

ANALYSIS OF INNOVATIVE AND ENTREPRENEURIAL POTENTIAL OF FIVE WESTERN BALKAN UNIVERSITIES SUPPORTED BY THE HEINNOVATE INITIATIVE

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Abstract

Higher Education Institutions (HEI) are crucial for solving societal challenges and encouraging exchange of knowledge and lifelong learning. Moreover, HEIs can be drivers for transformation and innovation when they engage with the environment. Academic education offers students a chance to get acquainted to the latest developments in their field and to get a clearer view on how to implement them in business in the future. In this regard, the European Commission and the Organisation for Economic Co-operation and Development developed comprehensive online guidance and self-assessment tool for HEIs, widely known as HEInnovate. The platform provides opportunity for HEIs to self-assess various statements related to entrepreneurial activities, including leadership, staffing and links with business. This research is based on the HEInnovate platform as an assistance for five Western Balkans Universities located in Albania, Montenegro and Bosnia and Herzegovina to become even more innovative, entrepreneurial and to generate values for the society. The research is conducted from May-August 2022, thus involving the impacts of the Covid-19 pandemic in the universities' endeavours to become more entrepreneurial. The research is conducted as part of the project "Reconnecting universities and enterprises to unleash regional innovation and entrepreneurial activity / KnowHub", co-funded by the European Union under the Erasmus + programme KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education, which supported the establishment of five Commercialisation Hubs at each of the participating Western Balkan Universities.

Keywords: Entrepreneurship, HEInnovate, Higher Educational Institution, Western Balkans.

1 INTRODUCTION

Higher education institutions (HEIs) have a unique capacity to share knowledge, develop competences and shape the professional path of their members. Furthermore, those capacities should be fully exploited along with the emerging requirements for providing solutions that will respond to the social and economic needs of society [1]. HEIs play an important role in the knowledge-based entrepreneurial economies [2] and can be drivers for transformation and innovation when they engage with the environment [3]. Academic education offers students a chance to get acquainted to the latest developments in their field, to get a clearer view on how to implement them in business in the future and to use the entrepreneurial dimension as a co-creator of value from university knowledge [2] [4]. Academically educated entrepreneurs are believed to be more important in the development of the regional economy than entrepreneurs with lower levels of education, based on research that shows that entrepreneurs from a higher educational environment are often more innovative and up to date with the contemporary concepts and trends [4]. In this regard, the term Entrepreneurial University builds on three main characteristics: 1) focus on the entrepreneurial activities of the academics and professors, 2) focus on the contributions that the university presents to the social environment, 3) improvement strategies in the creation of enterprises and changes in the organisational structure [5].

In view of this, the European Commission and the Organisation for Economic Co-operation and Development developed comprehensive online guidance and self-assessment tool for HEIs, widely known as HEInnovate [3]. It is created upon the trust that there are some key characteristics that are embodied in an entrepreneurial and innovative HEI, apart from the diversity that comes along with these topics [1]. The HEInnovate online self-assessment tool is consisted of the following dimensions: 1) Leadership and governance, 2) Organisational capacity: Funding, people and incentives, 3)

Entrepreneurial teaching and learning, 4) Preparing and supporting entrepreneurs, 5) Digital transformation and capability, 6) Knowledge exchange and collaboration, 7) The internationalised institution, 8) Measuring impact.

The project “Reconnecting universities and enterprises to unleash regional innovation and entrepreneurial activity / KnowHub”, co-funded by the European Union under the Erasmus + programme, which supported this research, has been designed to respond to the specific needs and problems in five participating universities from the Western Balkan by supporting the establishment of five commercialisation hubs. The entrepreneurial and innovation performance of the Western Balkan countries has improved significantly, but the innovation initiatives should be further strengthened in order to bridge the gap with the European regions [6]. In other words, the provided support to the five universities from Albania, Bosnia and Herzegovina and Montenegro aims to enhance long-term participation of the universities in international projects and programs, detection and valorisations of research results, creating strategic relationships with industry, liaisons and relations with potential sponsors. Although the political situation in each of the countries is recognised as quite different, the priorities and strategies for strengthening the relationship between universities and enterprises are quite similar with firm recommendations to strengthen the regional cooperation for overcoming common challenges [6].

