

THE ROLE OF EDUCATIONAL PROJECTS IN BUILDING AN ECOSYSTEM OF UNIVERSITY STARTUPS

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Purpose: The purpose of this article is to analyze the prospects of cooperation between universities and the business world on the example of training courses implemented within the framework of a project funded by the Ministry of Science and Higher Education (MNiSW). The paper presents the objectives, nature, and importance of business education projects that affect the form of university-business cooperation.

Design/methodology/approach: The article presents the barriers and advantages, that is, the factors determining the cooperation between the university and business. The study is based on the results of a survey of the target group participating in training courses, a literature review and focus interviews.

Findings: The conducted research allowed to analyze the main barriers to cooperation between universities and businesses and identify measures to improve the efficiency of technology transfer and commercialization of innovations within educational projects.

Research limitations/implications: The results of this work can become an incentive to undertake further research on the cooperation between universities and business. The study has certain limitations, resulting mainly from a small research group (32 people), however, it provides valuable feedback on the benefits of cooperation for recipients.

Practical implications: The results can be used to develop educational activities aimed at forming an academic ecosystem of startups and increasing the effectiveness of cooperation between universities and business in the framework of scientific projects.

Social implications: The implementation of research results will contribute to improving the level of education and employment of the population.

Originality/value: As a result of the research, it was found that the implementation of business education projects can become a driver for the development of university startups and increase the interest of university employees in cooperation with business.

Keywords: startups, education, economics, universities, university-business cooperation.

Category of the paper: Research paper.

1. Introduction

In an era of globalization and a changing market environment, companies are forced to compete more aggressively, and academic units (universities) have to adapt to changes in reforms in the higher education system, because effectively maintained advantage determines how an institution is managed and introduces innovative solutions related to its core business. Therefore, nowadays most universities strive for obtaining funds from various sources, to establish cooperation between universities and companies. The implementation of projects (grants) should be economically advantageous for both sides, universities and entrepreneurs.

The European Union and the Polish Government provide universities with a large budget to support the development of science for business and the development of higher education

The financial resources obtained enable institutions to conducting new scientific research and joint projects on the transfer and commercialization of innovations with business representatives.

It should be noted, however, that not every written and submitted application for funding is assessed positively by the examination committee and receives funding to achieve its objectives. Similarly, not every ongoing project needs to be successful and achieve the desired results, as there are a number of unfulfilled activities that need to be closely linked. In this case, one can only wonder how any project will be implemented. The benefits and barriers necessary to maintain the university-business cooperation are crucial. The aim of the article is to discuss the cooperation between the university and the business using the example of the training courses that were conducted within the project financed by the Ministry of Science and Higher Education (MNiSW) on the basis of the responses of the respondents, and the author's own experience. The aim of the study is to identify the reserves of economic benefits for both parties participating in scientific projects between universities and businesses. The research shows that there are many economic benefits for university staff participating in university science projects, including gaining new information and expanding knowledge, the possibility of scientific advancement, team cooperation, certificates, future experience, entry into CV, work with companies. With simultaneous satisfaction of the participants, the project team achieves satisfaction with the implementation of the adopted project objectives and the fulfilment of the project indicators (scientific and economic), which in turn leads to the correct execution of the project. For the public university, on the other hand, the important goal is to develop the competencies of the employees and academic entrepreneurship by participating in scientific projects.

2. Literature background

Many definitions of the project can be found in the subject literature. However, it is also important to distinguish between the project and project management. In his dissertation, K. Kacuga explains from a management perspective that "the project is a planned framework of activities within a certain period of time in order to achieve a defined goal (...) the project is a problem for which a solution has been planned" (Kacuga, 2008, p. 13) The project is the creation of something innovative or different, which will distinguish it from the rest of the teams and people applying for funding. The most important is to plan its beginning and its end, assuming that all planned activities are spread out over time, to create a unique result or product or service. Therefore, the project is unique because it consists of scheduled and interrelated activities that aim to achieve high quality results within a variety of resources and defined costs (Black, 2009). While B. Grucza insists that, in addition to its uniqueness, a fixed timeframe, a fixed beginning and end, and the involvement of limited financial resources, the project is also highly complex because it is carried out by a project team of qualified specialists from various scientific fields and thus involves organizational, technical and economic risks, while the implementation and preparation of the project itself requires knowledge, time, willingness and special methods (Grucza, 2012, p. 36).

