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Universitatea "Lucian Blaga" din Sibiu

Recommendations on University- Enterprise Cooperation

***Collaborations between universities and the
business environment in Romania – Study
based on questionnaires distributed to
Romanian companies***

"Lucian Blaga" University of Sibiu (LBUS)

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Sibiu – Romania - 2020

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1. Collaborations between universities and the business environment

1.1 Introduction

Collaborations between business environment and universities help higher education institutions to develop curricula and teaching techniques that meet the needs of both students and society. These collaborations represent a common benefit for both universities and companies. As a result of these partnerships, new technologies that can improve the quality of life can be developed, but also young people will chase different sets of values and skills, that will help them as future employees.

Building closer relationships between universities and companies can encourage exchange of information between the two institutions, to create long-term partnerships and opportunities and stimulates innovation, creativity and entrepreneurship.

There are many activities through which companies can start cooperating with universities. And of these actions the most important are: trainings and internships for students and graduates, financial support of university research centers and networking.

1.1.1. Internship

Internship is perhaps the most popular form of collaboration. In recent years there have been launched a lot of internship programs, being a way for companies to recruit their future employees. For students, the internship is a learning opportunity, a way to they can gain practical experience in the field of interest. After graduating from college, most young people are looking for a stable job, but most of the time they lack certain skills.

Through an internship, students can develop skills that can help them in a professional way. Investing in young people and giving them the opportunity to develop professionally, accumulating a solid knowledge base, the labor market will provide increased quality of services in the future. Educating young people is one of the most important things a company can do so that an educated society will become a responsible society.

The companies that hire students that are at an entry level career have many benefits. If the employer is satisfied with the intern's performance, an individual employment contract can be concluded, after the termination of the internship contract. The company thus gains a valuable human resource, who already knows how to perform his tasks efficiently. The company can simultaneously conclude internship contracts for a number of interns that cannot

exceed 5% of the total number of employees. But, as an exception, according to the law, in the case of an organization with 20 employees, there could work as interns maximum two people simultaneously.

Moreover internship programs can be organized at any time during an uninterrupted period of 12 months. In addition, host organizations that within 60 days from completion of the internship program, conclude an individual employment contract with the person who carried out the internship program receive, upon request, a premium of 4,586 lei for each employed person. The condition is that the young employee thus has an uninterrupted period of work in the company for at least two years. However, this does not apply to institutions and public authorities.

So an internship contract brings benefits to both young people starting their careers, but also for companies that want to invest in newcomers.

Internship / Practice

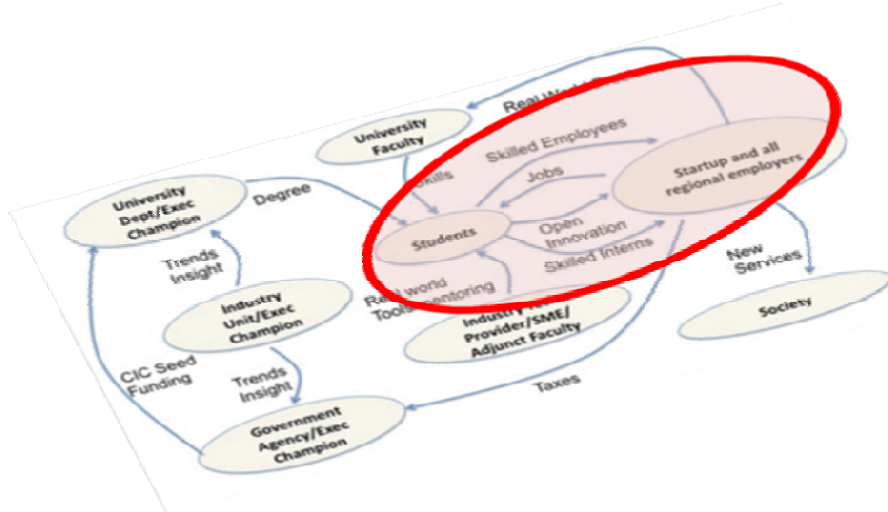
The practice is a compulsory component in the educational plan of the Faculties of Engineering in Romania. It takes place in year 2 and year 3 of study, being structured as practice in the field of study program (that of year 2) and as specialized practice (that of year 3). All these are completed in the last semester of year 4 with a special practice for the preparation of the diploma project. In the period 2015 – 2019, within the LBUS Engineering Faculty, several projects were done to organize the students' practice, which aimed to place them in specialized companies in the field, under favorable conditions, with practice supervisors from both the faculty and the companies participating in the project. Most of these projects benefited from European funding through sectoral programs SOP HRD (operational sector program for human resource development) and OP HC (operational program for human capital).



A major opportunity for the Faculty of Engineering within the LBUS is the fact that there is a developing industrial platform in the west of the city, which includes many companies with a production profile, many of them in the automotive field, that are constantly expanding their activity and, therefore, they need by specialists in the field of engineering.

On this basis, the companies have developed internship programs for students, which complete the practice programs, and offer students the possibility to continue to collaborating with the company in the conditions in which the student participates at the faculty programmes and, at the same time, they develops their practical skills, inside the company.

The law defines *internship* as a "**work done by students according to the curriculum, which is designed to verify the applicability of theoretical knowledge learnt**" and follow a "*framework agreement of cooperation or conventions, as appropriate, agreed between hard the organizer and practice partner*"(Romanian Law 258/2007 on the practice of students).



Some of the companies traditionally involved in the cooperation program for practice and internship are presented below.



1.1.2 Financial support for university research centers

Another step that companies can take is to invest in a university research center. Due to this initiative the industry will have access to the latest technologies and discoveries in the field in which it operates, and the advantages of this action will have a significant impact on the company's image and profit in the future.

Collaborations like this bring benefits to both parties, as universities enjoy financial support, companies have access to the first to the results obtained from those discoveries.

Research centers at „Lucian Blaga” University of Sibiu as a proof on University-Enterprise Cooperation¹

Formula Student Car

The first car built in Sibiu is a racing car, made by three professors and 25 engineering students of the "Lucian Blaga" University of Sibiu and that was tested at the Researchers Night, on 27th September 2019. The first car made in Sibiu has a Honda engine.

The first car made in Sibiu is a one-way car that will run in the Formula Student, a kind of Formula 1, intended for students, which awards not speed, but safety and inventiveness.



This machine, developed to participate in the "Student Formula" competition was made in collaboration between the departments of the engineering faculty, the students and the teachers from several specializations, within a research center of the faculty and with the large participation of the automotive companies from Sibiu.

