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Assessment of Applied Research Capacities in Kosovo

Evaluation Report
Edutask

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List of Abbreviations

KREN	Kosovo Research Education Network
HEI	Higher Education Institutions
R&D	Research and Development
MSMB	Micro Small Medium Business
CUI	Collaboration Between Universities and Industry
PuHEI	Public Higher Education Institutions
PrHEI	Privat Higher Education Institutions
NGO	Non – Governmental Organizations
OECD	Organization for Economic Cooperation Development
MESTI	Ministry of Education, Science, Technology and Education
KAA	Kosovo Accreditation Agency
NCS	National Council of Science
STEM	Science, Technology, Engineering and Mathematic
KRIS	Kosovo Research Information System

Executive Summary

The report Assessment of Applied Research Capacities in Kosovo is conducted withing the Digital4Business project, jointly financed by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) and being implemented in the framework of GIZ's Digital Transformation Center in the ITP Prizren. The implementation of this activity is being facilitated by Edutask. The project activities include assessment of applied research capacities in Kosovo, training for HEI and businesses and implementation of four applied research projects through a competitive application process managed by ITP.

This report starts with a general overview of the literature that describes the collaboration between universities and the industry sector; then, it defines the concept of applied research whereby it elaborates on the setting of the research ecosystem in Kosovo. We use first-hand information from in-depth semi-structured interviews with HEI research vice-rectors, whose insights were triangulated with focus group discussions and additional sources of evidence that cover documentation such as annual reports, HEIs' website and presentations, and other materials deemed necessary. In total, we offer detailed evidence for 10 HEIs and analysed their research capacities by trying to shed light on their strategic orientation concerning (applied) research, the quality of the research, the collaborative attitude (if at all present), research infrastructure (including human resources and their motivation), research sponsorship as well as their technology transfer and collaboration with industry.

In this study, we aim to assess the current engagement of HEIs in research by *(1) evaluating the future plans and the research strategy*, especially when it comes to applied research or, in other words, the attitude to collaborate with the private sector/industry. Understanding this raises the question of their *(2) actual engagement in research and the shown performance to date (in the last five years)*, i.e., the number of publications indexed in the peer-reviewed database of scientific articles – SCOPUS, also detailing the fields with the highest publication output. This engagement in research, of course, requires the presence of a research office which became another indicator that we decided to use in our report. Another domain we wanted to understand better relates to *(3) the collaboration culture/attitude* that characterizes a particular HEI. This area consists of elements that explain how close or open is an HEI in terms of productivity in research (local collaborations or international; with industry or purely academic); the incentive to create spin-offs (or the lack of interest in commercializing the created knowledge). We also intended to learn (*4) the infrastructure* within which these HEIs operate, to understand better the current productivity. To learn more about Kosovo HEIs' funds at their disposal for research, we asked our interviewees about *(5) the sponsorship of the research projects*. In addition, we were interested to hear about the quality of the created knowledge, more precisely, the number *of (6) patented inventions* and *(7) the dedication of the HEIs in knowledge*

commercialization through entrepreneurship (spin-offs, startups), (*8) the collaboration with industry partners as well as their level of innovativeness (10)*.

Our results suggest that while most of the analysed Kosovo HEIs possess a research strategy, they rarely have applied research included in their strategy; nonetheless, they are well acquainted with the concept. This indicates the need for more collaboration between HEIs and the private sector/industry beyond students' internships – which is the dominating collaboration modality to date. According to the conducted interviews, focus groups, and other secondary information, this missed connection might relate to the limited absorptive capacities (from the firms' side), lack of skill-matching, administrative barriers, and lack of funds from the university side, etc. While the university perspective speaks about the private sector as a component that needs more trust in collaborating with university scientists on applied research projects, the latter emphasizes the number of administrative barriers that commonly serve as a bottleneck to engaging in such collaborations. We believe this mismatch and lack of cooperation between the two actors stem from the absence of novelty and innovation in the private sector. The low investment in R&D, which was confirmed by the companies that were part of our focus groups, indicates a firm's low absorptive capacities, which increases the barriers when it comes to collaborating with HEIs.

Apart from this finding, we find that the productivity of a typical Kosovo HEI researcher is low (the number of publications in SCOPUS per staff is low), and there needs to be more profound quality in the published works. This observation might also explain why the number of international collaborations in most Kosovo HEIs is superficial. Furthermore, the created knowledge is rarely qualified as patentable, which decreases the chances of knowledge commercialization – we do believe – that this might also explain why there is a low number of spin-offs and startups born within universities. Digging deeper into the determinants of this outcome, we find that the lack of a supportive infrastructure (with few exceptions) and motivation among the high qualified staff might prevent the desired success. Therefore, we believe policymakers should dedicate more funds to the universities that perform better regardless of the equally absent infrastructure to allow them to be more competitive while constantly working on reducing the administrative barriers and increasing the information on the benefits of collaboration with the university.

1 Introduction

The assessment of research capacities in HEI in Kosovo aimed to evaluate applied research capacities and potential at HEI. More concretely, the assessment addressed the following evaluation questions:

- What are the research capacities for infrastructure, research, and technology transfer offices, and research staff?
- What projects, teams, and expertise have HEI engaged in the last five years in applied research projects?
- What was the scope and role of MSMB in the applied research cooperation projects?

The following indicators are observed:

- Engagement in research – development tools that identify research profiles and their engagement in producing scientific results.
- Institutional Culture– research clusters, research visits, and conferences, as well as investments in developing research capacities
- Performance, productivity, and innovations, including publications referenced in SCOPUS and Bibliographic data in google scholar, number of multi and interdisciplinary science collaborations with other universities locally and internationally, and number of partnerships with industry in terms of applied research projects, spin-offs, patents and other
- Impact: constructive and constant debate on the importance of research, research evaluation, and awards.

2 Literature review and definitions

2.1 Relationship between University and Industry

The unprecedented outbreak of the COVID-19 pandemic has triggered a massive increase in economic uncertainty. It has shaken the foundations of traditional economic planning and demonstrated that businesses must innovate and evolve quickly to be competitive and survive similar financial crises (Bertello et al., 2022). Now more than ever, companies need universities to progress in innovation. The collaboration between universities and industries (CUI) has existed and continues for a long time worldwide (Ankrah & Omar, 2015). Still, the challenging times have turned it into an essential part of the innovation process and knowledge generation (Bertello et al., 2022). CUI is a crucial mechanism to encourage innovation, exchange information, develop new technologies, and promote development (Kleiner-Schaefer & Schaefer, 2022). Davey et al. (2011) describe CUI as "all types of direct and indirect, personal and non-personal interactions between HEIs and business for reciprocal and mutual benefit including collaboration in R&D, personnel mobility (academics, students and business professionals), commercialization of R&D results, curriculum development and delivery, LLL, entrepreneurship, and governance." Simply put, CUI is a partnership between universities and businesses to produce knowledge and innovation exchange. It includes various activities like research, teaching, and valorisation (Orazbayeva & Plewa, 2022).

Although producing knowledge is the common goal, the know-how produced and aimed by universities and businesses varies significantly. Universities are primarily driven to develop new information, advance scientific methods and educate new generations. In contrast, companies are driven to acquire valuable knowledge that can be used to gain a competitive advantage and generate economic profit (Bruneel, d'Este, & Salter, 2010). In addition, there is also a difference in the institutional governance (Bruneel, d'Este, & Salter, 2010). In the case of public Higher Education Institutions (PuHEI) that receive public funding are required to guarantee the effective use of resources and adhere to the laws governing public funding. Private Higher Education Institutions (PrHEI) Private higher education institutions (PrHEI) are subject to HEI laws and regulations. They are required to set aside a specific funds for research, but in general governing bodies are free to allocate funds to their best interest. On the contrary of PuHEI and PrHEI, businesses do not have requirements or duties for how funds must be allocated and have only to abide to the private sector regulation. Therefore, Pu-PrHEI and businesses have different priorities on funding of research and development (R&D). Additionally, their focus varies significantly because corporate staff are solely focused on R&D output, whereas university researchers may also have teaching responsibilities. Despite these factors implying asymmetric objectives, the partnership can benefit both parties involved (Davey et al. 2018).

On one hand, the major motivations for universities to collaborate with industries are not just to exchange information, but also to get fundings and access to industrial technologies and equipment and apply their research to practice in industries, delivering lifelong learning programs or applying for governmental funded initiatives (Davey et al. 2018). In fact, public financing is decreasing for universities, and they are encouraged to compete for grants (Davey et al. 2018). This requires them to be more productive, competitive, and connected. For this reason, they need to connect with their local, national, and global environments

and produce knowledge to get funded. On the other hand, businesses partner with universities for obtaining innovative and new knowledge, access on highly skilled talents that can provide knowledge-based solutions and access on R&D equipment that might be out of their reach. Because of these aspects, businesses can build a competitive advantage for future-oriented innovation in their markets. Although these factors are crucial for guaranteeing the reciprocal benefits of collaboration, there are frequently gaps between these institutions in terms of expectations, objectives, appropriate skills level, and costs of cooperation that might act as roadblocks to effective collaboration (Kleiner-Schaefer & Schaefer, 2022).

Some of the main drivers for the promotion of CUI are the opportunities that the partnership produces in creation, acquisition, and acceptance of knowledge (innovation and technology transfer), the development of skills (education and training), and the promotion of entrepreneurship (start-ups and spin-offs) (Guimón, 2013). University-industry partnerships provide several advantages, including the ability to coordinate R&D agendas and prevent overlaps, encourage further private R&D investment, and make use of the synergies and complementarities of scientific and technological skills (Guimón, 2013). Collaboration between academia and business may also raise the value of research done in public institutions, encourage the commercialization of public R&D results, and boost labor mobility between the public and private sectors (Guimón, 2013). Ankrah and Omar (2015) identify seven categories as the primary methods for enabling CUI: "(1) Capacity and Resources; (2) Legal Issues, Institutional Polices and Contractual Mechanisms; (3) Management and Organizational Issues; (4) Issues relating to the Technology; (5) Political Issues; (6) Social Issues; and (7) Other Issues". The success of the knowledge and technology exchange at CUI may increase if these aspects are properly controlled (Ankrah & Omar, 2015). However, that are also several barriers to CUI (Bruneel, d'Este, & Salter, 2010). Ankrah and Omar (2015) grouped them into four categories that can inhibit CUI: "(1) Deviation from Mission or Objective; (2) Quality Issues; (3) Conflicts; and (4) Risks". Kleiner-Schaefer & Schaefer (2022) classify the barriers into four groups: different R&D knowledge levels, absence of external funding, disbalance between partners, and administrative hurdles. CUI may not be viable or reach its full potential due to regional support absence, insufficient funding, unbalanced R&D capacities, absence of information about CUI cooperation opportunities both for universities and industries, absence of administrative support, and a general lack of mutual trust between universities and industries (Kleiner-Schaefer & Schaefer, 2022). If the benefits and drawbacks of CUI partners are not considered, inter-organizational collaboration may not be successful (Fernandes & O'Sullivan, 2021).

These barriers can be significantly higher in developing countries. The collaboration between universities and industries in the Western Balkans is fairly low (Marmullaku & Marmullaku, 2021). Compared to the European area, CUI in Kosovo is less developed (Orazbayeva et al, 2018). To better understand the requirements, motivations, and obstacles, the CUI case in Kosovo is examined for the purposes of this study. Due to the increasing rise in enrolments, and the constrained possibilities and resources of public institutions, Kosovo's higher education system is experiencing significant difficulties (Marmullaku & Marmullaku, 2021). According to the Education Strategic Plan (2017-2021), Kosovo's government has spent only 0.1% of its GDP on scientific research, which is extremely low. According to a specific recommendation from the European Union (2022), Kosovo should offer more support to

businesses and incubators. In particular, Kosovo should "provide resources such as training, business consulting services, and mentorship that are essential to the success of start-ups and idea generation." The European Union institutional paper points out that there are no initiatives yet to help young entrepreneurs or any support for collaboration with businesses, the diaspora, or the NGO sector (European Union, 2022). Kosovo is still making minimal progress in building its capacity for research and innovation. Marmullaku and Marmullaku (2021) claims that the collaboration between businesses and higher education institutions in Kosovo is focused on creating relevant study programs that meet labour market demands.

A recent survey study conducted by Orazbayeva et al. (2018) on the cooperation between higher education institutions and public and private organisations has shown that most academic responders who work at universities in Kosovo report having little to no experience with CUI. Only 7% of responders out of all participants had worked together in a CIU for at least 1–2 years, 14% for 2–5 years, and 7% for 5–10 years (Orazbayeva et al., 2018). According to the opinions of Kosovo academics who are actively collaborating with industry, the main obstacle to CIU, is a lack of government funding for research initiatives. Bureaucracy and a general lack of knowledge about the advantages of CIU are also additional barriers (Orazbayeva et al., 2018). The report identifies the university's desire to use companies' R&D facilities to be the most important drive for carrying out CIUs (Orazbayeva et al., 2018). A common objective, dedication, and mutual trust should also exist to promote collaboration (Orazbayeva et al., 2018). Academic responders who have already collaborated with businesses evaluate their experience from modest to high (Orazbayeva et al., 2018). While there is a significant lack of support and information in the implementation of CIU in Kosovo, there is a positive attitude from the academic side, and let hope for future governmental initiatives that can benefit from CIU in order to fully succeed in their commitment to strengthen Kosovo research and innovation, as well as provide the funding basis and information for the successful implementation of CIU in Kosovo.

2.2. Defining applied research

When talking about applied research in general and the activities that relate to it, one naturally thinks of Frascati Manual (2002: 77). The latter represents formulations by the Organization for Economic Cooperation and Development (OECD) which, for the first time, made a distinction between the basic and applied research in 1966 (Niiniluoto, 1993) viewing applied research as an original investigation undertaken to acquire new knowledge, primarily focused on a particular practical aim or objective[1].