In general, the project is a series of activities characterized by such features as (Kuck, 2014, p. 4):

- have a predefined beginning and end,
- are linked in a complex way,
- aim to achieve a goal by creating something unique (a product, service or result),
- organized sequences of human activities,
- aiming to achieve the desired result,
- usually implemented as a team.

Burton and Michael consider that project management is the process by which the project manager should plan and manage all the tasks within the project using the resources provided by the organization for the implementation of the project (Burton, Michael, 1999, p. 20). The authors also state that project management is the skillful use of available techniques to achieve the intended results, which are in line with the standards set within a given time and budget. Project management is also defined as an area of management that deals with the applicability of available knowledge, skills, methods and tools with the aim of achieving the project objectives, i.e. the quality of the intended result within a certain time and cost frame (Brilman, 2002, p. 50). Whereas the Project Management Institute (PMI) defines project management as the application of skills, knowledge, tools and techniques to satisfy and even exceed the expectations and needs of the stakeholders involved in the project (Mingus, 2009, p. 21). It is noticeable that a more extensive interpretation of project management presented by

the Project Management Institute concerns various types of projects, which include educational, research and scientific projects, and implementation or business projects. In addition to defining all the objectives of a given project, it is also essential to manage the necessary resources in an efficient and effective manner (Pawlak, 2006). Project management and applying for funding from external sources requires extensive interdisciplinary knowledge, management skills, creativity and organizational excellence from the beneficiaries. However, the most important issue is how the project is managed, as it depends on three important parameters including time, resources and quality (Webster, Knutson, 2005, pp. 2-3). Therefore, project management is a continuous process in which the person in charge of the project carries out targeted control and planning of the tasks within the project and allocates funds accordingly, using the appropriate methods to achieve the desired objectives at the set costs (Jędrych, Pietras, Szczepanczyk, 2012, p. 11). From the perspective of the social sciences, J. Zieleniewski is of the opinion that a truly effective activity leads to the minimum effect of the intended objective, whereas the extent of achievement of the objective is considered the measure of effectiveness (Zieleniewski, 1981, p. 225). Thus, when referring to projects, effectiveness is gradual, due to the gradual nature of the objectives and the principle of milestones towards the main objective. In his study, M. Bielski takes the view that effectiveness should be assessed by the achievement of the intended objectives (as it corresponds to the English term effectiveness), and then the level of using all possible resources (as it corresponds to the English term efficiency). Hence, the concept of effectiveness in Polish literature is often replaced by the concept of efficiency (Bielski, 1997). Concluding, Zieleniewski believes that efficiency means the parallel occurrence of effectiveness, efficiency and cost-effectiveness. From her experience, the author is of the opinion that the project should first of all have a title, to which the main objective, specific objectives and the whole concept should be adjusted; the appropriate staff should also be selected to manage the project, giving the managerial functions accordingly; and it is also necessary to create a team of people who will support and add value to the project. Besides the objectives, it is crucial to assess the effectiveness of the project, which is possible through the development of both output and performance indicators. Usually, output indicators refer to all the outputs that are produced during the project implementation that should not exceed the adopted deadlines for the implementation of the project. Performance indicators, however, relate to the effects of activities that should be visible upon completion of a given project. The performance indicators should be presented after the output indicators, as the performance must be coherent and logically linked to the output. Developing an innovative solution allows the applicant to stand out from the competition and additionally has a positive impact on the promotion of the entity that implements the project. It is crucial that the project has a properly selected management and the team, as all persons actively participating in the implementation of the planned activities, must have predefined and specified tasks to perform. The project is more effective when it is carried out as teamwork, because each person can support the other through their experience. The most important aspect to achieve the project aim is the target

group, i.e. determining a number of people to whom the project offer will be addressed, assuming that the number will be achieved as the final result. Each project should lead to an exceptional and unique success and should generate profit for the unit, and it should also result in the implementation of new changes in the daily behavior of employees. The changes should have a direct impact on the economic indicators and allow obtaining specific, measurable and additional business value for the organization (Wysocki, 2013, p. 73).

3. Barriers and Benefits to University-Business Cooperation

As a result of the scientific discussion about the role of the university in the modern economy, B.R. Clark (Clark, 1998) and J. Wissema (Wissema, 2009) introduced the concepts of "entrepreneurial university" and "University 3.0", describing an improved model of a research (Humboldt) university in which, along with education and scientific research, a mission appears to transfer new knowledge from universities in order to further commercialize them and achieve economic growth.