INCON – Connected Intelligence Research Center



INCON – Connected Intelligence Research Center

INCON (Connected Intelligence Research Center) is established within „Lucian Blaga” University of Sibiu. *It gathers together a team of academic researchers and industry professionals with the mission to conduct interdisciplinary research and innovation activities in the field of engineering human-centered smart systems.*

¹ Informations from: <https://inginerie.ulbsibiu.ro/>



Development of cyber-physical social systems based on the Internet of Things for the factory of the future (DiFiCIL)²

Fundamental research – the fundamental research activities will focus on analyzing and developing concepts of a generic nature at the basis of a cyber-physical social system (CPSS) reference architecture for production systems.

Experimental development – the activities of industrial research will focus primarily on developing prototype systems for implementing and validating/improving the theoretical concepts developed within the fundamental research activities. The two proposed prototype systems – an automatic production system and a station for manual product assembling – cover a large spectrum of scenarios encountered in the regional, national and international industry.

Activities for obtaining, validating and protecting the industrial property rights – this activity focuses on obtaining, validating and protecting the property rights derived from the fundamental and experimental research.

The main goal of DiFiCIL is to create a sustainable team of experts that can analyze, design and implement complex cyber-physical social systems (CPSS) at an international level, and to successfully participate in European research projects such as Horizon 2020, INTERREG IVC etc.

The second major objective is the fundamental and applicable research in the field of emergent technologies on which the assimilation of Internet of the Future (IoF) depends for creating valuable international publications, and obtaining invention patents.

The third main objective of DiFiCIL is the development of a technological infrastructure for the research in the field of cyber-physical social systems with prototypes and experimental systems within Lucian Blaga University of Sibiu (LBUS).

The forth objective is to identify the research themes that represent real interest to the regional industry within the first six months of the project. The focus will be on refining study cases that will be implemented through the newly build infrastructure, with interesting scenarios form the local industry. Additionally, another purpose is to identify niches that will allow our team to participate in common European research project, such as Factory of the Future in Horizon 2020



1.1.3 Networking

Networking is used by professionals to widen their circles of acquaintances, find out about job opportunities, and to increase their awareness of news and trends in their fields.

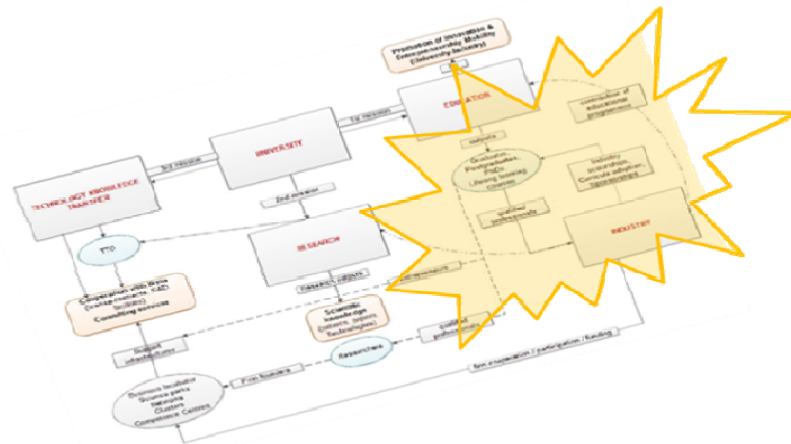
² Informations from: <https://inginerie.ulbsibiu.ro/>

Employees can teach a range of courses to students, both academically and in the classroom learning sessions (workshops, specialization courses, etc.) and can interact in an informal way.

Networking (workshops, specialization courses, scholarships, etc.)

Another way of collaborating with companies refers to the fact that many of them offer collaborative programs based on providing scholarships for students for involvement in various activities of cooperation with the business environment, as well as by offering tuition scholarships to do more easy access to educational activities in the university³.

Existing Examples from LBUS and business environment cooperation



Burse de studiu

Pentru anul universitar 2018 - 2019, studenții din ultimul an de studiu al unei facultăți cu specializare în domeniul mecanic, electro-mecanic, automatizări, electronică, pot beneficia de burse în valoare de 500 lei/lună, cu condiția să nu fie angajați sau bursieri al altor firme.

În perioada 8 - 22 octombrie 2018, studenții interesați pot depune dosarul de înscriere la sediul firmei sau la Decanatul Universității "Petru Poni" Iași.

Dosarul va conține:

- adeverință de la secretariatul facultății din care să rezece media din anul precedent;
- CV-ul candidatului;
- recomandări de la cadrele didactice din cadrul facultății;
- orice alte documente/informații pe care candidatul le consideră relevante în evaluarea dosarului.

Comandă va conține:

- evaluarea dosarului;
- testarea psihologică;
- interviu cu Manager-ul de Resurse Umane.

Căștigătorii bursei vor fi anunțați pe site-ul facultății în data de 5 noiembrie 2018.

Adresa de solicitare a bursei: 200100 IAȘI tel 0231 440140 sau pe mail: compa@ulbsi.ro

Regulamentul concursului, criteriile de selecție, condițiile de acordare: www.compa.ro

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Inginerie Științe

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Informații utile:

- 1. Bursa Continental se oferă studenților ce vor lucra în cadrul Companiei indiferent de an și nivel de studii.
- 2. Bursa se acordă din momentul acceptării acordului și până la absolvire, inclusiv pe perioada vacanțelor.
- 3. Pe perioada acordării bursei, studentul trebuie să aibă un contract de internship (CIVISIR pe 4).

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These scholarships reward students with special merits in research or educational activities. Some of these are part of specific collaborative projects with companies that aim to solve specific problems within these companies.

Have another type of resource, the knowledge, through teachers, researchers and all the people they work with. Combining those two entities, networking sessions will bring benefits to both parties, and the ideas that come out following these discussions can change in a favorable way the evolution of both parties.

³ Informations from <https://inginerie.ulbsi.ro/>

A partnership like this is not always easy because there are many variables which must be taken in consideration.

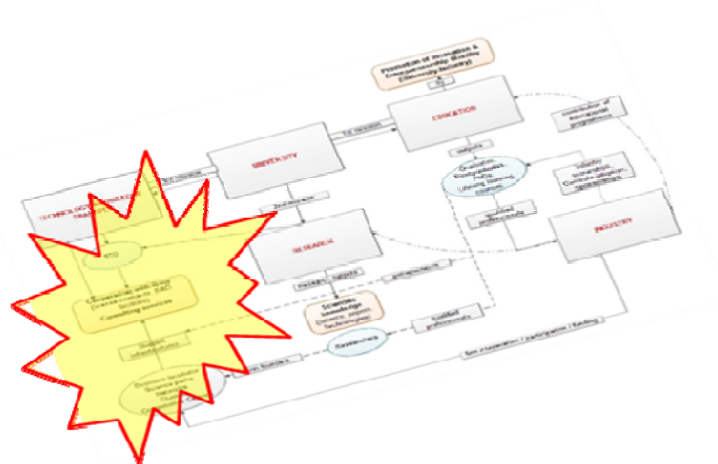
For the academic environment, which is characterized by having a slower evolution and a more calculated risk assessment, sometimes it will be difficult to keep up with the business environment, where things are constantly changing.