This research provides latest data on the entrepreneurial achievements and potential of five universities from the Western Balkans: European University of Tirana (EUT), University of Vlora “Ismail Qemali” (UV), University of Sarajevo (UNSA), University of Mostar (UoM) and University of Montenegro (UMNE), taking into account the impact of the Covid-19 pandemic as another challenge on the way of becoming an entrepreneurial university. Additionally, the analysis acknowledges the significance of establishment of commercialisation hubs in the process of becoming an entrepreneurial university.

2 METHODOLOGY

The followed methodology is centered on the HEInnovate initiative and its eight dimensions for self-assessment of the HEI's entrepreneurial and innovative potential. Under each of the eight areas, there are statements that individuals can rate on a scale of 'not applicable' (n/a) to 5, according to how much they agree or disagree with the statement in relation to their institution [3]. The collection of data through the HEInnovate platform was conducted in parallel through five separate groups, created respectively for each university, where targeted respondents from and outside of the HEI assessed the status quo of the respective HEI. The responses were properly filtered, all invalid answers were deleted and the final dataset was observed separately and comparatively. The self-assessment was completed by at least 50 respondents from each university. High emphasis is put on the collected responses from external stakeholders who have good relation with the HEI as a means to prove the reliability of the results. Moreover, additional assurance of the gathered results was secured by organisation of two workshops: one introductory workshop for each HEI's staff and one workshop for verification of the gathered data and derived conclusions, supported by an external expert. Analogous, the workshops provided meaningful data for qualitative analysis. Although all HEInnovate dimensions are of a high importance and the results were analysed in the same manner, the main focus of the research is on the following dimensions: 1) Entrepreneurial Teaching and Learning and 2) Knowledge Exchange and Collaboration.

3 RESULTS

The HEInnovate survey resulted with a total of 267 completed self-assessment questionnaires. The distribution of respondents per university is presented in Table 1, which also indicates the number of external stakeholders in order to emphasise the importance of their involvement in such processes [7]. As it can be noticed from Table 1, the University of Vlora with 58 respondents got highest responsiveness of the survey. However, the distribution of respondents does not differ much from one university to another. Important remark is that around 30% of the respondents at the University of Mostar and the University of Montenegro belong to the category of external stakeholders that represent respondents from the business sector, small and medium enterprises (SMEs), large corporations, start-up and spin-off companies, as well as other type of companies that have a close relation to the HEI and are relevant to assess its capacities and potential.

Table 1. Number of respondents per university

	Total number of respondents	Number of external stakeholders
<i>European University of Tirana</i>	53	11
<i>University of Vlora</i>	58	10
<i>University of Sarajevo</i>	51	11
<i>University of Mostar</i>	54	16
<i>University of Montenegro</i>	51	17
Total	267	65

3.1 HEInnovate self-assessment results per university

The results from the eight HEInnovate dimensions at each of the five universities were analysed by certain role categories in order to present the gap between HEI's top management, its teaching staff, its students and as mentioned before, very crucial, the external stakeholders. The aggregated results for each dimension are presented through radar diagrams that provide visual presentation of the difference among the different groups of respondents. The findings of the analysis for each university are presented in the following subsections.

3.1.1 European University of Tirana

Fig. 1 presents the average scores for each HEI dimension per respondent's role at the EUT. The Knowledge Exchange and Collaboration, Entrepreneurial Teaching and Learning, as well as the international dimension received high average scores by all respondents. These numbers arise as a result from the international training, study visits and inclusion in international projects, as well as the intensification of cooperation with external stakeholders and open lectures with guest lecturers from the business sector. An interesting finding is that professors believe there is still a higher potential for preparing and supporting entrepreneurs, although the average grade for this dimension from the other respondents is particularly high. Additionally, the positive grades might be related to the fact that the innovative and entrepreneurial activities are intensified in the last months, as most of them were postponed due to the Covid-19 pandemic.