The constructive interpretation of the "entrepreneurial university" harmoniously correlates with the terms of the "Triple Helix Theory" proposed by H. Etzkowitz and L. Leydesdorff (Etzkowitz, Leydesdorff, 1995), the core of which is close interaction between universities, business and the state from the position of "equal partners" at all stages of the innovation process. The development of the theory of entrepreneurial universities required the main actors (universities, business, the state) to move from closed innovation processes to cooperation and joint implementation of knowledge-intensive projects.

A key role in this process was played by the research of the American economist G. Chesbro, who at the beginning of the XXI century interpreted the essence of the Bayh-Dole Act (1980) and the Stevenson-Weidler Technology Transfer Act (1980) and justified a new theory of "open innovation" to create and benefit from the sharing of technologies.

It should be noted that a university or a company that opens its scientific developments to others increases the speed of their commercialization, but loses full control over the innovation process and bears the risks associated with the disclosure of trade secrets. Nevertheless, H. Chesbrough explains the inevitability of changing the model of "closed" innovations to the model of "open" innovations by market trends, according to which the life cycle of both goods and services is getting smaller, and the speed and frequency of bringing a new product to market will be the main advantage (Chesbrough, 2003). This point of view is shared by H. Etzkowitz, who believes that the problem is no longer how to invent advanced technology, but how to quickly turn it into a company that is a world leader in the industry (Etzkowitz, 2011).

Cooperation between universities and business makes it possible to apply the theory of open innovation in practice and use the effects of synergy for the benefit of both the private and public sectors.

An important point is also the fact that in the Polish literature about universities in the process of regional development is mentioned quite often. K. Pawłowski considers individual entrepreneurship, innovation capacity of enterprises, education of citizens, scientific research and knowledge and technology transfer as the main determinants of regional growth (Pawłowski, 2007, pp. 17-33). It is worth mentioning that no less than four of them depend on the quality of universities and research institutions. In Poland, however, there are still a number of barriers to the cooperation between universities and businesses, as shown in Table 1 below.

Table 1.
Barriers to university-business cooperation

Source of barriers	Barriers to university-business cooperation
Universities and businesses	<ul style="list-style-type: none"> – no interest in cooperation, – no patterns of cooperation, – complex procedures that accompany the establishment of cooperation and bureaucracy, – a misunderstanding of the nature and functioning of partners, – issues related to intellectual property rights management, – lack of adequate infrastructure and financial resources.
Businesses	<ul style="list-style-type: none"> – confidentiality, – problems in valuing the added value of cooperation, – no capacity to incur heavy expenditure on R&D projects, – no integration between cooperation and the current activity of companies, – weakness of intermediaries, – no knowledge of models and standards of cooperation, – low propensity to undertake innovative activities, – unfavorable company culture, – discouragement due to unsatisfactory previous cooperation.
Universities	<ul style="list-style-type: none"> – disadvantageous impact on employees and/or students, – conflict of interest and commitments, – procedures and bureaucracy, – offering identical courses of study at different faculties, – reluctance of employees and/or students to cooperate, – negative image effect, – shortage of financial resources, traditions and institutional facilities to support cooperation, – financial risk, – concerns about being accused of favoring or promoting technical solutions from companies or deriving private benefits from working with the company, – burdening employees with research and/or teaching activities.

Note. Adapted from: „Klasyfikacja barier podejmowania współpracy z otoczeniem gospodarczym przez uczelnie wyższe”, Bryła P., Jurczyk T., Domański T., 2013, Łódź: Rynek i Marketing № 5, p. 10-16.

As can be seen from the information contained in the table, the authors distinguish between the handicaps attributable to the entity in question, i.e. universities and companies, universities, companies. Relatively common problems, both from the experience of the author of the paper and from the content resulting from Table 1, are complicated bureaucracy and complex procedures and conflicts of interest. Companies usually do not decide to cooperate for strategic and financial reasons. On the other hand, universities are also largely concerned about starting a collaboration due to lack of financial resources or because of the financial risk.

Table 2.
Benefits from the university-business cooperation

Universities	Entrepreneurs
<ul style="list-style-type: none"> – adjustment of programs and educational results to the expectations of the recipients of the educational services offered, improvement of the quality of education, – limiting the effects of the demographic decline by recruiting for ordered faculties, – the possibility to use technological and intellectual resources of the partner, – attracting specialists-practitioners, sharing knowledge and experience, – establishing research centers at the university, popularizing new findings and research achievements, – development of university entrepreneurship, increasing staff mobility, – obtaining financial support for research, development and education 	<ul style="list-style-type: none"> – improving the qualifications of staff by co-organizing specialized courses, post-graduate studies or faculties, – hiring graduates that have been trained during the student internship, – the possibility to use intellectual resources of academic staff, – the possibility to use the infrastructure and facilities of university research, influencing the faculty and access to scientific research, – building the right image and brand of the company.