However, the form and the extent of this cooperation vary considerably between different countries, higher education institutions and academic disciplines.

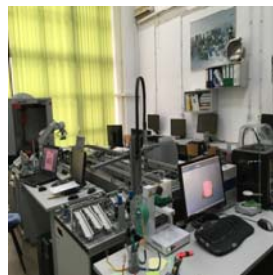
1.1.4. Support infrastructure

Existing Examples from LBUS and business environment cooperation

Support infrastructure



The partnership with the companies on the industrial platforms has provided a modern endowment of laboratories, it has been developed a good cooperation with specialists, which supports courses and applications for the bachelor's and master's programs in fields of interest.



A special feature is the development of collaboration programs between the university and the business environment through the support provided by companies for equipping laboratories with specialized techniques and equipment.

1.2. University – business cooperation (UBC) in Europe Union

The current concerns in the European policy about European higher education system are related to supporting graduates in having a successful career through cooperation between higher education institutions and the field of business.

Both the business sector and higher education institutions are important for contributing to sustainable economic growth, employment and prosperity in the European Union. Promoting and developing cooperation between higher education and business is a key element of the EU Agenda for the modernization of higher education and the potential to increase this contribution, through increased levels of collaboration, is now recognized firmly in EU political circles and in the Member States, with the publication of Europe 2020 and related initiatives. This potential has been explicitly developed in the field of research and innovation.

In order to show the potential benefits that are being achieved through cooperation between businesses and higher education institutions in the field of education, the European Commission has launched a pilot initiative of the knowledge Alliance for creating new multidisciplinary programs to promote entrepreneurship in education, and also the development of other transferable skills. It initially funded a small number of pilot projects in 2011 and 2012 before incorporating the initiative into the Lifelong Learning Program in 2013. Since 2014, these knowledge alliances have been incorporated into the Erasmus + program.

The Knowledge Alliances put together two forces: higher education and business, to create innovative and sustainable ways of developing human capital. Similarly, the Commission has developed a second approach, known as Sector Skills Alliances which are intended to bring together entities involved in education and training from several Member States and agencies involved in education and training systems for the development and design of common programs and methods to teach students the required skills of the labor market.

1.2.1. *The State Of University-Business Cooperation In Europe – European Commission Report, 2018⁴*

This report presents the findings of the project “The State of University-Business Cooperation in Europe”. The project has been conducted during 2016 and 2017 by a

⁴ Information from the study: European Commission (Prof. Dr. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Balzhan Orazbayeva and Prof. Dr. Thomas Baaken) – *THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE*, Luxembourg: Publications Office of the European Union, 2018

consortium led by the Science-to-Business Marketing Research Centre, Germany for the DG Education and Culture, European Commission. The aim of the project was to get a more profound, comprehensive and up to date understanding of the state of University Business Cooperation (UBC) in Europe, from the perspective of both the higher education institutions (HEIs) and the business sector. The project explored the UBC in different countries, examining the form and extent of main drivers and barriers for the different stakeholders, regulatory frameworks and the type and extent of existing measures supporting UBC at a national level.

In order to broaden the understanding of UBC and widen its development, governments (EU and national / regional), HEIs and businesses can⁵:

	EC	Nat/Reg Gov.	HEI Mngt.	Business
Finance project consortiums that extend their cooperation activities beyond research into education, valorisation and management cooperation.				
Provide funding for longer term cooperation initiatives, which allows the stability for expertise to develop and relationships to mature.				
Promote the benefits of UBC through guides, videos, roadmaps, e-courses, forums and workshops as well as media articles.				
Create more opportunities for cooperation with employers in education including more practical programmes, both within and cross-faculty.				
Create small 'packaged' opportunities to collaborate e.g. master-thesis supervision, student 'consulting' project with business, a joint paper around a common area of expertise, etc.				
Provide support to the creation of new curricula, to redesign existing curricula or undertake ongoing modernisation of curricula at HEIs.				
Develop improved employment and recruitment pathways from higher education to employers.				
Embrace the HEIs role in providing entrepreneurship education, creating entrepreneurial ventures and facilitating a regional entrepreneurship ecosystem.				

Source: European Commission (Prof. Dr. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Balzhan Orazbayeva and Prof. Dr. Thomas Baaken) – *THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE*, Luxembourg: Publications Office of the European Union, 2018

In order to improve personal relationships, governments, HEIs and businesses can⁶:

⁵ European Commission (Prof. Dr. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Balzhan Orazbayeva and Prof. Dr. Thomas Baaken) – *THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE*, Luxembourg: Publications Office of the European Union, 2018

⁶ European Commission, idem, 2018

	EC	Nat/Reg Gov.	HEI Mngt.	Business
Provide funding to develop relationships between HEIs and business at different stages of development by differentiating between shorter-term funding for 'starting up' new collaborations and longer-term funding for 'scaling up' proven collaborations.				
Develop opportunities for more frequent and extensive professional mobility which builds better cultural understanding on both sides.				
Create greater opportunities for academics and business people to develop trust and UBC experience through small funding opportunities, emphasise relationship-building exercises in projects and by drawing upon existing relationships as a source for connecting academics with business and employers.				
Develop new mechanisms to develop contacts and relationships by:				
Creating a community or network of like-minded external collaboration-driven academics to facilitate meetings, networking events and matchmaking, to build an external collaboration culture within the HEI as well as an experience set for UBC.				
Creating and promote events that encourage networking of academics with business people to help the development of relationships e.g. research pitching competitions, topic-related networking breakfasts etc.				
European-level initiatives such as the University-Business Forums and Knowledge Alliances can serve as inspiration for similar activities on Regional or National level				

Source: European Commission (Prof. Dr. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Balzhan Orazbayeva and Prof. Dr. Thomas Baaken) – *THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE*, Luxembourg: Publications Office of the European Union, 2018

