home

to most of Russian small businesses (1998 - Moscow - 20.6% of the total number of small businesses, in St. Petersburg - 11.6%; in 2004 "50% of small businesses were concentrated in Moscow and St. Petersburg", "the most important share of the small businesses... in the country as a whole." According to the report of the National Institute of System Studies Enterprise (Saidullayev, Shestoperov, 2009) of February 2009, in Moscow and St. Petersburg, as of October 1, 2008, the most significant indicator of the levels of small and medium enterprises per 100 thousand inhabitants was noted: 275.1 companies in Moscow, and 337.1 companies in St. Petersburg. The report also showed that those cities were marked by the highest level of turnover of small enterprises in the country in January-September, 2008, i.e. 752 905.9 mln. - Moscow, 745 455.9 mln. - St. Petersburg (Saidullayev, Shestoperov, 2009).

The considered studies reveal that in Russia, despite the formal government initiatives, the following phenomena are widespread: corruption, bribery, corporate raiding, distrust in executive power, economic crimes, including tax evasion, departmental violations. The reason for this may be a special course of formation of economic and legal institutions in Russia (Dolgopyatova, 2007; Tambovtsev, 2005; Polterovich, 2004).

## 2.2. Higher Education in Russia

The adoption in 1992 of the Federal Act "On education" signaled the beginning of reforms in national higher education. The Act introduced a new concept for Russians, i.e. undergraduate, graduate, multi-tiered education system. It was not breaking the existing system, rather preserved it, and included both the new and the old elements, single-tier system of training specialists, providing higher education institutions with the opportunity to choose on what program to prepare graduates. On the one hand, it has opened new opportunities for

universities and students, on the other hand, it opened some of the challenges with the choice of the educational system.

The Federal Act "On Higher and Postgraduate Professional Education" of 1996, defines three levels (or stages) of higher education as follows: the first stage - incomplete higher education for a period of two years, the second stage - the basic higher education (Bachelor degree) for a term of 4 years of training, the third stage - "certified specialist" for a period of 5 years (pre-existing model) and the "Master" with the term of 6 years of training (new model). At present, Russia is involved in the Bologna process and the country adopted a two-tier system: Bachelor's program is designed to meet the demand for basic education, Master's program is supposed to form an elite, the research and educational staff of higher level. Multilevel system of higher education meets the needs of most market economies, in which the labour market has special demands for flexibility and labour mobility. At the same time, the introduction of a two-tier system does not alter the classical traditions of Russian (Soviet) High School. For a variety of specialties maintained multi-level training leading to the award of the degree of a "certified specialist".

Analytical polls service stated that in recent years, the interest to higher education among Russians has grown particularly strong. Moreover, the need for higher education has been recognized not only by adults, but by high school students and university students, as well:

- 44% of high school students subscribed to that view.
- 14% of students considered it important to further study in graduate school.

According to the nationwide survey, conducted in 2005<sup>2</sup>, among young people aged 18 to 24 years:

- 20% of respondents intended to obtain a second higher education
- 6% were getting it at the moment

when the poll was taken.

- Among the people with high income the share of persons having or intending to get a second degree, was much larger.

According to the same survey, 33% of graduates of Russian universities were pursuing a career which was different from the profession they acquired in higher school. Thus, almost one third of budget spending on higher education has been used inefficiently.

The number of students in this country is the highest in the world: in 2010 it amounted to 5848.7 thousand people. At each 10 thousand people in 2010 there were 522 students. According to the Ministry of Education and Science, the number of colleges and universities is steadily growing in the country. During the period from 1990 to 2005 their number rose from 514 to 1068. At the end of 2010 there were 1115 institutions of higher education in Russia, among them - 652 public schools, and 463 - private schools. The number of state and municipal educational institutions of higher education decreased by 2 units.

The admission to state and municipal educational institutions of higher education in 2010 decreased by 134.2 thousand and reached 1195.4 thousand persons, while in private higher education institutions decreased by 204.0 thousand people. In the 2010 academic year, 1177.8 thousand people were from state universities, and 290.1 thousand people were from non-governmental higher education institutions<sup>3</sup>.

At the same time the education system itself operates according to the pattern accepted decades ago: the course content is often an obsolete copy of the simplified economic, social, scientific or technical concepts. As for Russian students, they do not associate university education with a real competitive advantage on the labor market. Higher education for many is a sign of social normality.

<sup>2</sup> Statistics of higher education. [Electronic resource] // Statistics portal Statistics.ru. 2007. -<http://statistika.ru> . - Accessed. (14.08.2011)

<sup>3</sup> Higher Educational Institutions [Electronic resource] // Federal Service of State Statistics. 2011. -<http://www.gks.ru> . - Accessed. (14.08.2011)



### 2.3. Entrepreneurship Education in Russia

Entrepreneurship education in Russia is usually arranged as training programs in management and economics for people of professions other than management, as well as short-term programs, seminars and round tables. It should be noted that, as the infrastructure to support small business and entrepreneurship in Russia, the education system in the field of entrepreneurship is rather weak and full of flaws. The main one is lack of understanding the content of the concepts, and respectively, the content of the process of entrepreneurship education. Entrepreneurship is a practical discipline, but one can not go to extremes, the system should be completed on all four sides: training, provision of necessary knowledge, their application in practice, supporting activities, studying problems and building networks, discussions. The majority of Russian higher education institutions have only one of four aspects. But not everything is so sad, now visible shifts in the direction of the intensive development of education and supporting infrastructure are made in entrepreneurship education, there are educational and research programs, conferences and associations that make us hope that things will change.

To analyze the situation with teaching entrepreneurship, the authors of this report conducted their own mini-study based on secondary data, concerning the capabilities of the proposed training and development of entrepreneurial skills in higher education schools, participating in GUESS. The following are the main results of this study. Analysis of data on entrepreneurship courses, seminars, business plan competitions, an infrastructure to support entrepreneurial initiatives has shown that conventional teaching of entrepreneurship in today's Russia can be divided into 4 levels:

**Level 1.** Characterized by a complete lack of courses in entrepreneurship,

or the presence of courses in business planning, risk management, marketing and other management disciplines, which are important to entrepreneurs in their activities. Those subjects were often included in the list of educational services for economic and managerial occupations. It should be also noted that many universities in Russia have departments, the title of which is the word "entrepreneurship", but it should not be considered as a synonym for "business". No truly entrepreneurial courses at universities are delivered. In the same category one may also include training programs that are offered in many private and public higher education institutions, but they only include general courses on economic and management disciplines: Finance, Economics, Logistics, Marketing, Human Resource Management. Unfortunately, such higher education institutions in Russia, and in our sample represent the majority, i.e. over 50%.

**Level 2.** It can be characterized by the presence in universities of purposefully created courses in entrepreneurship, innovation, management of small innovative enterprises, business in certain industries (arts, tourism, construction, farming, forestry), resource management and risk management in business. The quality of the data is average, but it is worth noting that the availability of such courses shows the demand for such disciplines in general, and attempts to develop courses that teach students whose goal is to think in business terms.

The courses are often practice-oriented. They are included in the program of specialized higher schools in the courses of economics and management for a better understanding by business students of the chosen major, that will help them to apply management of innovations in their field of competence in the future. There are up to 5 such universities in the sample, representing 20% of the sample, which may well reflect the

general situation in the country.

**Level 3.** It is characterized by several factors: firstly, the presence of separate units in the structure of higher education (departments, centers and special education programs) that are relevant to entrepreneurship. Secondly, business majors, institutionally supported by higher education institutions: they are, for example, Master programs of the relevant concentration (business, technology and innovation), various activities related to entrepreneurship and its development (business plan competitions, business games, and meetings with employers, workshops), or MBA programs for entrepreneurship. The important characteristics of universities at this level is the scientific study of entrepreneurship, participation in research projects, developing issues for discussion. These universities are at a higher level of development of the learning process of students of entrepreneurship. They develop their own educational and research programs, focusing on entrepreneurship. There were only 5 such universities in the sample, but this is not characteristic of the entire system of Russian higher education, and most likely, this is a specific feature of our sample formation.

**Level 4.** Finally, the fourth highest possible level of business education development, is represented by a group of institutions of higher education, which have a completed and advanced infrastructure to support entrepreneurship. Those universities have all the characteristics of the previous level, but they succeeded in developing them even further: at these universities, entrepreneurship and its support are allocated in a separate area of the university. In addition to academic and research work, activities are aimed at creating social business networks, those universities have a structure that supports innovation and entrepreneurial endeavors of their

students financially, by providing other resources, or incorporate it into their organizational structure, business incubators, technology parks, foundations, competitive and grant opportunities. It is an important fact,

that these universities carry out a full closed-loop learning cycle, and provide business support, in addition to that, in attempts to alter the institutional environment for new companies, they concluded a state-level agreement on

benefits and support for entrepreneurs. There are 4 such universities in the sample, and, unfortunately, it is the complete list of them, all over Russia there are no more than ten universities of this type.

## 3. Methodology and Sample

### 3.1. Participating Schools

The sample study consists of 23 universities in Russia. Initially, the questionnaire was sent to 25 universities, but 2 of them did not send

back any filled out questionnaires. Out of 8480 students who had been sent an invitation to take part in the study 2882 persons responded to the questionnaire, which comprised 33.9%

of the respondents. In addition, Russia ranked the seventh among 27 countries. The total sample for all countries in the study was 93 265 people.

Table 1  
Participating Schools and their respective response rate

	Name of educational institution	Percent
1	Moscow University of Industry and Finance "Synergy"	13.5
2	Northeast Federal University named after M.K.Amosov	12.7
3	Samara State Economic University	10.9
4	The Russian Presidential Academy of National Economy and Public Administration	9.2
5	Voronezh State University	8.1
6	Higher School of Economics – National Research University – Nizhny Novgorod	6.5
7	Kazan State Technical University named after A.N.Tupolev	5.6
8	Stavropol State Agrarian University	5.4
9	St.Petersburg State University – Graduate School of Management	5.3
10	Krasnoyarsk State Agrarian University	4.2
11	Institute of Management and Entrepreneurship – Ural State University named after A.M.Gorky	3.0
12	St.Petersburg State University – Faculty of Applied Mathematics and Control Processes	2.8
13	Ural Federal University named after B.N. Yeltsyn, Faculty of Economics	2.2
14	St.Petersburg State Polytechnical University	2.2
15	Bryansk State Technical University	2.1
16	Other Universities (+8)	6.3
	Total	100.0

\* Geographic distribution of universities in Russia is shown in Appendix 1.

### 3.2. Sample Profile

The overwhelming majority of respondents were undergraduate/specialty students (89.1% answered the questions), 8.7% of respondents were enrolled in Master's programs, 1.6% were graduate students, and 0.6% were students from other programs. 43 (1.5%) were exchange students, of which 72.1% were undergraduate students, 16.3% were master students, 4.7% - graduate students, and 7% were students from other programs.

The average age of respondents in Russia was 21 years of age (for comparison, on an international scale the average age is 25 years). It is worth noting that in Russia the share of students under 25 years is 95.4%, that constitutes the majority. In general, the respondents were Russian students studying in the fifth (30.4%) or fourth (9.2%) year of study. Most of the sample in the survey, i.e. 63.9% were women, at the international level women were also prevalent - 55.2% of respondents.

