



# Report on Survey of companies needs for Dual Higher Education in Montenegro

## *DUALOM - Strengthening capacities for the implementation of dual education in Montenegro Higher Education*

Project acronym:	<b>DUALMON</b>
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Abstract	This document reports on potential and prospects for dual education in Montenegro, as perceived by businesses. It is developed as part of the project " Strengthening capacities for the implementation of dual education in Montenegro higher education " (DUALMON).
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## Introduction

This research on the potential and prospects for dual education in Montenegro, as perceived by businesses, was developed as part of the project " Strengthening capacities for the implementation of dual education in Montenegro higher education " (DUALMON). The project's primary objective is to strengthen graduates' abilities and employability in Montenegro by incorporating best practices from European Union member states.

Dual higher education is a model of higher education that explicitly merges academic courses and professional experience in businesses and industries. This educational philosophy is centered on collaboration between the student, the higher education institution, and the (future) employer. The precise format of cooperation is defined in specific agreements between the company and the higher education institution, which specify the number of students accepted by the company (e.g. 3-9), whether students work for free or are compensated (depending on the company), working hours per semester (e.g. 170-200 hours) or per week (20 hours/week), as well as other rights and responsibilities of the student and the company. Companies are supposed to identify mentors for students who will help them throughout practical classes/stays at the firm, assess them at the semester's conclusion, and collaborate with the subject professor to develop a grade. Companies are not obligated to recruit these graduates after the completion of the programme.

The purpose of dual higher education is multifield: to assist students in acquiring practical knowledge and abilities that will enable them to find job more readily, and to assist businesses/enterprises in developing a skilled workforce capable of improving their business-value-add.

A total of 62 organisations from Montenegro took part in the research. Out of those 17 were micro companies, 18 small businesses, 13 medium businesses, and 14 big businesses (based on the number of employed people).

## Methods and limitations

This research was developed within the DUALMON project as planned to serve as one of foundation key factors in the process of development and implementation of generic and specific dual higher education models in Montenegro. The main goal of the DUALMON project is to improve the competencies of graduates and improve their employability as well as narrow the skills-gap in Montenegro.

Because of the research, it will be possible to gather information on the evaluation of interests, needs, and capacities of companies from Montenegro, with the goal of assessing the possibility for companies from Montenegro to become a potential partner in dual education alongside universities in Montenegro.

It was decided to conduct a survey with the use of a digital questionnaire, which was designed in accordance with the Intersectoral research design, which involved performing the survey in a short period in several distinct sectors or situations (organization, branch, economy). Survey was first created in English and then translated in local language to attract sufficient and relevant sample of responses.

Survey data collection was conducted by the Montenegrin Chamber of Commerce, a partner in the DUALMON project consortium. A total of 62 responses were provided by the business community of Montenegro. Out of those 17 were micro companies, 18 small businesses, 13 medium businesses, and 14 big businesses (based on the number of employed people).

According to the national and international classification of the business areas, all businesses industries are represented in this report: Agriculture, forestry and fishing, Mining and quarrying, Manufacturing, Production and supply of electricity, gas, steam and air conditioning, Water supply (sewerage, waste management and remediation activities), Construction, Wholesale and retail (repair of motor vehicles and motorcycles), Traffic and storage, Accommodation, food service activities (hotel and catering), Information and communication, Financial and insurance activities, Real estate business, Professional, scientific and technical activities, Administrative and support service activities, Public administration and defence (compulsory social security), Education, Health care and social work and Arts, entertainment and recreation.

This research has the following limitations geographical limitation and representation:

Companies represented are headquartered in the following municipalities:

- Podgorica (56.5%)
- Herceg Novi (9.7%)
- Bar (6.5%)
- Nikšić (6.5%)
- Budva (4.8%)
- Danilovgrad (4.8%)
- Kotor (3.2%)
- Tivat (3.2%)
- Bijelo polje (1.6%)
- Rožaje (1.6%)
- Kolašin (1.6%)

Other Montenegrin municipalities are not represented. Headquarter address may not fully represent the location of its business operations.

Furthermore, average employee's age, company age, management education was not considered.

Surveys were completed by the management of the company and human resources departments and thus this represents their views, which may not be equal to the views of the employees.

The questionnaire was divided into three sections. The first section of the questionnaire contained nine questions (demography), while the second section, which addressed the possibility of involving businesses in Montenegro in the implementation of the dual program in higher education, contained sixteen (16) questions that addressed the following topics: the need for additional employment of highly educated staff, employment difficulties, the abilities and skills of the required highly educated staff, and cooperation with international organizations.