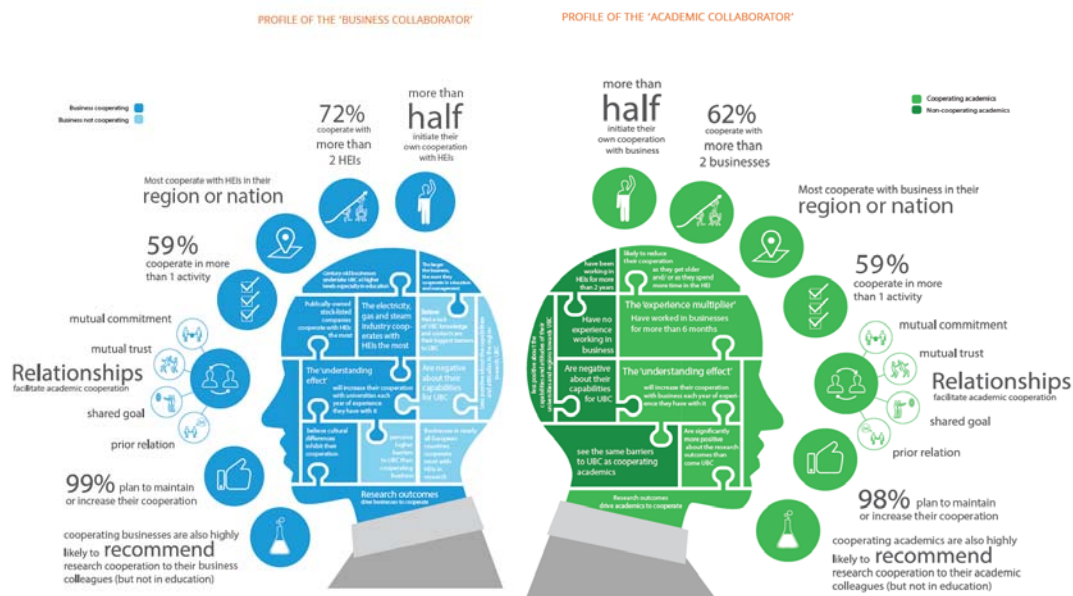
In order to increase the strategic commitment to UBC, governments, HEIs and business should⁷:

	EC	Nat/Reg Gov.	HEI Mngt.	Business
Ensure that both academics and business get greater benefits from their cooperation that contribute to both their short-term and long-term objectives, with focus on research / Innovation outcomes.				
Reward HEIs for undertaking UBC by linking part of their funding to their UBC activities and outcomes.				
Expand the benefits from cooperation beyond research to deliver more employable graduates, support better employment pathways, more streamlined valorisation of research results and management level cooperation.				
Prior to implementing UBC mechanisms, audit the environment to have clarity about which supporting mechanisms are already in place and what is needed.				
Provide a clear UBC strategy and development policy which is aligned and included in the mission of the organisation.				
Establish an executive-level position that is responsible for UBC and a person responsible for its execution.				
Seek opportunities to remove barriers for UBC, which primarily relate to lack of funding and resources.				
Seek ways to develop improved cross-cultural understanding between the academic and business environment.				
Create external engagement offices, overseeing all external engagement activities, incl. alumni, graduate and technology transfer offices.				

Source: European Commission (Prof. Dr. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Balzhan Orazbayeva and Prof. Dr. Thomas Baaken) – *THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE*, Luxembourg: Publications Office of the European Union, 2018

⁷ European Commission, idem, 2018

The results showed that, given the right circumstances, UBC can be a highly positive activity for all parties involved. Particularly, businesses are starting to realize the benefits of partnering or working with higher education institutions (HEIs) as a source of future-oriented innovation as well as talent development that can build a competitive advantage. There is a evidence that HEIs are being increasingly seen as a source of talent, entrepreneurship and a lead player in regional development.



Source: European Commission (Prof. Dr. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Balzhan Orazbayeva and Prof. Dr. Thomas Baaken) – THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE, Luxembourg: Publications Office of the European Union, 2018

1.2.2. Examples of collaborations in the EU

While the level of cooperation varies considerably between different countries, universities and academic disciplines, there are many examples of successful cooperation between academia and industry across Europe. Here are some examples:

- The dual education system, where students combine school and practical learning, is used in several European countries, but for the most part it is developed and incorporated in Germany. An OECD analysis since 2010 found out that the system has been deeply embedded and highly valued in German society, allowing flexible training in various fields in depending on market requirements. They also found a growing interest in the ranks employers, they considered this system to be a very good research resource and innovation among businesses.

- European Business Innovation Centers (organizations) support innovative small and medium-sized enterprises (SMEs) and entrepreneurs. Their mission is to contribute to economic and social development by implementing support services for entrepreneurs, helping them to turn their innovative business ideas into reality, as well as providing services to existing SMEs. Now, there are over 150 European innovation centers across Europe.

So, the European Commission has been working for years to support and strengthen this cooperation, and these are due to the fact that these collaborations bring significant growth to the European economy and help Member States to develop economically and socially.

2. Research results

The main objective of this study is to identify the ways of cooperation between the business environment and universities (UBC – university – business collaboration) and the particularities of this collaboration existing at different geographical areas (particularly in Romania), in order to identify examples of good practice and to be able to harmonize this type of collaboration at the level of the universities involved. The research is part of a future larger investigation conducted as an integral part of the Erasmus + project Personalized Engineering Education in South Africa - PEESA III. This study will be extended by administering this questionnaire to partners from Germany, Poland and South Africa.

A secondary objective is to contribute to the strengthening of the didactic and research activity within the Romanian universities and to increase their connection to the realities and tendencies of the socio-economic environment.

The study analyzed the perceptions of respondents from some companies operating on the Romanian market, regarding the company in which they are activating and its level of cooperation with the university environment. ***The administration and analysis of the questionnaires was carried out between April and June 2020, the sample of respondents being made up of 50 people from different companies in Romania.*** Within this research, the survey unit was constituted by the entry level, middle level or top level managers who answered the questionnaire, but in particular were targeted those persons who deal with collaborations with the university environment within the company. ***To conduct the research, this was developed in Google Forms, and was distributed online (the questionnaire included a number of 15 questions). Some of the questions of the questionnaire had as idea, the theme of a study conducted under the auspices of the European Commission, at the level of European Union countries, including Romania⁸, conducted in June 2018, these being adapted to project requirements and specificities identified in this project. In this idea in the analysis to be presented, we will refer to also to this study results, to point common or different elements identified by us in the area of a close type of questions.^{9, 10}***

The results presented in this report reflect the perceptions of businessmen and companies in Romania regarding the relationship between universities and companies.