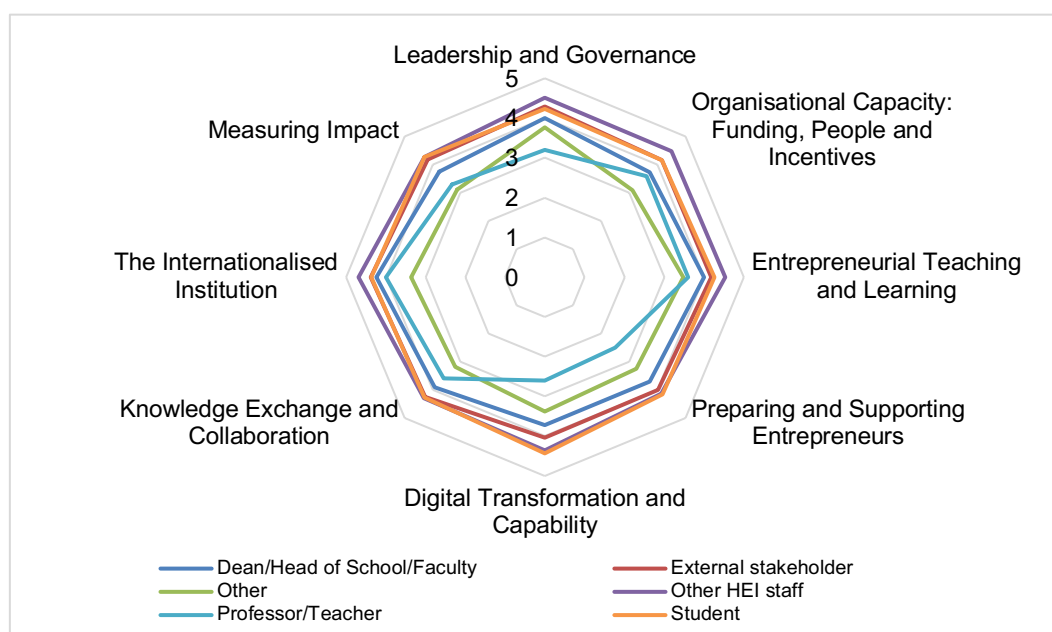


Figure 1. Average scores per role - European University of Tirana

3.1.2 University of Vlora

Fig. 2 presents the average scores for each HEI dimension per respondent's role at the UV. What could be perceived from the chart is that the highest grades are received from respondents who are Dean/Head of School/Faculty or other HEI staff. However, there is no evidence of significant difference in the results based on the role of the respondents. Considering the entrepreneurial teaching and learning, the UV has introduced two new entrepreneurship-related courses at the Department of Informatics that will be delivered by the new academic year. Therefore, this area is expected to gain even higher importance and promotion which may result with significantly higher scores in the upcoming assessments. Additionally, the number of scientific publications has increased, which is believed to contribute to the positive assessment of knowledge exchange activities. Finally, the international dimension is supported by the establishment of partnerships with different universities, not only in Europe, but also in USA, Asia, Middle East and China.

