

# **Comparative studies of the environment and startup barriers on the example of Poland and Kyrgyzstan**

**Aizhan Dosalieva**

Bialystok University of Technology, Faculty of Engineering Management

e-mail: dosalieva.aijana@gmail.com

**Urszula Kobylńska**

Bialystok University of Technology, Faculty of Engineering Management

e-mail: u.kobylinska@pb.edu.pl

## **Abstract**

Each year, thousands of ambitious startup projects appear in this venture world. As the demand of young students who want to be entrepreneurs to work in their desirable position, more and more people are setting up their own startups. However, plenty of small business statistics estimated that 80 percent of startups fail by the end of second years of existence. The development of startup projects is hampered by a number of barriers. Some barriers have been formed for a long time, for example, lying in the field of social psychology. However, most of the barriers appeared during the transition to the market and have an institutional character.

The main aim of the article is to provide insight into barriers to startup establishment. This paper is also devoted to study theoretical knowledge on startups and its environment. Topics discussed in this thesis provide an overall understanding of history, determination, features, drivers and components of startups. Paper will give some insight on startup environment in Poland and Kyrgyzstan, in addition compare student's perception toward limitation run the startup projects. Including brief take on the reasons that tend to make startups fail or succeed. Furthermore, concepts of university incubators with their activities and end goals are also reviewed in depth.

The research was held among 100 participants from Bialystok University of Technology and International Ala-Too University. Results present comparison in startup environment of Polish and Kyrgyzstani students.

## Keywords

start-up, entrepreneurship, barriers, internal and external drivers

## Introduction

Nowadays there are too many start-ups in this venture world. The number of people who want to be entrepreneurs and work in their desirable aspects is increasing every day. Therefore, knowing how to create start-up company is important and becomes must-have courses for any university these days. The market is filled with many successful start-up stories of famous entrepreneurs in the world. The inspirable luck of start-ups boosted a lot of students to dream of own business in the near future. However, plenty of small business statistics estimated that 80 percent of startups fail [Mansfield, <https://smallbiztrends.com> 28.03.2019] by the end of second years of existence. Thus, scrutinizing the barriers of creating start-ups is essential for creating successful start-up projects.

Article aims to describe theoretical knowledge on start-ups, its environment and identify main barriers which is important to overcome for young students wishing to acquire strong comprehension to open up their own business.

### 1. Definition of the start-up, its internal and external development drivers

As a rule, start-up, is a company which have been established recently, is in the stage of development or research of promising market. Start-up companies usually have limited amount of resources, including temporary ones, due to the youth of the company. Start-up is a non-standard idea, which is solving the problems of ordinary people, where success is not guaranteed in financial equivalent, rather it is satisfaction in solving the problem. Furthermore, start-up should be open to the world, if in the company can be found some constraints, options to scale or targeted market segments company is not start-up. Drivers are the major power which keeps moving on the start-ups and furthermore develops them. It is possible to divide drivers into internal and external types. The drivers which are called internal depends on the factors and conditions which are related with the inside atmosphere of the start-up itself, while the external directly depend on the environment where the start-up is realized.

One of the important internal drivers in start-up is an entrepreneur. The desire that drives the founder is important. Entrepreneur's will to explore, challenge, insist, keep pushing, succeed-everything is vital. The energy that leads an entrepreneur to success. And character of entrepreneur is creating and establishes the culture, which

is the key component that gets softly shared between people creating and establishing norms, expectations and duties that defines organization acts. Entrepreneur's soul is the frame where culture lies. The founders have an important role in establishing the firm's early DNA, which influences its culture and behaviors [Mullins, 1996]. Therefore, several studies have strongly linked the characteristics of the entrepreneur to firm growth, and these characteristics are also one of the key areas that venture capitalists seek out in startup investments [Gompers, Lerner, 2011].

Second, an articulated growth-orientated vision establishes the importance of the firm's growth and aligns decision making with growth in mind [Kim, Mauborgne, 1997]. This vision is one key firm-level growth driver, together with the firm's commitment to grow by executing a growth-orientated strategy [Barringer, Jones, Neubaum, 2005]. Vision is the energy that provides an entrepreneur and its company with the ability to show their aim. Vision is the frame where culture lies. Great and successful entrepreneurs have achieved their purpose and goal by setting a strong and clear vision, and by pursuing it with passion.