⁸ M. Melonari, A. Fodor, M. Ranga, T. Davey, A. Meerman, B. Orazbayeva, V. Galán-Muros, The State of Romanian University-Business Cooperation Report (Business Perspective), Technical Report, Publications Office of the European Union, September 2018

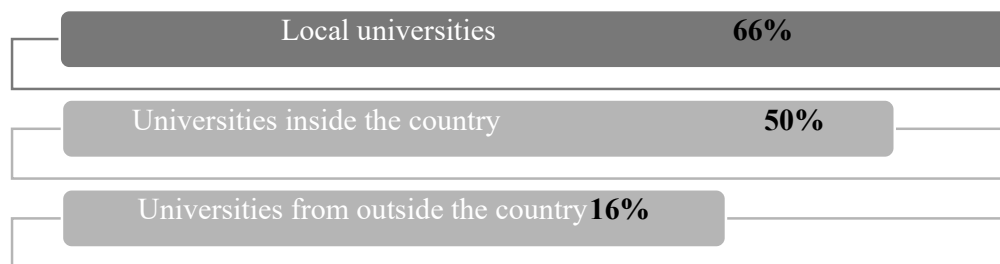
⁹ M. Melonari, A. Fodor, M. Ranga, T. Davey, A. Meerman, B. Orazbayeva, V. Galán-Muros, The State of Romanian University-Business Cooperation Report (Business Perspective), Technical Report, Publications Office of the European Union, September 2018

¹⁰ T. Davey, A. Meerman, V. Galan Muros, B. Orazbayeva, T. Baaken, The State Of University-Business Cooperation In Europe, Luxembourg: Publications Office of the European Union, (2018)

The aim of the research is to understand in depth and have complete information and news about this relationship between universities and companies. The study analyzed respondent's perceptions of their own business and their level of cooperation with universities.

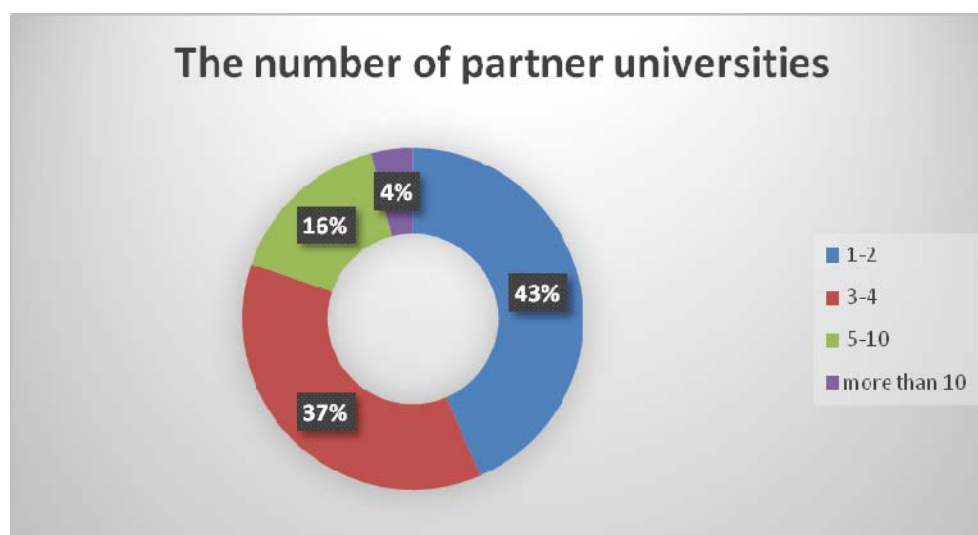
2.1 The importance of geographical location

Most of the times the companies decide build collaborations with universities from:



This result shows us that geographical position matters a lot to companies in choosing a university partner. While most Romanian businesses cooperate with universities in the region (66%), the results also report a high percentage for universities national (50%)¹¹. But only 16% collaborate with universities abroad, this shows the interest of companies in using human resources within the country.

2.2 Number of partner universities

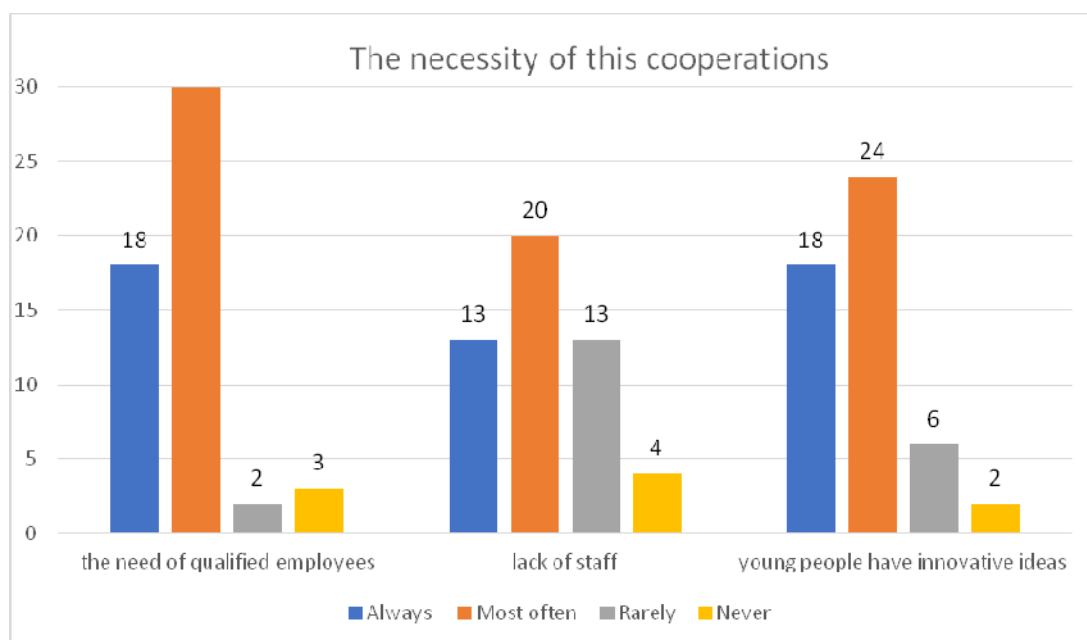


¹¹ The results presented at 2.1 and 2.2 refer to percentages of the total answers received in the study, but an extrapolation can be made at national level based on these results, which is close to the answers received by the study conducted in Romania at the level of the European Union.

Over 80% of Romanian companies cooperate with less than 4 universities and this is due to the fact that these companies collaborate mostly with universities in the country and the number of universities at national level is relatively low, 16% have established relationships with 5-10 partners and a very low percentage of 4% cooperate with over 10 universities.

2.3 Reasons why companies cooperate with universities

Regarding the reasons why Romanian companies want to collaborate with universities and what are the activities they access most often, opinions are divided according to the needs of each company.