Applied research can be understood better when contrasting it with other types of existing research. While basic research is more experimental and theoretical and focuses more on the pursuit and advancement of knowledge (and usually emerges out of curiosity)[2] without a defined aim of practical application, applied research does rather focus on solving a

[1] Although the vast of researchers encounter troubles classifying applied research, the definition provided by Frascati Manual seem to conquer the others. As such, in this report we will stick to this definition.

[2] Niiniluoto (1993) also states that hosts for basic research are usually universities, whereas applied research is mainly conducted in applied research polytechnics, business schools, and industrial laboratories.

specific problem or concern (meaning that its motive is utility). Distinguishing applied research from the basic one is more complex. E.g., according to the Frascati Manual, among other disciplines where applied research is present (see subsection 1.1.2), in the discipline of social sciences and humanities, the theoretical investigation of the factors that determine regional variation in economic development is defined as basic research, but if the same analysis is undertaken with the aim to develop governmental policies, that would be defined as applied research (Frascati Manual, 2022). Such similarities are also present in natural sciences and engineering. As explained in the manual, one example in that domain is "*the determination of the amino acid sequence of an antibody molecule*" which is defined as basic research (pp. 79). However, a similar study undertaken to differentiate between antibodies for certain diseases is conceptualized as applied research.

Although applied research attempts to solve practical problems using empirical methodologies, it is less of a systematic process due to its more relaxed approach to its research protocols. For e.g., applied research is commonly considered to concern more for simplicity and manageability and is also accepted if run on a non-random sample (Coombs, 2017). Such an approach clearly distinguishes it from basic research, which is conducted with much more methodological rigour. The mentioned differences between the two also hold when it comes to findings. While basic research findings are more used to understand elements of certain issues, those of applied research can provide concrete solutions to problems. According to Frascanti Manual, the outcomes of applied research are purposefully valid for one or a limited "number of products, operations methods or systems" (2002: 78). Although this approach can be helpful to particular situations, it also implies challenges in terms of the generalizability of the findings. Applied research varies based on the methods the researchers use to find a solution and the sectors where it is applicable.

2.2.1 Applied research methods

Applied research also distinguishes itself in terms of the methods one uses to undertake such research (Applied Research, 2021), and that depends on the process expected to solve a problem. The first acknowledged method is evaluation research, which relies on the existing information and knowledge which, after being comprehensively analysed, may yield new outcomes. Such a method sees applicability in the field of marketing. Second, research and development is another method that is used by businesses to understand trends and tailor their products to specific customer needs and requests. Third, action research is another method that mainly focuses on providing practical solutions to problems using inquires that are limited to certain contexts.

2.2.2 Applied research across sectors

In several sectors, applied research is deemed applicable (Niiniluoto, 1993). That includes social and natural science. In social sciences, applied research is used in business research, education, and psychology (Applied Research, 2021). The applicability of applied research in business depends on the products and services at hand. E.g., applied research may help a business unit identify market needs and launch products in conformity with the findings. Applied research, in general, helps business units improve their hiring process, efficient work among employees, and identify skill gaps in the workplace.

In education, applied research tests teaching to deliver clear-cut implications and policy advice, especially before introducing education policies on similar topics. An example in such a domain would be the investigation of online learning.

Applied research is also utilized in psychology, whereby it may seek to understand workplace behaviours and human resource division inside specific organizations. Practical problems in the working place, such as motivation and dealing with depression, are only a few examples of applied research in psychology.

Apart from social sciences, applied research is also used in natural sciences (Applied Research, 2021). E.g., any research that is focused towards finding the cure to disease (a recent example is COVID-19 vaccine). In addition, applied research sees use in physics, microbiology, thermodynamics etc.

2.3. Kosovo Research Ecosystem

Research is regulated with the Law on Higher Education of Kosovo (Kosovo Assembly, 2011) (No. 04/L-037). The law divides funds for teaching and research per MESTI priorities and with sub-legal acts that regulate such spending. The new draft of the HE law (The Kosovo Government, 2022) has been revised and approved by the government, and has proceeded to the Kosovo Parliament. The most important provision affecting current public universities' status is article 3.2, which stipulates that the status of the university is granted only to institutions that offer higher education and scientific/artistic research programs that include at least five accredited PhD programmes in five broad fields. This provision is present in the current law but has not been implemented during the establishment, accreditation, and licensing of public HEI institutions. Another provision (article 28) that will affect HEI regarding research activity in the new law is the requirement for research in internationally recognized journals for obtaining academic titles. If the law is approved, from 2026, all professors, except for those born before 1966, must meet new conditions for academic in accordance with the new law. This requirement is believed to influence research productivity of academic staff. Regarding research financing, the new law provisions income from research and commercial activities, requiring from HEI to regulate such activities and especially the intellectual and other rights with institutional regulation compatible with other applicable laws in Kosovo. Public HEI are also exempt from taxes for teaching and research activities except when income derives from commercial activities.

Another important development is the performance-based HE financing, which considers the HEI strategic plan and key performance indicators in the Performance agreement signed between HEI and MESTI. The roadmap has been published and is planned to enter into effect in the following academic year. Research is one of the indicators, and the performance is measured depending on the institutional focus on teaching or research. Teaching-focused universities must demonstrate that their teaching is based on research, whereas research-focused universities should develop clear strategies which clearly describe their research fields, including accompanying research infrastructure, international cooperation, and contribution to society. In this regard, there is a brief reference on developing capacities for sustainable development, transfer of knowledge, and technology.

Additionally, the Kosovo Accreditation Agency evaluates HEI's research performance. According to the KAA manual (Kosovo Accreditation Agency, 2022), HEI are evaluated

against 11 standards: existence of research plan, existence and monitoring of research performance indicators, earmarked budget for research, staff support and development for research, existence of research office, at least 1 publication within three years for academic staff, cooperation with the industry and other partners in research, staff performance evaluation regarding research, research publication visibility, regulations of research, research ethics and intellectual property. The Draft Law on Kosovo Accreditation Agency (The Kosovo Government, 2022) is in approval procedure in Kosovo Parliament, and there are no major changes regarding research indicators.

Another important law is the law on scientific innovation and transfer of knowledge and technology approved in 2018 (Kosovo Assembly, 2018). The law provisions 0.7 of the yearly budget for research. The law also regulates conditions for establishing research institutes requiring a minimum of seven full-time researchers, including appropriate research facilities. The Administrative instruction on organization, activity and composition of the council for the scientific innovation and transfer of knowledge and technology has been approved. The National Council for Science has been established, which has just recently completed the national research programme. Some other legislative aspects are not completed such as The Law on Research Funding, the existing Law on Research Activities is not yet amended, and The Research Promotion Agency and The Ethics Council for Research have not been established yet. Other functions are not implemented, such as the process of licensing, registration and functioning of technology parks. Although the Administrative instruction on transfer and forms of knowledge and technology transfer (Ministry of Education, Science and Technology, 2021) has been recently approved however there no registered ToT through this procedure yet.

The new education strategy 2022-2026 (Ministry of Education, Science and Technology, 2022) plans to functionalise the Kosovo register of researchers by 2023, implement performance-based funding by 2024, increase the number of students in STEM, have all mechanisms of Project development and coordination in all HEI, increase engagement and performance in scientific research. The 2022 budget distribution for HEI, still focuses on staff costs, goods and services, utilities, subsidies and capital investment. The budget for 2022 for science and innovation was less than 0.1% of GDP Field (European Commission, 2022), including research grants and support for three institutes, National University Library, Center for innovation and transfer of technology and Academy of Science. The total earmarked budget for research infrastructure discerned in the budget description amounts to 3,595,000 euros (Kosovo Assembly, 2022). (Gap Institute, 2022)

Other important laws from the Ministry of Industry, Entrepreneurship and Trade are the law on brands law (Kosovo Assembly, 2022), on trade secret protection (Kosovo Assembly, 2022), law on industrial design (Kosovo Assembly, 2022), the law on patents (Kosovo Assembly, 2022). There is little activity from university academic and research staff in filing patents or other activities.

There are also several positive developments, such as the establishment of Kosovo Register of Researchers, the development of a Smart Specialization Strategy, the

development of the Research Information System (KRIS), and establishment of the Kosovo Research and Education Network (KREN). Additionally, Kosovo has become a fully associated member of the Horizon Europe program and has dedicated a web portal that provides a single-entry point for all participants, including SMEs, and every information related to the Horizon Europe opportunities.

3. Methodological approach

The study used an evaluative multiple case study methodology using primarily qualitative methods such as semi-structured interviews, focus groups and document review.

The adoption of in-depth semi-structured guidelines for interviews following literature such as Drever (1995), Eisenhardt, (1989) and Yin (2009) allowed us to collect first-hand information from the key informants such as HEI research vice-rectors. Interview data are then triangulated with focus group discussions as well as multiple sources of evidence that cover documentation such as annual reports, HEI website and presentations and other material provided by informants (see Yin, 2009). Content-wise, this approach enabled the team to explore research capacities and potential using multiple sources and perspectives in HEI in Kosovo whilst maintaining structure in data collection, analysis and interpretation. While the intention was to understand and interpret actors' experiences and reasons for engaging or not in applied research, the study mapped research capacities and potential and identified good practices that work in the Kosovan context. The assessment involved the following phases:

1. A project launch was organized with higher education institutions and businesses in September. University representatives and companies were informed about the assessment.
2. After the project launch, universities were contacted through email and phone to schedule meetings for the assessment. The information letter and email (see Appendix 1) was sent to inform the universities about the assessment and follow-up. email and phone calls covered all clarifications requested by the universities
3. Before the interview, the participants were sent the consent form (see Appendix 2). Semi Structured Interviews with vice-rectors for research in 7 Public and 3 Private HEI were organized during September and November.
4. After the institutional interview , focus groups were organised with academic staff and business. Sixteen focus group with academic staff and fourteen focus groups with businesses were organised during the same period.
5. The interview phase was followed up with communication with universities to receive additional documents and the team reviewed the following types of documents:
   - University strategic plans
   - University research plans
   - University baseline assessments
   - University research projects

6. After reviewing the documents, the team split universities to analyse data using a framework analysis for individual cases. This enabled the usage of same framework to analyse all HEI. After initial assessment, the researchers independently double checked the assessment to ensure appropriate rating according to the framework.

4. Key findings from universities

4.1. Research Strategy

A university's research strategy refers to an overarching plan or direction that a university takes in conducting and supporting research activities. This may include the identification of specific fields a university wants to focus on, the identification of partnerships and organizations with which a university wants to collaborate as well as the resources it plans to provide to support faculty to undertake research activity.

This strategy, however, is dependent on the mission of an institution, the available resources, faculty expertise and interest, as well as students' needs. Considering that a university's strategy is an important way to advance the institution so that its impact on the society becomes more meaningful, we checked how HEIs in Kosovo stand in this regard.

From the interviews with HEIs' management, we uncovered that most Kosovo HEIs' have worked/are working in their research strategy, either producing it as a stand-alone document or as an integrated piece with the overall strategy. Some universities took this step for the first time in their lifecycle since they were primarily interested on offering teaching services only (the e.g., of RIT Kosovo). From our interviews and focus groups, we understood that although these research strategies highlight the objective of collaboration, they do not give specific attention to applied research with the exception of UASF, which has a University of Applied Research profile. While most of the investigated institutions do have a good understanding of what applied research is and its impact in society, 80% of the Universities did not include applied research in their research strategy.

4.2. Research Rating

A document analysis was conducted in Scopus by filtering all documents and authors for each university included in the analysis.

Methodological Notes

The research strategy in Scopus included the following steps:

1. Only publications from the last five years were included in the analysis.

2. The authors could not be filtered by year. In addition, some authors might have different affiliations in Scopus than the actual university. They could not be included, as they cannot be identified through the system.

3. Two lists containing the document's data and authors' information were extracted for each university.

5. Only the main field of study was considered for each author.

Three different analyses were conducted to rank universities based on each university's number of publications, authors, and fields of study.

Table 1 shows the Scopus number of publications and authors for each University. It can be noted that most of the publications come from the University of Pristina. Yet, the University of Pristina shows the lowest productivity when considering the number of Scopus publications per author[3].

This difference between university and individual-level productivity poses difficulties in ranking the pool of selected universities. While productivity at the individual level is important, the overall number of publications is one of the main indexes used for bibliometrics research[4]. Therefore, we use the overall number of publications to rank universities' research productivity (Table 1 reflects such ranking).

Table 1. Number of publications for university

University	Publications	Authors	*Ratio**
University of Pristina	1168	1018	1,1
University of Peja	142	81	1,8
AAB	136	103	1,3
University of Mitrovica	87	70	1,2
University of Prizren	87	61	1,4
University of Gjakova	53	22	2,4
University of Gjilan	35	30	1,2
University of Ferizaj	31	13	2,4
IBCM	11	5	2,2
RIT	7	3	2,3
Grand Total	**1757**	**1406**	**NA**

**The ratio is calculated as the (number of publications) / (number of authors)*

[3] It should be considered that this indicator does not account for variations in individual authorship contributions, such as the order of authorship or the nature of their involvement in the research project. It can be influenced by factors such as disciplinary norms, research traditions, and publication practices, which may differ across academic fields. In some disciplines, collaborative research projects involving numerous authors are more common, leading to a higher number of authors per publication. Conversely, in other disciplines, single-author or small-team publications may be more prevalent.
Furthermore, it does not capture the quality, impact, or significance of individual publications. It focuses solely on the quantity of publications attributed to each author, overlooking factors such as citation counts, journal impact factors, and the recognition of research contributions within the academic community.