One of the questions students were asked was to indicate (in the broadest sense) the area of study. They represented altogether four such areas: business and economics, natural sciences, social sciences, and other areas.

Analysis of samples shows that among survey respondents in Russia, 62.5% of students studied economics and business, 18% - science studies, 7.5% - social studies, and 12% of respondents indicated the "other". To compare, on a global scale 29.3% of respondents studied in the field of economics and management, 32.9% - in the field of natural sciences, 21.5% of respondents chose social sciences and humanities, while 16.3% chose "other sciences". In Russia, the percentage of students in a sample of economics and management of the surveyed students was twice as large, as the percentage of respondents across the globe.

### 3.3. Data collection

Data collection in the project "Global University Entrepreneurial

Table 2  
Distribution of respondents by field of studies

Major	Disciplines included	Ratio	
		Russia, %	International sample, %
Economic and management studies	Economics, management, business, political studies, management systems, etc.	62.5	29.3
Social sciences	Sociology, psychology, pedagogy, arts and humanities, etc.	7.5	21.5
Natural sciences	Mathematics, physics, computer sciences, chemistry, forestry, medicine, etc.	18	32.9
Other		12	16.3

Spirit Students' Survey" (GUESSS) was carried out by using an online questionnaire, and each country had the right to translate the questionnaire into their language. Thus, the Russian questionnaire was available to the Russian participants in Russian.

The Graduate School of Management of St. Petersburg State University is a national partner of the project. The research team of the Graduate School of Management was in charge of the search for and involvement of universities, as well as research participants, the translation of the questionnaire and distribution of the link to an online survey among national participants. The data were collected during the period from March to June 2011. In the course of that period, representatives of universities several times sent out emails with a link to an online questionnaire to students to achieve higher response rates. In total, the link was sent to 8480 students, of whom 2882 people responded. It takes 10-15 minutes to fill out the questionnaire.

As stated above, it was the first time

that Russia participated in this research project, but the number of respondents allowed Russia to rank the 7th by the number of respondents among the 27 countries.

In the link to questionnaire distribution and to attract the participating universities, the research team used official contacts of the Graduate School of Management and GSOM Center for Entrepreneurship, as well as personal contacts of researchers. The Russian Association of Entrepreneurship Education provided tremendous help in attracting the project participants. Every 2 weeks, representatives of universities sent out the intermediate results of data collection to intensify the efforts made to attract students. The motivating factor for participation was the fact that two students, the survey participants, received from the project sponsors an Apple iPod music player. In total, 93 265 people from 27 countries participated in the survey, which accounted for 30 thousand respondents and eight countries more than in 2008.

## 4. Results

### 4.1. Students' future career aspirations

Expectations and aspirations of students for future careers may be quite different. It is often the case that the work that students choose after graduation in high school, does not coincide with their preferences in choosing a job after 5 years after graduation. Students gain more experience, and their career and professional intentions change. The study takes into account this fact, so respondents were asked to answer two questions about career preferences: right after studies (during 5 years after graduation, at most) and more than 5 years after studies. Responses to questions were arbitrarily divided into four career options: an employee, a founder, a successor and others (for people without direct career path). The employee is employed in an existing company, the founder is an entrepreneur who founded a new business, the successor to inherit and take over the management of the family business, in the "others" indicates a lack of professional career and other desires.

Table 3 shows that the majority of Russian students right after graduation are seeking paid employment (66.6%). It is almost identical to the global picture (67.8%). Most want to work in medium-size or large companies (27.9% and 28.7% of respondents, respectively). Only 11.7% of the sample would prefer to become a founder immediately after graduation, which is also correlated with international standards. 15.9% of the respondents in Russia did not decide upon career. It is also comparable to world standards. The smallest part of the sample wanted to inherit the family business - 5.9% of the respondents, and even fewer in the global survey - 3.9% of the respondents. It is worth noting, that even if the distribution of the Russian sample is different from the worldwide, the difference is insignificant.

Table 3

Career expectations of Russian students and students around the world

	Russia, %		International sample, %	
	Immediately after graduation	In 5 years after graduation from a higher school	Immediately after graduation	In 5 years after graduation from a higher school
<b>Hired employee:</b>	<b>66.6</b>	<b>28.6</b>	<b>67.8</b>	<b>38.2</b>
...at a small or medium-sized company (1-249 employees)	27.9	4.0	22.4	7.1
...at a large company (>250 employees)	28.7	19.3	26.2	15.0
...at university/in Academia	7.1	3.1	9.2	7.6
...in the public service	2.8	2.3	10.0	8.6
<b>Founder</b>	<b>11.7</b>	<b>47.1</b>	<b>11.0</b>	<b>34.4</b>
... continuance in the firm I have already founded	1.9	7.1	2.3	4.1
... foundation of one's own firm	6.5	34.9	4.6	21.6
... start as a freelancer	2.3	2.3	3.4	5.9
... foundation of a franchise company	1.0	2.8	0.6	2.7
<b>Successor</b>	<b>5.9</b>	<b>7.2</b>	<b>3.9</b>	<b>8.9</b>
...continuance of my parents'/relatives' firm (family firm)	4.4	3.8	2.3	2.9
... take over a firm not controlled by my family	1.5	3.4	1.6	6.0
<b>Other:</b>	<b>15.9</b>	<b>17.0</b>	<b>17.3</b>	<b>18.6</b>
...no professional career (e.g., travelling, family, etc.)	3.4	3.5	4.8	3.3
...I don't know (not yet)	8.8	10.0	7.9	9.9
...other	3.6	3.6	4.6	5.4

n=2882, in per cent.

The situation is different when it comes to career expectations 5 years after studies. Almost half, namely 47.1% of Russian students want to start their own company, that is to become the founders. As of the global sample, the figure is 34.4%. Nearly 38% decrease in the number wishing to remain wage-workers - to 28.6%,

while worldwide the figure is 38.2%. More respondents want to succeed the business - 7.2%, the global rate also increased and raised up to 8.9%. The number of those who did not make up their mind about career also increased, 17% in Russia and 18.6% in the world. Trends in changes in career expectations in Russia and the world

observed the same, but in Russia, more respondents were thinking about starting their own business 5 years after graduation.

Among the Russian students studying economics and management, the distribution of career expectations is the following (see Table 4).

Table 4

Distribution of future career aspirations among students of economics and management, %

Economics and Management		
	Right after studies	5 years after studies
Hired employee	67.2	27
Founder	10.3	49.0
Successor	6.7	7.9
Undefined	15.8	15.9

Among the social science students the distribution of career expectations is the following (see Table 5).

Table 5

Distribution of future career expectations among students of social science, %

Social sciences		
	Right after studies	5 years after studies
Hired employee	69.1	44.7
Founder	12.0	28.6
Successor	4.1	7.8
Undefined	14.7	18.9

Among the natural sciences students the distribution of career expectations is the following (see Table 6).

Table 6

Distribution of future career expectations among students of natural sciences, %

Natural sciences		
	Right after studies	5 years after studies
Hired employee	64.6	27.5
Founder	14.5	48.0
Successor	4.7	5.7
Undefined	16.2	18.8

Among men, 61.9% of respondents wanted to be employed immediately after graduation and 31.1% - 5 years after graduation, 17.8% of men would have preferred to set up their business right after graduation, 47.4% - 5 years after studies.

Among women, a slightly different pattern was formed: 69.2% of the respondents wanted to be employed right after studies, and 9.2% wanted to set up their businesses, whereas 5 years after studies 27.3% of female students wanted to be an employee and 47% were willing to found their own business.

Thus, the overall trend is clear: regardless of sex and degree received, respondents wanted to become founders of their own business more than 5 years after graduation. This is due primarily to the fact that within 5 years of work they needed to gain valuable professional experience. However, if one considers the differences among students of humanities and social professions after 5 years is more than the desire to preserve the position of the wage worker. This is probably due to the special stability of the desire of the students of these professions, as well as the fact that students studying social sciences do not really understand where and how they can start their own business.

Table 7 summarizes the results of analysis of the motives that prevail in choosing a career path for students of Russian universities.

It is worth noting, that a number of features in the motives of different groups of respondents were very important to the theme of "Build a business children can inherit" among the founders and successors of family businesses. On the other hand, "Continue the family tradition" is quite important for the successor, as a matter of fact, while it is unimportant and neutral for

Table 7

*Motives of choosing a career path among students of Russian higher education institutions (1 – absolutely not important, 7 – very important)*

Motives of choosing a career path among students in Russia					
	Total in sample	Employees	Founders	Successors	Other career
Challenge myself	5.01	4.85	4.91	4.91	4.80
Fullfill my own dream	6.09	5.77	6.19	6.08	5.89
Grow and learn as a person	6.35	6.25	6.23	6.19	6.05
Earn a larger personal income	6.15	6.01	6.19	6.16	6.09
Financial security	6.00	5.95	6.08	6.09	5.83
Build a business children can inherit	5.13	4.25	5.74	5.94	5.21
Continue a family tradition	3.35	2.99	3.70	5.02	3.83
Follow example of a person I admire	3.88	3.69	4.36	4.64	4.12
Be innovative, at the forefront of technology	4.72	4.36	5.43	5.07	4.81
Develop an idea for a product	4.91	4.55	5.68	5.24	4.86
Achieve something, get recognition	5.94	5.90	6.06	5.87	5.67
Gain a higher position for myself	5.72	5.60	5.75	5.72	5.57
Get greater flexibility for personal life	5.71	5.56	5.91	5.61	5.62
Be my own boss	5.77	5.07	6.13	6.16	5.76
Exploit a specific business opportunity that I recognizedTo follow a social mission	5.33	4.60	6.17	5.71	5.29
Follow a social mission	4.69	4.53	5.08	4.85	4.86
To follow an ecological mission	4.67	4.48	5.06	4.91	4.87

the founders of their own businesses and those, who did not decide upon their career. Interestingly, the theme of "Follow example of a person I admire" is only important for the successor, and all other groups have expressed a neutral attitude to this motif. Interestingly, the reasons for "Be innovative, at the forefront of technology" and "Develop an idea for a product" are quite important for the future founders, and future employees mark this choice as neutral. It is very important for future founders to consider the motive "Grow and learn as a person." Finally, for future employees the motives of "Follow the social mission" and "Follow environmental mission" are not particularly, while for a group of founders, this motif appears clearer than for other groups.

#### 4.2. Entrepreneurial intentions

The above results and comments were focused mostly on career preferences of students. This section

considers entrepreneurial intentions of students, as well as those actions that are taken by students in creating their business.

Fig. 2 shows entrepreneurial intentions of students in Russia and around the world. The general trend is the same in both cases, the majority of students (34.2% and 39.1%, respectively), only occasionally thought about building their business.