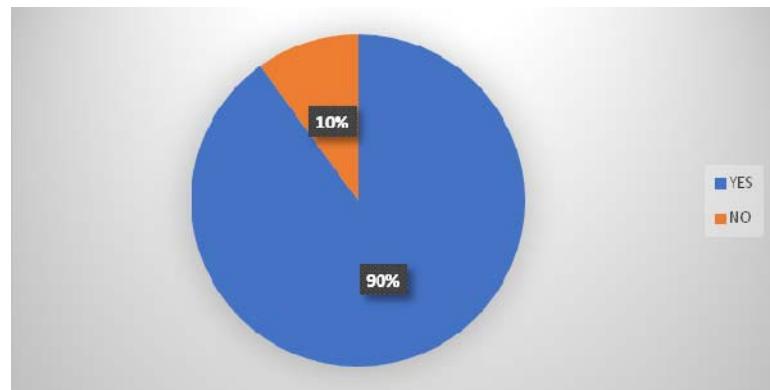


From this graph we can see that the lack of staff among Romanian companies qualified is a very big problem, and most of the time that is a reason for which companies decide to initiate partnerships with academia¹². Another important reason why these partnerships are beneficial is that young people have innovative ideas and can help companies to develop their products and services, by adapting them to market requirements. (to this question there was the possibility to select multiple answers, and the values in the graph reflect the absolute number of answers received, from a total of 50 respondents)

¹² To this question there was the possibility to select multiple answers, and the values in the graph reflect the absolute number of answers received, from a total of 50 respondents. The answers could be dosed on a scale with the structure: always, most often, rarely, never.

2.4 Activities carried out in collaboration with the university environment

To the question 'Do you think that the collaborations with the university environment helped the company in its development?' A percentage of 90% answered in an affirmative way, this confirms the importance of these partnerships and the fact that they bring huge benefits to the business environment.



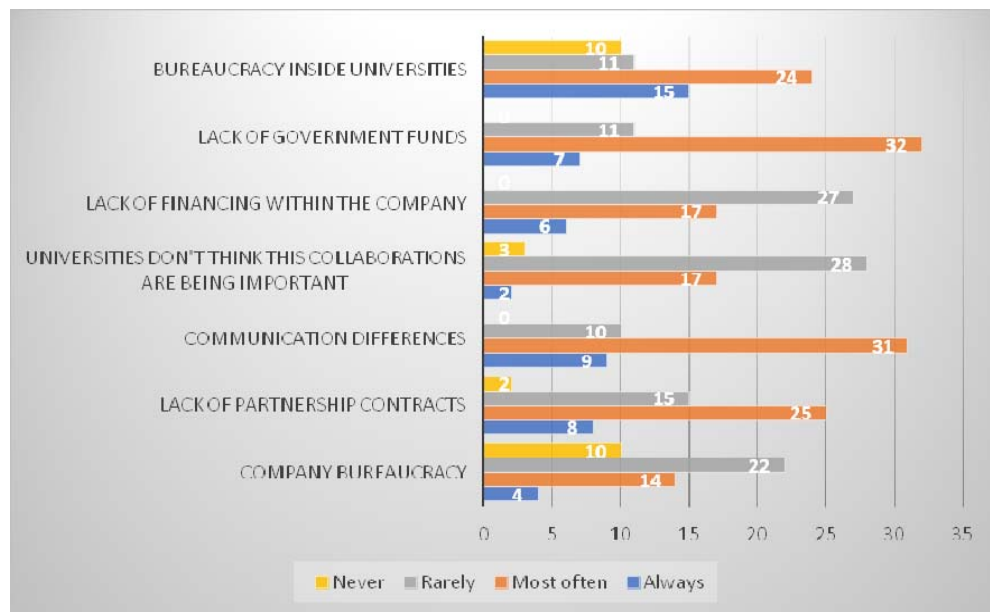
And to find out why companies consider these partnerships important, we used an open-ended question to analyze each company's point of view. Although the way of expression was different, most respondents share the same idea, that young people are flexible and can be easily modeled according to the needs of the company. At the same time, a large part of the respondents consider that students bring added value within companies, even if at the beginning a process of training and integration of students within the company is needed, they adapt easily due to the fact that they are innovative and eager to learn new things.

2.5 Factors influencing collaborations between universities and companies

- Barriers in collaboration with the university environment

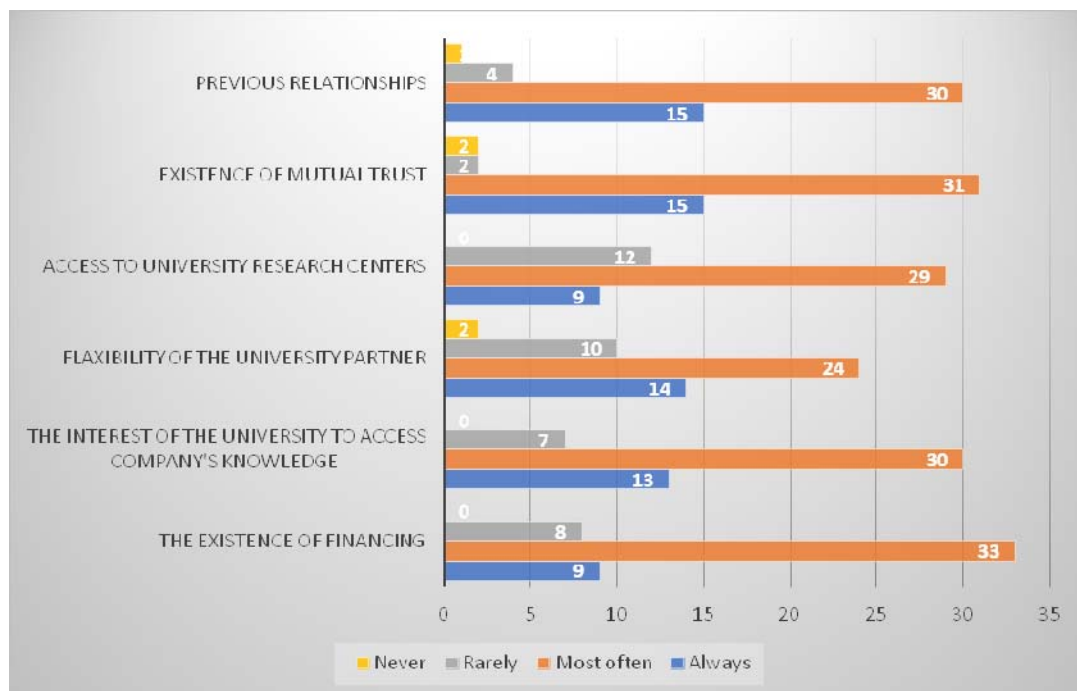
As can be seen from the chart below, the main factors that prevent a good development of these collaborations are: lack of government funds, differences in communication between academia and companies and bureaucracy within universities¹³. On the other hand, companies say that the lack of funding at the company level and the bureaucracy within the company are often the barriers to partnerships with the university environment.

¹³ To this question there was the possibility to select multiple answers, and the values in the graph reflect the absolute number of answers received, from a total of 50 respondents. The answers could be dosed on a scale with the structure: always, most often, rarely, never.



