

STUDENT STARTUPS IN NATIONAL AND INTERNATIONAL CONDITIONS. MANIFESTATIONS OF INNOVATIVE ENTREPRENEURSHIP AMONG YOUNG PEOPLE

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ABSTRACT

The global startup market is growing rapidly and is becoming more and more popular. This trend is visible, among others, in Poland, although the startup market is still not as big as in the case of the business power of the United States. A significant share of this market is held by young people, especially students, for whom creating a startup and finding an investor is an opportunity for success and further career development. The dream of many today's students is to become an entrepreneur, which consequently manifests itself in the formation of an increasing number of companies operating at universities. The article is theoretical and analytical. Its main objective is to present the problems of startups, taking into account their basic characteristics, stages of development, major errors in their management. For the practical analysis of startups, examples of existing companies operating in national and international conditions were mentioned and discussed. For the purposes of this article, a survey was conducted among students of Polish academic institutions using an online questionnaire. It aimed to check the knowledge of the startup market and the potential path of its development. It was found that the Polish startup market is very popular, especially in the new technologies sector.

Key words: startup, innovation, entrepreneurship, students.

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1. Introduction

Startups are playing an increasingly important role in Poland and around. Due to their great popularity, it is becoming increasingly difficult to distinguish

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an idea in this market. Due to the great interest and needs, courses of study are created that allow you to learn how to introduce and maintain a startup on the market. Such a course was established, among others, in 2022 at the Wrocław University of Economics. Its name is Startup Leadership Program (Osowicz, P., 2022).

Startups currently play an important role among companies due to the fact that they are entities almost independently creating a new market. They take innovative solutions, which is why they are referred to as innovative companies, market pioneers, creating modern products, sometimes inventions. Startups test their solutions in the realities of economic reality, contribute to the creation of new lines of products and services, sometimes also new industries. Solutions used in startups are often used by other companies (Deloitte, 2016).

The strong growth of startups in countries such as the United States, China and the United Kingdom allows these countries to remain leaders in innovative products and services. Innovative business models modernise the economic structure of countries, increase competitiveness and create new jobs (Deutscher Startup Monitor, 2015). Startups contribute to creating and meeting needs, but their development is not possible without permanent sources of financing, which most often include: crowdfunding, venture capital funds, support for business angels, founders' equity, FFF (friends, family and fools), bank loans, funds from the European Union, funds from the employment office, support for business incubators (Cegielska, E., Zawadzka, D., 2017).

Although startups are often treated as small versions of large companies, they rarely achieve a strong market position, as they face relatively high operational risks and the need to find and apply different business methods to those that work for large companies. Today, it is possible to draw and exchange between startups and companies with established market position. All these entities have the same goal – seeking competitive advantage in order to achieve long-term profitability (Skala, A., 2017).

The world's leading startup researchers are Steve Blank, Silicon Valley entrepreneur and consulting associate professor in entrepreneurship at Stanford University, and Eric Ries, entrepreneur-in-residence at Harvard Business School. These researchers are the authors of the Lean startup management concept, which is a response to the need to create innovative products and services. This well-known concept involves shortening product development cycles and quickly checking whether the chosen business model is profitable. Management should be focused on minimizing waste and improving internal processes in the company. The concept of lean startup was popularized by Eric Ries, but S. Blank is considered to be the father of this line of thinking (Tomaszewski, A., 2018). Among Polish researchers dealing with the topic of startups, we can mention Agnieszka Skalska, who deals with the issue of complex definition of startups (Skala, A., 2017).

2. Characteristics of startups

2.1. Definition of startup

In the literature there are different approaches to defining a startup, but the often-mentioned feature is the high growth potential and innovation of this newly formed company. Related to the introduction of a new or improved product or service. The authors of the European Startup Monitor 2015 characterise startups as “companies under 10 years old, with innovative technologies and/or business models, aiming to significantly increase the number of employees and/or sales”. These features allow to distinguish startups from companies referred to as SMEs (Cegielska, E., Zawadzka, D., 2017).