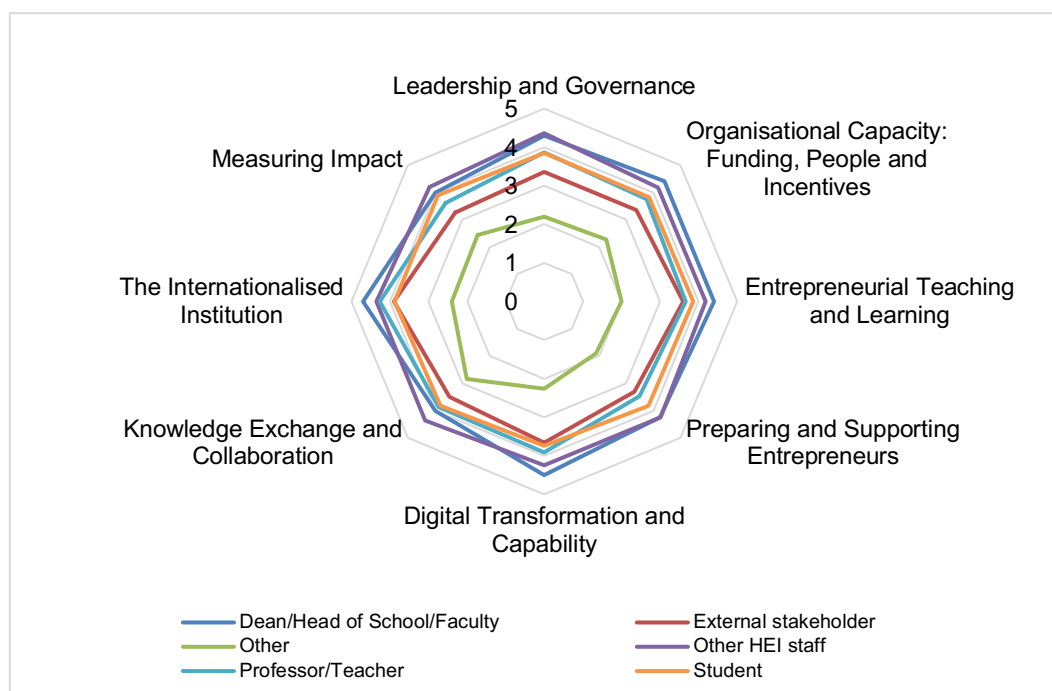


Figure 2. Average scores per role - University of Vlora

3.1.3 University of Sarajevo

Fig. 3 presents the average scores for each HEI dimension per respondent's role at the UNSA. Although the presented average results are unexceptional, UNSA confirms the progress towards becoming an entrepreneurial and innovative university by upgrading its entrepreneurial and innovation competences and orientation, and will continue its efforts on a continuous basis for regional and European cooperation on these topics with joint activities and projects. In regard to the entrepreneurial teaching and learning, UNSA remarks the update of the existing curricula with subjects and modules that are related to innovation and entrepreneurship. Derived from the qualitative analyses, there will be efforts to provide opportunities to students to prepare their master theses in companies on topics that will be nominated by those companies, which is lacking in the moment. The UNSA goal is to make the existing commercialisation hub a real interface between the university, enterprises and the society.