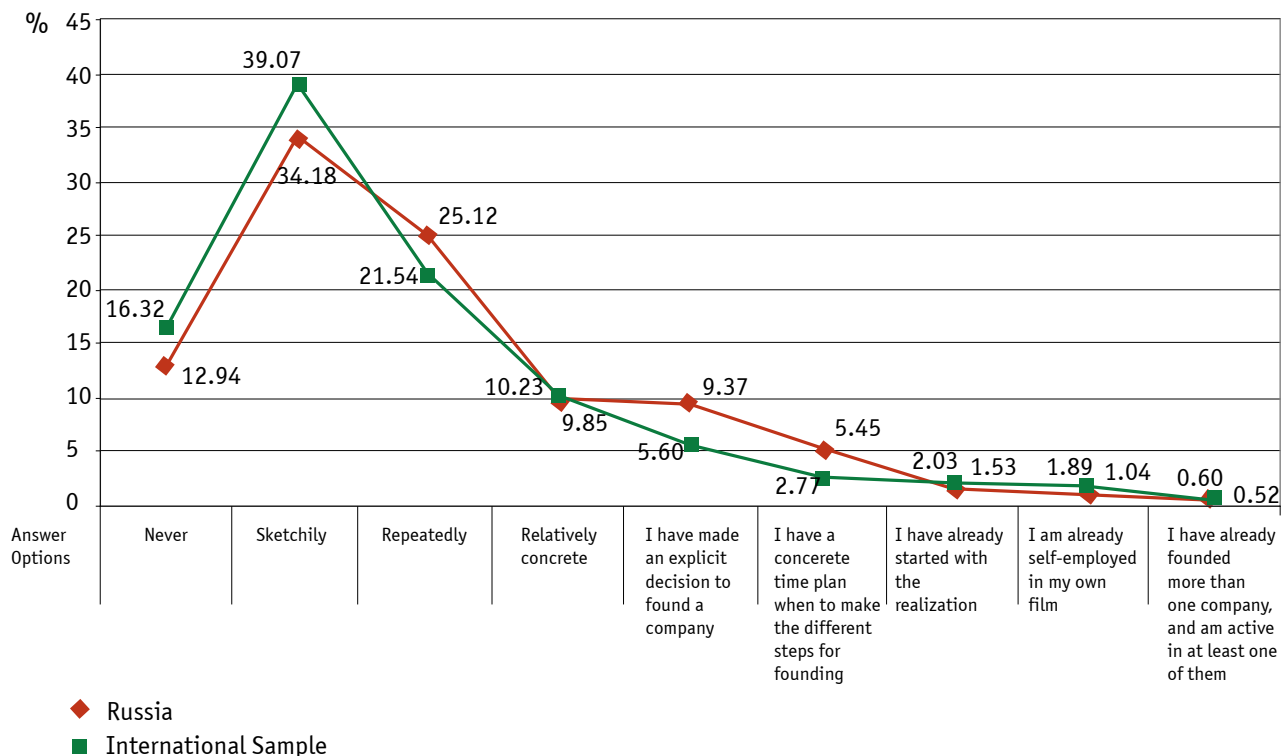
It is an interesting fact, that almost the same ratio of students in Russia and the world think about building their business seriously enough. At the same time, the percentage of respondents that had taken a positive decision, and had a concrete plan of action in Russia was even higher (nearly 2 times higher), than that around the world. In a more specific case, the situation is almost the same, but Russia is falling behind by 0.5-1%, as compared to global results.

#### 4.3. Entrepreneurial Activities of Students

Those students who are willing to

connect their life with employment as an entrepreneur, with the exception of those, who responded "never" and "sometimes" to the question about their entrepreneurial intentions, are classified in the research project "Global University Entrepreneurial Spirit Students' Survey" as potential or active founders of their own businesses. It is quite enlightening to know, how far students come into their business operations. In the Russian sample 47.1% (points "never" and "sketchily" in Fig. 2) of the respondents indicated that they had not thought about doing their own business, but 51.3% answered the questions (items "Repeatedly", "Relatively concrete", "I have made an explicit decision to found a company", "I have a concrete time plan when to do the different steps for founding", "I have already started with the realization" in Fig. 2) indicated that they are potential entrepreneurs, while 1.6% ("I am already self-employed in my own firm" and "I have already founded more than one company, and am active

Figure 2. Russian and international students' entrepreneurial intentions <sup>4</sup>



<sup>4</sup> Students' response to the question: "Have you ever seriously considered setting up you own business?"  
Figures illustrated % of students selecting one of the eight listed options.

in at least one of them” in Fig. 2) were active entrepreneurs. Need to consider how far would-be entrepreneurs took their business activities. This distribution in Russia and the world is presented in Fig. 3.

Russia is almost 10% (36.7% and 27.2%, respectively) ahead of the international sample in the indicator “Thought about the first business ideas”. In addition, potential entrepreneurs in Russia are more active in searching for potential partners: 13.9% versus 11.6% of the world. Other parameters are almost at the same level, with a less than 1% difference.

Among those who have already decided to become entrepreneurs the time period during which this group of potential entrepreneurs is going to set up their businesses has been investigated. The results are shown in Fig. 4.

Fig. 4 shows that the majority of potential entrepreneurs are going to set up their own business within a year: 55.9% of respondents from Russia and 49.2% of respondents worldwide.

The preference should be given to industry-potential entrepreneurs. This comparison is very interesting in terms of qualitative results, i.e. the comparison of international and Russian samples. Results of the comparison of industry preferences of potential entrepreneurs are given in Fig. 5.

Based on the information presented in Fig. 5, we can conclude that Russia’s most popular industries are: advertising / marketing / design (10.7% of respondents), wholesale and

Figure 3. Russian and international students’ entrepreneurial actions<sup>5</sup>

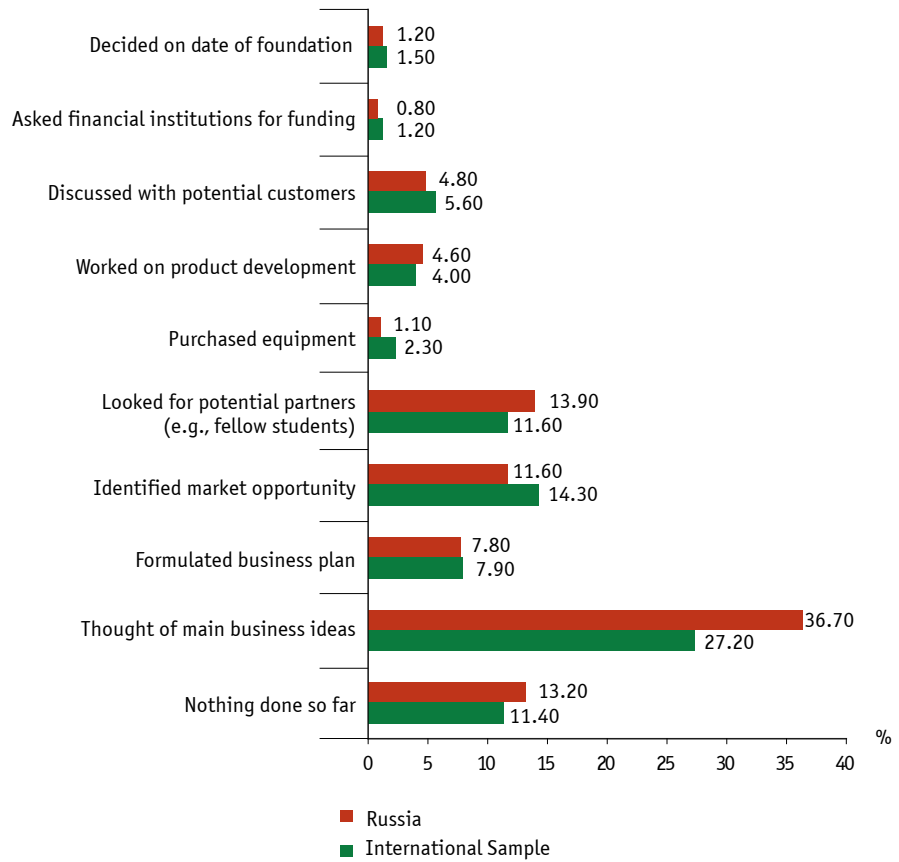
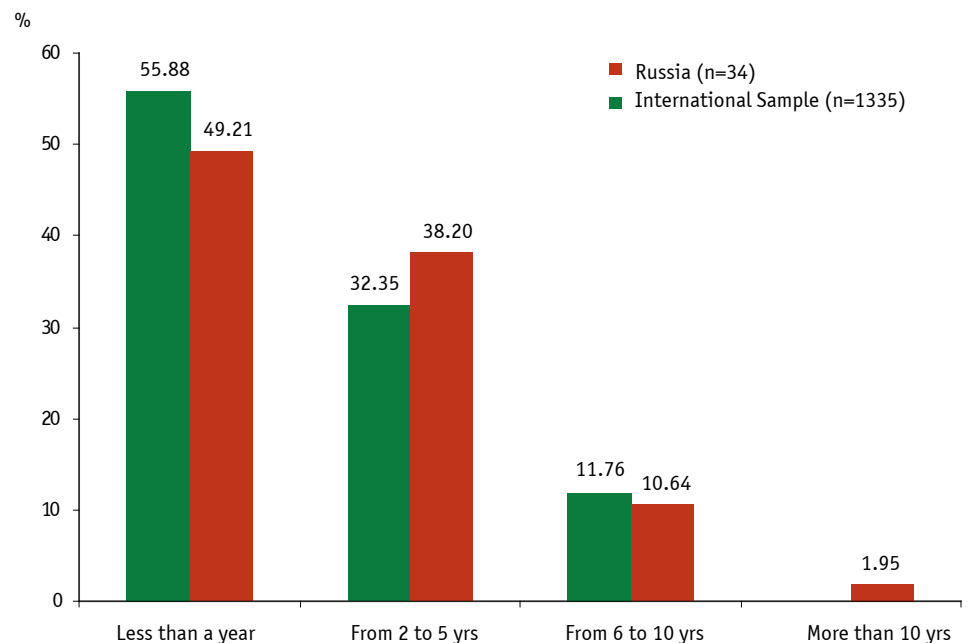


Figure 4. Number of years before founding one’s own company



<sup>5</sup> Students responding to the question: “What actions have you already taken for your potential start-up?” Figures illustrate the % of students who have engaged in the ten steps given.



Figure 5. Industry preferences of potential entrepreneurs



retail trade (15.8% of respondents), hotel and restaurant business (13.9%) and manufacturing (8.3%), whereas the global sample exceeds the Russian in the following sectors: health (9.4% of respondents), architecture and engineering (6.4%), consulting (9.5%), education (5.6%) and another: everything from genetic engineering and ending with sport sections (13.2%).

An interesting extension of entrepreneurial intentions among students is the idea generation, i.e. how would-be entrepreneurs come up with the idea of their own business. The results of statistical analysis of the issue are presented in Table 8.

As for the experience of the potential entrepreneurs before founding their own businesses, the Russian students spared less time for it: 2 to 6 years against the world results, as a whole. In addition, Russian students are willing to devote 58% percent of their working time per week to that, whereas in the global sample,

Table 8  
Business idea generation

	Russia, %	International sample, %
Current or former work activity	6.1	11.3
Hobby or recreational pastime	21.0	13.1
University studies	18.1	19.1
Academic, scientific or applied research	4.4	4.8
Idea from self or fellow students	18.1	12.6
Friends outside University	6.2	4.6
Family members	9.7	7.7

this index had a value of 53%.

As for finding partners, the results were as follows (see Table 9).

Table 8 shows that the majority of Russian would-be entrepreneurs were thinking about a business with a partner (44.6% of respondents), they would be looking for business partners at higher school or among friends outside the university (46.3% and 55% of respondents). 27.1% of respondents were not going to search for business partners. A similar situation was in the world: most of the surveyed students wanted to have a partner or partners at all (39.9% and 35.2%), and they would find them in higher school and among friends outside the university (49.6% and 55.2%, respectively), 29.5% and 27.7% of the respondents, who answered this question, would be looking for business partners in the circle of relatives and family in Russia, and in the world the respondents answered roughly the same way.