[4] Van Raan, A. (2019). Measuring science: Basic principles and application of advanced bibliometrics. In Springer handbook of science and technology indicators (pp. 237-280). Springer, Cham.

Table 2. Field of study for each University

Fields of Study	AAB	Ferizaj	Gjakova	Gjilan	IBCM	Mitrovica	Peja	Pristina	Prizren	RIT	Total
Business, Management and Accounting	X	X	X	X	X	X	X	X	X	X	15
Engineering	X	X	X	X		X	X	X	X		8
Social Sciences	X		X	X		X	X	X	X	X	8
Arts and Humanities	X		X	X	X		X	X	X		7
Computer Science	X		X	X		X	X	X	X		7
Earth and Planetary Sciences	X	X		X		X	X	X			6
Economics, Econometrics and Finance	X			X		X	X	X	X		6
Environmental Science			X		X	X	X	X	X		6
Mathematics		X	X	X		X		X	X		6
Medicine	X		X		X		X	X	X		6
Agricultural and Biological Sciences	X		X				X	X	X		5
Biochemistry, Genetics and Molecular Biology							X	X	X		3
Energy				X			X	X			3
Pharmacology, Toxicology and Pharmaceutics						X	X	X			3
Psychology	X							X		X	3
Chemical Engineering							X	X			2
Chemistry						X		X			2
Decision Sciences	X							X			2
Health Professions	X							X			2
Materials Science						X		X			2
Multidisciplinary	X							X			2
Physics and Astronomy						X		X			2
Veterinary						X		X			2
Dentistry								X			1
Immunology and Microbiology								X			1
Neuroscience								X			1
Nursing	X										1
Grand Total	**14**	**4**	**9**	**9**	**4**	**13**	**14**	**26**	**11**	**3**	

Table 2 shows the fields of study for each university. It can be noted that the University of Pristina is the one covering most of the fields (26). It is then followed by the Universities of Peja, Mitrovica and Prizren. Business, management and accounting is the most common field of study for each University, followed by Social Sciences and Engineering (in 8 universities); Computer Science (in 7 universities); Mathematics and Medicine (in 6 universities). The rest of the fields are less common for the pool of universities.

Table 3 shows the funding details for each university. Only 48 articles mention the use of funds for their research. This accounts for almost 2% of the total publications, which shows a very low number of research being funded by research projects. Most of the funds come from the European Commission (8 articles) and the Ministry of Education, Science and Technology (6 articles). The rest of the funds come from COST actions, other international funds (to mention some: Fundação para a Ciência e a Tecnologia, Austrian Science Fund, etc.).

Table 3 Funding analysis per university

	Funding Details	Publications with Funding
AAB	Austrian Science Fund, FWF	1
	Deutscher Akademischer Austauschdienst, DAAD; Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, BMZ	1
	Grantová Agentura České Republiky, GA ČR: RVO:68081740; Akademie Věd České Republiky, AV ČR	1
	National Institute on Minority Health and Health Disparities, NIMHD: G12MD007595, R25MD007589	1
	University at Buffalo, UB	1
AAB Total		**5**
Gjakova	K-02-2017; Universität Wien	1
	Universität Wien	1
	2802; Universität Wien	1
Gjakova Total		**3**
Gjilan	European Commission, EC	
	Ministry of Education, Science and Technology, MEST	
	Rochester Academy of Science; Ministry of Education and Science of the Russian Federation; Total	
	Science and Technology Facilities Council, STFC; Deutsche Forschungsgemeinschaft, DFG	
Gjilan Total		**4**
IBCM	Hrvatska Zaklada za Znanost, HRZZ: IP- 2016-06-6000	3
IBCM Total		**3**
Mitrovica	Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ	1
	Deutscher Akademischer Austauschdienst, DAAD; Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, BMZ	1
	Direktion für Entwicklung und Zusammenarbeit, DEZA	1
	EUROPEAID/133795/DH/SER/KX; European Commission, EC	1
	European Commission, EC	1
	Ministarstvo Obrazovanja, Znanosti i Sporta, MZOS: 098-0982904-2912, 098-1191344-2943, 119-1193079-3069	1
	Ministry of Education, Science and Technology, MEST: 2-3970-3; Yeditepe Üniversitesi	1
	National University of Singapore, NUS	1

	Society of Economic Geologists Canada Foundation, SEGCF; Akademia Górniczo-Hutnicza im. Stanislawa Staszica, AGH: 11.11.140.320	1
	Tekirdağ Namık Kemal Üniversitesi, TNKU	2
Mitrovica Total		**11**
Peja	Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ	1
	Direktion für Entwicklung und Zusammenarbeit, SDC	1
	European Commission, EC	2
	European Science Foundation, ESF: DOK-2018-09-1417; Hrvatska Zaklada za Znanost, HRZZ: IP-2016-06-9988	1
	Hrvatska Zaklada za Znanost, HRZZ: IP-2016-06-9988; European Social Fund, ESF: DOK-2018-09-1417	1
	Javna Agencija za Raziskovalno Dejavnost RS, ARRS: P5-0161	1
	Rochester Academy of Science; Ministry of Education and Science of the Russian Federation; Total	1
	United Nations Development Programme, UNDP	1
	Univerza v Ljubljani, UL	1
Peja Total		**10**
Prizren	ANR-08-JCJC-0008, UPGAL 240039; Agenzia Spaziale Italiana, ASI: I/088/ 06/0	1
	Grantová Agentura České Republiky, GA ČR: 16-02760S, APVV-16-0321; Vedecká Grantová Agentúra MŠVVaŠ SR a SAV, VEGA: 1/0935/17	1
	IGA/FaME/2019/	1
	Ministry of Agriculture and Rural Development, MOARD	2
	New York City Department of Health and Mental Hygiene, DOHMH	1
	UNICEF; Ministry of Education, Science and Technology, MEST; Ministarstvo Prosvete, Nauke i Tehnološkog Razvoja, MPNTR	1
	Università degli Studi della Tuscia, UNITUS	1
Prizren Total		**8**
RIT	18-19; Department for the Economy, DfE	1
	European Commission, EC	1
	European Research Council, ERC; Horizon 2020: 715842	1
	Horizon 2020 Framework Programme, H2020: 715842; European Research Council, ERC	1
RIT Total		**4**
Grand Total		**48**

4.3. Joint Research

Another important dimension that helps to assess the research capacities of HEI in Kosovo is their tendency to work well with others, i.e., their collaboration attitude with colleagues from the same university, same country or with international peers as well as their approach towards possible collaborations with the domestic business sector. To obtain this information, in our in-depth interviews with rectors of all HEIs in Kosovo as well as the developed focus groups with academics and the business community, we asked explicitly how institutions at hand collaborate. While for some universities, we could not trace the level of staff collaborations with other universities in Kosovo as well as international collaborations (e.g., the university of Prishtina) based on direct interviews and focus groups we conducted, we consulted the publications indexed in Scopus to get a better understanding of the global presence in publication output and recognized that there are several co-authorships with research fellows from domestic and international colleagues[5].

That step led us to a more precise assessment which notes that while most HEIs in Kosovo are pretty collaborative with other internal colleagues, colleagues from other universities and colleagues from abroad, their collaboration in the research domain with the domestic business sector is poor. None of these institutions obtains income from research since according to them, the industry does not have such demands. Apart from limited cases of businesses in the pharmaceutical industry or agriculture which seek support from experts who are academic staff of the university (e.g., University of Prishtina), the others do not exchange labs or labour for research purposes. They collaborate only at student level.

4.4. Research Infrastructure

Another relevant dimension that facilitates the current assessment of the research capacity of Kosovo educational institutions is the research infrastructure which had to be built from scratch after the last war in 1999 (Marmullaku and Marmullaku, 2019). Here the analysis of interviews and focus group discussions highlight several generic infrastructural advancements in Kosovo HEIs such as the University of Prishtina, the University of Applied Sciences in Ferizaj, AAB College, RIT Kosovo, and IBCM Mitrovica. In other cases, one can still observe very basic challenges.

Internet for e.g., as a basic institutional infrastructural need seems to be a hindering factor still when it comes to research activity of several public universities in Kosovo such as University of Gjilan, the University of Prizren, the University of Gjakova, and the University

[5] We have no information on the ratio of total collaborations and internal, domestic, and international collaborations. Hence, we cannot identify what is the share of such collaborations per university, normalized with the number of active research staff.

of Mitrovica. These institutions, although have improved internet access through KREN, are also short of workspace – another basic requirement that limits productivity in research.

Regarding access to journals, databases, and specialized software, although at first glance, university management claimed that access to online journals is satisfactory, the discussions with university focus groups revealed that the first argument does not hold in completeness. E.g., the focus group with researchers from the University of Prishtina showed that access to journals and databases is limited and insufficient to perform rigorous research analyses in social sciences. According to them, software licenses of the University of Prishtina are not extended on a continuous basis, and that, in turn makes it hard to conclude a research project successfully.

As for the presence of specialized laboratories, most of the subjects of this study highlighted that there are laboratories where more applied research can be conducted. However, to make these labs fruitful the devices need to be well maintained, something that is completely absent. Moreover, there is a lack of operative knowledge required to operate with machines, *"... once a device is out of order, the university has to call experts from abroad to fix them, and that is quite costly,"* said one of the interviewees.

Regarding research offices, most institutions (6 out of 10) have either worked recently on creating a specialized office that supports research or are planning to do so in a foreseeable future. However, apart from this infrastructural priority, there is no concrete agenda for creating a technology transfer office that supports academic entrepreneurship. This can be explained by the fact that universities might need to act on more basic infrastructural needs, which can serve as a basis for further, more advanced development of research infrastructural capacities.

4.5. Research Sponsors

Regarding sponsorship of research as a means of finance, it is worth noting that the analyzed institutions rarely cover their research processes via third-party funding. An exception here are the University of Prishtina, and the University of Peja who at times gets the benefit of project sponsorship, but not on a continuous basis.

4.6. Level of Knowledge Creation and Innovation

Concerning knowledge creation in Kosovo HEIs, our analysis observed that apart from the University of Prishtina, which may sometimes file a patent (mainly in the field of natural sciences), other universities have never done so throughout their lifecycle. New knowledge creation is costly, and with these limited budgets directed to their R&D, one can hardly expect Kosovo HEIs involved in knowledge creation.

4.7. Stimulation for Academic Spin-Offs

For numerous years, governments worldwide have done a lot to strengthen the linkages between science and industry to improve economic growth. In 1980, the U.S. Bayh-Dole act allowed universities and scientists to commercialize research through patenting and licensing their discoveries (Rothaermel et al., 2007). Since then, the commercial application of research, also called academic entrepreneurship, has become a relevant goal for universities worldwide (Abreu & Grinevich, 2017). In this study, we wanted to understand how HEIs in Kosovo behave towards academic entrepreneurship. Our assessment reveals that HEIs in Kosovo lack the culture (and awareness towards promoting academic entrepreneurship. So far, none of the universities have created an office that works on the knowledge transfer. No training is being organized within the university to raise awareness of knowledge materialization through patenting, licensing, and consulting activities. The academic staff we talked to showed a lack of experience in the industrial sector and a lack of engagement with industry, making it hard to develop an entrepreneurial attitude.

4.8. Level of collaboration with the industry

Another relevant dimension crucial for assessing Kosovo HEIs' research capacities remains the collaboration with industry. During the interviews, HEI management, academic, and business focus groups revealed that there is not much going on between them. While university professors complained that the business sector does not sufficiently appreciate their research capacities and does not deem them relevant for their business, the business community confirmed that due to bureaucracy and the time needed to have a more formalized collaboration, they prefer to refrain from engaging with the university a loose their limited time. This misalignment wastes lots of resources and reduces the general welfare while much needs to be done to bridge these two groups to build a more long-lasting ecosystem.

4.9. Motivation of the Academic Staff

The dimension of motivation amongst academic staff is another feature that is worth's attention when it comes to assessing the research capacities of Kosovo HEIs. Apart from University of Peja and AAB College which have clear schemes of research rewards, other institutions seem not to offer the right incentives to mobilize research staff on research engagement. We must emphasize that putting specific schemes in place without assessing how they work is insufficient. Hence the universities that have schemes of rewarding should assess their functionality while those who do not have any reward for research should thoroughly think of considering them to improve the productivity.

4.10. Level of business innovativeness

While analysing research capacities and the tendency of academic institutions to collaborate with business, it was worth understanding the ambition of business community in Kosovo, i.e., observe their level of innovativeness so to understand the reasons of their lack of engagement with university. Since most of the businesses who were part of the focus groups have clearly indicated that their investments in R&D is minimal that can also explain their research absorptive capacities which again may be minimal, and this might also be the reason they refrain from using the knowledge created at university. The lack of engagement with academic institutions and limited research absorptive capacities suggest that businesses may have limited interest in utilizing the knowledge generated by universities. This highlights the need for fostering a stronger culture of innovation and promoting research-industry collaboration in order to bridge the gap between academia and the business community in Kosovo.

5. Conclusions

In conclusion, the assessment of the research landscape in Kosovo universities reveals several key findings.

Firstly, while some institutions have well-defined research strategies, it is notable that the inclusion of applied research in these strategies is scarcely mentioned. This highlights the need for universities to emphasize applied research and its role in addressing real-world challenges and driving economic development.

Secondly, the research rating of Kosovo universities is relatively low, as evidenced by the limited number of publications indexed in platforms like Scopus. This underscores the importance of enhancing research output and productivity among academic staff. Efforts should be made to create a supportive environment that encourages and rewards research excellence, including providing resources, training, and opportunities for collaboration.