Another similar definition of a startup can be found in the Management Encyclopaedia. According to it, a startup is an organization at an early stage of its life cycle. The main goal of creating a startup is to find a “repeatable and scalable business model”. The operation of a startup is associated with operating in an environment of extreme uncertainty, which is the most important difference compared to small and medium-sized enterprises operating in established and mature markets.

However, one of the most well-known definitions in the world is that of E. Ries (2011), who considers a startup to be a “human institution” whose task is to create a new product or service under conditions of extreme uncertainty. In this definition, E. Ries emphasises the focus of the startup’s activities on the extreme risks in which the organization operates.

2.2. Phases of startup development

The development of an innovative enterprise can be presented in the form of a certain model, including a fixed element. Of great importance in the selection of sources and financing strategy of a startup is paying attention to the phased development. There are different approaches to identifying the stages of development of startups. Usually, three types of division are distinguished depending on whether the development model refers to: customer development, product development or financing (Kowal, D., Kowal B., 2019). The latter category includes the concept of German entrepreneurs. S. Ripsas and S. Tröger highlight the following stages of startup development (Deutscher Startup Monitor, 2015):

1. Seed Stage – The first phase of development involves the formation of the startup through the implementation of the idea, the maturation of the business idea. At this stage, the concept is developed and the future entrepreneur is shaped. There is no sale yet, but the feasibility of the project is initially assessed, it is checked whether the solution will be interesting for potential users.

2. Startup Stage – Phase two is the early development of the startup. It consists in the completion of the concept development by the founders. Typically,

this phase generates the first revenue on the market and provides benefits to customers. The most important thing is to refine a product that will meet the needs of the target group. This is not yet a complete solution. Developers work with users to find out how they can improve the product. At this stage of development, a startup usually actively defines a business model.

3. Growth Stage – The next stage involves the slow transition of the company into the maturity stage. The startup has a ready market offer, realizes a strong growth in sales and an increase in the number of customers. This is a very important stage of startup development.

4. Later Stage – The fourth stage is the stage in which other companies, products or technologies are acquired or purchased in order to achieve faster growth. A startup is a mature company in which it is important to achieve a high income.

5. Steady Stage – The last stage of the startup's development involves an intended or unintended stabilization stage. Startups cease to show a significant increase in revenues and users. The stage ends with the sale of the startup to an industry investor or listing on the stock exchange. Those startups that manage to reach this stage of development usually become well-known organizations around the world. At this stage, it is difficult to describe them as startups, as their revenue, number of employees, processes and structure are closer to corporations than startups.

2.3. Mistakes in startup management

According to research by N. Patel (2015), as many as nine out of ten startups fail. Therefore, managing the development of a startup can be considered a particularly difficult task. It is therefore important to conduct research in order to better understand the specifics of their functioning and development, and in the longer term to minimize problems associated with functioning in the area of extreme environmental uncertainty and high risk (Tomaszewski, A., 2018).

K. Kowalewski lists the eight most common mistakes in startup management. Kowalewski's analysis of the practical sphere of startups' activity was based on the experience gained while working as a mentor of these types of companies within the "Hub of Talents" project. In connection with this project, a startup platform for new ideas for startups was created. Kowalewski considers the most serious mistakes that startup creators make: developing a startup individually due to unwillingness to cooperate; excessive belief in the correctness of assumptions; selection of unsuitable employees; incompetent raising of capital and ineffective financial planning; lack of coherent vision of development between partners; unprofessional marketing; lack of passion and perseverance in action; and shortcomings in strategic planning (Kowalewski, K., 2020).

These negative phenomena in the field of management hinder the functioning of startups. Identifying errors and working on them allows to improve man-

agement processes. It is important to be aware of the mistakes made and to see their consequences. Elimination of the above mentioned shortcomings gives managers the chance to significantly improve the effectiveness of management. Gathering knowledge, taking into account the decision areas and actions that most often cause problems, allows to avoid them in the longer term (Kowalewski, K., 2020).

2.4. Examples of student startups in Poland and around the world

Below are examples of existing companies operating in national and international conditions.