The results of the survey on the sources of financing of future businesses are presented in Fig. 6. The results are shown in mean value.

There is a very interesting fact, that almost the same number of people pointed out bank loans as a source of finance in Russia and in the world - 20.74% and 20.47%. Respondents in the rest of the world were increasingly reliant on equity - 41.12%, rather, than in Russia (32.08%), but in Russia, there was more reliance on capital and the family and friends for help: 21.74% compared with 14.94% of the world's survey. However, equity is dominated as a source of funding in both samples.

#### 4.4. Active Entrepreneurs among Students

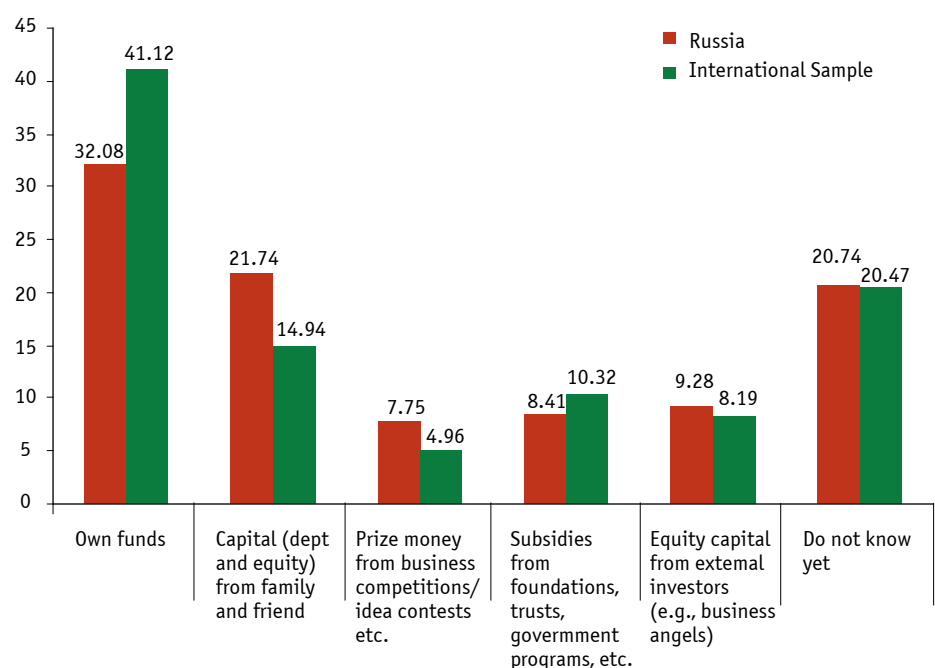
In this section we focus on the study of active entrepreneurs and their characteristics. Active entrepreneurs are those who work in the firm, which they founded themselves, or those who founded more than one firm. In the Russian sample there were 45 such people, and the sample of the world

Table 9

Number of potential partners and sources, where potential partners come from

Number of business partners		
	Russia, %	International sample, %
No partners	27.1	35.2
1 partner	44.6	39.9
2 partners	21.4	17.9
3 partners	4.1	3.9
4 partners and more	2.7	3.2
Sources of partner search (several responses are possible)		
	Russia, %	International sample, %
University	46.3	49.6
Circle of friends outside university	55.0	55.2
Relatives / family (parents, brothers, sisters)	29.5	27.7
Spouse	21.0	18.5

Figure 6. Sources of funding a potential business (approximate share, %)



was 2324. It is necessary to conduct a descriptive study profile of a group of entrepreneurs. In the sample, active entrepreneurs are distributed by age and sex, as follows (see Table 10).

Table 10 shows that the gender distribution in Russia and worldwide were about the same: there were more men among the active entrepreneurs - 71.1% and 68.8%, respectively, for Russia and the global sample. In terms of age the results were diametrically opposite: 71.1% of active entrepreneurs in Russia - under 25, compared with 30% of the world.

The distribution of active entrepreneurs in areas of learning are shown in Table 11.

Table 11 shows the prevalence of active entrepreneurs in Russia among the students receiving education in economics and management, namely 64% vs. 34% in the global sample. However, on an international scale, it is seen that there is prevalence of active entrepreneurs among students in social sciences and humanities, and a slight preponderance of students of natural science disciplines.

We now turn to the characteristics of established firms. Number of partners with whom the enterprise was established on average equal to 2.62 and 1.9 for Russia - around the world. Collectively we can conclude that Russia has created a business with three partners, and the world average - with two. The average share of property owned by the respondent, about the same in Russia and the world: 61% for Russia, and 68.3% in the world.

Speaking on the impact of business is to answer that the average in Russia, about twice the global average. The average number of employees in the Russian firm is 6 people in the world - 3 persons. Sales for the past year, an average of 929 321 Euro in Russia and 459 755 Euro in the world.

With respect to the orientation of growth, the Russian businessmen active among the students expect that the number of staff within 5 years of their company to grow by 35% (for

Table 10  
Distribution of active entrepreneurs by gender and age

Distribution by gender, %		
	Russia, %	International sample, %
Men	71.1	68.8
Women	28.9	31.2
Distribution by age, %		
Under 25	71.1	30.0
Over 25	28.9	70.0

Table 11  
Distribution of active entrepreneurs by field of study, %

	Russia, %	International sample, %
Economic and management studies	64	34
Social sciences	4.4	21.6
Natural sciences	22.2	29.8
Other areas	8.9	15.1

3 persons on average) and 20% by volume of sales. Globally, the picture is somewhat different: the increase in the number of staff expectations are 29.1% (1 person), but 6 times higher than Russia in terms of sales growth - 125.9%. The experience of the founder in the case of both samples is about one year (0.67 and 0.65, respectively for Russia and the world).

How active entrepreneurs finance their business? Fig. 7 shows the results of the allocation of funding

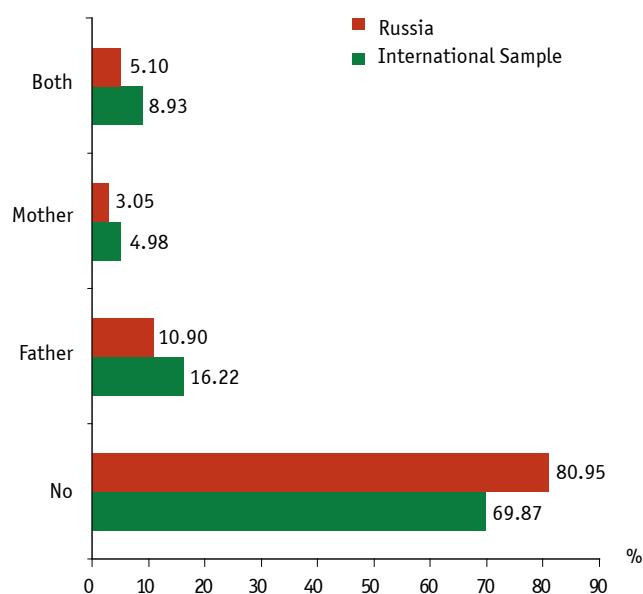
from various sources which are characteristic for Russia and the world at large.

Most companies established by active student entrepreneurs, were founded at their own expense, and in the world this figure is higher: 72.5%, compared to 57.8% in Russia. The share of capital, taken from friends and family earlier in Russia - 23.8%, and the world - 14.5%.

Figure 7. Sources of financing of an established business, %



Figure 8. Presence of business owners in students' families



#### 4.5. Family Business

This section examines characteristics of the distribution of students who inherit the family business. To conduct a full analysis of the family business and succession in the field among students, survey participants need to understand what percentage of the respondents' parents are business owners? Fig. 8 shows the answers in Russian and international samples at full scale.

Fig. 8 shows that the majority of the students' parents are not the owners of the business both in Russia (81%), and in the world (69.9%). In the rest of the world the performance indicator is higher than in Russia, but there is a tendency in most cases, that the owner is his or her father, then go both parents and the number of cases, when a mother is the owner are least common.

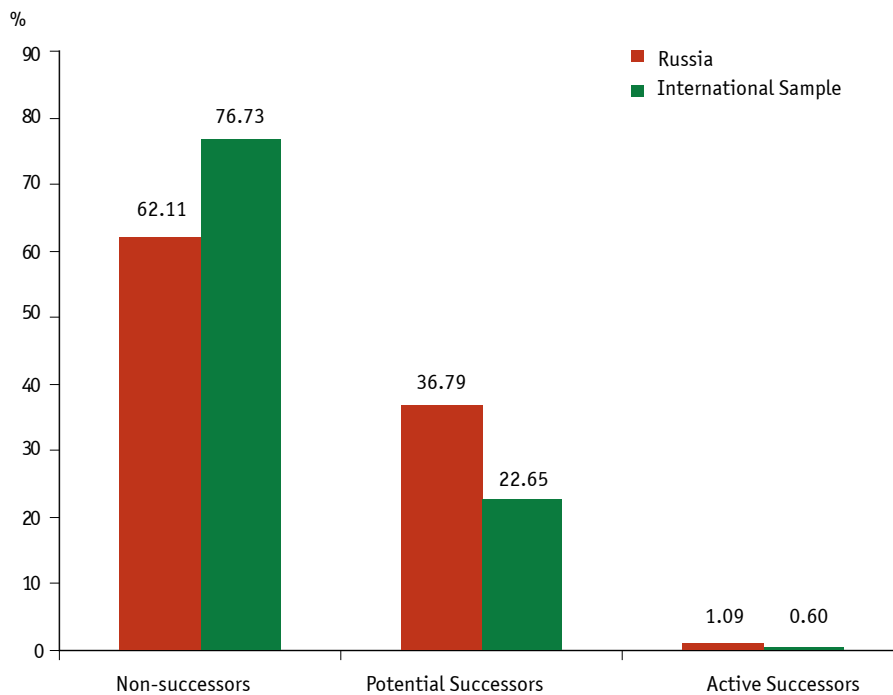
Fig. 9 shows the levels of succession in the ownership and management of family firms among students in Russia and throughout the world.

Judging by Fig. 9, we can conclude that, despite the small number of succession cases, Russian students are more willing to take over the family business from their parents: as potential successors, there are 36% of respondents in Russia and 22.7% - in the world, and among active successors in Russia, there is 1.09% sample of potential successors, while in the world it is 0.6%.

Analysis of the family business, by analogy with the business created by the students. Table 12 illustrates the main indicators of the family business.

Table 12 shows the results of a study of indicators of family business firms. The main differences are the following: Russian firms were established 10 years later than the world average, the same difference in gaining control over the family business, but it is worth noting that Russian companies on average employ 2 times more employees than in firms around the world. The main

Figure 9. Levels of succession in business among students in Russia and worldwide

Table 12  
Main indicators of family business activities

	Russia	International sample
Since when does the main company exist?	1999	1989
Since when is it owned by your family?	2000	1991
How many family members are working in the company in total?	1.68	1.93
What is the percentage of equity that is owned by your family?	72.47	74.92
Total number of employees (full time equivalents)	40.5	16.4
What is the total turnover that the company generated last year (Euro)?	4167866	274706407

difference is in sales over the past 2010: the average sales of Russian companies have exceeded 4 million Euros, while the average sales of family firms in the global sample of almost summed up to 275 million Euros.