The third and last section provided the contact information for the individuals who completed the questionnaire on behalf of the firm in case the research team had more questions.



# Results and analysis

## Participating organisations

Addiko Bank

**BARANKA**

**Bencom**  
just for **I**business

**CASA DEL MARE**  
BOUTIQUE HOTELS

**CEIS**  
Crnogorski elektroprenosni sistem  
d.o.o. Podgorica

**CGE** CRNOGORSKI  
ELEKTROPRENOSNI  
SISTEM AD

**CINETICS** |  
Mobility Construction

**ČISTOČA**  
D.O.O. HERCEG NOVI

**COTEE**

**CP**  
CRNOGORSKA PLOVIDBA

**DR TRADE**  
SINCE 1991

**elkon**

**epcg**

**FARMONT**

**HOTEL  
ELEVEN**  
PETROVAC I MONTENEGRO

**IceCom**



**LEX ELLENT**  
PRAVNE USLUGE

**LOGATE  
INSTITUT**

**LOVČEN BANKA<sup>AD</sup>**

**Port of Bar  
Luka Bar**

**LAZINE  
MLJEKARA**

**MONTCARTON**  
commercial packaging production

**Montecco**

**MONTEGRANDE**  
FOOD & WINE

**MONTENEGRO ADVENTURES**

**MONTENEGRO STARS**  
HOTEL GROUP

**MONTE PARTS**

**MSC** MEDITERRANEAN SHIPPING COMPANY

**MyGuide**  
MONTENEGRO

**Nacionalni parkovi  
CRNE GORE**

**Plantaze**

**SPORTSKI CENTAR, ROŽAJE**

**T...**

**TIMICOM**

**TYJKO  
A.D.**

**KUBURA PROMET**

**MEDITERAN**

**UNIPROM**

**Univerzitet Crne Gore  
Pomorski fakultet**

**VAGAR**

**Vijesti**  
ONLINE

**Vlada  
Crne Gore**

**VOLI.me**

**Ziraat Bank**



## List of participating organisations

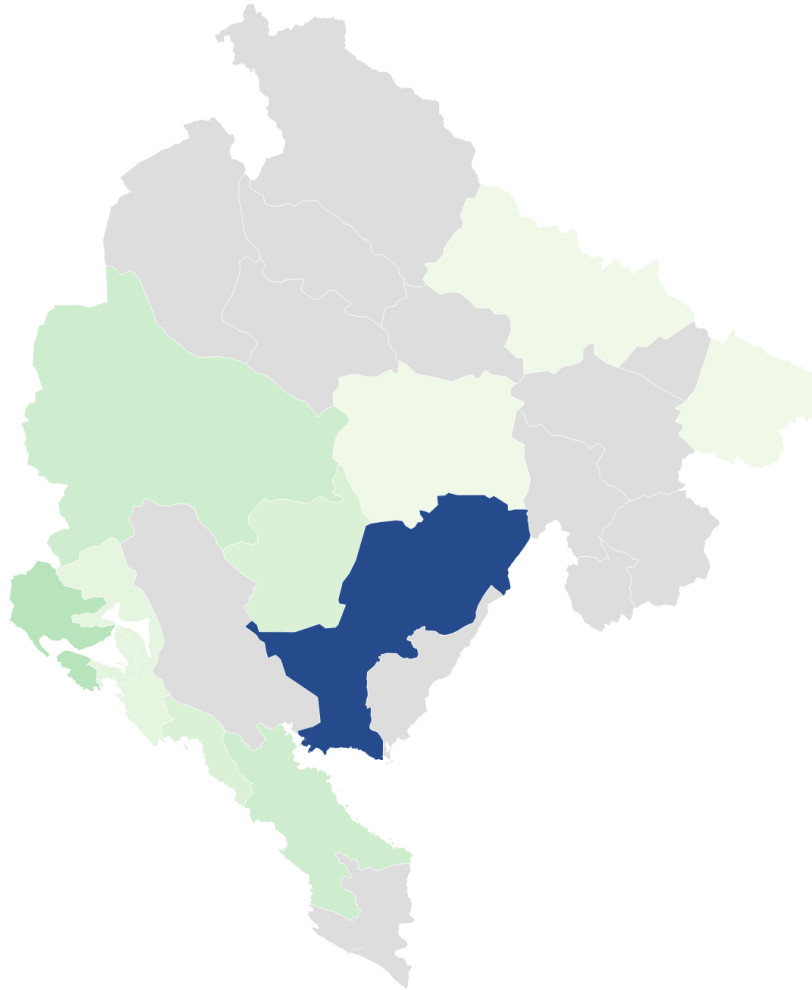
1. CEDIS d.o.o. Podgorica
2. NEREGELIA DOO
3. Montecco INC
4. JP Nacionalni parkovi Crne Gore
5. TIMICOM DOO
6. Doo DR-Trade
7. Boutique Winery Knežavić
8. Medini Co DOO
9. Bencom d.o.o.
10. VOLI TRADE DOO
11. Hotels Group Montenegro Stars  
d.o.o. Budva
12. MONTCARTON DOO
13. DOO "Baranka Export-Import  
Pejanovic"
14. My Guide Montenegro
15. KONTO-ACCOUNTING DOO
16. DOO TUJKO KOTOR
17. Doo dela maris
18. Crnogorski operator tržišta  
električne energije DOO
19. Lexellent doo Podgorica
20. Biznis Akademija Vijesti
21. D.o.o. "Talija company"
22. IceCom doo Podgorica
23. Datum Solutions
24. Sveti Nikola Nikšić
25. IceCom doo
26. Monte Parts doo
27. Hotels Group Montenegro Stars  
doo
28. Voli Trade doo
29. D.O.O. "KUBURA-PROMET"
30. Logate Institut za informacione  
tehnologije
31. HIFA OIL CG DOO
32. MSC Montenegro
33. Capita
34. Talbon doo
35. DOO Sportski centar Rozaje
36. Crnogorska plovidba A.D. Kotor
37. 13. Jul - Plantaže
38. Cinetics Mobility Construction  
d.o.o.
39. ELKON DOO Podgorica
40. Vagar doo
41. Univerzitet Crne Gore, Pomorski  
fakultet Kotor
42. Šimšić Montmilk
43. Invar-Ivošević doo
44. M & D ALIGRUDIC
45. EPCG
46. UNIPROM - KAP
47. Ministarstvo ekonomskog  
razvoja
48. JUGOPETROL
49. Meps Engineering d.o.o.
50. SOLAR GROUP d.o.o. Podgorica
51. EPCG-SOLAR-GRADNJA
52. CGES
53. ZIRAAT BANK MONTENEGRO AD
54. FARMONT M.P. DOO
55. "Luka Bar" AD
56. Montenegro Adventures
57. DOO "Čistoća" Herceg Novi
58. Univerzitet „Mediteran"  
Podgorica
59. Lovćen banka AD Podgorica