In addition, there is a set of human capital-related resources that have been frequently studied and found crucial for new venture growth. The execution of strategy requires the right human resources [Chandler, Hanks, 1998]. Any organization is only ever as good as the people working for it. To win the war for talent, leading businesses build an environment that values diversity and attracts and retains the right people to help grow their businesses – not just great people, but people who share the company's vision and fit its culture.

One of the most significant external drivers that can influence the life of startups or as well as develop they are in general, is the concentration of the majority startup's development in the metropolitan area and the capital. Geographical location is important for future development of startups. In general, all innovations occur in large cities and gradually spread to smaller cities.

The next important factor is the development of startup projects within the support of government activities. The state is not only engaged in raising funds, but also in attracting private investment. State is the most powerful mechanism which can create a flourishing condition for startup. The state can directly put some efforts to protect the interests of worthy and profitable startups.

Another key factor in the creation and development of startups is higher education institutions. They are an active participant in the formation of incubators, technology parks. Universities direct students, they also support research in the high-tech industry. Additionally, higher educational institutions encourage student initiatives and ideas aimed development the startups.

To sum up, internal drivers such as entrepreneur, vision, strategy, knowledge, human resource management are important in development of startup company. While geographical location, government, education institutes, incubators, students are essential external drivers. All drivers mentioned above, both internal and external play a vital role in the growing and developing of startups.

## **2. Start-up environment in Poland and Kyrgyzstan**

Today, in the age of high technologies and innovations, a startup is a locomotive of the economy, they are magical projects of XXI century. Startups are urban, unique, fast, innovative and useful at the same time. On the example of two countries Poland and Kyrgyzstan, will be described the startup environments.

Poland seems to be successfully winning its victorious path, but this does not prevent the Poles from creating their own launch models. Identifying the perfect starting definition or way of development for startups is not an easy task. It is possible to consider 1990s as the age of start-up creation in Poland. Nowadays Polish ecosystem of startup has become important and strong. Almost half of the startups boldly and strongly compete in the global market. Day by day, more and more frequently founded and controlled by experienced managers, they are becoming qualified professional and successful entrepreneurs. In addition, they are guiding and supporting staff shortages: especially when it is comes to programmers and salespeople.

Similar situation is in Kyrgyzstan, but it is necessary to point that startup idea is eventually new phenomena in the country. It is possible to consider that first startup companies appeared in Kyrgyz Republic within 10 years ago. The development and enlargement of the startups are not so rapid and fast as it is observed in Europe. Over the past few years, attitudes toward startups in Kyrgyzstan have radically changed. If recently, new ideas were perceived as something frivolous and disastrous. Now, interesting projects are attracting a large number of clients.

While describing the start-up ecosystems in Poland and Kyrgyz Republic. In Poland slight changes visible in entrepreneurs age, with 58% of respondents in their 30s. The 40s age representatives also increased by a several percentage points. But situation changed with the proportion of entrepreneurs in their 20s and younger dropped from over 33% last year to just 26% in 2017 [Beauchamp, 2017]. A challenge for the ecosystem is the promotion of high-tech activities among younger entrepreneurs. The entrepreneurs age situation is completely different in Kyrgyzstan. Startup in Central Asian region is considered as young generation idea of business, which is newly established. Mostly all the project is controlled and managed by young between 25-35 years old entrepreneurs. Usually most of the startup beginners

educated abroad and got knowledge from abroad companies. It is possible to say that they were inspired by different and unusual environment of system of business, which helps them to create prototype projects of already existed successful startups.

The literature on the subject indicates that business angels play an extremely important role in financing enterprises in their early stages of development [Piekunko-Mantiuk, 2014].

Nowadays, approximately 62% of the surveyed polish startups are living because of self-funding support. Among startups which gained external capital for development, one in five took advantage of foreign sources of capital: accelerators, business angels or venture capital funds. Startups which want to get financial support from foreign investment capital, about 44% are planning cooperation with a foreign investor in the next six months [Beauchamp, 2017], which is quiet differs from Kyrgyzstan where situation almost all startups are self- financed, governments try to support newly raised businesses, but unfortunately it is not enough. Mostly startups supported by family budget, independent businessmen or rich people who already have some experience in international market or by governmental entities. Support from government usually challenging for new startups as there are usually a big amount of competition, and even good startup project can be destroyed in the first steps of development.