- **LEXLY**

LEXLY is an application that allows you to find legal aid. It allows you to obtain immediate legal aid by using the services of legal advisers and lawyers cooperating with the web application. Lexly is the first such application in the world. The author of the application is Mateusz Januś, a Polish student who in 2017 saw a problem in finding appropriate legal aid in Poland. Mateusz Januś created a startup that allows you to contact a lawyer or legal advisor within 15 minutes for a fixed rate via a mobile device, usually a smartphone (Polski start-up ułatwi znalezienie prawnika..., 2021). The app was launched on 4 October 2021 (LexU! App ogłasza przełom..., 2021).

- **Kebs&GO**

It is a startup of students of the Warsaw University of Technology, who constructed a machine for a dish popular especially among young people. The machine producing and selling kebabs was set up at the university in November 2017 (Kebaby z automatu hitem w Warszawie..., 2019). After great success, kebab vending machines were installed in several places in Warsaw, and in 2019 one of the vending machines could be used at Warsaw Modlin Airport. Despite the initial success, kebab vending machines have now been closed, which shows the high risk of long-term survival of startups (Kebs&GO profile on Facebook).

- **“Brewery UwaRzone”**

It is a startup of students of the University of Rzeszow created in cooperation with students and lecturers of the university. It is the first student company in the field of brewing in Poland with the characteristics of a microcorporation. The company is run by as many as 50 people from different institutes, thanks to which it combines the competences of journalists responsible for marketing and biotechnologists developing the brewery recipe. Students of dietetics and food technology are also involved in the work on the company. Currently Brewery UwaRzone is sold at special events and events. Currently, the brewery offers four types of beer and its points are located in eleven locations in Rzeszow and five outside the city (UwaRzone – pierwszy studencki browar w Polsce, 2023).

- **QPONY. PL**

Qpony. pl is a startup in the field of new technologies, mobile technologies, in particular mobile applications. Startup is an attempt to implement a business model popular in the United States using products and services in digital form. It was created as part of a project initiated by students of the Academic Business Incubators operating at Poznań University of Economics. The creators of the startup were inspired by the model of discount coupons popular in the United States. The beginnings of the startup date back to 2010 and are connected with the creation of a paper version of the catalogue with discount coupons. In 2012, the company launched a mobile app, and in 2018 it became the owner of apps such as Qpony, Blix and Healthy Shopping, which are used by millions of users. The apps make everyday shopping easier for users by providing the opportunity to get acquainted with the offer of retailers and information about promotions, as well as giving the ability to create shopping lists and check the composition of products (Nowak H., Łuczak K., 2019).

- **FACEBOOK**

One of the most popular examples of student startups is the social platform Facebook. The platform for communication via the Internet was created on the initiative of Harvard student programmer Mark Zuckerberg in collaboration with other students of the university. Before founding Facebook, he was successful in creating Play Synapse Media and CourseMatch. In February 2004, the first version of Facebook was created as an academic site at Harvard, which had a million users in less than a year. In December 2005, it was distributed worldwide as a public communication platform (Kowalska J., 2017).

- **LINGT LANGUAGE**

It is a platform for learning a foreign language created by students of Massachusetts Institute of Technology who had difficulty learning Chinese pronunciation. For this reason, they created a platform for both teachers and students who want to learn a foreign language. Through it, teachers create assignments using photos, texts and videos available on the platform. On the other hand, students have the opportunity to record their text and check its pronunciation and correctness on Lingt (Turek A., 2015).

- **GOOGLE**

The most popular and widely known internet search engine is also a startup created by students. In 1995, Sergey Brin and Larry Page met at Stanford University. At the university, they were engaged in indexing and cataloguing theses, and decided to use their skills with the help of the Internet. Google was supposed to be used to index web pages and sort and match data. The platform was established in 1998. The Stanford University student startup has been a huge success, as evidenced by the popularity of the browser, as well as its founders being on the list of the ten richest people in the world in 2022 according to Forbes magazine (Bartosiewicz D., 2022).