However, it should be noted that the average domestic owners and property owners in the international control sample have almost equal shares in ownership: 72.5% and 75%, respectively.

#### 4.6. Entrepreneurial Power

Entrepreneurial intentions and actions of students are used to calculate the aggregate index of entrepreneurial power of the students. The index takes values from 1 to 100 in each case, but in reality they do not reach the value 100, as with the country index, an average index of all cases is taken. The method of calculation is described in Appendix 2.

For Russia, the index of entrepreneurial power is 11.13. Russia is at 21 place among 27 countries that participated in the survey. In addition, the index of entrepreneurial power of the Russian students is lower than the average world index of entrepreneurial power: it is close to 12.39. Russia comes earlier in this list, than countries such as Japan, Greece, Pakistan, Germany, Austria and Belgium. The list starts with Great Britain, Finland and Portugal (see Fig. 10).

It would be interesting to continue the analysis of entrepreneurial attitudes among students by comparing the number of active entrepreneurs with the total number of respondents surveyed in the country of the respondents. In this rating Russia was in the 22nd place with 1.6% and did not differ on this indicator of the level of the index of entrepreneurial power. However, other countries are different:

there were very few of the surveyed businessmen in France, Singapore, China, Luxembourg and Japan. Estonia, Great Britain and Liechtenstein are on top of the list. The average is 2.5%.

#### 4.7. Barriers in entrepreneurial spirit formation among students

One of the most important analytical sections of this report is a section on barriers that hinder students to become entrepreneurs: to set up their business or take over management of the family with their relatives. These barriers should be investigated and possibly removed to facilitate business development and infrastructure support for small and medium-sized businesses in the country.

##### *Barriers to founding one's own business*

Fig. 12 shows the relative importance of different barriers that stand in the way of young entrepreneurs in the founding of their firms. This figure was estimated at the scale of seven. The figure shows a comparison of results obtained for the Russian and the global sample. As can be seen, the most significant barrier is the access (lack of) to financial capital: 5.1 for Russia as compared to 4.89 on average in the world. The second most important barrier in the world, and Russia - is a "financial risk": Russia - 4.73, the world - 4.42. The most insignificant barrier both samples considered "High workload of entrepreneur". It is worth noting that the biggest difference between the indicators presented in the answer, "Having the necessary skills and capabilities". In Russia it is quite a significant barrier, while worldwide its significance is less. In addition, the interesting fact that all the barriers in Russia are more important (somewhere - more, somewhere - to a lesser

Figure 10. Index of entrepreneurial power, %

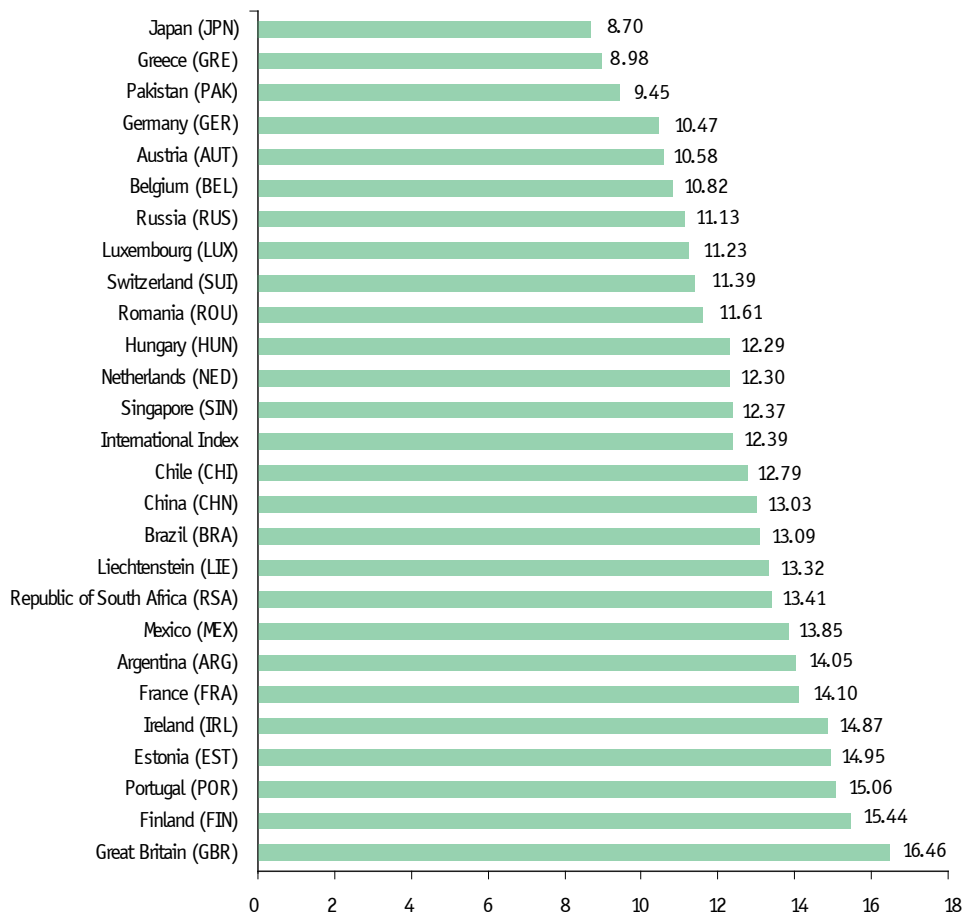
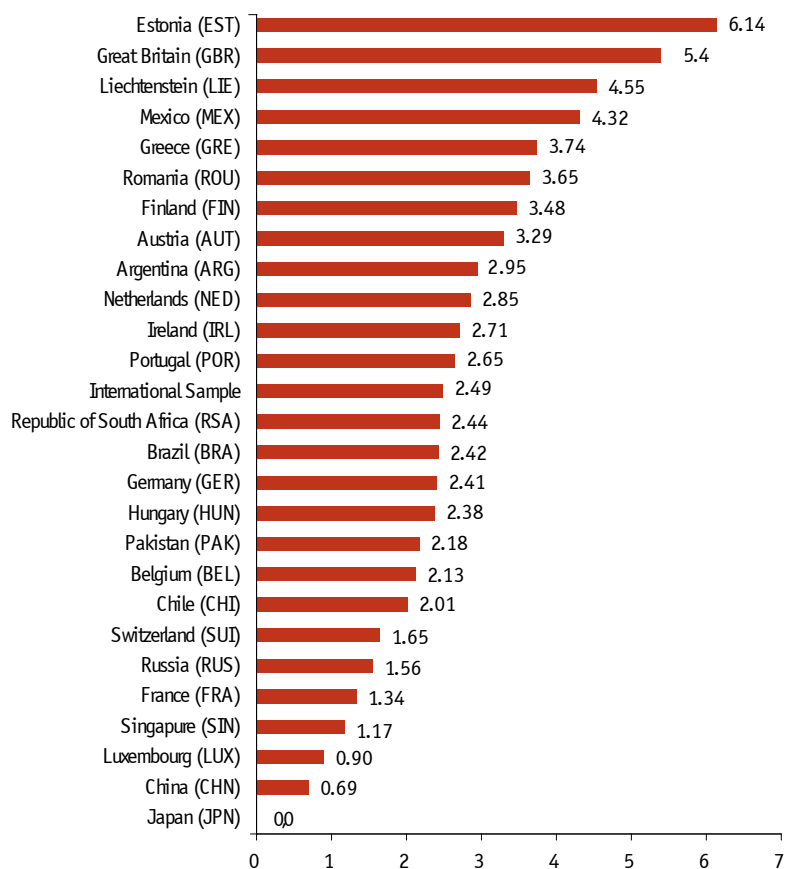


Figure 11. Ratio of active entrepreneurs among students to the number of respondents



extent) than the global results.

*Barriers in family business succession*

Another aspect of entrepreneurship among students is the inheritance of the family business. It is also important, that there are factors in this process, which impede the normal running of the process. A comparative analysis of these factors are presented in Fig. 13. It is interesting that in Russia the most significant barrier is "unwillingness to work in this company, regardless of other barriers", the value of 4.54 out of 7 (global value is much lower - 3.93). The least significant barriers were "workloads of entrepreneur" (this figure is also the lowest in the world sample) and the "daily work in a team with parents/family members". But in the international perspective the least significant barrier was "Responsibility for the successful continuation of the family tradition". It is important to note that in Russia, the significance indices for all the barriers are also higher, as the previous case, than the average worldwide.

**4.8. University factors**

To the greatest extent the development and implementation of entrepreneurial intentions among students promotes the availability of infrastructure support entrepreneurship at the university: the availability of courses, seminars, business incubators, master classes, financial support, etc. In order to study this problem, a question on proposals (factors Enterprise Development) in each university was included in the questionnaire. The list, which is presented in Table 11, included not only the university courses and seminars, educational opportunities for business networking (communication with business meetings, competitions and so on), as well as providing

Figure 12. Significance of barriers in the process of firm founding by students (1 – not in the least significant, 7 – very significant)