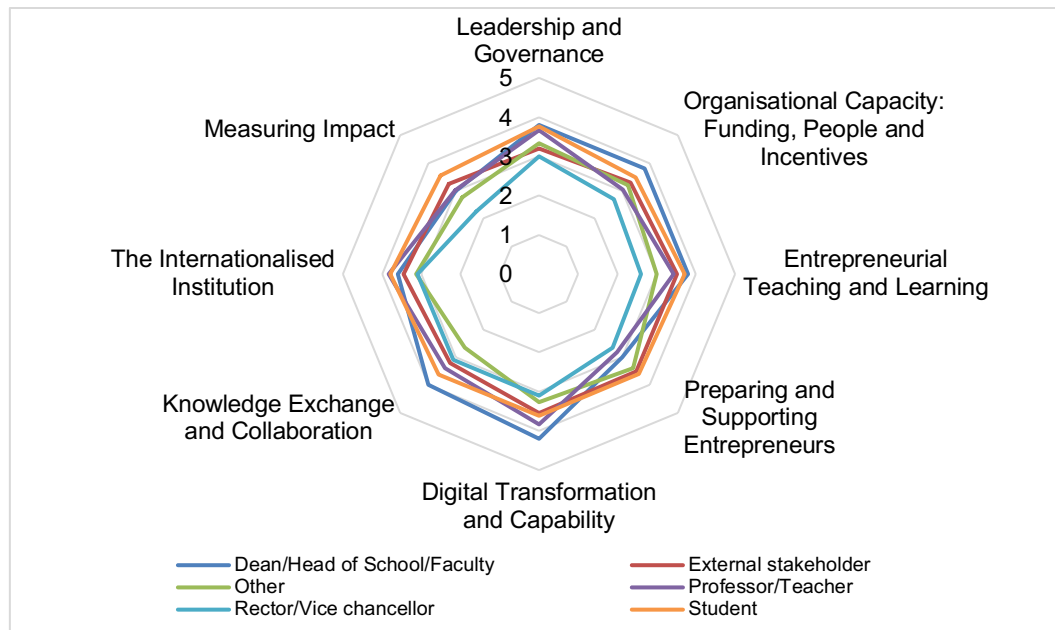


Figure 3. Average scores per role - University of Sarajevo

3.1.4 University of Mostar

Fig. 4 presents the average scores for each HEI dimension per respondent's role at the UoM. In this case, slightly lower grades are received from the teaching staff for most of the HEInnovate dimensions. The mutual positive attitude to the entrepreneurial teaching and learning by both students and external stakeholders is a result of networking events between students and businesses, as well as internships in local companies. Also, the UoM supports curriculum changes to stimulate and develop entrepreneurial mindsets and skills through new pedagogies, student-centred, cross-disciplinary and practice-based learning. With implementation of projects, such as: Know Hub, DualSci, PARTISH, ICSMED, etc., UoM acquired high-value equipment and developed an infrastructure for cooperation with local industry, which is recognised by students and external stakeholders in the average score of the organisational capacity.