3. Purpose and description of the study carried out. Research material and methodology

This article is based on research conducted using an online survey. Two hundred people, who were students and graduates of academic institutions, took part in the study. The survey questionnaire was shared on social media. The survey consisted of respondents completing a questionnaire consisting of 12 main questions and three defining the study group. The study was conducted in July and August 2023 and involved 142 women and 58 men. Most of the respondents, as many as 83%, are young people under 25 years of age. The largest group of respondents were people living in rural areas. The aim of the study was to know the level of knowledge about startups in Poland and the opportunities offered by academic institutions for students who want to start their own startup.

4. Research results

The following part of the article contains a detailed description of the results of the survey, related to the answers of the respondents to the individual questions of the survey.

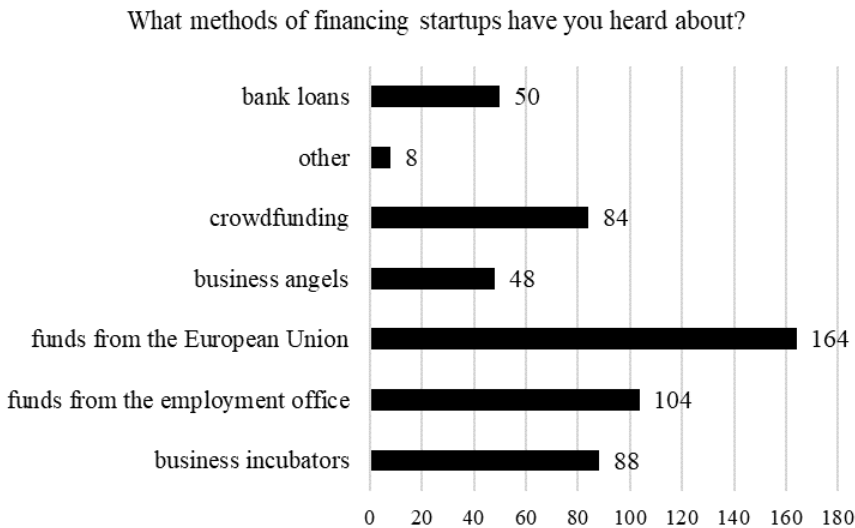


Figure 1. Methods of financing startups known by respondents

Source: own work.

The first question concerned the most well-known methods of financing startups. The most popular were funds from the European Union, which were chosen by 164 people, in second place were funds from the employment office chosen by 104 people, followed by business incubators chosen by 88 people and crowdfunding selected by 84 people. In addition, it was possible to choose other answers and additions, where 8 respondents mentioned, among others, bootstrapping and venture capital funds.

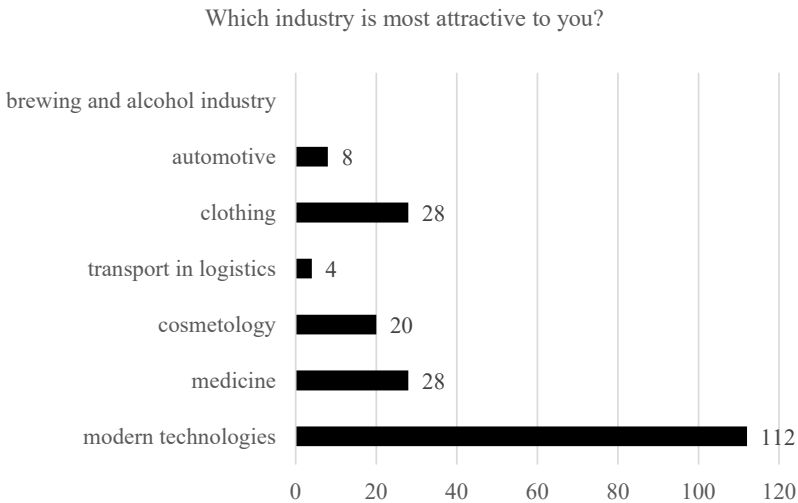


Figure 2. Industries with the most attractive startups

Source: own work.