Startups occupied essential role in Polish economics. According to annuals survey which was held by Polish Startup Reports 2017, startup projects are increasing each year. For instance, in the third edition which was represented in 2017, in Poland were as many as 621 startups, up from 539 in the previous year and 423 in 2015. In statistical terms, this means the scope of the survey is increasing by approximately 20% on an annual basis [Beauchamp, 2017]. According to Kyrgyzstan resources the total amount of the startup projects in country on 2018 is around 143 startup companies [Ageev, [www.osoo.kg](http://www.osoo.kg) 26.02.2019]. Which is quiet less comparing to Polish ecosystem of startups. It is also important to mention that countries are quite different in economic development, as well as the geographically.

Mostly startups in Poland located in cities like Warsaw, Wrocław, Kraków, Poznań, Toruń, Łódź. It is also important to mention that Wrocław, Toruń, Łódź and Lublin marked their presence in the startup industry particularly stronger than last year.

While in Kyrgyzstan startup projects mostly enrolled in two big cities which are Bishkek and Osh. Especially, Bishkek as a capital city has wide market of startup projects comparing to the other part of the country. The city is a platform to test the product. Usually if the customer in capital city are welcomed the output of the startup, it is most probably will be successful in the other part of the country. It is

essential to make good and reliable advertisement in order to attract more people to be involved in the project. Sometimes it is difficult and challengeable to promote the startup's output, despite the great idea of the project.

The majority of startups in Poland and Kyrgyzstan are still focused on the domestic market, with one in every eight startups having a founder from another country, but almost half of Polish startups sell their goods and services abroad. Exporters develop at a quicker pace, are better earners and gain investors with greater ease. For Kyrgyzstani startup it is really difficult to do outsourcing as the idea of outsourcing is new phenomena. It is possible to describe Kyrgyz startup environment as a fresh and not well experienced market, but still it is growing due to the young generation's educational development. For instance, sphere such as International technology. Outsourcing is actively developing in Kyrgyzstan. To become more successful still there is huge need to have a sufficient number of qualified programmers and specialists. To come to us customers from Western countries, country needs the presence of large companies, which will have the number of employees from 300 to 1000 people, who can perform at least the minimum order quantity. Today startups in Kyrgyzstan are small, the average employees' number is 15-20 people. To grow, they need to grow tenfold. In addition, there is a shortage of specialists in market, the reason for that is an overestimated cost of the work of programmers. From a financial point of view, it is not ineffective it needs a very long time

In Poland 76% of startups operate in a B2B model [Beauchamp, 2017], meaning they sell technologies and services to other companies, while in Kyrgyzstan startups mostly related to B2C model, which means selling goods or services by businesses to consumers using the internet. The majority of Polish startups build technologies in the areas of: big data, analytics, internet of things, developer tools and life sciences. Startups engaged in the areas of life sciences, healthcare and biotechnology are the least likely to receive a regular income. No wonder – these areas are often heavily dependent on investment, in terms of manpower as well as time. Despite this, these areas come in the top five in terms of popularity. Kyrgyz startups more related to selling and proving goods and services to customers.

For Polish and also for Kyrgyz entrepreneurs' start-ups are attractive by independence and decision-making privileges.

In conclusion, it is obvious that startup environment in Poland and Kyrgyzstan mostly differs from each other. Especially, in Poland the first startups dated in the late 1990s, while for Kyrgyzstan it is new phenomena. The fact that more than 600 startup companies existing in Poland, while in Kyrgyz Republic the number of projects less than 200 tells that Poles are more involved in startup market. While in Poland different type of financing are existing, in Kyrgyz entrepreneurs have

to invest their own capital. However, both countries have same motives to run a startup companies and willing to develop the environment. Finally, both countries are expected to enlarge their capabilities and increase outsourcing possibilities.

### **3. Characteristic of the results**

The main aim of this research is to identify the barriers for the students to run a start-up. As an example, two countries were examined: Poland and Kyrgyzstan. While the investigation process articles aim to find out the most important barriers to overcome while running the startup project. The authors findings are based on questionnaire “Barriers to run a startup for students” which was conducted to support and resolve that issue. The questionnaire consists from 10 questions which help to discover the defined topic.

In total 100 students took part in survey, where half of them from Kyrgyz Republic and who studies in International Alatoo University. The rest 50 students were from Bialystok of University of Technology.