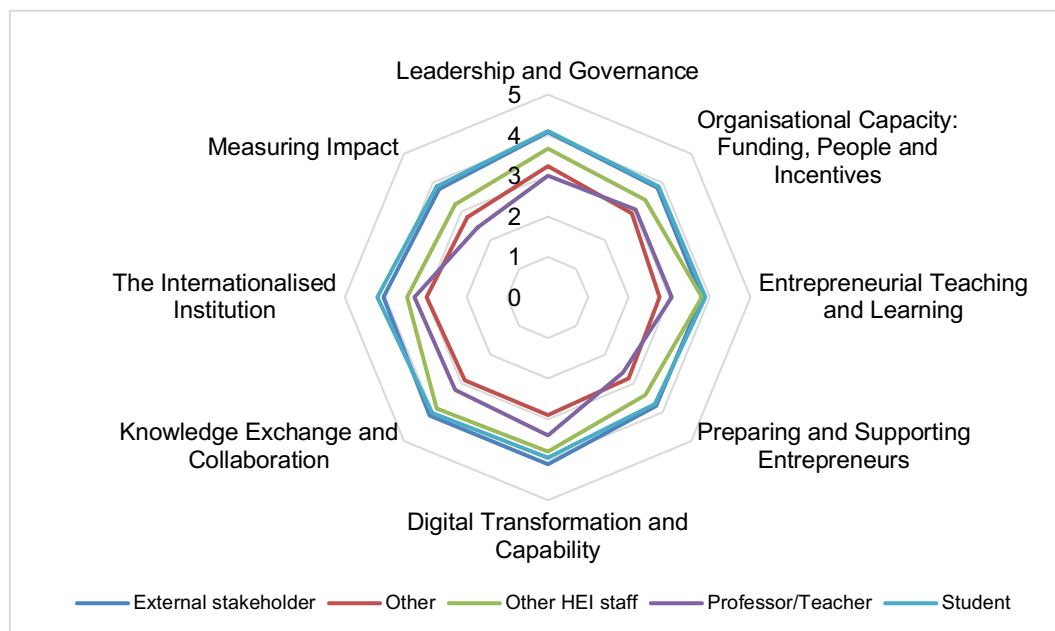


Figure 4. Average scores per role - University of Mostar

3.1.5 University of Montenegro

Fig. 5 presents the average scores for each HEI dimension per respondent's role from the UMNE. Students, teaching staff and external stakeholders agree that the knowledge exchange and collaboration are on a decent level. Moreover, the existing engagement of professionals from local SMEs as visiting lecturers was even more promoted by the commercialisation hub. During the verification process, the results were proven by the partnership between the Government of Montenegro and UMNE that resulted with establishment of a Science and Technology Park of Montenegro (STP MN). The process of supporting entrepreneurs is facilitated by the Career Building Centre of the UMNE which frequently organises different trainings for students intending to start their own businesses. In terms of organisational capacity, unfortunately, Covid-19 crisis caused reduced governmental funding of many activities during last two years.

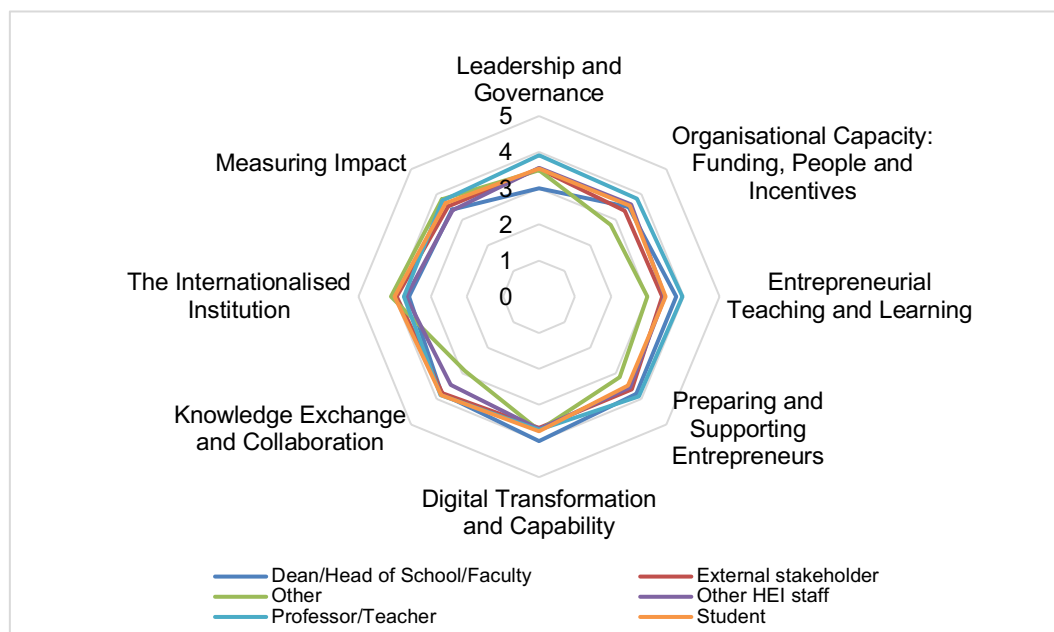


Figure 5. Average scores per role - University of Montenegro

3.2 Comparison of the average scores of each HEInnovate dimension per university

Fig. 6 presents the average scores of each HEInnovate dimension per participating university. Considering the average scores of all HEInnovate dimensions at each university, the EUT got the highest score (4.2), followed by the UV (4.0), meaning that the Albanian universities perform very well in terms of innovation and entrepreneurship. The UNME has an average score of 3.6, while both universities from Bosnia and Herzegovina, UNSA and UoM, have an average score of 3.5.

Regarding the HEInnovate dimensions, it is evident from Fig. 6 that the highest scores belong to the *Internationalised Institution*. Referring to the organised workshops and qualitative analyses, the reason for the excellent international dimension is the collaboration in various projects and exchange of knowledge. In this regard, all participating universities stated that the Know Hub project significantly contributed to this indicator. WB universities had an opportunity to establish and strengthen the collaboration among themselves, but also with other European HEIs, to gain knowledge through study visits organised by the University of Applied Sciences FH Joanneum in Austria, the University of Vaasa in Finland and the University of Girona in Spain, as well as to offer their students an opportunity to gain knowledge and skills for development of a viable business model through participation in a bootcamp, organised in the premises of the University of Girona. However, the Know Hub project is mentioned as a good practice for boosting entrepreneurship and innovation within universities, but all participating universities are engaged in other relevant projects, as mentioned above in the respective sections for each university.