The second question concerned the industries from which startups seem to be the most attractive for the studied group. The vast majority of respondents considered the most attractive startups in the field of new technologies, because as many as 112 people gave such an answer, which corresponds to 56% of respondents. Also popular were answers such as medicine and clothing chosen by 28 people each, and cosmetology, which 20 people consider to be the most attractive. The next places were automotive, transport and logistics. No one chose the brewing and alcohol industry.

What forms of support from academic institutions for startups are attractive to you?

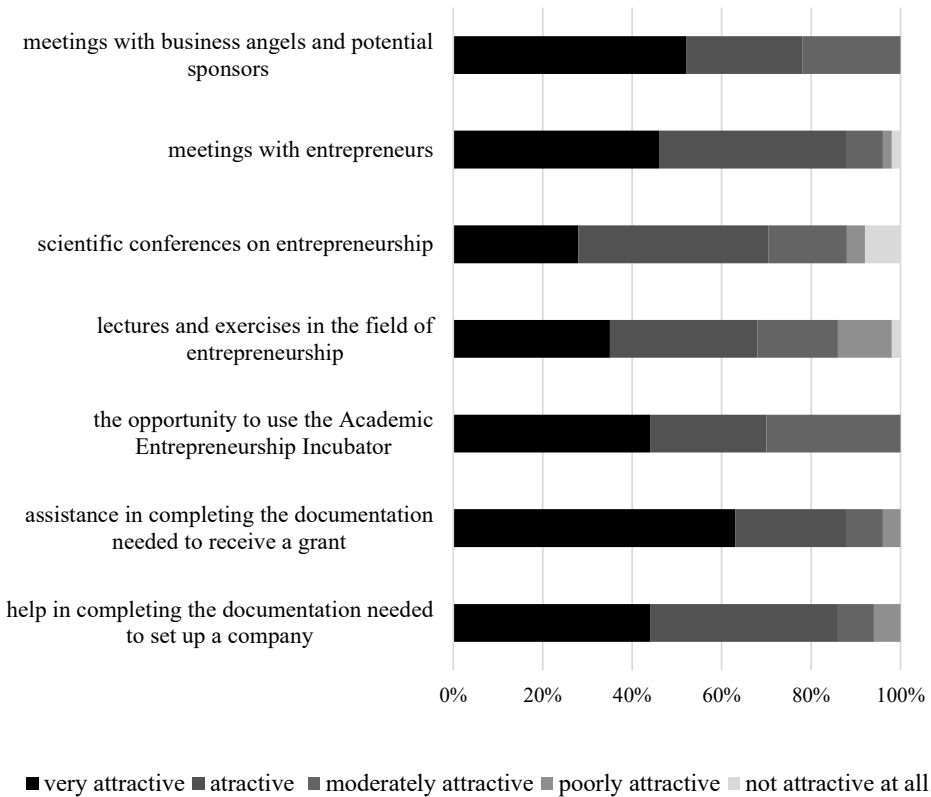


Figure 3. Attractiveness of forms of support from academic institutions for startups

Source: own work.

The third question concerned attractive forms of support for startups offered by academic institutions. Three activities turned out to be attractive or very attractive for more than 80% of respondents. These included meetings with entrepreneurs, assistance in filling out the documents needed to set up a business and support in filling out the documents for obtaining a grant.

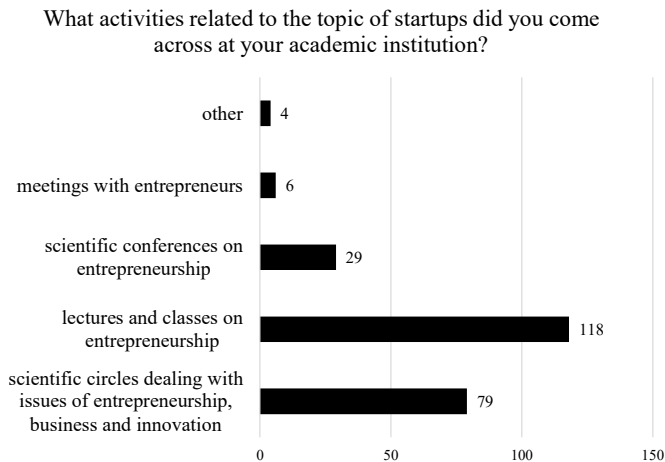


Figure 4. Activities taking place at academic institutions

Source: own work.