Furthermore, joint research efforts within and beyond university boundaries are currently underdeveloped. Collaboration with colleagues from other institutions in Kosovo and abroad is limited, indicating a potential missed opportunity for knowledge exchange and cross-disciplinary research. Similarly, collaboration with industry partners remains low, with only a few cases of applied research collaborations. Strengthening partnerships with external stakeholders and promoting a culture of collaboration can foster innovation and enhance the relevance and impact of research activities.

Additionally, the research infrastructure in Kosovo universities shows a mixed picture. While some institutions have well-equipped labs and research centres, others face challenges regarding resources such as specialized software and internet access. Improving research infrastructure is crucial to support high-quality research endeavours and attract external funding opportunities.

Moreover, the level of research sponsorship in Kosovo universities is limited, with most third-party funding directed towards student scholarships rather than research projects. Diversifying funding sources and establishing mechanisms to support research initiatives can provide the necessary financial backing to drive impactful research outcomes.

Motivating academic staff to engage in research is another important consideration. While some institutions report low levels of academic staff motivation, others express optimism regarding the implementation of new strategies. It is crucial to develop targeted motivation strategies, such as competitive research grants, recognition programs, and opportunities for international collaboration, to foster a research-oriented culture and incentivize academic staff to participate in research activities actively.

Lastly, while there are promising cases of collaboration between academia and the industry, overall collaboration remains low. Strengthening university-industry

partnerships, facilitating knowledge transfer, and establishing mechanisms for internships and research placements can bridge the gap between academia and the business sector, fostering innovation and economic growth.

In light of these findings, it is recommended that policymakers, university leaders, and other stakeholders work collaboratively to enhance research strategies, promote collaboration, invest in research infrastructure, provide adequate financial incentives, and establish strong university–industry partnerships. It is recognised that by the time the assessment is published, there were already several improvements especially in infrastructure and research incentives, and for this reason it is important to monitor and report each indicator regularly to document these developments and their impact on applied research in Kosovo in the future. By addressing these areas, Kosovo universities can foster a vibrant research ecosystem that contributes to the country's academic excellence, socio-economic development, and innovation.

Table4. Assessment Matrix

	Pristina	Gjilan	Ferizaj	Prizren	Peja	Gjakova	AAB	RIT	IBCM	Mitrovica
1. Research Strategy	Medium	Medium	High	Medium	High	Low	High	Medium	Low	Low
1.a. Presence of a Research Strategy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
1.b. Inclusion of Applied Research in the Research	No	No	Yes	No	No	No	Yes	No	No	No
1.c. Inclusion of the objective to collaborate with industry	Yes	No	Yes	No	Yes	No	Yes	Yes	No	No
1.d. Understanding of /Appreciation of Applied Science	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
2. Research Rating	High	Low	Low	Medium	Medium	Low	Medium	Low	Low	Low
2.a.Number of Publications on Scopus	High	Low	Low	Low	Medium	Very Low	Medium	Low	Low	Low
2.b. Number of Authors with Scopus publications	High	Low	Low	Low	Medium	Very Low	Medium	Low	Low	Low
2.c. Research activity (how many research projects are)	Low	Medium	Low	Medium	Low	Low	Low	Low	Low	Low
2.d. Field of research based on publications results	High	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium
2.e. Presence of a Research Office	No	Yes	No	Yes	No	No	No	No	No	Yes
3. Joint Research	Medium-Low	Low	Medium	Medium	Medium	Low	Medium	Medium	Medium	Low
3.a.Collaboration with colleagues from the same	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
3.b. Collaboration with colleagues from other	No	No	Yes	Yes	Yes	Few	No	No	No	Few
3.c. Collaboration with colleagues from abroad	No	Few	Few	Few	Yes	Few	No	No	No	Few
3.d. Collaboration with companies	Few	No	Yes	Few	Few	Few	Few	Few	Few	Few
4. Research Infrastructure	Low	Low	High	Low	Medium	Low	High	High	Low	Medium
4.a. Internet	High	No	High	Low	High	Low	High	High	High	Low
4.b. Spaces	Low	Low	High	Low	Medium	Low	High	High	High	Medium
4.c. Accesss to online journals	Low	Low	Medium	Medium	Low	Medium	Medium	High	Low	Medium
4.d. Specialized softwares	Low	Low	Low	Low	Low	Low	High	High	Low	Low
4.e. Labs	Medium	Low	High	Low	High	Low	High	High	No amswer	High
4.f. Assistants (low; average; high)	Low	Low	Low	Low	Low	Low	Low	High	Low	Low
4.g. Presence of a Research Office	No	Yes	No	Yes	Yes	No	Yes	Medium	Low	Yes
4.f. Quality of the Research Office	Low	Low	Low	Low	High	Low	Low	Medium	Low	Low
4.i. Plans for a research office/ Technology Transfer	No	No	Yes	No	No	No	Yes	No	No	No
5. Research Sponsors	Low	Low	Low	Low	Medium	Low	Low	Low	Low	Low
5.a. Are there any sponsors to fund the research before	Medium	Low	Low	Low	Medium	Low	Low	Low	Low	Low
5.b. If yes? Who are the sponsors	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6. Level of Research Innovation	Medium	Low	Low	Low	Low	Low	Low	Low	Low	Low
6.a. Presence of patents	Yes	No	No	No	No	No	No	No	No	No
6.b. Level of projects initiated from the University (low, medium, hig)	Yes	Low	Low	Low	Low	Low	Low	Low	Low	Low
6.c. Research management (low, medium, high)	No answer	Low	Low	Low	Low	Low	Low	Low	Low	Low
6.d. Role of HEI in research cooperation projects	Partner	Partner	Partner	Partner	Partner	Partner	Partner	Partner	Leader	Partner
7. Stimulation for Academic Spin-Offs	Medium	Low	Low	Low	Low	Low	Low	Low	Low	Low
7.a. Level of training on how to create a business	Low	Low	Medium	Low	Low	Low	Low	Low	Low	Low
7.b. Experience of work with the industry	High	Low	Medium	Low	Low	Low	Low	Low	Low	Low
7.c. Number of Spin-Offs	None	None	None	None	None	None	None	None	None	None
8.Level of collaboration with te industry	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
8.a. What is the level of collaboration with te industry	Low	Low	Medium	Low	Low	Low	Low	Low	Low	Low
8.b. At what level is the collaboration being agreed	Personal	None	Univeristy	Personal	Personal	Personal	Personal	Personal	Not specified	Personal
8.c. Number of contract research/income	None	None	Few	None	None	None	None	None	None	None
9. Motivation of the Academic Staff	Low	Low	Medium	Low	High	Low	High	Low	Low	Low
9.a. Level of Motivation of the Academis Staff	Low	Low	Medium	Low	High	Low	High	Low	Low	Low
10. Level of business innovativeness	Low	Medium	Medium	Medium	Low	Low	High	Low	Low	Medium
10.a. Level of business innovativeness	Low	Medium	Medium	Medium	Low	Low	High	Low	Low	Medium

6. Case studies

In this section we present individual case studies for the following Universities:

1. University of Prishtina
2. University of Gjilan
3. University of Applied Sciences in Ferizaj
4. University of Prizren
5. University of Peja
6. University of Gjakova
7. AAB College
8. RIT Kosovo
9. IBCM Mitrovica
10. University of Mitrovica

6.1. University of Prishtina

	Indicators	Rating	Comments
1. Research Strategy		**Medium**	**A research strategy is in place, but it is not so clear on how it promotes the applied research or the collaboration with industry.**
	1.a. Presence of a Research Strategy	Yes	Within the general Strategic Plan of University of Prishtina 2020-2022 there is also a research plan.
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	No	Applied research is not specifically detailed in the research strategy of the University of Prishtina.
	1.c. Inclusion of the objective to collaborate with industry	Yes	The institution at hand deems as important investing in partnerships with industry.
	1.d Understanding of /Appreciation of Applied Sciences	Yes	The interviewees and the focus groups appreciate applied research and do build ideas on how to strengthen the collaboration in the future.
2. Research Rating		**Medium**	**This university has reached a high level of research if one looks at the absolute number of publications indexed in the last five years (2018-2022). The absolute number of academic staff of University of Prishtina indexed in Scopus is also high while this institution in active in several research fields.**
	2.a. Number of Publications on Scopus	High	1168 documents found in Scopus
	2.b. Number of Authors with Scopus publications / Number of Academic Staff	High	1018 authors found in Scopus
	2.c. Research activity (how many research projects are being handled from the staff)	High	University of Prishtina won 28 project grants within the time frame 2018-2022. For the same time-frame, this institution is the winner of 20 Erasmums+ projects. IF we normalize these numbers per year, UP was

			the winner of 5.6 project grants (respectively 4 Erasmus+ projects) per year.
	2.d. Field of research based on publications results	Medium	26 fields of research are identified in Scopus: Agricultural and Biological Sciences, Arts and Humanities, Biochemistry, Genetics and Molecular Biology, Business, Management and Accounting, Chemical Engineering, Chemistry, Computer Science, Decision Sciences, Dentistry, Earth and Planetary Sciences, Economics, Econometrics and Finance, Energy, Engineering, Environmental Science, Health Professions, Immunology and Microbiology, Materials Science, Mathematics, Medicine, Multidisciplinary, Neuroscience, Pharmacology Toxicology and Pharmaceutics, Physics and Astronomy, Psychology, Social Sciences, Veterinary.
	2.e. Presence of a Research Office	Yes	Within University of Prishitna, there is a specialised office that supports research and sponsored projects.
3. Joint Research		Medium	In general, collaboration in this institution seems to remain internal.
	3.a. Collaboration with colleagues from the same university	Yes	Focus group participants mentioned that they are in good collaboration with internal colleagues mainly with mentors, although they indicate that collaborations are rare since the calendar year is too short to allow them dig deep into scientific projects. In medical field/pharmaceutical sciences, the collaborations are perceived as highly relevant.
	3.b. Collaboration with colleagues from other institutions in Kosovo	High	Focus group professors did not answer this question however information from publications indexed in Scopus reveal that such collaboration is present.
	3.c. Collaboration with colleagues from abroad	High	Focus group professors did not answer this question however information from publications indexed in Scopus reveal that such collaboration is present. The focus groups and documents show that there are research collaborations of the academic staf with other colleagues in University of Prizren as well as other Universities in Kosovo, but few with colleagues abroad (almost 50% of the staff from

			the focus groups demonstrate to have abroad collaborations, but they claim this was not representative for the University).
	3.d. Collaboration with companies	Few	Focus group participants who were active in applied sciences confirmed that they do collaborate with companies that belong to the production sector (water production, food industry). Somebody mentioned collaboration with the pharmaceutical company 3Pharm however the collaboration remains and personal level (due to connections with colleagues that work there) and did not make it to institutional level. In the domain of languages for e.g., the collaboration takes place more with public institutions such as Ministry of Education, Science and Technology.
4. Research Infrastructure		Medium	An overall assessment speaks against the current infrastructural state of the University of Prishtina, which seems to miss basic infrastructure to facilitate both lab and office research.
	4.a. Internet	High	There is consensus that academic staff can access internet at this institution.
	4.b. Spaces	Low	Focus group professors admitted that they are scarce of space related resources.
	4.c. Access to online journals	Medium	Elsevier is accessible according to the interview with university management, however, focus group professors declare that the access to online journals is limited. Here there is space for improvement.
	4.d. Specialized softwares	Low	Focus group professors agree that the presence of specialized softwares is limited and that the licence agreements of using such softwares is not continuously renewed. This in turn, hinders the productivity in conducting research.
	4.e. Labs	Medium	There is mixed evidence regarding the equipment and laboratories. While in one hand some focus group professors agree that there are no sufficient laboratories to conduct experiments, some others state that

			there are laboratories and equipment in place however they remain unused due to the limited human capital capacity on handling them.
	4.f. Assistants	Low	The job of assistant is most of the time done by students.
	4.g. Presence of a Research Office	Yes	/
	4.h. Quality of the Research Office	Missing information	/
	4.i. Plans for a research office/Technology Transfer Office	No	
5. Research Sponsors		Medium	There is consensus that there are sponsors that are oftentimes active on financing the research at this unviersity.
	5.a. Are there any sponsors to fund the research before being published?	Medium	
	5.b. If yes? Who are the sponsors	Medium	Goethe Institut, DAAD, Ministry of Science and Technology
6. Level of Research Innovation		Medium	
	6.a. Presence of patents	Yes	The focus group professors admitted that there are patents in pharmaceutical sciences
	6.b. Level of projects initiated from the University	Medium	University of Prishtina has initiated Venture UP as a business incubator that enables students at the University of Prishtina (and other universities) to get support on their business ideas and their further development.
	6.c. Research management	Medium	The research potential of University of Prishtina is high however due to the high number of students and the obligation that the researchers have for them, their level of productivity in research is not the most desirable one, despite the specialized offices that support and help on the management of research.