Moreover, taking into consideration the assessment scale from 1-5, each HEInnovate dimension is ranked quite well at each of the assessed universities. The UMNE strengthened the entrepreneurial teaching and learning by engaging professionals from local SMEs in curriculum co-design at the Faculty

of Mechanical Engineering with respect to co-design of student projects during the ongoing reaccreditation of the UMNE. Similarly, both UV and UNSA remark their upgraded curricula with subjects and modules related to entrepreneurship and innovation.

It is worth mentioning that the participating universities improved their infrastructure with appropriate equipment as part of the established commercialisation hubs. These changes offered an opportunity for students to conduct pilot projects with the industry and to experience practice and project-based learning. The purchased equipment is going to boost the academy-industry cooperation even more as one of the most efficient services from the entire portfolio of instruments offered by each Commercialization Hub/university. Each University purchased the type of equipment that is most needed on their market, according to their regional needs and the highest research potential of the specific industry.

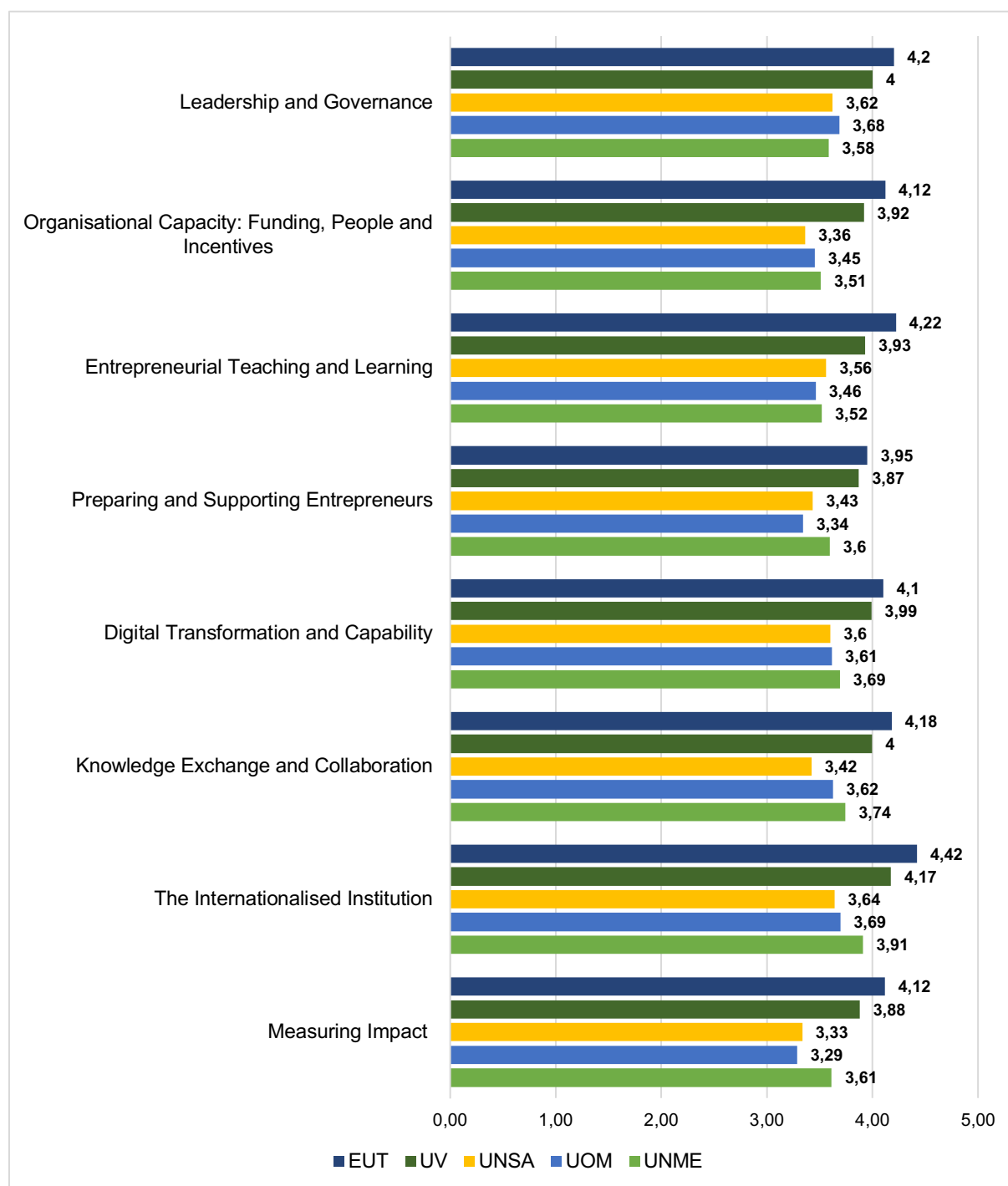


Figure 6. HEInnovate dimensions: Average scores per university

4 CONCLUSIONS

The conducted research assesses the innovative and entrepreneurial potential of five Western Balkan universities from Albania, Bosnia and Herzegovina and Montenegro, with the support of the HEInnovate initiative and its self-assessment tool. Firstly, the self-assessment process involved respondents from the respective HEIs, as well as students and external stakeholders, in order to ensure collection of reliable data and to minimise the possible biases. Besides, a verification workshop with external experts conducted in the premises of each university, was used as a means for further confirmation of the relevance of the results.

Taking into consideration the average scores of all HEInnovate dimensions, it is visible that the status quo and the entrepreneurial potential at the examined universities is not the same. The Albanian universities appear to be more developed and with higher entrepreneurial agenda compared to those from Montenegro and Bosnia and Herzegovina. However, the most positive finding is that the international dimension is reflected in each of the participating universities. The HEIs in the Western Balkan countries understand the importance