The next question was a multiple choice and was related to the activities of academic institutions that could contribute to the creation of startups by students. 118 people met with lectures and exercises on entrepreneurship. In academic institutions 79 respondents had the opportunity to get involved in the activities of scientific circles dealing with the issues of entrepreneurship, business and motivation. Less popular activities are scientific conferences on entrepreneurship and meetings with entrepreneurs. Four respondents indicated a different answer and wrote that their academic institutions did not offer any entrepreneurship activities.

Is there an Academic Business Incubator at your academic institution?

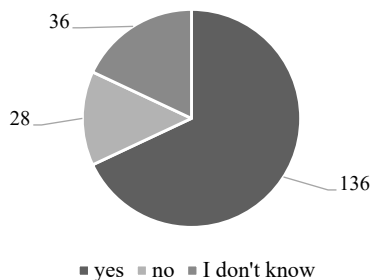


Figure 5. Academic Incubator of Entrepreneurship at Academic Institutions

Source: own work.

The following question concerned the Academic Entrepreneurship Incubator. More than 2/3 of the respondents, as many as 136 people, answered that the Academic Entrepreneurship Incubator operates at their academic institutions. 36 people did not know if their academic institution had an Academic Incubator of Entrepreneurship. Only 28 admitted that there is no such unit in their academic institution.

Have you ever thought about starting your own startup?

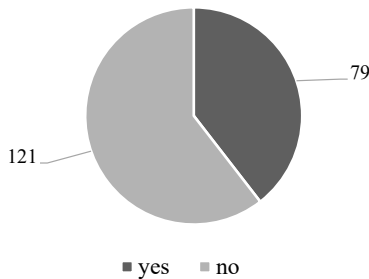


Figure 6. Desire to start a startup

Source: own work.

The next question was whether the surveyed respondents think about starting their own startup. Almost 40% of the people surveyed, i.e. as many as 79 people, are considering the possibility of starting a startup. 121 people did not think about starting their own startup.

What is your main motivation to start a startup?

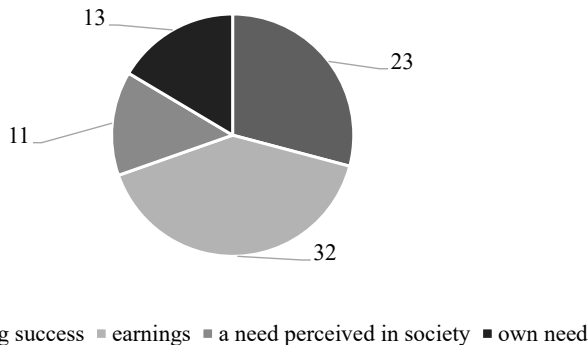


Figure 7. Motivation to start a startup

Source: own work.

The next question asked the respondents concerned their motivation to start a startup. The question was addressed only to 79 people who answered in the previous question that they had been thinking about starting their own startup. As many as 32 people consider the possibility of earning the most important motivation. Another 32 people think the most important thing for them is to achieve success. The following places included their own needs and needs perceived in society.