Therefore 100 students from Kyrgyz Republic and Poland were participated in questionnaire.

### **4. Main barriers for the students to start-up in Poland and Kyrgyzstan based on survey**

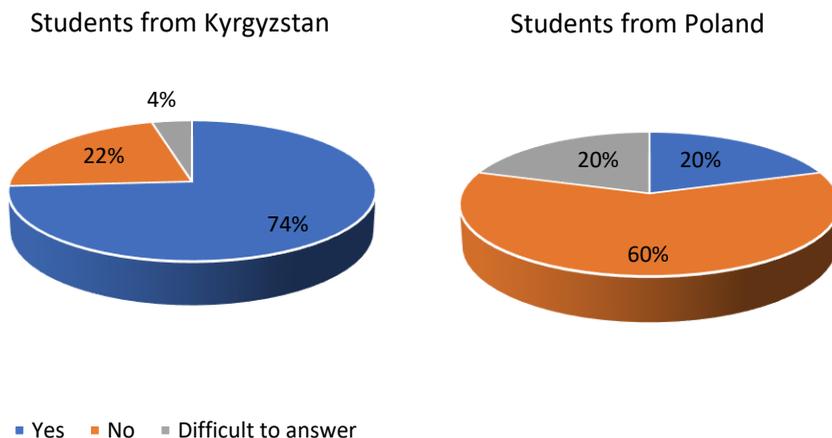
The development of startup projects is hampered by a number of barriers. Some barriers have been formed for a long time, for example, lying in the field of social psychology. However, most of the barriers appeared during the transition to the market and have an institutional character. Through the survey held by author the article aims to investigate and find out the general barriers which fail start-up projects organized and managed by young entrepreneurs or student who is willing to become an entrepreneur (Tab. 1). The survey will analyze the core relations of two given countries’ students toward the barriers to successfully development of projects.

**Tab. 1.** Awareness about start-ups created by students

<b>Do you know any startup projects created by students?</b>	<b>Students from Kyrgyzstan</b>	<b>Students from Poland</b>
<b>Yes</b>	37	10
<b>No</b>	11	30
<b>Difficult to answer</b>	2	10

<b>Total</b>	50	50
--------------	----	----

Source: own study based on survey.



**Fig. 1.** Percentage ratio of awareness about startups created by students

Source: own study based on survey.

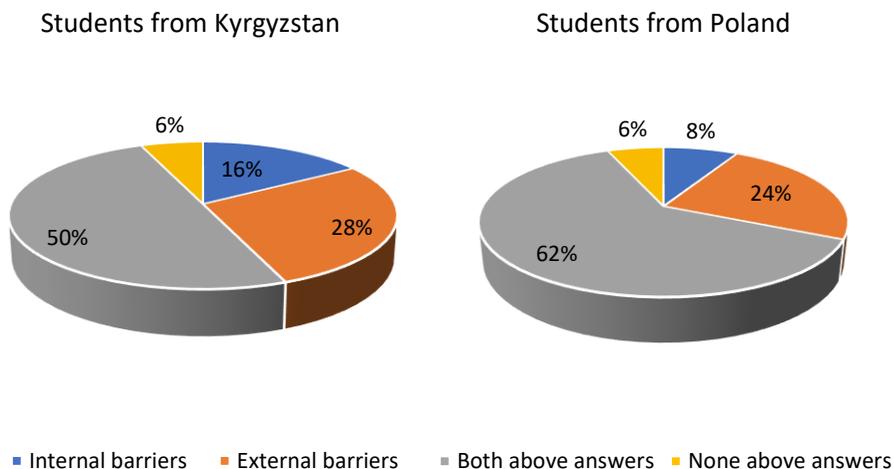
According to the survey results (Fig. 1) 74 % of Kyrgyzstani students from Ala-Too University know the startups created by students, while Polish students rather do not know such projects.

Both group of examined participants believe that Internal and external barriers are existing in the way of startups (Tab. 2; Fig. 2). Each entrepreneur or student who would like to start project will face them.

**Tab. 2.** Types of barriers faced by students willing to run startup

Types	Students from Kyrgyzstan	Students from Poland
<b>Internal barriers</b>	8	4
<b>External barriers</b>	14	12
<b>Both above answers</b>	25	31
<b>None above answers</b>	3	3
<b>Total</b>	50	50

Source: own study based on survey.