of collaboration and knowledge sharing, as well as utilisation of donor funds, to achieve better educational processes and to develop entrepreneurial competences among students. It is evident that the assessed Western Balkan universities perform really well in terms of teaching, learning and preparing entrepreneurs, fostering innovative approaches and knowledge sharing activities. In view of each university separately, certain dimensions need to be addressed with additional activities in order to be improved to the desirable level.

The presented results support the concept of entrepreneurial university and provide evidence on the importance of continuous collaboration and knowledge exchange. The findings are of a great importance for demonstrating the quality and strongly established partnerships in the universities from the Western Balkan. Although there is a need for bridging the gap with the developed countries, the outcomes of the survey show that the self-assessed universities have a great capacity for innovative endeavours, willingness to gain and share knowledge, and enrooted entrepreneurial behaviour. The international thread is broadly recognised as a necessity for becoming a fully entrepreneurial university and for developing competences that will contribute to a stronger and more sustainable economy. Finally, HEIs top management, public institutions for development of education and relevant policy-makers might consider these results for defining measures that will facilitate national, regional and international collaboration, as well as reduction of existing burdens that complicate or hinder the international exchanges, study visits and use of funds for purchasing appropriate equipment.

It is important to emphasise that the HEI self-assessment tool is not and cannot be used as a benchmark tool among the HEIs, since the results from the self-assessment show only the perception of the stakeholders at each HEI, and some results can give different picture for the HEI from the view of other relevant stakeholders. During this research, the inclusion of at least 20% external stakeholders in the self-assessment process helped to overcome the bias of good grading that might have been noticed if only direct stakeholders/employees at the university participated. In the detailed analysis of the results, all grades have great consistency in the responses from different roles which confirms the credibility of the results and reliability of the analysis.

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