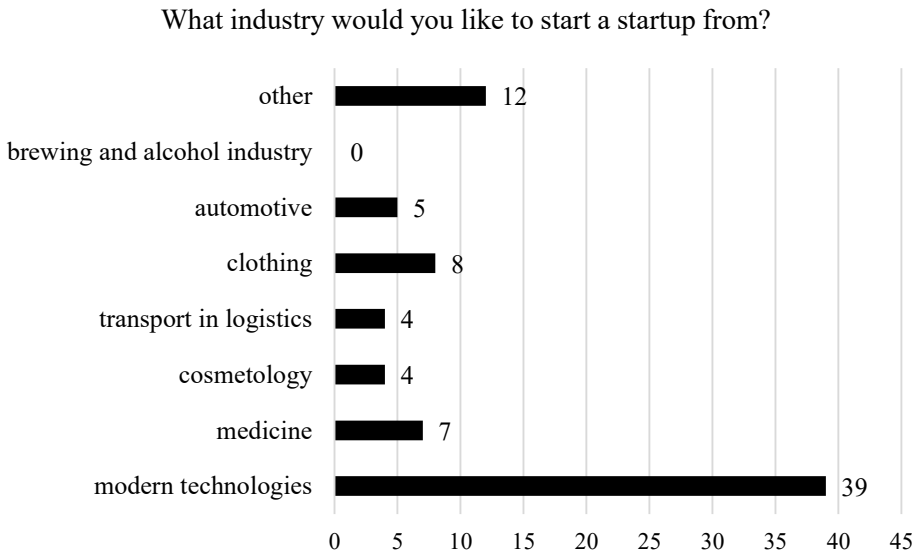


Figure 8. Potential startup industry

Source: own work.

The next question also concerned 79 people who are thinking about starting their own startup. Respondents chose the field in which they would like to start a startup. Almost half of the surveyed people think about starting a startup in the new technology industry. Respondents also selected clothing, medical, cosmetics, automotive, transport and logistics industries. Nobody thinks about starting a startup in the field of brewing and alcohol industry. 12 respondents responded differently, including sectors such as retail, education, coffee and real estate.

Have you heard about starting a startup by students at your academic institution?

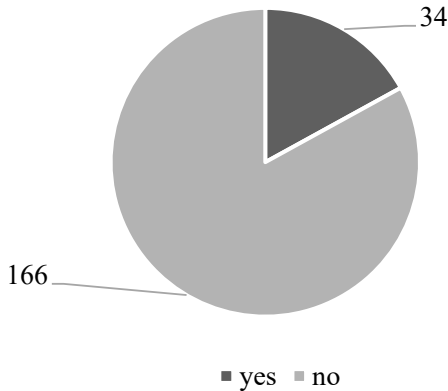


Figure 9. Startups founded by students that originated in academic institutions of respondents

Source: own work.

The penultimate question in the questionnaire concerned startups that were founded at the respondents' academic institutions. 34 people have heard about setting up startups at their academic institutions, which is 17% of respondents.

The last question asked in the survey was an open-ended question, which was answered only by people declaring that they had heard about setting up a startup at their academic institutions. 34 respondents mentioned the following industries: cosmetics, brewing, automotive, medical, modern technology, pop-ups, tourism and smart home systems. These were startups very diverse in terms of industries, but most of them were in the field of new technologies.

5. Conclusions

Startups are a popular form of setting up an innovative company in many industries. The presented examples show that both in Poland and around the world there are numerous initiatives of students who already take their first steps in business during their studies at academic institutions. Startups are also associated with huge risks, but opportunities for high earnings or success are factors that encourage young people to consider the decision to start a startup.

Research conducted for the purpose of this article shows that startups are very popular among students and graduates of academic institutions. Interest in the possibility of starting your own innovative business is constantly growing.

About 40% of respondents are thinking about starting their own startup. The popularity of startups may be associated with numerous activities of academic institutions, which transfer the knowledge needed to make it easier to open a business. Many of the academic institutions include courses in the field of entrepreneurship, enable active participation in circles dealing with broadly understood business topics or offer meetings with entrepreneurs, potential investors and business angels. Attractive forms that academic institutions that do not have one should consider in their offer are meetings with entrepreneurs, assistance in filling out documents needed to set up a business and to receive grants. The most attractive industry in which respondents believe it is worth running a startup or which respondents met at their universities is the sector of new technologies.

There are many initiatives that contribute to the popularization of startups. Both in Poland and around the world, events related to the startup market are organized, including competitions for the best startups, festivals for people thinking about their own startups, scientific conferences and business meetings. Due to the great popularity of startups, a new field of study at Wrocław University of Economics called Startup Leadership Program was created in 2022. Classes conducted within this field are aimed at providing students with knowledge of managerial skills, soft skills and learning how to run a business through classes in the field of marketing, finance and technology.

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