- Elements that facilitate collaborations between universities and companies

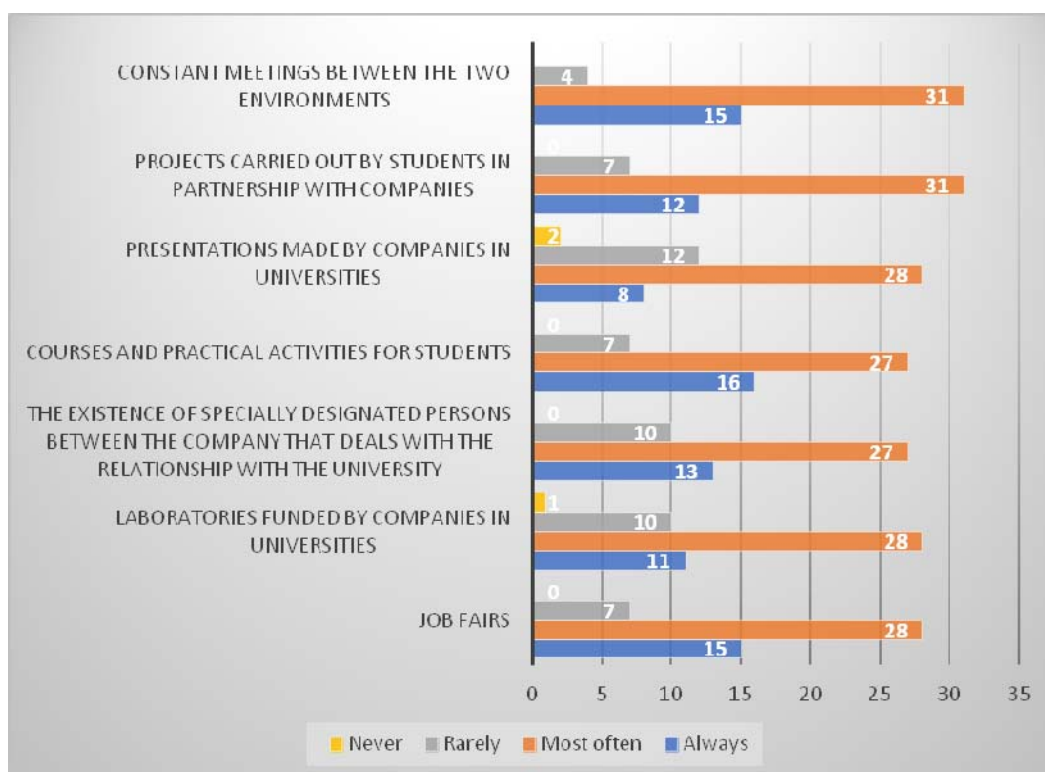
The elements that facilitate these collaborations in Romania refer mostly to a relationship built between the two environments, to the presence of a previous connection based on mutual trust, but also in the interest of the university to benefit from the knowledge and services of the partner companies¹⁴.



¹⁴ To this question there was the possibility to select multiple answers, and the values in the graph reflect the absolute number of answers received, from a total of 50 respondents. The answers could be dosed on a scale with the structure: always, most often, rarely, never.

2.6 Activities to support collaborations between universities and companies

Companies start a series of activities to support collaborations with the university environment. The main activities they initiate are: constant meetings between business members and university environment, courses and practical activities for students and projects made by students in partnership with companies¹⁵.



2.7 The level of preparation of students

On a scale of 1 to 5 (1 representing to a small extent, and 5 representing to a large extent) respondents had to express whether the level of preparation of students met the expectations of companies.

We found out that 50% of the respondents gave a grade of 3, they consider that they are students have an average level of training, over 40% gave a grade of 4-5, they said they were satisfied with level of education of students, and only 10% are considered relatively dissatisfied with the vocational training of young people.

¹⁵ To this question there was the possibility to select multiple answers, and the values in the graph reflect the absolute number of answers received, from a total of 50 respondents. The answers could be dosed on a scale with the structure: always, most often, rarely, never.

2.8. The experience in collaboration with the university environment

On a scale of 1 to 5 (1 representing unsatisfactory and 5 representing satisfactory) respondents were asked to rate the experience they have had so far in their collaborations which they have achieved over time with Romanian universities. A percentage of 58% gave a grade of 4-5, 40% a grade of 3 and a percentage of only 2% gave grades below average.

2.9. Tips for strengthening these collaborations

Respondents were asked to briefly state what they think universities should improve so that these collaborations take better shape and develop more on future. Most of the answers refer to the fact that universities should focus more much on the practical side to update the university curriculum more often, depending on market trends and to embrace an open mindset, aligned with current technology and standards.

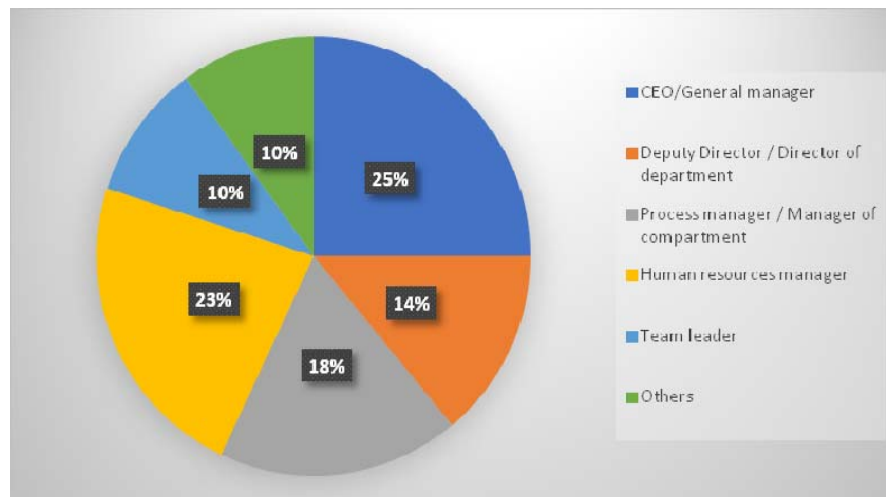
However, many other answers refer to the fact that universities do not provide opportunities for collaboration to smaller companies, local companies, because they often focus their attention and all facilities for large firms such as Continental, Marquardt, etc... In this way there are many companies that find it difficult to reach students, especially those with a smaller budget, but who could provide jobs or internships for students, they consider that the degree of employability of students would be even higher than at present.

2.10. Profile of respondents

➤ The position held within the company

The questionnaire was largely completed by general managers (25%) and managers of the human resources department (23%). The 'other' section (10%) represents the functions of engineers and technicians¹⁶.