**Fig. 2.** Percentage ratio of types of barriers faced by students willing to run startup

Source: own study based on survey.

Students from Kyrgyzstan think that: poor idea, lack of financial resources and competition market are most commonly faced obstacles for young entrepreneurs to start their own project. Students from Poland believe that the most usually faced obstacle is also: the weak idea and the situation with competitors, but the lack of test on output of startups has an essential role (Tab. 3; Fig. 3).

**Tab. 3.** Six main obstacles of startups

Obstacles	Students from Kyrgyzstan	Students from Poland
Poor idea	43	41
Lack of financing / capital	42	16
Competition in the market	33	40
No testing	24	29
Less support from customers	26	11
Expensive output	21	11
Lack of uniqueness	7	26
Poor staff organization	22	15
Lack of time	12	10

Lack of prior experience	14	24
Concern about failure	7	25
Concern about protecting company's intellectual property	3	5
Lack of available mentors and advisors	10	12
Lack of knowledge	19	26
Family pressure	9	-
Difficult of co-founders	8	9
Total	300	300

Source: own study based on survey .

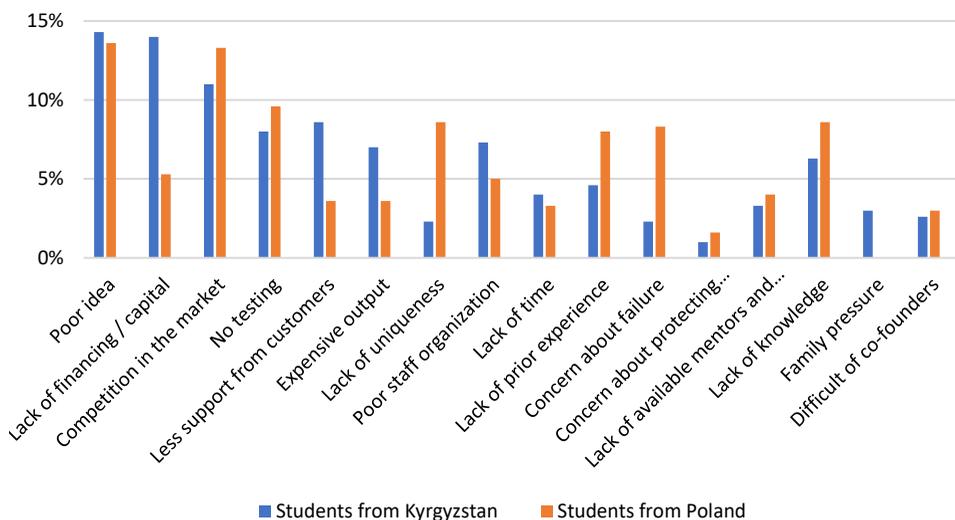


Fig. 3. Evaluation of main barriers of startups

Source: own study based on survey.

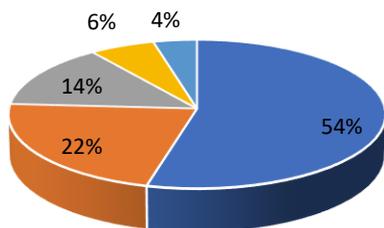
That barriers which were mentioned above mostly we chosen by students from both universities because participants believe that they are the most important problems which had to overcome every startup (Tab. 4; Fig. 4).

**Tab. 4.** Reasons of respondent’s answer about the main six obstacles of startups

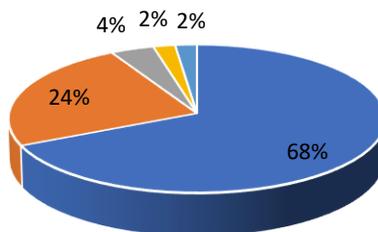
Reasons	Students from Kyrgyzstan	Students from Poland
Because they are the most important problems which faces every startup project	27	34
Because that barriers are core elements of each successful startup	11	12
Because that barriers impossible to overcome	7	2
Because that barriers easy to overcome	3	1
Other	2	1
<b>Total</b>	<b>50</b>	<b>50</b>

Source: own study based on survey.

Students from Kyrgyzstan



Students from Poland



- Because they are the most important problems which faces every startup project
- Because that barriers impossible to overcome
- Because that barriers are core element of each successful startup
- Because that barriers easy to overcome
- Other

**Fig. 4.** Percentage ratio of respondent’s answer about the main reasons of barriers

Source: own study based on survey.