	6.d. Role of HEI in research cooperation projects	Partner	Most of the times, University of Prishtina is part of different consortiums as a partner. This however does not exclude the possibility that this institution is a times also on the role of a leader.
7. Stimulation for Academic Spin-Offs		**Medium**	**Although there are no particular spin-offs mentioned to have emerged out of this university, it can be concluded that the university professors have had experiences with industry.**
	7.a. Level of training on how to create a business	No answer	/
	7.b. Experience of work with the industry	High	Focus group professors especially those active in the field of pharmacy and architecture seems to have had contractual arrangements with industry prior same time to their work at the university.
	7.c. Number of Spin-Offs	None	From the data available, there were no spin-offs mentioned to have been created out of University of Prishtina due to a lack of an integrated dataset that would
8. Level of collaboration with the industry		**Low**	**The level of collaboration with the industry is typically limited to students' internships. Only in a few cases was noted to have experienced opportunities for applied research.**
	8.a. What is the level of collaboration with the industry (low; average; high)	Low	According to the focus group professors, collaboration with industry is low. However, from the focus group with business sector, the collaboration with university is portrayed more positively. That may have to do with the fact that university professors are hired as experts on certain fields, or in other words as individuals.
	8.b. At what level is the collaboration being agreed	Personal	Focus group with business sector emphasizes that collaboration happens at personal level. Even when the collaboration is broader and more intense, it still has to do with students' mobility only. In the field of technical studies, Business sector is actually pessimistic in terms of the speed of collaboration when it comes to paring with university. While they need data access on a timely manner, the

			university is really slow on processing the requests discouraging further the potential collaboration,
	8.C. Number of contract research/income	Low	The university so far has not managed to get incomes through research as a service to third parties despite the fact that it claims to have 5-6 research institutes which are active.
9. Motivation of the Academic Staff		Low	
	9.a. Level of Motivation of the Academic Staff	Low	Focus group professors consider that they are not sufficiently motivated. They claim that the outputs get financed but not the process.
10. Level of business innovativeness		Low	The low level of R&D results no new patentable knowledge created. None of the companies in this focus group have ever filed a patent.
	10.a. Level of business innovativeness	Low	Focus group professors reveal that they have not filed any patent and their investment in R&D is rather low.

6.2 University of Gjilan

	Indicators	Rating	Comments
1. Research Strategy		**Medium**	**A research strategy is in place, but it needs revision (no objectives to collaborate industry). Yet, there is a good understanding of the potential of research in applied sciences.**
	1.a. Presence of a Research Strategy	Yes	There is a strategy called (STRAGJIA ZHVILLIMORE PËR NDËRKOMBËTARIZIM DHE PLANI I VEPRIMIT I ZMJ 2020 – 2025). Within this strategy, chapter 3.2 Research, Conferences and Publication includes four main objectives: • Development of research and publications at the individual and institutional level; • Organization of international scientific conferences; • Improving the language and research skills of staff and students; • Improving the research infrastructure to meet the needs of internationalization. There is also another strategy called (STRATEGJIZA ZHVILLIMORE DHE PLANI I VEPRIMIT I UKZ 2017–2022). On this 29 pages documents, the word "research" is mention 4 times in general descriptions. During the interview, it was mentions that the plan was revised in 2020 because all of the objectives were realized prematurely.
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	No	Not mentioned – Interviewee doesn't make a clear answer. He just explains some research examples and what the applied research means according to him.
	1.c. Inclusion of the objective to collaborate with industry	No	Interviewee mentions that businesses, at least in the municipality of Gjilan, do not have the confidence that we can do these researches (works). On the other side, two documents we listed above, doesn't mention any specific objective to collaborate with industry except in terms of practice learning. Interviewee also

			mentioned that with the support of Industrial Board they are trying to collaborate with industry.
	1.d Understanding of /Appreciation of Applied Sciences	Yes	Interviewee and the focus groups show a good understanding from the management and the academic staff on the importance of applied sciences for the industry and its potential.
2. Research Rating		Low (improving)	The University is striving to reach a medium level of research, by pushing for more projects' applications and creating a research office as support for projects' applications. The number of research fields is low as well as the number of authors and publications is low.
	2.a. Number of Publications on Scopus	Low	37 documents found on Scopus
	2.b. Number of Authors with Scopus publications / Number of Academic Staff	Low	30 authors found on Scopus
	2.c. Research activity (how many research projects are being handled from the staff)	Medium (improving)	University of Gjilan has managed to get several grants and projects also from various financing organizes and instruments, which have played a fundamental contributor to implementation of UKZ strategic plan.
	2.d. Field of research based on publications results	Low (improving)	9 fields of research are identified on Scopus: Arts and Humanities, Business, Management and Accounting, Computer Sciences, Earth and Planetary Sciences, Economics, Econometrics and Finance, Energy, Engineering, Mathematics, Social Sciences.
	2.e. Presence of a Research Office	Yes	Interview
3. Joint Research		Low	Most of collaboration that are mention in FG are collaboration with international professors.

	3.a. Collaboration with colleagues from the same university	Yes	All the focus groups participants as well as the interview point that there are good collaborations with colleagues from the same university.
	3.b. Collaboration with colleagues from other institutions in Kosovo	No	Not mentions
	3.c. Collaboration with colleagues from abroad	Some	Some of the focus group participants had abroad experience and as such, they shared to have good collaborations with colleagues from abroad. This was not to be generalized.
	3.d. Collaboration with companies	No	FG participants have mentions that business never came to university to ask for help regarding to applied research.
4. Research Infrastructure		Low	There is much to be done. It depends from the Faculty. Some FG participants have mentions that they don't have their office, their PC, and also, they mention that the assistant is very busy with administrative stuff. *UKZ "Kadri Zeka", not provide better research conditions at the moment*. During the interview has mention that they had a offer from University of Podgorica to give them the Mechatronics Laboratory, but unfortunately UKZ didn't has space to accept.
	4.a. Internet	!	Not motions
	4.b. Spaces	Low	No personal offices
	4.c. Access to online journals	Low	One of the participants just mention that he uses city library. On the other hand, the Interviewee has mention that for online platform there is no problem. They can buy it without mentions which of them.
	4.d. Specialized software's	Low	No software is purchased from the University (i.e., stata, spss, or other specific software required for research).
	4.e. Labs	Low	There is no real laboratory
	4.f. Assistants (low; average; high)	Low	No assistants are foreseen for the research staff, except for the master students.
	4.g. Presence of a Research Office	Yes	There is a research office since the last year. The research office helps in finding, writing and managing the research projects

	4.h. Quality of the Research Office	Low	The research office helps in finding, writing and managing the research projects
	4.i. Plans for a research office/Technology Transfer Office	No	Not mentions
5. Research Sponsors		Low	No sponsors
	5.a. Are there any sponsors to fund the research before being published?	Low	No sponsors being used for the academic staff research.
	5.b. If yes? Who are the sponsors	N/A	Documents, Projects, FG Professors (Q12)
6. Level of Research Innovation		Low	The level of research innovation is still low. No initiatives are taken as lead partner in projects' applications and no patents were highlighted during the interviews.
	6.a. Presence of patents	No	No patents
	6.b. Level of projects initiated from the University (low, average, high)	Low	Not mentions
	6.c. Research management (low, medium, high)	Low	Still much to be done in the research office
	6.d. Role of HEI in research cooperation projects	Partner	The main role is as a partner
7. Stimulation for Academic Spin-Offs		Low	There is a low level of engagement with the industry from the research staff.

	7.a. Level of training on how to create a business	Low	No training was held
	7.b. Experience of work with the industry	Low	The main collaboration pertains students' activities. There is no activities and cooperation with industry regarding to applied research.
	7.c. Number of Spin-Offs	None	
8. Level of collaboration with the industry		**Low**	**The level of collaboration with the industry is typically limited to students' internships.**
	8.a. What is the level of collaboration with the industry (low; average; high)	Low	The focus groups with both businesses and academic staff show that there is a very limited collaboration on applied research. The main cooperation is related to students' internships, but there no collaboration to do applied research. In a few cases companies shows readiness to collaborate with University in terms of applied research whereas the Interviewee and FG participants said that they didn't see any interested from industry.
	8.b. At what level is the collaboration being agreed	None	
	8.C. Number of contract research/income	None	
9. Motivation of the Academic Staff		**Low**	
	9.a. Level of Motivation of the Academic Staff	Low (improving)	Research is paid. If your research published in Scopus, in Q1 or Q2 the payment is 1K. If the research published in Scopus, in Q3 or Q4 payment is 500EUR. It's important to highlighted that if research is a joint work the payment would be spread.
10. Level of business innovativeness		**Medium**	**Side information: After a lot of attempts finally we manage to organize the FG but only in online. Initially we had seven participant confirmation but in the end we had only four.**

			The business in the area shows a good number of interesting cases (in the drink, food oil and other industries) which could cope very well with universities applied research.
	10.a. Level of business innovativeness	Medium	According to them, there is a considerable level of innovations.

6.3. University of Ferizaj

	Indicators	Rating	Comments
1. Research Strategy		**High**	**A research strategy is in place, but it needs revision (no objectives to collaborate industry). Yet, there is a good understanding of the potential of research in applied sciences.**
	1.a. Presence of a Research Strategy	Yes	There is a research strategy (PLANI STRATEGJIK PËR HULUMTIME SHKENCORE 2020-2025) with three main objectives: • Improvement of research and innovation infrastructure • Increasing quality in research and innovation • Increasing local and international Cooperation in research projects During the interview, it was noted that the strategic plan has not been approved in the Senate, although it was developed within an Erasmus Project Research Cult. it needed revision as it was not successfully implemented. It would be revised these days by an ad-hoc commission.
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	YES	UASF is the only university of applied sciences in Kosovo
	1.c. Inclusion of the objective to collaborate with industry	YES	Besides having a specific objective for cooperation with the industry, the strategy foresees concrete actions for collaboration with the industry such as solving industry problems, offering testing services, establishing a network with strategic partners and using university labs for joint research. The strategy also foresees other actions that improve research outputs such as establishing a research fund, restructuring staff workload, implementation of ethical standards and establishing a research office and an institute.

	1.d Understanding of /Appreciation of Applied Sciences	Yes	The interview and the focus groups show a good understanding from the management and the academic staff on the importance of applied sciences for the industry and its potential.
2. Research Rating		**Low**	**The University is striving to reach a higher level of research, by pushing for more projects' applications and creating a research center as support for projects' applications. The number of research fields is high, yet, the number of authors and publications is low.**
	2.a. Number of Publications on Scopus	Low	32 documents found on Scopus
	2.b. Number of Authors with Scopus publications / Number of Academic Staff	Low	13 authors found on Scopus
	2.c. Research activity (how many research projects are being handled from the staff	Low (improving)	
	2.d. Field of research based on publications results	Medium	4 fields of research are identified on Scopus: Business, Management and Accounting, Earth and Planetary Sciences, Engineering and Mathematics.
	2.e. Presence of a Research Office	No	Interview
3. Joint Research		**Medium**	**The focus groups and documents show that there are research collaborations of the academic staff with other colleagues in University of Peja, Mitrovica and Prishtina and with few colleagues from abroad. There is collaboration with businesses mainly in developing case studies and initiative for applied research.**

	3.a. Collaboration with colleagues from the same university	Yes	All the focus groups participants as well as the interview point out that there are good collaborations with colleagues from the same university.
	3.b. Collaboration with colleagues from other institutions in Kosovo	Yes	All the focus groups participants as well as the interview point that there are good collaborations with colleagues from other universities.
	3.c. Collaboration with colleagues from abroad	Some	Some of the focus group participants had abroad experience and as such, they shared good collaborations with colleagues from abroad. This was not to be generalized.
	3.d. Collaboration with companies	Yes	There is commitment to collaborate with businesses and it seems that UASF is looking for ways to make collaborations more of a win win situations. The recent developments show that UASF has revised all collaboration agreements and revised the internship procedures..
4. Research Infrastructure		High	UASF has invested in research infrastructure and is now functionalizing a testing center.
	4.a. Internet	High	Wifi for students'/staff.
	4.b. Spaces	High	The offices and labs provide conditions for productive work
	4.c. Access to online journals	Average	Access to Ebsco (limited for some disciplines)
	4.d. Specialized softwares	Low	No software are purchased from the University (i.e. stata, spss, or other specific software required for research)
	4.e. Labs	High	Furniture Lab (628.035 m2), Engineering Lab (628.035 m2), Renewable Energy Lab (LE=67.43 m2), Physics and Chemistry Lab (48 m2), Research and Innovation lab (42.65 m2) and Informatics labs (N2) (LI=116.73 m2). Testing center is being build, investment of ??? UASF is working in the procedures to put in use the labs for teaching and research
	4.f. Assistants (low; average; high)	Low	No assistants are foreseen for the research staff, except for the master students.

	4.g. Presence of a Research Office	NO	There is vice rector position for research but no research office dedicated to write applications, or manage research projects within the university. There is a plan to open such an office.
	4.h. Quality of the Research Office	N/A	No office
	4.i. Plans for a research office/Technology Transfer Office	YES	Yes it is foreseen in the strategic plan and there are concrete actions to functionalize such an office
5. Research Sponsors		Low	No sponsors
	5.a. Are there any sponsors to fund the research before being published?	Low	Few sponsors are being used for the academic staff research. In 2022 UASF has been funded to do a skill mapping exercise in the wood industry and Skill Needs Assessment of the Furniture Sector in Kosovo. It has also secured funds to revise internship manual, lab operation manual and adapt teaching and lab work .
	5.b. If yes? Who are the sponsors	Low	Compete Activity FEGO HERAS + Erasmus + (Q12)
6. Level of Research Innovation		Low	The level of research innovation is still low. No initiatives are taken as lead partner in projects' applications and no patents were highlighted during the interviews.
	6.a. Presence of patents	No	No patents
	6.b. Level of projects initiated from the University (low, average, high)	Low	No projects initiated from the University

	6.c. Research management (low, medium, high)	Low	Still much to be done in the research office
	6.d. Role of HEI in research cooperation projects	Partner	The main role is as a partner
7. Stimulation for Academic Spin-Offs		Low	There is a low level of engagement with the industry from the research staff.
	7.a. Level of training on how to create a business	Medium	Some trainings were held
	7.b. Experience of work with the industry	Medium	The main collaboration is focused on case studies and restructuring the pertains cooperation with industry to use the testing center and labs.
	7.c. Number of Spin-Offs	None	
8. Level of collaboration with the industry		Low	
	8.a. What is the level of collaboration with the industry (low; average; high)	Medium	The focus groups with both businesses and academic staff show that there is an increase in initiatives for collaboration on applied research. The main cooperation is related to case studies, and few research activities. There is frequent contact with businesses.
	8.b. At what level is the collaboration being agreed	University	
	8.C. Number of contract research/income	Few	2
9. Motivation of the Academic Staff		Medium	There are financial incentives for publishing and there has been some restructuring of staff workload.