¹⁶The sample of respondents being made up of 50 people from different companies in Romania

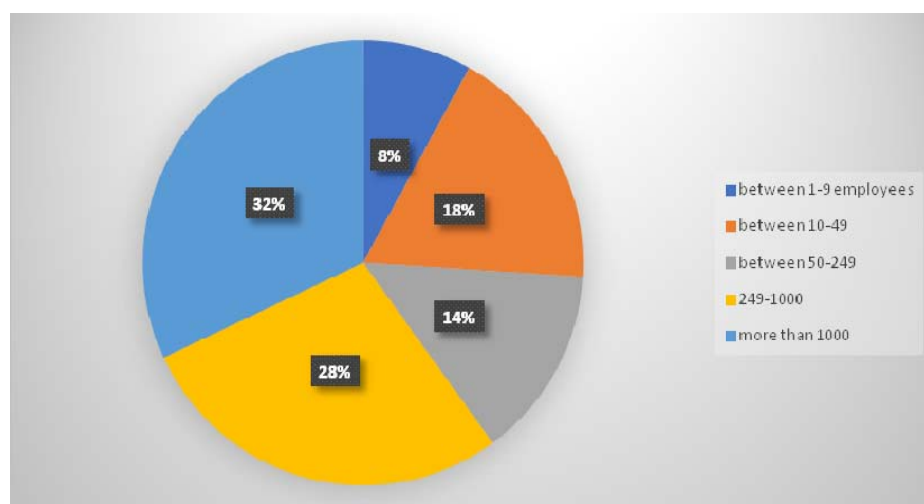


➤ Company type

Most companies in Romania are companies with private capital, hence the large number of respondents working for companies with private capital (94%), while only 4% of respondents work for companies with majority state capital.

➤ Number of employees

From the graph below, it can be seen that 32% of respondents are employed in companies with a number very high number of employees (over 1000), 28% are employed by companies with an average number of employees (between 249 and 1000) and 40% of the respondents are employed in companies with a relatively small number of employees (under 249)¹⁷.



¹⁷ The sample of respondents being made up of 30 companies from Romania (mostly of them located in the Sibiu, Alba and Brasov area, but also from Bucharest, Cluj-Napoca and Timisoara)

3. Conclusions and recommendations

After processing the data and interpreting the results, we came to a series of conclusions, which will be presented below:

- It is suggested as ways of communication between universities and the business environment to attend conferences, round tables, mutual consultation, and dialogues with graduates and constant meetings between members of the business environment and the university environment.

- One aspect highlighted by managers is the mismatch between competencies and qualifications offered by the academic environment and the needs of the labor market, this is certainly one of the aspects that most companies are dissatisfied with. Romanian universities need to update their curricula more often due to how quickly the world in which we live in changes their tendencies.

- Romanian businesses consider that the biggest impediment in these collaborations is bureaucracy within the faculty, followed by the statement that there are differences in communication between academia and business. Another very important barrier identified by respondents is the lack of government funds for collaboration with universities.

- As a result of collaborations with universities, companies consider that the biggest benefit is that it is the fact that young people have innovative ideas and thus find new solutions for their business, but also the fact that they need staff, and especially qualified staff.

- Regarding the factors that facilitate the cooperation, the companies consider that the most important factor is the access to the research / development facilities of the university but also the existence of previous relations between the business environment and the university. These results indicate the fact that to strengthen this relationship, both universities and companies must focus more on developing a close relationship for successful collaboration.

Based on the results of the study, the identification of the deficiencies of the communication and cooperation relationship between the academic and the entrepreneurial environment, we propose the following improvement measures:

- increasing the involvement of the local business environment in the development of internships for students and intensifying the request for advice from the academic environment;

- creating a favorable framework for the development of students entrepreneurial skills, thus so that undergraduate and dissertation work is based on the identification of solutions for the real problems of local companies;

- cooperation between universities and the business environment must be intensified as part of universities education, research and innovation strategies;

- because the relationship with the private environment is, first and foremost, the responsibility of the academic environment, it must show a proactive and open attitude towards the private environment. The management structures of the universities, but also the teachers must meet the companies, looking for partnerships and offering facilities and openness to the needs companies;

- Supporting smaller, local or entry level companies to initiating partnerships with the university environment;

- a more active involvement of student organizations in this collaboration process, to participate together with the management of the educational institution in the realization and implementation of the strategy relationship with the external environment.

- creating the conditions for stimulating the granting of private scholarships by enterprises such as source of performance of students and graduates of higher education institutions.

From what has been analyzed, the relationship between universities and companies tends to take shape very well in the future, companies are increasingly eager to work with students and collaborate with universities.

However, there are several issues that need to be worked on for this relationship to be a tight one. The Romanian business environment is willing to provide all the necessary tools for a beneficial and long-lasting relationship between the two, but has higher expectations from him university partner, expectations that are expected to be met in the near future.

Bibliography

1. European Commission (Prof. Dr. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Balzhan Orazbayeva and Prof. Dr. Thomas Baaken) – *THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE*, Luxembourg: Publications Office of the European Union, 2018
2. Nicolaescu Sergiu Stefan, Palade Horatiu Constantin, Kifor Claudiu Vasile, Florea Adrian – *Collaborative platform for transferring knowledge from university to industry – a Bridge Grant case study*
3. Ankrah, S., & Omar, A. T. (2015). *Universities–industry collaboration: A systematic review*. Scandinavian Journal of Management, 31(3), 387-408.
4. Cunningham, J. A., & Link, A. N. (2015). *Fostering university-industry R&D collaborations in European Union countries*. International Entrepreneurship and Management Journal, 11(4), 849-860.
5. Jacob, M., Hellström, T., Adler, N. and Norrgren, F. (2000), *From sponsorship to partnership in academy-industry relations*. R&D Management, 30: 255–262. doi:10.1111/1467-9310.00176
6. Miricescu D., Tăbușcă D., *The need for internships and school practices as a method of bridging the gap between education and industry in Romania*, Proceedings of 8th Balkan Region Conference on Engineering and Business Education (BRCEBE) & 10th International Conference on Engineering and Business Education (ICEBE) “*Creating a mindset for growth and socio-economic development*”, October 19-22, 2017 Lucian Blaga University of Sibiu, Romania, ISSN: 1843-6730, pag. 149 – 155
7. T. Davey, A. Meerman, V. Galan Muros, B. Orazbayeva, T. Baaken, *The State Of University-Business Cooperation In Europe*, Luxembourg: Publications Office of the European Union, (2018)
8. M. Melonari, A. Fodor, M. Ranga, T. Davey, A. Meerman, B. Orazbayeva, V. Galán-Muros, *The State of Romanian University-Business Cooperation Report (Business Perspective)*, Technical Report, Publications Office of the European Union, September 2018