As the aim of the question is to evaluate the challenges by their importance from 1 to 5, where 5 means impossible to overcome given barrier (Tab. 5).

Students from Kyrgyz Republic decided that such are expensive output, which means entrepreneur need to spend a lot of financial resources in order to produce the product or service. Secondly, product has lack of uniqueness from other and finally there might be unfavorable conditions with competitors. In Poland the results differ, students think that it is really hard to overcome barrier such as “less support from customers“, also capital issues are difficult to overcome.

**Tab. 5.** Evaluation of barriers by respondents

Barriers	Students from Kyrgyzstan	Students from Poland
Poor idea	3,2	3
Lack of financing / capital	3,24	3,16
Competition in the market	3,24	2,96
No testing	2,78	2,64
Less support from customers	3,16	3,48
Expensive output	3,46	3,2
Lack of uniqueness	3,32	3,12
Poor staff organization	2,86	2,66
Lack of time	2,64	2,66
Lack of prior experience	2,64	2,48
Concern about failure	2,62	2,48
Concern about protecting company's intellectual property	2,9	2,26
Lack of available mentors and advisors	3,04	2,86
Lack of knowledge	3,18	2,8
Family pressure	2,8	2,22
Difficult of co-founders	2,86	2,72

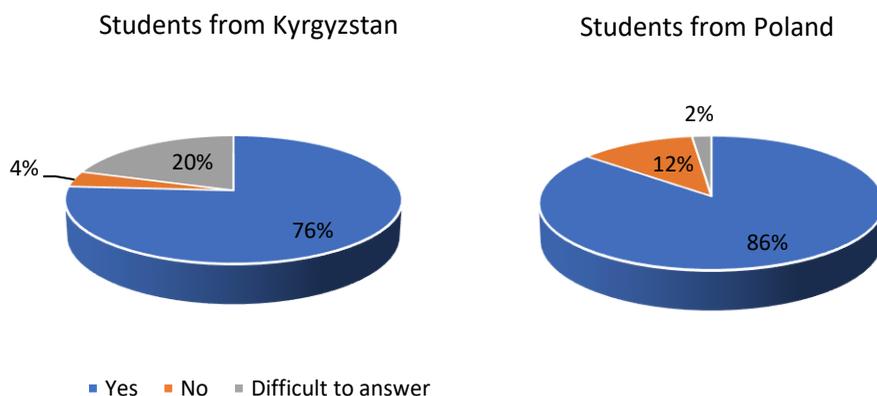
Source: own study based on survey.

Most of the students believe that barriers are not something constant (Tab. 6; Fig. 5). Approximately 76% of the participants in Kyrgyzstan think that overcoming the barriers is possible, however positive results in Poland are higher.

**Tab. 6.** Respondents' opinion on the possibilities to overcome barriers

Are there any ways to overcome barriers?	Students from Kyrgyzstan	Students from Poland
Yes	38	43
No	2	6
Difficult to answer	10	1
Total	50	50

Source: own study based on survey.



**Fig. 5.** Percentage ratio of respondents' opinion on the possibilities to overcome barriers

Source: own study based on survey.

Polish students believe that incubators the main actors to support and help the startup projects in their early lives, while participants for Kyrgyzstan gave that responsibility to investors. Around 38% of the answers were devoted to investors constant (Tab. 7; Fig. 6).

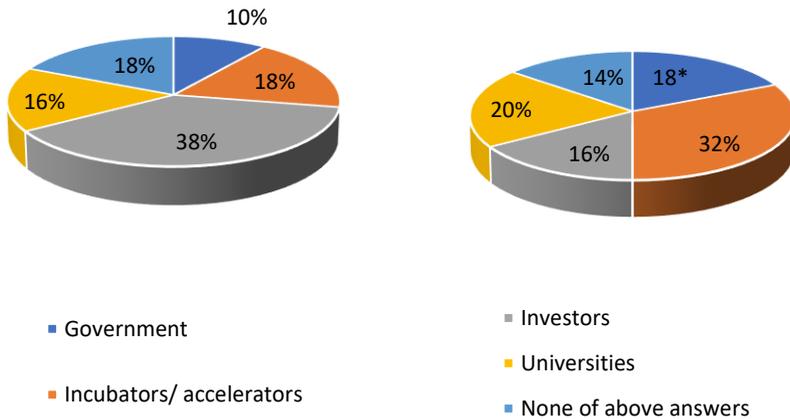
**Tab. 7.** Respondents' opinion on main actors to support students in overcoming barriers

Actors	Students from Kyrgyzstan	Students from Poland
Government	5	9
Incubators/ accelerators	9	16
Investors	19	8
Universities	8	10
None of above answers	9	7
<b>Total</b>	<b>50</b>	<b>50</b>

Source: own study based on survey.