	9.a. Level of Motivation of the Academic Staff	Medium	The academic staff is motivated but is new and feel stressed about publications and tenure. There are financial incentives for publishing and there has been some restructuring of staff workload.
10. Level of business innovativeness		**Medium**	**The business in the area shows a good number of interesting cases (in the wood, IT and other industries) which could cope very well with universities applied research. This shows opportunities for further research**
	10.a. Level of business innovativeness	Medium	The business in the area shows a good number of interesting cases (in the wood, IT and other industries) which could cope very well with universities applied research. This shows opportunities for further research

6.4. University of Prizren

	Indicators	Rating	Comments
1. Research Strategy		**Medium**	**A research strategy is in place, but it needs revision (no objectives to collaborate industry). Yet, there is a good understanding of the potential of research in applied sciences.**
	1.a. Presence of a Research Strategy	Yes	There is a research strategy (STRATEGJIA PËR VEPRIMTARI KËRKIMORO-SHKENCORE 2020-2024). During the interview, it was noted that it needed revision as it was not successfully implemented. It would be revised these days by an ad-hoc commission.
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	No	Not mentioned
	1.c. Inclusion of the objective to collaborate with industry	No	The strategy mentions the objective to create a database with all the University's projects, but it does not focus on how to create collaboration with the industry (Action 4.1 of the strategy)
	1.d Understanding of /Appreciation of Applied Sciences	Yes	The interview and the focus groups show a good understanding from the management and the academic staff on the importance of applied sciences for the industry and its potential.
2. Research Rating		**Medium**	**The University is striving to reach a higher level of research, by pushing for more projects' applications and creating a research center as support for projects' applications. The number of research fields is high, yet, the number of authors and publications is low.**
	2.a. Number of Publications on Scopus	Low	111 documents found on Scopus
	2.b. Number of Authors with Scopus	Low	61 authors found on Scopus

	publications / Number of Academic Staff		
	2.c. Research activity (how many research projects are being handled from the staff	Medium (improving)	The last year, the University has applied for 10 projects. Usually it was 2-3 projects/year.
	2.d. Field of research based on publications results	Medium	11 fields of research are identified on scopus: Agricultural and Biological Sciences; Arts and Humanities; Biochemistry, Genetics and Molecular Biology; Business, Management and Accounting; Computer Science; Economics, Econometrics and Finance; Engineering; Environmental Science; Mathematics; Medicine; Social Sciences
	2.e. Presence of a Research Office	Yes	Interview
3. Joint Research		Medium	The focus groups and documents show that there are research collaborations of the academic staf with other colleagues in University of Prizren as well as other Universities in Kosovo, but few with colleagues abroad (almost 50% of the staff from the focus groups demonstrate to have abroad collaborations, but they claim this was not representative for the University). Collaboration with companies was mentioned in a few cases for research matters; mostly for students' internships or job placement.
	3.a. Collaboration with colleagues from the same university	Yes	All the focus groups participants as well as the interview point that there are good collaborations with colleagues from the same university.
	3.b. Collaboration with colleagues from other institutions in Kosovo	Yes	All the focus groups participants as well as the interview point that there are good collaborations with colleagues from other universities.
	3.c. Collaboration with colleagues from abroad	Some	Some of the focus group participants had abroad experience and as such, they shared to have good collaborations with colleagues from abroad. This was not to be generalized.

	3.d. Collaboration with companies	Few	Only in a few cases, some professors showed interest and past experience in doing applied research with companies.
4. Research Infrastructure		Low	Despite very good investments that have been done (in terms of infrastructure, such as specific equipment in some faculties), there is much to be done.
	4.a. Internet	Low	No wifi for students'/staff.
	4.b. Spaces	Low	The offices would require more space for more productive work
	4.c. Access to online journals	Average	Access to Ebsco (limited for some disciplines)
	4.d. Specialized softwares	Low	No software are purchased from the University (i.e. stata, spss, or other specific software required for research)
	4.e. Labs	Low	There are labs in some faculties, but as noted, they do not have all the equipment to accomplish their research.
	4.f. Assistants (low; average; high)	Low	No assistants are foreseen for the research staff, except for the master students.
	4.g. Presence of a Research Office	Yes	The research office helps in writing research projects
	4.h. Quality of the Research Office	Low	The office was not generall being used from the academic staff.
	4.i. Plans for a research office/Technology Transfer Office	No	No plans
5. Research Sponsors		Low	No sponsors
	5.a. Are there any sponsors to fund the research before being published?	Low	No sponsors being used for the academic staff research.
	5.b. If yes? Who are the sponsors	NA	Documents, Projects, FG Professors (Q12)

6. Level of Research Innovation		**Low**	**The level of research innovation is still low. No initiatives are taken as lead partner in projects' applications and no patents were highlighted during the interviews.**
	6.a. Presence of patents	No	No patents
	6.b. Level of projects initiated from the University (low, average, high)	Low	No projects initiated from the University
	6.c. Research management (low, medium, high)	Low	Still much to be done in the research office
	6.d. Role of HEI in research cooperation projects	Partner	The main role is as a partner
7. Stimulation for Academic Spin-Offs		**Low**	**There is a low level of engagement with the industry from the research staff.**
	7.a. Level of training on how to create a business	Low	No training was held
	7.b. Experience of work with the industry	Low	The main collaboration pertains students' activities. Research activities and cooperation with industry are very few.
	7.c. Number of Spin-Offs	None	
8. Level of collaboration with the industry		**Low**	**The level of collaboration with the industry is typically limited to students' internships. Only in a few cases was noted to have experienced opportunities for applied research.**
	8.a. What is the level of collaboration with	Low	The focus groups with both businesses and academic staff show that there is a very limited collaboration on applied research. The main cooperation is related to students' internships, but there is very little collaboration to do applied research.

	the industry (low; average; high)		In a few cases, it was noted that companies were approached by the academic staff for research purposes, but not beneficial at the end for the company itself.
	8.b. At what level is the collaboration being agreed	Personal	
	8.C. Number of contract research/income	None	
9. Motivation of the Academic Staff		Low	
	9.a. Level of Motivation of the Academic Staff	Low	The academic staff does not have other incentives, except for their self-reputation. The financial incentives of having more research, have been reduced ultimately and there are only contributions to attend conferences.
10. Level of business innovativeness		Medium	The business in the area shows a good number of interesting cases (in the automobile, agricultural and other industries) which could cope very well with universities applied research.
	10.a. Level of business innovativeness	Medium	The business in the area shows a good number of interesting cases (in the automobile, agricultural and other industries) which could cope very well with universities applied research. This shows opportunities for further research

6.5 University of Peja

	Indicators	Rating	Comments
1. Research Strategy		**Medium**	**The future plan of the university is to focus its efforts on building two institutions that shrink the distance between private sector and university. They are concretely acting on founding a research institute and a centre that supports businesses with consulting services.**
	1.a. Presence of a Research Strategy	Yes	The institution at hand has built a 2020–2024 Strategy for Scientific Research (source: Gallopeni, 2021).
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	No	The inclusion of applied research was not specifically mentioned however the plan that they have to create the Centre for Business Support as well as the Institute for Scientific research might indicate that this might be part of the future research strategy.
	1.c. Inclusion of the objective to collaborate with industry	Yes	HEI interviewees agree that this objective is clear and part of the strategy however in the assessment by Gallopeni (2021), this was not mentioned.
	1.d Understanding of /Appreciation of Applied Sciences	Yes	The interviewees and the focus groups appreciate applied research and do build ideas on how to strengthen the collaboration in the future.
2. Research Rating		**Medium**	**The University is striving to reach a higher level of research (also applicable), by focusing on founding a research institute and a centre that supports businesses with consulting services.**
	2.a. Number of Publications on Scopus	Medium	142 documents found in Scopus
	2.b. Number of Authors with Scopus	Medium	81 authors found in Scopus

	publications / Number of Academic Staff		
	2.c. Research activity (how many research projects are being handled from the staff	Missing information	/
	2.d. Field of research based on publications results	Medium	14 fields of research are identified in Scopus: Agricultural and Biological Sciences, Arts and Humanities, Biochemistry, Genetics and Molecular Biology, Business, Management and Accounting, Chemical Engineering, Computer Science, Earth and Planetary Sciences, Economics, Econometrics and Finance, Energy, Engineering, Environmental Science, Medicine, Pharmacology Toxicology and Pharmaceutics, Social Sciences.
	2.e. Presence of a Research Office	High	There is the office of scientific research and a specialized group of professors that processes the applications of staff to finance different research projects.
3. Joint Research		Medium	The focus groups and documents show that there are research collaborations of the academic staff with other colleagues in University of Peja as well as other Universities in Kosovo, but few with international colleagues. Although half of them demonstrated to have international collaborations, they claimed that such collaborations usually originate from their previous education institutions (the states where they finished their PhD) and that was not representative for the University at large. Collaboration with companies was mentioned only in very few cases for research matters, and mostly for students' internships or job placement.
	3.a. Collaboration with colleagues from the same university	Yes	Focus group participants mentioned that they collaborate with students allowing us to imply that they collaborate with colleagues from the same university.
	3.b. Collaboration with colleagues from other institutions in Kosovo	Yes	All the focus group participants mentioned that there are scientific collaborations with other universities, especially with the University of Prishtina (one respondent said that).

	3.c. Collaboration with colleagues from abroad	Yes	All the focus group participants mentioned that they do collaborate well with other universities. Some specifically mentioned collaborations with University of Skopje, Technical University of Munich, University of Washington, University of Luxemburg, universities, and centres of excellence in Poland.
	3.d. Collaboration with companies	Few	Focus group professors were positively responded when we asked about the collaboration with companies, although admittedly, these collaborations are not because there is a culture of joint research with industry. They did sporadically conduct some case studies in local companies and researched specific questions in the food technology sector but it seems that there is no established research collaboration at university level.
4. Research Infrastructure		**Medium**	**Despite some basic infrastructural facilities being at the disposal of researchers, there is still much space for improvements needed.**
	4.a. Internet	High	This institution is covered with internet.
	4.b. Spaces	Medium	Focus group professors admitted that they are provided with desk office and all what they need (office-wise) for research.
	4.c. Access to online journals	Missing information	No clear answer
	4.d. Specialized softwares	Missing information	No clear answer
	4.e. Labs	High	Labs were not considered as a deficiency in infrastructure by neither focus group professors nor the management.
	4.f. Assistants (low; average; high)	Low	The job of assistants seems to be replaced with students. Focus group professors talked about engaging students as collaboration partners.
	4.g. Presence of a Research Office	Yes	The research office is named "Coordinator for Scientific Research" and helps the staff by disseminating calls for fund applications, process documents that relate to research engagements (mobilities, leaves, reimbursements)
	4.h. Quality of the Research Office	High	Since this office assists researchers only technically, also the quality of its services relates to such tasks.

	4.i. Plans for a research office/Technology Transfer Office	No	As of now, there is lack of a research office that may help staff more qualitatively on their knowledge creation. A research institute as well as the centre for business support are planned to be founded but they would be other organizational units. While the former will focus on more rigour scientific knowledge creation, the business office will aim at offering specific services to the local business community in the field of accounting, market research, human resource management etc.
5. Research Sponsors		**Medium**	**There are only a few sponsors that have at some points in time sponsored the research at University of Peja. These occasions are however rare.**
	5.a. Are there any sponsors to fund the research before being published?	Medium	There might be sponsors at times, but this is not a regular thing.
	5.b. If yes? Who are the sponsors	Medium	Some examples: Ministry of Education, Science and Technology, GIZ, Municipality of Peja (FG Professors)
6. Level of Research Innovation		**Low**	**The level of research innovation is still low. No initiatives are taken as lead partner in projects' applications and no patents were highlighted during the interviews.**
	6.a. Presence of patents	No	No patents
	6.b. Level of projects initiated from the University (low, average, high)	Low	No projects initiated from the University
	6.c. Research management (low, medium, high)	Low	Still much needs to be done in the research office

	6.d. Role of HEI in research cooperation projects	Partner	The role of this institution in other cooperation projects is as a partner
7. Stimulation for Academic Spin-Offs		Low	Business knowledge across academics of University of Peja is low. The staff was neither trained in technology transfer domains, nor had prior experience in the private sector.
	7.a. Level of training on how to create a business	Low	No trainings were held. The staff has trained the others (in alike topics) but that knowledge was never disseminated internally (with colleagues from other faculties).
	7.b. Experience of work with the industry	Low	Focus group professors did not have any contractual arrangements with industry prior to their work at the university.
	7.c. Number of Spin-Offs	None	No Spin-Offs were created within University of Peja
8. Level of collaboration with the industry		Low	From both focus groups, it is observed that the collaboration with industry is limited to students' internships.
	8.a. What is the level of collaboration with the industry (low; average; high)	Low	The focus groups with university professors show that there is very limited collaboration on the applied research. Collaboration might be conceptually defied as there are many agreements that already exist, but these agreements merely focus on student's internships and only little (if at all) on the applied research domain.
	8.b. At what level is the collaboration being agreed	Personal	/
	8.C. Number of contract research/income	Missing information	/
9. Motivation of the Academic Staff		High	University of Peja is among institutions that has in place several measures that aim at improving the motivation of academic staff to conduct rigour research.