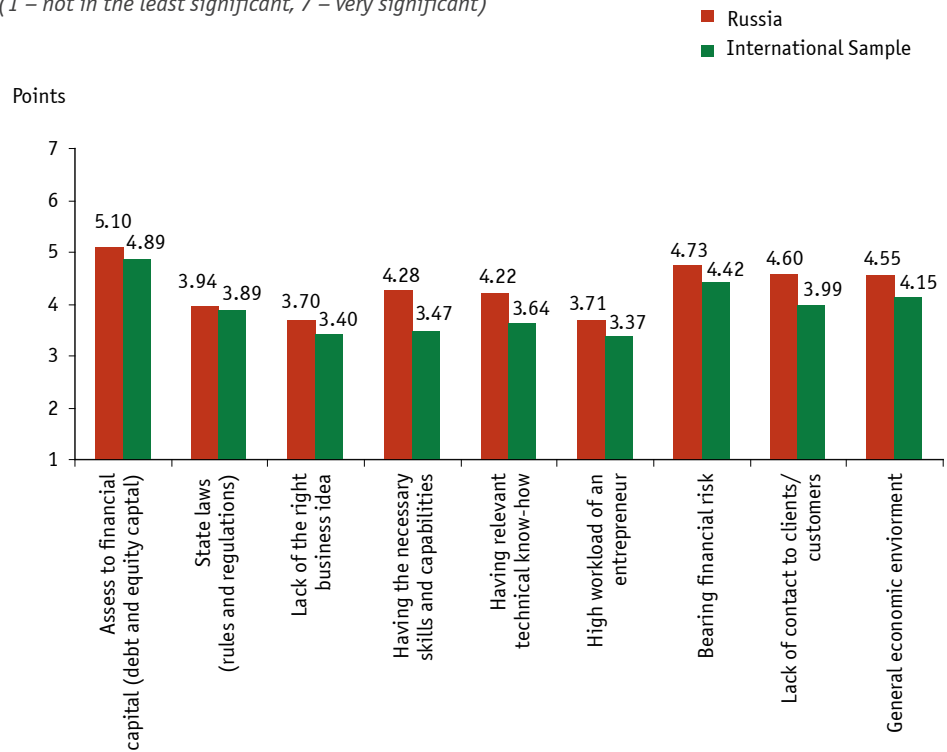
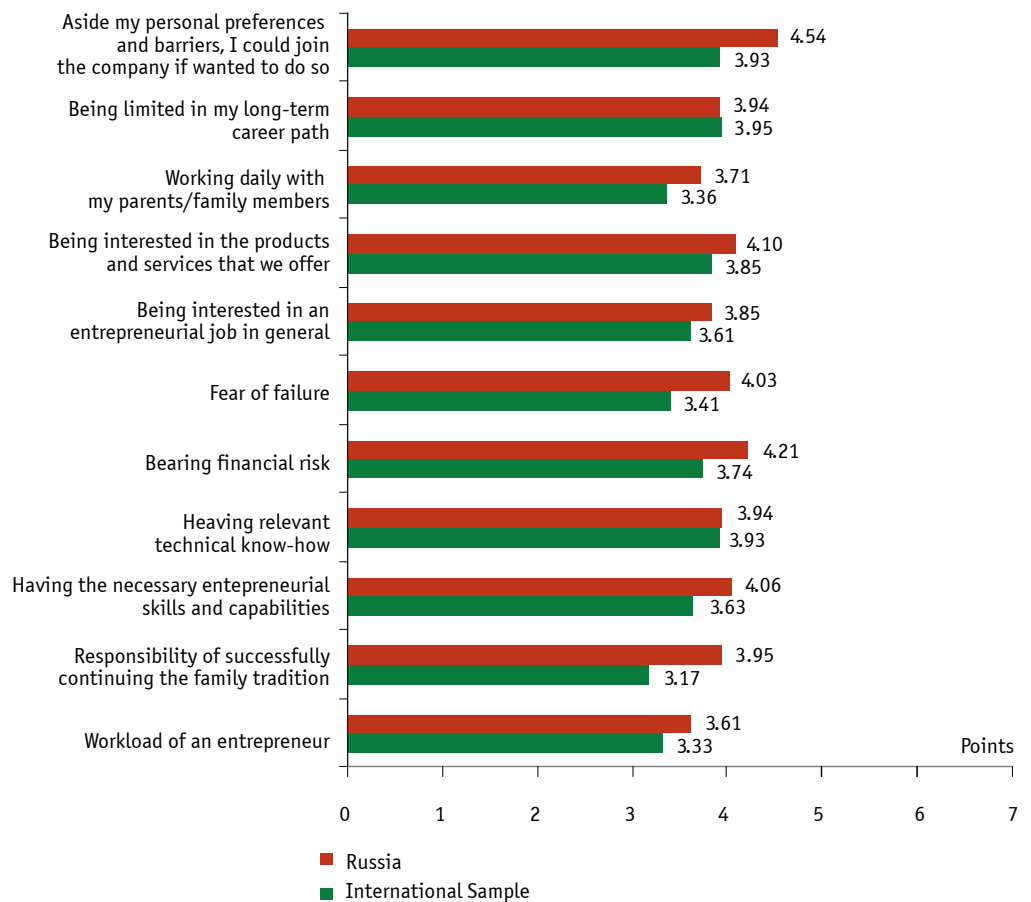


Figure 13. Significance of barriers for business successors (1 – not in the least significant, 7 – very significant)



resources in the form of technological resources and financial assistance. Firstly, students were asked to respond, whether the University offered them similar infrastructural opportunities, secondly, whether they wanted to participate in such activity, or not, and, thirdly, whether they were satisfied with the existing proposals. The answers to those questions are presented in percentage terms in Table 13.

It is worth noting that the most represented species of infrastructure support are the “technology and research resources (library, web)”, - 75.4% of the respondents, as well as the presence in most universities, the survey participants courses in “entrepreneurship in general” (65%) and “business planning” (67.7%, respectively). Also of course there are offerings of “entrepreneurial marketing” (52%), and among the network of areas – “business plan contests” (53.4% of respondents). Otherwise, the offerings indicated the presence of less than half of the respondents. Among the lowest rates in the course “Family Business” - 11.3% of the respondents, the courses “Technology entrepreneurship” and “Social entrepreneurship” is also low: 24.4% and 21.2% answered affirmatively about their availability, respectively. Among the opportunities for building networks the lowest index was in “mentoring and coaching programs for entrepreneurs” - 21.8% of the respondents indicated that such programs exist, also should answer that, traditionally, universities do not offer financial support, although 20.8% of survey participants noted that it was still there. Of those who did not attend and did not participate in the programs, the majority wished that they had participated and had the opportunity to be involved in their implementation. The typical feature was that students, of course, wanted financial support from the university - 78.2% of respondents, and what was unexpected, they wanted training in “innovation and idea generation” (74.5%), although earlier it had been noted that the

Table 13

*Availability of infrastructure for entrepreneurship development in Russian universities*

Do you have such proposal at your university?				
	Yes (%)	No / I don't know (%)		
			I would like	I need it
Entrepreneurship in general	65.1	34.9	71	29
Family firms	11.3	88.7	58.3	41.7
Financing entrepreneurial ventures	37	63	64.2	35.8
Technology entrepreneurship	24.4	75.6	49.7	50.3
Social entrepreneurship	21.2	78.8	51.4	48.6
Entrepreneurial marketing	52	48	63.5	36.5
Innovation and idea generation	48.6	51.4	74.5	25.5
Business planning	67.7	32.3	70.3	29.7
Workshops/networking with experienced entrepreneurs	49.7	50.3	72	28
Contact platforms with potential investors	29.8	70.2	71.4	28.6
Business plan competitions / workshops	53.4	46.6	59.4	40.6
Mentoring and coaching programs for entrepreneurs	21.5	78.5	65.6	34.4
Contact point for entrepreneurial issues	45.7	54.3	66.6	33.4
Technology and research resources (library, web)	75.4	24.6	57.2	42.8
Seed funding / financial support from University	20.8	79.2	78.2	21.8



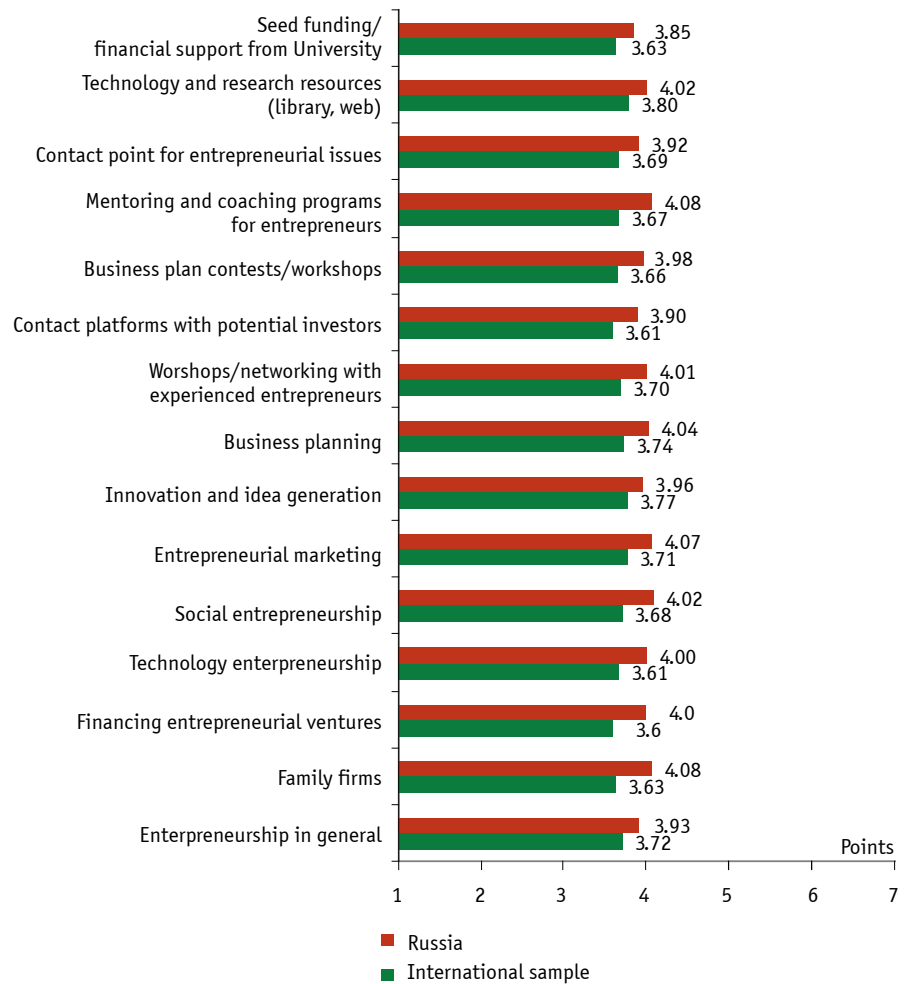
presence of business ideas was not a barrier to the establishment of the company. High rates were also given to items "Workshops/networking with experienced entrepreneurs" - 72% and "Contact platforms with potential investors" - 71.4% of survey participants.

Thus, the present Russian universities training offers individual elements of business studies, but only the most basic ones, without in depths, but, on the contrary, weak infrastructural support - availability of sites for construction of networking, communication, exchange of help, and there is no component associated with fundraising / funding.

It is also necessary to analyze the degree of satisfaction with the proposals, which are present at the universities of Russia. Fig. 14 shows the results of the analysis of satisfaction with the proposals in the field of business, previously referred to in Table 11.

Distinctively when comparing the results of international studies and Russian part of it there was a significant excess in rates of satisfaction offered by the university courses and opportunities for entrepreneurship among Russian students. The following fact seems especially strange in light of the analysis of data in Table 11, i.e. seeing courses on social entrepreneurship, family business and a coaching program, despite the fact that they are least represented in Russian universities. The lowest satisfaction associated with such proposals as the availability of venues for meetings with entrepreneurs - the network infrastructure support aspect of entrepreneurship, as well as directly with courses on entrepreneurship and innovation. On a global stage, most students were satisfied with the provision of university technological resources, as well as with courses on innovation (compared with Russia) and entrepreneurial marketing. Of the lowest satisfaction was an organization of sites for meetings with entrepreneurs,

Figure 14. Level of satisfaction by schools' offerings in entrepreneurship area (1 – absolutely unsatisfied, 7 – fully satisfied)