Students from Kyrgyzstan

Students from Poland



**Fig. 6.** Percentage ratio of respondents' opinion on main supporter actors in overcoming barriers

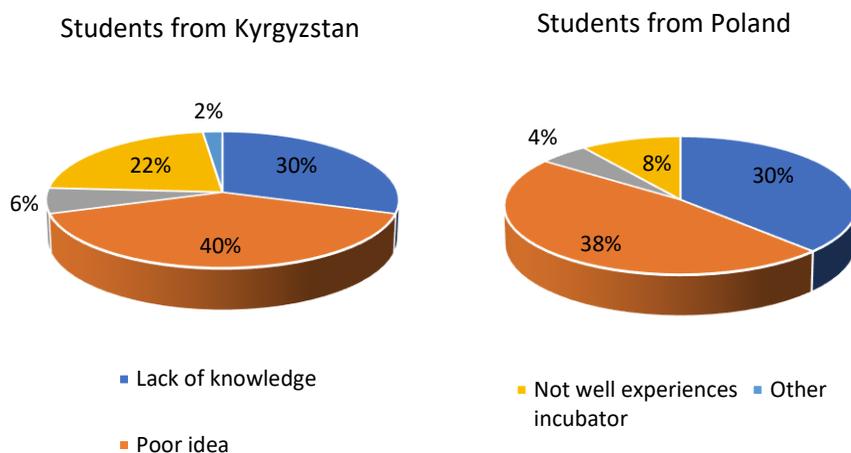
Source: own study based on survey.

According to the survey results, poor idea of the startups is the main reason why projects are failed. Around 40% of students' opinion is concentrated on that issue (Tab. 8; Fig. 7).

**Tab. 8.** Respondents' opinion on reason of startup fails

Reasons	Students from Kyrgyzstan	Students from Poland
Lack of knowledge	15	15
Poor idea	20	19
Poor government support	3	2
Not well experiences incubator	11	4
Other	1	-
<b>Total</b>	<b>50</b>	<b>50</b>

Source: own study based on survey.



**Fig. 7.** Percentage ratio of respondents' opinion on reason of startup fails

Source: own study based on survey.

Most of the participants consider doing research as the main tool to overcome the barriers (Tab. 9; Fig. 8), in addition Polish students think that project member also might become a good source to overcome and other obstacles.

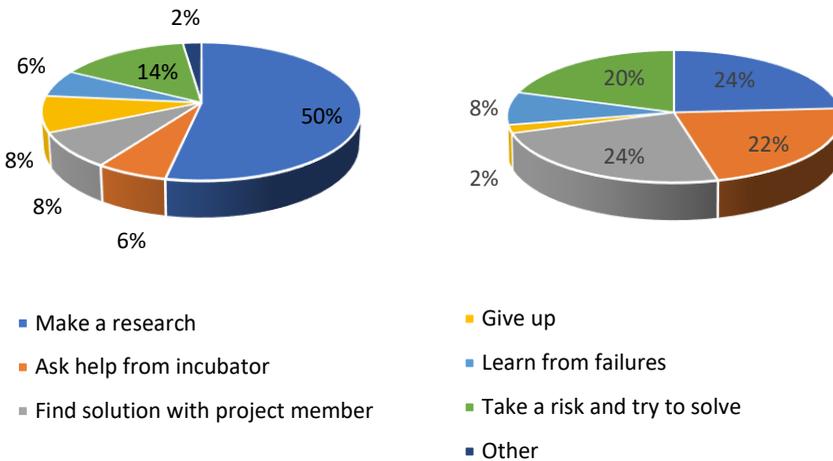
**Tab. 9.** Respondents' opinion on the best way to overcome barriers

Solutions	Students from Kyrgyzstan	Students from Poland
Make a research	25	12
Ask help from incubator	3	11
Find solution with project member	4	12
Give up	4	1
Learn from failures	6	4
Take a risk and try to solve	7	10
Other	1	-
<b>Total</b>	<b>50</b>	<b>50</b>

Source: own study based on survey.