	9.a. Level of Motivation of the Academic Staff	High	Focus group professors consider that they are quite motivated from the university when it comes to knowledge creation. According to them, one published paper in Scopus or WoS is rewarded with 500 Eur. Conferences are reimbursed up to 50%. According to a new regulation, the university plans to support up to three publications per year (depending on the budget). The university also encourage staff to do an international mobility once a year. Higher education interview with the management of the university complemented the above statement with further information confirming that a published work that is indexed in Scopus results with a 500 Eur financial reward. If the work is indexed in the Web of Science, the reward may to up to 800 Eur. An author is eligible to apply for this reward up to three times within a year. There is another reward scheme which assigns a 2K reward for the researcher of the year.
10. Level of business innovativeness		**Low**	**The mentioned businesses can increase the cooperation with university. Such cooperation is completely absent according to the business focus group.**
	10.a. Level of business innovativeness	Low	The business in the area shows a good number of interesting cases (in the production of medical crops, dairy industry, industry of food and beverages industry) which have the right pre-conditions to engage very well with universities in conducting applied research.

6.6 University of Gjakova

	Indicators	Rating	Comments
1. Research Strategy		Low	A research strategy was found. It has objectives on the internationalization of the University; an increase of research projects; an improvement of the research quality; opening of the ph.d. positions; but no mention to the collaboration with the industry
	1.a. Presence of a Research Strategy	Yes	There is a research strategy (2021-2025) called "Open Eye".
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	No	No
	1.c. Inclusion of the objective to collaborate with industry	No	No
	1.d Understanding of /Appreciation of Applied Sciences	No	Low
2. Research Rating		Low	The actual level of publications is low. There is a focus in teaching more than research.

	2.a. Number of Publications on Scopus	Very Low	55 documents found on Scopus
	2.b. Number of Authors with Scopus publications / Number of Academic Staff	Very Low	22 authors found on Scopus
	2.c. Research activity (how many research projects are being handled from the staff	Low	There are no ph.d. positions in the University. The general number of academic staff is very low (less than 80 persons) and the University is facing challenges in maintaining its courses open. Therefore, their focus is not strictly the research activity of their academic staff.
	2.d. Field of research based on publications results	Low	9 fields of research are identified on Scopus: Agricultural and Biological Sciences; Arts and Humanities; Business, Management and Accounting; Computer Science Engineering; environmental Science; Mathematics; Medicine; Social Sciences
	2.e. Presence of a Research Office	No	No office present
3. Joint Research		Low	The focus group with the academic staff has showed that there is not much cooperation with other colleagues from other Universities or abroad. In addition, there are a few cases of applied research with local companies.
	3.a. Collaboration with colleagues from the same university	Yes	All the focus groups participants as well as the interview point that most of the collaboration is with the colleagues from the same university.

	3.b. Collaboration with colleagues from other institutions in Kosovo	Some	Not much
	3.c. Collaboration with colleagues from abroad	Some	Not much.
	3.d. Collaboration with companies	Few	None
4. Research Infrastructure		Low	The research infrastructure is meager. There are some labs related to health sciences..
	4.a. Internet	Low	No wifi for students'/staff.
	4.b. Spaces	Low	The offices would require more space for more productive work
	4.c. Access to online journals	Average	Access to Ebsco (limited for some disciplines)
	4.d. Specialized softwares	Low	No software are purchased from the University (i.e. stata, spss, or other specific software required for research)
	4.e. Labs	Low	Some labs were available, such as the chemical lab; or the one for diabetes analysis.
	4.f. Assistants (low; average; high)	Low	No assistants are foreseen for the research staff, except for the master students.
	4.g. Presence of a Research Office	No	No

	4.h. Quality of the Research Office	No	No
	4.i. Plans for a research office/Technology Transfer Office	No	No plans
5. Research Sponsors		Low	No sponsors
	5.a. Are there any sponsors to fund the research before being published?	Low	No sponsors being used for the academic staff research.
	5.b. If yes? Who are the sponsors	NA	Documents, Projects, FG Professors (Q12)
6. Level of Research Innovation		Low	The level of research is low.
	6.a. Presence of patents	No	No patents
	6.b. Level of projects initiated from the University (low, average, high)	Low	No projects initiated from the University
	6.c. Research management (low, medium, high)	Low	No

	6.d. Role of HEI in research cooperation projects	Partner	The main role is as a partner
7. Stimulation for Academic Spin-Offs		**Low**	**There is a low level of engagement with the industry from the research staff.**
	7.a. Level of training on how to create a business	Low	No training was held
	7.b. Experience of work with the industry	Low	The main collaboration pertains students' activities. Research activities and cooperation with industry are very few.
	7.c. Number of Spin-Offs	None	
8. Level of collaboration with the industry		**Average**	**The level of collaboration with the industry is typically limited to students' internships.**
	8.a. What is the level of collaboration with the industry (low; average; high)	Low	It is very low.
	8.b. At what level is the collaboration being agreed	Personal	
	8.C. Number of Fibcm research/income	None	

9. Motivation of the Academic Staff		Low	
	9.a. Level of Motivation of the Academic Staff	Low	The academic staff does not have other incentives, except for their self-reputation. The financial incentives of having more research, have been reduced ultimately and there are only contributions to attend conferences.
10. Level of business innovativeness		Low	
	10.a. Level of business innovativeness	Low	The area is suffering from issues with the decrease of population and the high competition from other neighbor areas.

6.7 AAB College

	Indicators	Rating	Comments
1. Research Strategy		**High**	**A research strategy is in place (Plani Strategjik 2022-2026). Since it was just created, it is rather hard to assess its success to date, however all the components that a research plan should have (including ideas on how to proceed with applied research) are present in this plan which is also publicly available.**
	1.a. Presence of a Research Strategy	Yes	The institution at hand has built a 2022-2026 namely "Plani Strategjik 2022-2026"
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	Yes	Applied research is part of the research strategy (Objective number 2 in the chapter 2.7.2. Science – objectives and strategic measures).
	1.c. Inclusion of the objective to collaborate with industry	Yes	The institution at hand prioritizes the building of new partnerships with industry to transfer the knowledge and technology (measure 2.12 in the document "Plani Strategjik 2022-2026).
	1.d Understanding of /Appreciation of Applied Sciences	Yes	The interviewees and the focus groups appreciate applied research and do build ideas on how to strengthen the collaboration in the future.
2. Research Rating		**Medium**	**The absolute number of research documents indexed in Scopus is larger than 100. The college is active in 14 research fields.**
	2.a. Number of Publications on Scopus	Medium	136 documents found in Scopus
	2.b. Number of Authors with Scopus publications / Number of Academic Staff	Medium	103 authors found in Scopus

	2.c. Research activity (how many research projects are being handled from the staff)	Missing information	This information was not available in the documents sent by this institution.
	2.d. Field of research based on publications results	Medium	14 fields of research are identified in Scopus: Agricultural and Biological Sciences, Arts and Humanities, Business, Management and Accounting, Chemical Engineering, Computer Science, Decision Science, Earth and Planetary Sciences, Economics, Econometrics and Finance, Engineering, Health professions, Medicine, Multidisciplinary, Nursing, Psychology, Social Sciences.
	2.e. Presence of a Research Office	No	In the document "Self-assessment Report" AAB has clearly identified its challenges towards knowledge creation and dissemination. To alleviate these challenges, it has built strategies that seek to accomplish different objectives. Among others, this institution has prioritized the establishment of an effective management office that supports academic research initiatives (p.13)
3. Joint Research		Medium-low	In general, collaboration in this institution seems to remain internal.
	3.a. Collaboration with colleagues from the same university	Yes	Focus group participants mentioned that they are in good collaboration with internal colleagues although they indicate that in many projects, they are solo authors. This according to them seems to be already a pattern which might speak of a missing co-authorship culture.
	3.b. Collaboration with colleagues from other institutions in Kosovo	No answer	Focus group professors did not specifically answer this question.
	3.c. Collaboration with colleagues from abroad	No	Apart from appreciating conferences as nice meeting points with international reputable researchers, the focus group professors did not point at any international collaboration in terms of research.
	3.d. Collaboration with companies	Few	Focus group participants expressed the concern of the lack of connection to industry. They claimed that private companies do not deem the research conducted at university as relevant for them, hence they restrain from financing

			any research activity. It is not that this collaboration misses completely but a lot need to be done to bridge these two sectors.
4. Research Infrastructure		High	An overall assessment speaks positively about the current infrastructural state at AAB College.
	4.a. Internet	High	There is consensus that everybody can access internet in this institution.
	4.b. Spaces	High	Focus group professors admitted that they are provided with desk office and all what they need (office-wise) for research.
	4.c. Access to online journals	Medium	Professors, assistants, and students can access JStore.
	4.d. Specialized software's	High	Focus group professors agree that there are specialized softwares at their disposal however they did not specify any.
	4.e. Labs	High	Labs were not considered a deficiency in infrastructure by neither focus group professors nor the management.
	4.f. Assistants (low; average; high)	No answer	
	4.g. Presence of a Research Office	Yes	This academic HEI has recently established the office of projects which is a separate unit from Rector of Science and Research. This office acts as a contact point for professors with ideas and proposals for research projects. It already acts on the support for application procedures of funding acquisition.
	4.h. Quality of the Research Office	No assessment	To be evaluated in the future as it was consolidated only lately.
	4.i. Plans for a research office/Technology Transfer Office	Yes	That recent plan is already materialized (see 4.g.)
5. Research Sponsors		Low	All focus group participants agree that there is lack of sponsors. Some relate this absence to the fact that researchers are mis-perceived as individuals who only criticize. Considering that "...in Kosovo nobody wants to learn about the

			reality – hence be criticized, it is natural that there are not as many sponsors that fund research" says one of the respondents.
	5.a. Are there any sponsors to fund the research before being published?	Low	All focus group participants agree that there is lack of sponsors. Some relate this absence to the fact that researchers are mis-perceived as individuals who only criticize. Considering that "…in Kosovo nobody wants to learn about the reality – hence be criticized, it is natural that there are not as many sponsors that fund research" says one of the respondents.
	5.b. If yes? Who are the sponsors	/	/
6. Level of Research Innovation		**Low**	**There are not many initiated projects that were developed under the leadership of AAB College.**
	6.a. Presence of patents	No	No patents
	6.b. Level of projects initiated from the University (low, average, high)	No answer	/
	6.c. Research management (low, medium, high)	Low	Still much needs to be done in the research office (see 2.e. above)
	6.d. Role of HEI in research cooperation projects	Partner	According to the current evidence found online, the role of this institution in other cooperation projects is as a partner.
7. Stimulation for Academic Spin-Offs		**Low**	**The staff is nor experienced in the industry, neither engaged in collaborations with industry. It can be concluded that their engagement with industry is low.**
	7.a. Level of training on how to create a business	Low	Focus group professors agreed that in AAB College, there is a centre for professional development however it did not yet provide courses to the staff on topics that relate to the technology transfer or entrepreneurship.

	7.b. Experience of work with the industry	Low	Focus group professors did not have any contractual arrangements with industry prior to their work at the university.
	7.c. Number of Spin-Offs	None	
8. Level of collaboration with the industry		**Low**	**The collaboration with industry is limited to students' internships.**
	8.a. What is the level of collaboration with the industry (low; average; high)	Low	Focus group participants expressed the concern of the lack of connection to industry. They claimed that private companies do not deem the research conducted at university as relevant for them, hence they restrain from financing any research activity. It is not that this collaboration misses completely but a lot need to be done to bridge these two sectors.
	8.b. At what level is the collaboration being agreed	Personal	To our understanding, the collaboration with industry remains at personal level.
	8.C. Number of contract research/income	None	This institution has not created incomes through research as a service to third parties or business community.
9. Motivation of the Academic Staff		**High**	
	9.a. Level of Motivation of the Academic Staff	High	Focus group professors consider that they are quite motivated from the university when it comes to knowledge creation. According to them, since December 2021, one published paper indexed in Scopus is rewarded with 700 Eur. For a co-authored paper, the reward is even higher.
10. Level of business innovativeness		**Medium**	**The business in the area shows a good number of interesting cases (in the automobile, agricultural and other industries) which could cope very well with universities applied research.**
	10.a. Level of business innovativeness	Missing information	/

6.8 RIT Kosovo

	Indicators	Rating	Comments
1. Research Strategy		**Medium**	**A research strategy is in place, but it is not so clear on how it promotes the applied research or the collaboration with industry.**
	1.a. Presence of a Research Strategy	Yes	A research strategy in RIT Kosovo exists. It is part of the general strategic plan since recently. Two-three years ago, RIT Kosovo did not have a research strategy as it was only teaching oriented.
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	No	Applied research is not specifically detailed in the research strategy of the University of Prishtina.
	1.c. Inclusion of the objective to collaborate with industry	Yes	The institution at hand deems as important investing in partnerships with industry.
	1.d Understanding of /Appreciation of Applied Sciences	Yes	The interviewees and the focus groups appreciate applied research and do build ideas on how to strengthen the collaboration in the future.
2. Research Rating		**Medium**	**The University is striving to reach a higher level of research, by pushing for more projects' applications and creating a research center as support for projects' applications. The number of research fields is high, yet, the number of authors and publications is low.**
	2.a. Number of Publications on Scopus	Low	7 documents found in Scopus
	2.b. Number of Authors with Scopus	Low	3 authors found in Scopus

	publications / Number of Academic Staff		
	2.c. Research activity (how many research projects are being handled from the staff	/	/
	2.d. Field of research based on publications results	Low	3 fields found in Scopus: Business, Management and Accounting, Psychology, Social Sciences.
	2.e. Presence of a Research Office	Low	There is no special office that provides support for research projects (either application for research grants or hands on support on conducting research).
3. Joint Research		Medium	In general, collaboration in this institution seems to remain internal.
	3.a. Collaboration with colleagues from the same university	Yes	Staff is in good collaboration with colleagues of the same university.
	3.b. Collaboration with colleagues from other institutions in Kosovo	Yes	Focus group professors did not answer this question
	3.c. Collaboration with colleagues from abroad	Some	Focus group professors did not answer this question
	3.d. Collaboration with companies	Few	Focus group participants who were active in applied sciences confirmed that they do collaborate with companies that belong to the production sector (water production, food industry). Somebody mentioned collaboration with the pharmaceutical company 3Pharm however the collaboration remains and personal level (due to connections with colleagues that work there) and did not make it to institutional level. In the domain of languages for e.g., the collaboration takes place more with public institutions such as Ministry of Education, Science and Technology.