Note. Adapted from: „Synergia wartości i usług edukacyjnych we współpracy uczelni wyższej z partnerem komercyjnym – studium przypadku”, Pietrzyk, A., 2015. *Studia Ekonomiczne, Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, No 225, p. 146-155.

In contrast to Bryła, P. and the other authors, Pietrzyk A. breaks down the advantages resulting from the university's cooperation with companies according to the entity concerned, i.e. companies and universities. The first unit can at least improve the qualifications of its employees thanks to the cooperation with the university, while the second entity receives funds for complex scientific research and at the same time develops academic entrepreneurship (Pietrzyk, 2015, p. 146-155).

The development of the entrepreneurial function at the university largely depends on the effectiveness of the academic ecosystem of startups that is created for the commercialization of scientific developments. A properly organized startup brings innovative products and services to the market faster, has a more flexible business model, and shows faster growth compared to corporations. The state participates in building the ecosystem for startups and invests in infrastructure for their development (transfer centers, business incubators, technology parks). Startups, as a rule, need additional resources for rapid growth. Therefore, corporations provide startups with the opportunity to receive venture capital investments for the development of the company in exchange for a share in a new business (Savaneviciene et al., 2015).

The existing international experience shows that in order to reduce the implementation time of innovative projects, startups participate in business incubation and business acceleration programs, where they receive mentoring assistance, as well as new knowledge and skills of serial entrepreneurs. One of the conditions for participation in such programs is often the transfer of a share in a new business to the accelerator. Thus, as a result of the project, the startup transfers minority shares of the new business to venture investors, accelerators and other infrastructure participants in exchange for investments, resources and knowledge.

At the same time, the management of a startup usually remains the majority owner and independently carries out the project and operational activities of its business.

It should be noted that the use of modern organizational forms in the form of startups and the creation of conditions for their financing is not always the key to success (77% of corporate venture initiatives do not achieve their goals) (Prats et al., 2018).

An in-depth analysis of startups in the European Union (U28) (according to the data of the authoritative resource Crunchbase) revealed the following patterns: (1) Nine out of ten startups fail; (2) Accelerators (education, mentoring) do not have a significant impact on the success of a startup; (3) The effectiveness of corporate acceleration programs (education, investment, consulting, market access, etc.) has not been proven (Mahr, 2020). Even with venture backing, a staggering three-quarters of startups fail according of Harvard Business School (Gage, 2012).

Despite participation in the acceleration programs and full financing of startups in the initial rounds, in reality, entrepreneurs from the academic environment are not always able to effectively manage the resources received and their projects due to the lack of knowledge and experience to conduct entrepreneurial activities. This leads to the fact that the startup team, instead of developing an innovative idea on a daily basis and increasing its value for consumers, has to spend a lot of time on in-depth study of project management, business process modeling and preparation of financial statements, strategies and plans. As a result, the implementation period of such projects is delayed, teams break up, and startups are closed (CB Insights Research, 2021; Autopsy, 2021; Fielden et al., 2000; Bruneel et al., 2010)

A study of 18 startup centers in Europe showed that only 32% of startups have problems accessing financing and 45% said they have "easy" access to financing for their company (PwC European Start-up Survey, 2018). At the same time, startups indicate as challenges and threats Customer acquisition & sales and Competition (Table 3).

Our research shows that the foundation of a successful academic innovation project is not financial resources, but a professional project team. The initiators of a startup should understand that in order to commercialize their idea, they must not only engage in science and minimum viable product (MVP) testing, but also understand the management of human and financial resources, as well as be able to develop an effective marketing strategy. Preparation of potential participants of such a startup can be carried out with the help of corporate business education programs.