Students from Kyrgyzstan

Students from Poland



**Fig. 8.** Percentage ratio of respondents' opinion on the best way to overcome barriers

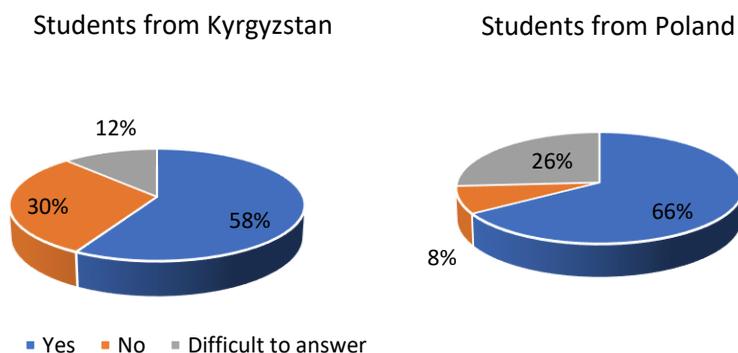
Source: own study based on survey.

Finally, most of the students see the barriers and obstacles as good challenge to get a practice and experience (Tab. 10; Fig. 9).

**Tab. 10.** Respondents' opinion on failure of startups

Does the mistakes or failure mean an opportunity to learn for a next time or the decision to stop the project?	Students from Kyrgyzstan	Students from Poland
Yes	29	33
No	15	4
Difficult to answer	6	13
<b>Total</b>	<b>50</b>	<b>50</b>

Source: own study based on survey.



**Fig. 9.** Percentage ratio of respondents' opinion on failure of startups

Source: own study based on survey.

## Conclusions

Summarizing the article, it is obvious that both internal and external environment of any startup is important. Barriers such as poor idea, lack of finance, lack of testing the product, competitors are most commonly faced obstacles for young entrepreneurs to start their own project. That barriers which were mentioned above mostly we chosen by students from both universities because participants believe that they are the most important problems which had to overcome every startup. It is also important to mention, that the most difficult to overcome barriers, according to the students' evaluation are financial spending on product, the lack of uniqueness of the product and competitors and customers' behavior in the market.

However, still barriers are not something constant and incubators the main actors to support and help the startup projects in their early lives. Students think that incubator has a good support. The performance of the incubators might be improved due to well knowledgeable and experienced staff. As the decision maker still, role of team is important in startups. In addition, doing researches considered as a good tool to overcome barriers. Finally, most of the students see the barriers and obstacles as good challenge to get a practice and experience.

What needs to be said at the end of this paper is the fact that the essence of this research is not to create new theoretical hypothesis, but to summarize in both countries main barriers and solutions for running startups. It is rather important to focus more on particular environment and it serves as a way how to assess it based on the specific criteria. Thus, the results of this research can be only partially generalized.

## Literature

1. Ageev M., *The most successful Startups in Kyrgyzstan*, www.osoo.kg [26.02.2019]
2. Barringer B., Jones F., Neubaum D. (2005), *A quantitative content analysis of the characteristics of rapid-growth firms and their founders*, Journal of Business Venturing, pp. 663-687
3. Beauchamp M. (ed.), *Polish Startups Report 2017*, Warsaw 2017, pp. 5-8, 19
4. Chandler G., Hanks S. (1998), *An examination of the substitutability of founders human and financial capital in emerging business ventures*, Journal of Business Venturing, pp. 353-369
5. Gompers P., Lerner J. (2011), *The money of invention*, Boston MA, Harvard Business School Press
6. Kim W., Mauborgne R. (1997), *Value innovation: The strategic logic of high growth*, Harvard Business Review, pp. 102-112
7. Mansfield M., *Startup Statistic – The numbers you need to know*, <https://smallbiz-trends.com/2019/03/startupstatistics-small-business.html> [ 28.03.2019]
8. Mullins J. (1996), *Early growth decisions of entrepreneurs: The influence of competency and prior performance under changing market conditions*, Journal of Business Venturing, pp.89-105
9. Piekunko-Mantiuk I. (2014), *Aniolowie biznesu i ich rola w finansowaniu startupów*, *Ekonomia i Zarządzanie* nr 4, s. 365-379, doi: 10.12846/j.em.2014.04.26