4. Research Infrastructure		**High**	**An overall assessment speaks positively about the current infrastructural state at the RIT Kosovo.**
	4.a. Internet	High	There is consensus that everybody can access internet at this institution.
	4.b. Spaces	High	All participants in the focus groups mentioned that AUK has provided them with all the needed facilities that support conducting research including physical spaces such as offices, office desks etc.
	4.c. Access to online journals	High	Focus group professors and university management agreed that if there is something that they are really proud of, it is the access to international journals.
	4.d. Specialized softwares	High	There are several specialized softwares accessible at RIT Kosovo. MATLAB, SPSS are only a few of them according to the school management.
	4.e. Labs	High	Within AUK infrastructure there are labs and research centers. Innovation Lab founded with the support of Norwegian Embassy. We are in preparation of organizing the other lab named as Social Lab.
	4.f. Assistants (low; average; high)	High	Working students are hired when needed.
	4.g. Presence of a Research Office	Medium	Focus group professors can use one of the project offices that help them with writing applications however that is not defined as a research enabling office.
	4.h. Quality of the Research Office	Medium	/
	4.i. Plans for a research office/Technology Transfer Office	High	RIT Kosovo has a grant plan on going beyond teaching and doing more rigour research, hence the creation of a research office is needed.
5. Research Sponsors		**Low**	**There is consensus that there are sponsors.**
	5.a. Are there any sponsors to fund the research before being published?	Low	There is no third-party funding that supports research in general and applied research in particular. The only third-party funding that RIT Kosovo gets, relates only to students' scholarships.

	5.b. If yes? Who are the sponsors	/	It seems that staff gets access to research sponsors but only for their individual small consulting projects.
6. Level of Research Innovation		**Low**	**The level of research innovation is still low. There were no patents highlighted during the interviews.**
	6.a. Presence of patents	No	No patents filed.
	6.b. Level of projects initiated from the University (low, average, high)	Low	No projects are initiated from the University.
	6.c. Research management (low, medium, high)	Low	Still much to be done in the research office.
	6.d. Role of HEI in research cooperation projects	Partner	/
7. Stimulation for Academic Spin-Offs		**Low**	**The staff of RIT Kosovo is rarely trained in the topics that relate to academic entrepreneurship. In addition, their prior experience on the private sector is low.**
	7.a. Level of training on how to create a business	No answer	No training was held (there was an exception that attended modules on the topic of proof of concept and technology transfer yet was not convinced to start a venture creation process).
	7.b. Experience of work with the industry	Low	Focus group professors did not experience working in the industry.
	7.c. Number of Spin-Offs	No answer	/
8. Level of collaboration with the industry		**Low**	**There is low level of collaboration between research staff at RIT Kosovo and industry.**
	8.a. What is the level of collaboration with	Low	The collaboration with industry is low.

	the industry (low; average; high)		
	8.b. At what level is the collaboration being agreed	Personal	If there is collaboration, it is always personal rather then at institutional level.
	8.C. Number of contract research/income	None	This institution has never signed contract for research projects in exchange of a monetary value.
9. Motivation of the Academic Staff		**Low**	**Staff in RIT Kosovo is not found to have been particularly motivated to conduct research as the university itself was teaching oriented. Lately, the new strategy of this institution looks promising in terms of academic staff motivation.**
	9.a. Level of Motivation of the Academic Staff	Low	Focus group professors consider that they are not sufficiently motivated, however, they believe that next years might be more promising due to the new strategy of RIT Kosovo.
10. Level of business innovativeness		**Missing information**	
	10.a. Level of business innovativeness	Missing information	

6.9. IBCM Mitrovica

	Indicators	Rating	Comments
1. Research Strategy		Low	
	1.a. Presence of a Research Strategy	Not mentioned	
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	Not mentioned	
	1.c. Inclusion of the objective to collaborate with industry	Not mentioned	This institution considers the collaboration with industry as an important one however nothing was mentioned with regard to future objectives of this institution in this domain.
	1.d Understanding of /Appreciation of Applied Sciences	Yes	The university understands clearly what applied research is.
2. Research Rating		Low	The overall assessment captures this university with a low research rating however one has to keep in mind that this university is also teaching oriented.
	2.a. Number of Publications on Scopus	Low	11 documents found in Scopus
	2.b. Number of Authors with Scopus publications / Number of Academic Staff	Low	5 authors found in Scopus
	2.c. Research activity (how many research	/	

	projects are being handled from the staff		
	2.d. Field of research based on publications results	/	
	2.e. Presence of a Research Office	No	There is a project office but not a research office.
3. Joint Research		Medium-low	In general, collaboration in this institution seems to remain internal.
	3.a. Collaboration with colleagues from the same university	No	Academic staff was hired for teaching, hence not much scientific research takes place at this institution.
	3.b. Collaboration with colleagues from other institutions in Kosovo	No answer	/
	3.c. Collaboration with colleagues from abroad	No answer	/
	3.d. Collaboration with companies	Few	According to the school management, apart from little collaborations with the agricultural sector, there is not much collaboration going on between industry and university.
4. Research Infrastructure		Low	Infrastructure in IBCM seems promising for project writings and applications however, we assess that to set a bed for rigorous research, this institution needs to seek further improvements.
	4.a. Internet	High	
	4.b. Spaces	High	
	4.c. Access to online journals	Low	JStore, APSCO

	4.d. Specialized softwares	Low	Anti-plagiarism software
	4.e. Labs	No answer	
	4.f. Assistants (low; average; high)	Low	Number of staff involved in research is low because this is a small institution.
	4.g. Presence of a Research Office	Low	Research office is integrated in another project management office, it does not exist as a single unit.
	4.h. Quality of the Research Office	Missing information	
	4.i. Plans for a research office/Technology Transfer Office	Missing information	
5. Research Sponsors		Low	No sponsors
	5.a. Are there any sponsors to fund the research before being published?	Missing information	/
	5.b. If yes? Who are the sponsors	/	/
6. Level of Research Innovation		Low	The level of research innovation is still low. There were no patents highlighted during the interviews.
	6.a. Presence of patents	No	No patents filed.
	6.b. Level of projects initiated from the University (low, average, high)	/	No projects are initiated from the University.

	6.c. Research management (low, medium, high)	Low	Still much to be done in the research office.
	6.d. Role of HEI in research cooperation projects	Leader	IBCM led several consortiums.
7. Stimulation for Academic Spin-Offs		Low	
	7.a. Level of training on how to create a business	Missing information	/
	7.b. Experience of work with the industry	Missing information	/
	7.c. Number of Spin-Offs	None	Occasionally there were researchers that left the institution to create their private businesses, but this is not an established pattern.
8. Level of collaboration with the industry		Low	There is low level of engagement with the industry from the research staff.
	8.a. What is the level of collaboration with the industry (low; average; high)	Low	The collaboration with industry is low. The existing collaboration is more theoretical than practical
	8.b. At what level is the collaboration being agreed	Not specified	/
	8.C. Number of contract research/income	NA	
9. Motivation of the Academic Staff		Low	

	9.a. Level of Motivation of the Academic Staff	Low	There are no financial measures defined to motivate the research staff. Staff is indirectly encouraged to engage in research. For e.g., helping them do short visit stays abroad might help them see other peers and get inspired b
10. Level of business innovativeness		/	
	10.a. Level of business innovativeness	Missing information	/

6.10. University of Mitrovica

	Indicators	Rating	Comments
1. Research Strategy		Low	No research strategy was found
	1.a. Presence of a Research Strategy	No	No specific research strategy at the moment. All the research investments are based on the general strategy of the University.
	1.b. Inclusion of Applied Research in the Research Strategy (YES/NO)	No	No
	1.c. Inclusion of the objective to collaborate with industry	No	No
	1.d Understanding of /Appreciation of Applied Sciences	No	Low
2. Research Rating		Low	The actual level of publications is low. There are some researchers very active in doing research and there is an office that supports international cooperation and research, but there is much to be done. The number of publications is low.
	2.a. Number of Publications on Scopus	Low	123 documents found on Scopus

	2.b. Number of Authors with Scopus publications / Number of Academic Staff	Low	70 authors found on Scopus
	2.c. Research activity (how many research projects are being handled from the staff	Low (improving)	The interviews with the Vice Rector and academic staff show that the research projects are still low, but there is a will to improve.
	2.d. Field of research based on publications results	Medium	13 fields of research are identified on Scopus: Business, Management and Accounting; Chemistry; Computer Science; Earth and Planetary Sciences; Economics, Econometrics and Finance; Engineering; Environmental Science; Materials Science; Mathematics; Pharmacology, Toxicology and Pharmaceutics; Physics and Astronomy; Social Sciences; Veterinary
	2.e. Presence of a Research Office	Yes	There is an "Office for international cooperation and research", but it is understaff. According to the interview with the Vice Rector, it needs at least seven persons to do a proper work; at the moment there are only two.
3. Joint Research		Low	The focus group with the academic staff has showed that there is not much cooperation with other colleagues from other Universities or abroad. In addition, there are a few cases of applied research with local companies.
	3.a. Collaboration with colleagues from the same university	Yes	All the focus groups participants as well as the interview point that most of the collaboration is with the colleagues from the same university.

	3.b. Collaboration with colleagues from other institutions in Kosovo	Some	Not much was highlighted during the focus group
	3.c. Collaboration with colleagues from abroad	Some	Those who have a Ph.D. abroad have collaborations with their peers at those Universities. Still, the number is not high.
	3.d. Collaboration with companies	Few	Only in a few cases, some professors showed interest and experience in doing applied research with companies.
4. Research Infrastructure		**Average**	**Despite very good investments that have been done (in terms of infrastructure, such as specific equipment in some faculties), there is much to be done.**
	4.a. Internet	Low	No wifi for students'/staff.
	4.b. Spaces	Average	The offices would require more space for more productive work
	4.c. Access to online journals	Average	Access to Ebsco (limited for some disciplines)
	4.d. Specialized softwares	Low	No software are purchased from the University (i.e. stata, spss, or other specific software required for research)
	4.e. Labs	High	There are some good investments in infrastructure (up to 1.4 mln euro invested). For instance, they have a lab for machine learning; another for tests of diary products. There are some issue related to the maintenance of the infrastructure. If there could be the possibility for generating revenue from its use, it could be later used as a fund for maintainance.

	4.f. Assistants (low; average; high)	Low	No assistants are foreseen for the research staff, except for the master students.
	4.g. Presence of a Research Office	Yes	The research office helps in writing research projects
	4.h. Quality of the Research Office	Low	The office was not generally being used from the academic staff.
	4.i. Plans for a research office/Technology Transfer Office	No	No plans
5. Research Sponsors		Low	No sponsors
	5.a. Are there any sponsors to fund the research before being published?	Low	No sponsors being used for the academic staff research.
	5.b. If yes? Who are the sponsors	NA	Documents, Projects, FG Professors (Q12)
6. Level of Research Innovation		Low	The level of research innovation is still low. No initiatives are taken as lead partner in projects' applications and no patents were highlighted during the interviews.
	6.a. Presence of patents	No	No patents

	6.b. Level of projects initiated from the University (low, average, high)	Low	No projects initiated from the University
	6.c. Research management (low, medium, high)	Low	Still much to be done in the research office
	6.d. Role of HEI in research cooperation projects	Partner	The main role is as a partner
7. Stimulation for Academic Spin-Offs		**Low**	**There is a low level of engagement with the industry from the research staff.**
	7.a. Level of training on how to create a business	Low	No training was held
	7.b. Experience of work with the industry	Low	The main collaboration pertains students' activities. Research activities and cooperation with industry are very few.
	7.c. Number of Spin-Offs	None	
8. Level of collaboration with the industry		**Average**	**The level of collaboration with the industry is typically limited to students' internships. Despite that, there is a high interest from some companies in collaborating with the University, due to their good infrastructure.**
	8.a. What is the level of collaboration with	Low	The focus groups with both businesses and academic staff show that there is a very limited collaboration on applied research. The main cooperation is related to

	the industry (low; average; high)		students' internships, but there is potential of collaboration. The businesses involved in the focus group were involved at personal level with professors and they were positive on possible collaboration, give the possibility of using the University's infrastructure and know how in some fields (for instance, the tests of diary products, which are mandatory for companies, could be done at the University at a lower rate, but that could support the maintainace of the infrastructure)
	8.b. At what level is the collaboration being agreed	Personal	
	8.C. Number of contract research/income	None	
9. Motivation of the Academic Staff		**Low**	
	9.a. Level of Motivation of the Academic Staff	Low	The academic staff does not have other incentives, except for their self-reputation. The financial incentives of having more research, have been reduced ultimately and there are only contributions to attend conferences.
10. Level of business innovativeness		**Medium**	**The business in the area is very interested to collaborate with the University, to access their infrastructure and know how. There are a number of cases in the dairy industry for example, which were actually collaborating with some professors in order to improve their processes.**
	10.a. Level of business innovativeness	Medium	The business in the area is very interested to collaborate with the University, to access their infrastructure and know how. There are a number of cases in the

			dairy industry for example, which were actually collaborating with some professors in order to improve their processes.

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