Table 3.*Challenges and threats to the future development of startups in Europe*

Challenges		Threats	
rating	answers	rating	answers
1	Customer acquisition & sales	1	Competition
2	Attracting and retaining talent	2	Rapid changes in market condition
3	Product development & innovation	3	Domestic regulation and bureaucracy
4	Cash-flow and liquidity management	4	Lack of access to finance
5	Managing growth	5	Lack of talents
6	Internationalization	6	IT security and cyber
7	Optimizing profit margins	7	Regulation and bureaucracy in EU
8	Improving processes and internal operations	8	Knowledge theft
9	Regulation	9	Digitalization
10	Balancing social impact with profit making	10	Other
11	Other		

Note. Adapted from: „A research study of 18 start-up hubs in Europe”, PwC European Start-up Survey, 2018, Available online <https://www.pwc.com/gx/en/services/assets/pwc-european-start-up-survey.pdf>.

4. Research results and discussion

The University of Szczecin is carrying out a project entitled "Improving the quality of scientific research in economic sciences with special emphasis on the service sector" within the framework of the program of the Minister of Science and Higher Education entitled "Regional Initiative of Excellence", announced on 19 January 2018. (M.P. item 120) (Agreement No. 001/RID/2018/19 dated 28.12.2018). The project is scheduled to run from 1 January 2019 to 31 December 2022.

Within the framework of project tasks to be achieved is the number of employees of the Faculty of Economics, Finance and Management who have participated in the training to improve the skills of working in project teams.

The author's intended action was to implement two soft training courses for 32 research staff members (a specific group of people). One training course could be attended by 16 participants due to the limited number of places. The first training course was held under the title: "Creativity and innovation in the establishment and work of research teams", the second was dedicated to the topic: "Creative methods to support the work and results of research teams". Both trainings were conducted by an external company based in Szczecin, West Pomeranian Voivodeship. Experienced trainers from the business community were invited to conduct training courses.

The aim of the study is to evaluate the prospects of cooperation between university and business using the example of training courses within the project financed by the Ministry of Science and Higher Education, based on the answers of the respondents and the author's own experience. The data for the evaluation were collected using a questionnaire form and focus interviews. It is important to select the number of participants in the focus group correctly,

and usually it depends on the subject of the study and the total number of focus groups participating in a particular research project. E. Babbi states in his work that the number of people taking part in an interview should be correlated with the subject of the study and can be between 12 and 15 people (Babbi, 2005, p. 330). Therefore, the group interview was conducted with a representative group of scientists who participated in the project. The training courses were completed in 2019, and the current research has been carried out on their basis. Moreover, there is a willingness to create cyclical initiatives in the coming years based on the methodology already developed. The aim of the qualitative research was to broaden the knowledge of the university's past cooperation with the business community and plans for the future to create similar ventures. The project participants answered questions about the skills they would like to improve or acquire and which would be necessary for their professional growth. Out of 32 people who participated in the study, 30 indicated that soft skills, e.g. interaction between peers from different centers, making new acquaintances, cooperation and team work, are a helpful factor in motivating further action. A total of 32 people (100%) replied that they would like to continue the training cycle in the future, as it would enable them to develop further joint innovative activities leading to scientific work or new scholarships. The characteristics of the research sample are shown in Table 4. The respondents answered all the questions in the questionnaire, but for the sake of clarity, only the most important information was presented in the diagrams.

Table 4.
Study group structure

Indicators	Structure, %
Sex	Woman – 93.7; Man – 6.3
Age	26-30 y/o – 6.3; Over 35 – 93.7
Education	University – 100
Place of residence	Large city (over 400k) – 81.3; Rural areas (village) – 18.7

Note. own study.

A total of 32 persons, 2 men and 30 women, took part in the study. As can be seen, the gender proportions in a particular study group are not evenly distributed, as the predominance of women is clearly noticeable. The analysis of the target group shows that most of the persons were over 35 (93.7%), all participants have a higher education, and that the vast majority of people live in a city with more than 400 thousand inhabitants.

Most important question raised in the survey was what made the researcher decide to take part in a training course conducted by business representatives. The respondents had the opportunity to express their opinion by marking the answer that would best define their choice (Table 5).

As can be seen from the above, the vast majority of participants (31.25%) were motivated by the fact that they acquired their knowledge free of charge. The second argument in favor of the participation in the training, in terms of the number of responses (18.75%), was the use of the knowledge acquired in the training courses to work with students. The third argument

related to the integration of staff, as a lunch break in the form of a hot meal and coffee was provided during the sessions, and this may have been the reason for the respondents to give this answer. Other opinions, i.e.: interest in interaction with other people during the training, interest in the content of the training, getting to know with the trainer for further personal cooperation and the assessment of the trainer's level received 9.38% votes each.