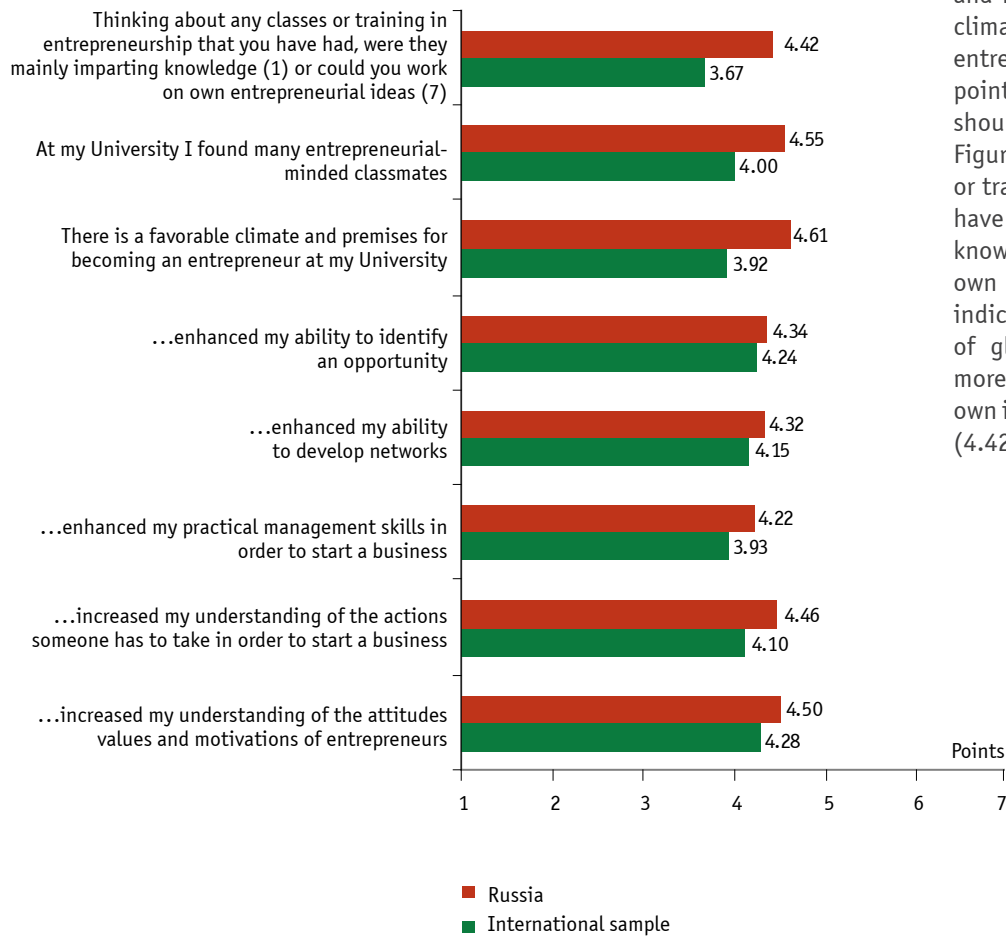
the same with Russian students, and the aspect of financial support from the university. We can see the distribution of offers from universities in all countries in Appendix 3.

The second item of analysis was to analyze the results of satisfaction that students have achieved as a result of visiting the host university sponsored activities in the field of entrepreneurship. They are presented in Fig. 15.

The first thing one need to comment on is just another excess in Russian results over the results

of the global average. The largest value of results shown in Fig. 15 - is a figure "There is a favorable climate and premises for becoming an entrepreneur at my University" - 4.61 out of 7, "At my University I found many entrepreneurial-minded classmates" - 4.55, and "increased my understanding of the attitudes, values and motivations of entrepreneurs" - 4.5 points. The latter figure is also the highest of the global, followed by "enhanced my ability to identify an opportunity" and "enhanced my ability to identify an opportunity." The lowest

Figure 15. Outcomes of attending courses in the domain of entrepreneurship among Russian and international students ("Courses I attended...", 1=strongly disagree, 7=strongly agree)



values among Russian students were represented in the result in terms of "enhanced my practical management skills in order to start a business" (4.22), and in the world - "There is a favorable climate and premises for becoming an entrepreneur at my University" – 3.92 points, in contrast to Russia. Attention should be also paid to the first item in Figure 15: Thinking about any classes or training in entrepreneurship that you have had, were they mainly imparting knowledge (1) or could you work on own entrepreneurial ideas (7)? For this indicator, Russia was confidently ahead of global significance, so Russia had more freedom over the study of their own ideas, rather than the global average (4.42 and 3.67, respectively).

## 5. Discussion

Among the advances in the study results one should highlight the most distinctive results and comment on them. Especially because some of them are contrary to world trends and represent a unique Russian phenomenon.

In the beginning it is worth noting that, in general, describing the entrepreneurial intentions and attitudes among Russian students, it is possible to declare with the responsibility that they are not in any way inferior, and even in some ways even superior to their foreign counterparts. However, in addition to this positive development, it is necessary to address an important shortcoming of the Russian economy growth-imperfect institutions, business support infrastructure in general. Thus, Russia has not developed assistance programs for entrepreneurs, but in recent years has created a platform for their communications among themselves and with the government. Support is needed especially by young entrepreneurs, of which students make a tangible part. The development of communication infrastructure between business and the state must become a priority for the Russian government. Less important, but rather, the main part of this development should be a system of entrepreneurship education that develops the entrepreneurial intentions of students, providing them with quality educational services, as well as various institutional and resource support.

Now we need to consider the facts that distinguish Russia from other countries.

1. Let us turn to the profile of the sample: in Russia the majority of those surveyed do their economic and management studies (62.5%), are twice the global rate. Possible reasons for this lie in the fact that Russia for the first time participated in the project "Global University Entrepreneurial Spirit Students' Survey", thus, participation in the study made an impact on

universities, which have contacts with the National Project Coordinator - Center for Entrepreneurship of the Graduate School of Management, St. Petersburg State University. Given the business and management profile of the Graduate School of Management, it is worth noting that the partner universities also have an business profile. However, many of them are departments of larger universities, where the questionnaire was sent out to students in all faculties of priority (the ability to control) in economics. The average age of respondents also differed: 21 and 25 years for Russia and the international sample, respectively. This difference is generated by the fundamental principles of the education system in Russia and in many countries around the world. Our students come to college at the age of 17-18 years, whereas in many countries, this threshold is 20-22 years.

2. Career aspirations of students. It is not strange that right after studies, young professionals for the most part want to be employees. Having received the necessary theoretical knowledge, students want to check them out in practice, to gain practical experience. 5 years after graduation, many (global sample had the same trend) change their preferences in the direction of opening their own business, and in Russia this trend is even higher than the world average. This can be explained by several reasons. Firstly, after gaining experience, many young people dream of independence in choosing their place of work, but the best way to be independent is to work for themselves - create their own businesses. Secondly, business in Russia is a prestigious, respected, and approved of social activity, which gives, in addition, social security and more material benefits. Thirdly, the material gain is seen above all in the establishment of one's own business, than in being hired. It is worth noting, that the high percentage

of graduates have not decided upon career path after 5 years of graduation of respondents. Apparently, such graduates account for a high level of uncertainty in the modern world and can not yet tell what their career path would be like, within 5 years from the date of the survey and graduation.

3. There is a number of interesting features among the motives underlying the choice of career path. They are rather important for the theme "Build a business children can inherit" among the founders and successors of family businesses. This can be explained by the intention to build a successful, stable business that brings income that lasts a long time. On the other hand, "continue the family tradition" is quite important for the successors, because such a motive is the basis of continuity. It is worth noting, that the following themes are important for the founders of new businesses "Be innovative at the forefront of technology" and "Develop an idea for a product". They are very significant, since the theory that entrepreneurs are innovators and suppliers of new innovative products to market had been confirmed. It may also be due to the fact that if a product on the Russian market is out-of-date, there is a risk not to make money, so employers tend to be innovative. The founders consider important the theme of "Grow and learn as a person" because business is a very important step in one's own development. Finally, the least important reasons for employees are the following: "Following the social mission" and "Following the environmental mission," which is interesting, because they consciously do not have motives that lie just beyond the bounds of income and innovation, as risk-averse have and seek to maintain a steady income, as well as the fact that they expect their employer to be socially responsible and care for the environment. Since for the founders these two motives appear brighter than

all the others, it might be suggested that entrepreneurs benefit from caring about the environment and society in gaining the necessary legitimacy. They are likely to facilitate institutional pressure. In addition, those motives can manifest themselves, due to the fact, that for businesses it is easier to provide more effective care for the environment and society, than to enter into corrupt schemes and to overcome other distortions of the institutional environment. An interesting fact is also that employees are absolutely neutral to the idea of innovative products, technologies and do not aspire to be like the persons who they admire. What their status as employees proves, is that those things are not enough for them, the motives of career advancement and personal growth are other than those of entrepreneurs.

4. An analysis of entrepreneurial intentions showed that the intentions of the Russian students were completely identical with the same indicators worldwide, but the global one's were twice as big, as the Russian ones, when it came to the first concrete steps for starting a business. The indicators "I have made an explicit decision to found a company" and "I have a concrete time plan when to do the different steps for founding" are higher than the world figures. But then the situation is even. All are likely to have been influenced by the fact, that the entrepreneurial career is preferable for many students since its prestigious, and they look for ideas of founding a business, make plans for how it can/will work, but further barriers arising on the path of an entrepreneur (financial, institutional, lack of experience) make most of the students abandon their entrepreneurial dream and gain experience by becoming employees. This is confirmed by Fig. 3, at which point the indicator "Thought of first business ideas" in Russia is higher than the global average by almost 10%, but the indicator "Looked for potential partners (e.g., fellow students)", is higher only by 2.3%, but then all the indicators are aligned, that can prove

that after the implementation of the action potential entrepreneurs in Russia are not supported in the implementation of other steps.

5. Considering the industry preferences, one can say, that Russia is different from the world, and that the world average potential entrepreneurs prefer to base their business in professional fields: consulting, architecture, etc. Whereas in Russia, business is based in such industries, where there is no need for big start investing (advertising), as well as in related hobby and pastime sectors (hotel and restaurant business: bars, clubs). This is indirectly confirmed by Table 7, in which most of the ideas in Russia come from spare time hobbies, as well as from the university.

6. In terms of seeking funding for one's own business in Russia it is most common to found business from "own funds", which is primarily due to the unavailability of credit in Russia, as well as the reluctance to borrow money from financial institutions for fear of failure on the start. It is worth noting, that according to the source "Capital (debt and equity) from friends and family", Russia is ahead of the global sample. This can be explained by the fact that Russia is inherent to a large community, and personal incomes in Russia are lower, on average, than in other countries. All that does not always allow a potential entrepreneur to open a company just on one's own money. Due to the reluctance to borrow from banks and unavailability of financial support from the investors of any kind, a potential employer asks for money from family and friends.

7. Students are relatively active entrepreneurs, among them Russia is dominated by men (71.1%), which is consistent with theories about women's entrepreneurship and the role taken by the majority of women in modern society – a mother, a housewife, an employee. However, it should be noted that active businessmen in Russia under the age of their foreign colleagues, most of them younger than 25 years (70%), whereas

the world average active entrepreneurs is over 25 years (68%). This is due primarily to feature selection: in Russia entrepreneurs are younger, on average, than their peers in the world, due to the specifics of the Russian higher education and attitudes, social norms. In many countries graduates work after finishing high school, and only a few years after leaving school they go to university. In Russia, the university education is received immediately after school, the same young people in Russia often prefer to go to University, rather than to go to the army. The cross-section analysis of active entrepreneurs among students in terms of the area of their learning, reveals that economic and administrative sciences dominate, in second place there are technical sciences. As noted above, this is due, primarily, to the characteristics of the sample.

8. Let us turn to the analysis of the impact of the business, to be active entrepreneurs in Russia and the world average. A surprising fact is that in Russia, the company turned out to be larger than the global sample, as in the number of staff and in terms of sales. Presumably, this may be due to the fact that Russian firms operate in traditional sectors (catering, trade, advertising), whereas the world average popular industries are those, in which firms themselves are smaller and may consist of one person. Accordingly, the performance indicators of firms will vary. However, if the Russian firms grow through extensive recruitment, there would be an increase in the number of transactions. Foreign firms are growing rapidly - their expectations of an increase in sales over five years exceeds the expectations of Russian entrepreneurs in 6 times.