Table 5.
Opinions on the participation in the training courses

Answers	Structure, %
Gaining knowledge free of charge	31.25
The use of the knowledge acquired in the training courses to work with students	18.75
Integration of staff	12.48
Interest in interaction with other people during the training	9.38
Interest in the content of the training	9.38
Getting to know with the trainer for further personal cooperation	9.38
The assessment of the trainer's level	9.38

Note. own study.

The study also covered the issue of the benefits of cooperation between university and business for trainees (Table 6). The table below shows the values in the order chosen by the respondents in terms of the number of their answers, from the highest to the lowest.

Table 6.
Benefits from university-business cooperation

Answers	Rating	
	№	%
Broadening knowledge and gaining new information	1	93.75
Scientific experience	2	75.00
Job experience with enterprises	3	68.75
Research team building	4	62.50
Team-work	5	59.38
Opportunity to be promoted	6	15.63
Getting the certificate of the course completion	7	15.63
Lack of classes with students during the training course	8	3.13

Note. own study.

As the figure above shows, the highest value in terms of the benefits from cooperation between the university and business for the participants is broadening of knowledge and the acquisition of new information (93.75 %). Another equally important aspect for researchers, chosen by 75% of all participants, is gaining experience to be used in the future. A statement relating to the benefits from working with entrepreneurs is ranked important – 68.75%. Slightly less, 62.5% respondents focus on teamwork, especially on building research teams, as there is a possibility to share tasks and cooperate more effectively. More than 59% (19 people) consider teamwork an important asset as it can bring further mutual results, through scientific publications, conferences or work on creating new projects and obtaining funding.

5. Conclusions

The authors verified the accuracy of the hypothesis through their research. As a result of the answers received, the goal of the article was achieved. Analyzing the target group, it can be stated that the representativeness of the research sample is low, however, these are strictly defined assumptions of the task to be financed under the Regional Initiative of Excellence project (RID). The results of the survey show that, in the opinion of the target group, the cooperation between university and business is a result of mutual benefit and that it is worthwhile to participate in such initiatives, both because of personal and professional development. Training courses to improve soft skills and business competencies are indispensable in team research and project work, as the importance of team and group work in research projects and academic startups is currently increasing, which in turn affects cooperation with entrepreneurs. The implementation of training courses has significantly improved the quality of team research, the cooperation with the local community (cooperation between science and business) and the relationships in the establishment of research teams. The focus interviews show that the target group finds soft skills and business competencies helpful in areas such as interaction between people from different centers, making new acquaintances, working together or in groups, and motivation for further commercialization of the results of scientific research.

In the world of science and business, there is a constant search for new initiatives that create opportunities to broaden horizons, break down barriers and create common innovative solutions. Work and mutual support should benefit both parties. Paradoxically, the undeniable advantages of cooperation between the university and business representatives do not always lead to the mass implementation of joint projects in practice. The answer to this question can be found by referring to the "Triple Helix Theory". According to this theory, each of the parties (state, business, university) should partially accept the role of the other party in interaction with all the others, while maintaining its main role and separate identity. Thus, universities should develop academic entrepreneurship, and businesses should actively share their knowledge and competencies with external stakeholders. The state should not only regulate innovation activities and finance university research, but also work as a venture capitalist, investing in high-risk high-tech startups.

In practice, we see that the exchange of roles and information does not occur according to the theories described above. At the same time, the existing "The Triple Helix" is characterized by the following features:

1. University teachers and students are not always ready to manage the business processes of their own innovative projects, even if venture funds are available. The research results confirm the interest of this group in obtaining new knowledge and business competencies directly from experienced entrepreneurs.

2. Corporate entrepreneurial education programs organized by business have an internal nature and are aimed at training the personnel reserve for their companies (HR). Such programs are not aimed at developing competencies for managing business processes of innovative projects for external stakeholders.
3. The state very rarely finances venture university startups due to their low "survival rate" and prefers to invest in the creation of innovative infrastructure (laboratories, business incubators, technology parks, etc.). Our research has shown that in order to reduce the risks of public financing, it is necessary to actively implement projects aimed at improving the business competencies of potential academic entrepreneurs. This will make it possible to effectively use the infrastructure already created by the state and increase the "survival rate" of university startups.

The results of the presented study can be an incentive to carry out subsequent research on university-business cooperation on a group of researchers in order to further explore knowledge. The study has certain limitations, mainly resulting from a small research group (32 persons), but provides valuable feedback to the audience on the benefits from university-business cooperation.

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