9. Analysis in the field of family business has shown that only a small percentage of students have parents, who own businesses, and it would often be an owner's father. In addition, of those whose parents own the business, only 36% are ready to succeed, and 1% is already a family business successor.

It is worth noting that, despite the small proportion of respondents among the successors, they are still higher, than the world average. This may explain the fact that in Russia control of the family business is passed to no one else, but children. People are distrustful of salaried managers, so here the motivation is likely motivated by the desire of parents, the owners, rather than by the successor-students.

10. Descriptive characteristics and performance characteristics of Russian and international business from the standpoint of inheritance are different. Firstly, the family business in the world is older than the Russian average by 10-11 years. It is easy to explain the reforms that have taken place in the country in the early 1990s, as well as the crisis year 1998, when many lost their jobs, and the only way out for them was to become entrepreneurs. However, the analysis shows that Russian firms have developed extensively: they have more employees (2.5 times) than in foreign companies, but sales of the latter exceeds the volume of Russian in the tens and hundreds of times. Likely that the average Russian firms in the sample met the criteria of Small Business: 40 employees and 10 million in sales per year. Small business in Russia is rarely international and rarely extends beyond the region, whereas in Europe the international business developed quite strongly. Furthermore, additional 10 years of development have allowed businesses to reach a higher stage of development, and not to forget the gravity of international business in niche sectors where they may have weak competitive pressures.

11. The index of entrepreneurial powers shows how strong are the entrepreneurial intentions of students in one country or another. It estimates the number of people who are potential or active entrepreneurs, the total number of respondents in the national sample, as well as the actions they have taken in regards with their intentions to engage in business. Unfortunately, Russia ranks 21, staying behind countries with non-

entrepreneurial culture, as well as with lower levels of economic development. From the perspective of a low index of entrepreneurial power it may be said that in Russia business sentiments are quite strong and have the preconditions for entrepreneurship among students, because there are prerequisites for that. However, the low level of institutions, infrastructure support influences that young people face barriers and leave the entrepreneurial path of career development, or do not want to deal with them as a student or after graduation.

12. There is a need to consider in detail, what kind of barriers stand in the way of entrepreneurship. In general, the barriers can be divided into three groups: institutional factors, financial factors and individual factors. The analysis showed that all three groups of factors are important for the Russian respondents, however, individual factors related to personal skills and abilities are used in technology business, they are less important than financial and institutional factors. There is a need to address primary issues, such as access to capital through increasing access to credit, development of investment programs, lower interest rates for certain categories of young entrepreneurs, etc. It should be noted that there are institutional problems of two kinds: business support infrastructure and institutional problems with governmental system.

This primarily refers to the possibility of students and future entrepreneurs to meet with existing businesses and establish networks of contacts, mutual assistance, exchange of experience - such initiatives are to enhance entrepreneurial activity and greater survival of business. Relative to the second issue of institutional level, here we are talking primarily about solving the structural problems of corruption, high taxes, closure of some industries, and other legal insecurity.

From the perspective of family business succession, it is the most pressing problem - the reluctance of children to inherit and manage the

business of their parents. Perhaps this is due to the desire to create something different, then there is the desire to self-realization (here the high importance of the barrier "lack of interest in the products and services" is worth noting), or a reluctance to do business, and just live happily, receiving rents, or lack the necessary skills, which is also a significant barrier.

13. Finally, it is necessary to analyze the educational and other offerings that exist in higher schools, which participated in this study, i.e. attendance of students, if there is no offering, whether students are willing to go, and whether they are satisfied with the results. Frequency analysis showed that not all universities offer an infrastructure for entrepreneurship education. There are universities, that offer courses on business planning, marketing, and even entrepreneurship, but courses in the family business, technological entrepreneurship and social entrepreneurship are underrepresented. Regarding the various activities on networking and communication skills, the least represented is the offer of platforms and the opportunities to meet with investors and coaching programs. Financial support is, of course, also in demand. Of course, as expected, from those who did not attend those activities, most of them would like to attend. The last but not the least on demand is just practical assistance, as well as network infrastructure: the students want to get more practical skills, communicate with potential investors. The following is consistent with earlier data, i.e. there are significant barriers to access to capital, as well as the lack of practical skills at firm management. What one should pay special attention to in building support for potential and active entrepreneurs and entrepreneurship education systems in Russia, is the opportunities for students to get real business experience of business and be able to communicate and receive feedback on their projects, have an opportunity through some mechanisms,

competition and other, to obtain financing on favorable terms.

14. Regarding the satisfaction with the course, the result is surprising, namely, Russian students are quite satisfied with every event from the list presented in the survey, which is far more than the average for the international sample. There could be two explanations for this: either Russian students are satisfied with what is presented on the subject of entrepreneurship in Russia and are ready to perceive positive things offered by universities in terms of business studies, and they are less critical in their assessments, than the international sample, because they have nothing to compare to, or the situation is such, that students do not actually try to critically assess the situation, as susceptible to the idea that in Russia the situation in practice turned out differently than in theory, therefore, they are not willing to take seriously the proposals in the area of entrepreneurship. Both reasons are quite frightening, as affected by the low quality of the courses in entrepreneurship, lack of institutional measures to improve the situation of small businesses in public policy, as well as weak infrastructure, training and assistance to entrepreneurs in Russia.

15. However, in terms of learning outcomes, exploring the various activities in the field of entrepreneurship, it is important to note that the Russian students were more likely than the average for the sample reached and expanded their abilities. Perhaps this is an important indicator, that it is necessary to develop entrepreneurship studies in modern Russia and bring them to a new level, giving students the opportunity to improve in those areas, where they lack expertise, provide new knowledge and support for entrepreneurs. It is even more important for Russian students to work out their own ideas in the classroom, rather than get ready solutions: they do not think that the solutions would work, so they are not ready to use ready-made ideas for business.

## 6. Conclusion

To conclude, it is important to note once again the significance of the "Global University Entrepreneurial Spirit Students' Survey" (GUESS) in the study and development of entrepreneurship in the world, as well as a separate country. Conditions may vary, but the results make it possible to take measures to improve the situation with training and development of entrepreneurial intentions among students.

We would like to thank the universities, which participated in the research project, for their help in attracting students, who directly responded to the questionnaire.

Speaking about the study and its findings, the following should be noted: the scale and breadth of issues covered, the analysis of the responses, which provided a full picture of entrepreneurial intentions among students.

Russian national results simultaneously produced a number of significant challenges in teaching entrepreneurship, in the development and spread of entrepreneurial intentions in Russia. This is attributed primarily to poor quality of the courses offered, weak institutional support and poor infrastructure development, and training assistance to business, as an institution.

However, at the same time it is a very important fact, that Russian students are very entrepreneurial-minded people, who have a wealth of entrepreneurial potential, produce ideas, worth implementing, are engaged in business themselves, and their impact on the company exceeds their international counterparts, and if properly supported by state, the index level of entrepreneurial powers in Russia would be above the current value. Accordingly, it is necessary to develop entrepreneurial education, remove barriers to doing business and the intention to create it, create an improved infrastructure of entrepreneurship education, to which, in fact, this study was devoted.

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**Appendix #1**

Geographical distribution of project participants among universities in Russia





## Appendix #2

### Methods of calculating the index of entrepreneurial power

Each answer to the question about the action of a potential entrepreneur in relation to his or her own firm foundation the following weights were assigned in Table 1.

Number of question	Answer	Weight
1	Never	1
2	Sketchily	3
3	Repeatedly	3
4	Relatively concrete	5
5	I have made an explicit decision to found a company	5
6	I have a concrete time plan when to do the different steps for founding	5
7	I have already started with the realization	7
8	I am already self-employed in my own founded firm	8
9	I have already founded more than one company, and am active in at least one of them	10

Then the answers to question about the steps, undertaken to establish a company were multiplied in respect with distributed weight in Table 2.

Number	Question	Coefficient
1	Nothing done so far	1
2	Thought of first business ideas	3
3	Formulated business plan	5
4	Identified market opportunity	5
5	Looked for potential partners (e.g., fellow students)	5
6	Purchased equipment	7
7	Worked on product development	7
8	Discussed with potential customers	7
9	Asked financial institutions for funding	8
10	Decided on date of foundation	10

and were summed up. Finally, the index of entrepreneurial power was calculated as the mean value obtained by adding the variable weights and variables, which is composed of the answers to the question about the steps, multiplied by the corresponding weight. Formula: The index of entrepreneurial power =  $\text{Weight} + \sum$  (Step for foundation of one's own company \* respective Weight)

As the index, the average of all values among all meanings of this indicator, is taken. The index can range from 1 to 100, but in reality the average rarely goes beyond 30.

**Appendix #3**

List of countries participating in the research project “Global University Entrepreneurial Spirit Students’ Survey”, universities and project representatives by country

#	Country	University	Representative
1	Argentina	IAE Business School	Prof. Silvia Carbonell
2	Austria	Johannes Kepler University Linz	Prof. Dr. Norbert Kailer
3	Belgium	Vlerick Leuven Gent Management School	Prof. Dr. Hans Crijns
4	Brazil	UNINOVE - Universidade Nove de Julho	Prof. Edmilson Lima
5	Chile	Universidad Adolfo Ibanez, Santiago	Prof. German Echeopar
6	China	Tongji University (CDHK), Shanghai	Prof. Zheng Han
7	Estonia	Tallinn University of Technology	Prof. Dr. Urve Venesaar
8	Finland	Lappeenranta University of Technology	Prof. Asko Miettinen
9	France	EM Lyon Business School	Prof. Dr. Alain Fayolle Janice Byrne
10	Germany	University of Hohenheim	Dr. Heiko Bergmann
11	Greece	University of Western Macedonia	Prof. Katerina Sarri
12	Hungary	University of Pecs, Faculty of Business & Economics Szechenyi Istvan University, Győr	Prof. Dr. Laszlo Szerb Dr. Szilveszter Farkas
13	Ireland	University of Limerick	Dr. Naomi Birdthistle Dr. Briga Hynes
14	Japan	Hosei University	Prof. Noriko Taji
15	Liechtenstein	Hochschule Liechtenstein	Prof. Dr. Urs Baldegger
16	Luxembourg	Institut Universitaire International Luxembourg	Prof. Pol Wagner
17	Mexico	EGADE Business School, Tecnológico de Monterrey	Prof. Dr. Elisa Cobas-Flores
18	Netherlands	Erasmus University, Rotterdam	Prof. Roy Thurik, Dr. Joern Block Dr. Katrin Burmeister Dr. Ingrid Verheul
19	Pakistan	GC University, Lahore	Prof. Najaf Khan
20	Portugal	Technical University of Lisbon Instituto Superior Tecnico	Prof. Joao Leitao Prof. Rui Baptista
21	Romania	University of Bucharest	Dr. Lilian Ciachir
22	Russia	St.Petersburg State University Graduate School of Management	Prof. Galina Shirokova Alexander Kulikov
23	Singapore	National University of Singapore	Prof. Dr. Wong Poh Kam
24	South Africa	Stellenbosch University	Dr. Suzette Viviers
25	Switzerland	University of St.Gallen (KMU-HSG) HEG Fribourg	Dr. Philipp Sieger Prof. Rico Baldegger
26	UK	Kingston University, Kingston	Prof. Robert Blackburn

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