## Geographical representation of organisations

### Company Headquarters



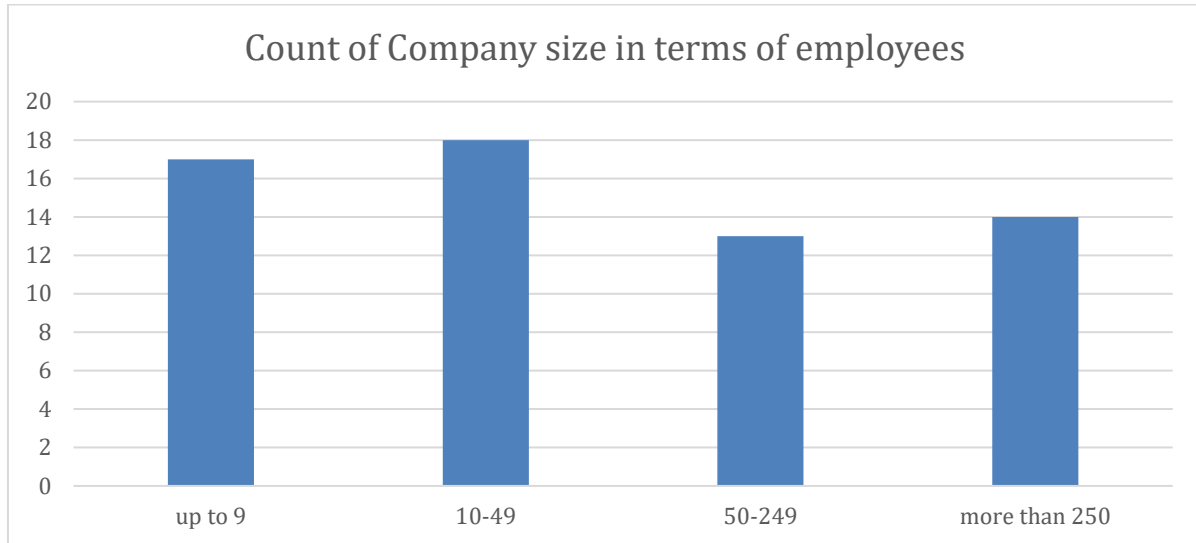
Map: DUALMON project team • Source: DUALMON Erasmus+ project • Map data: © OSM • Created with Datawrapper

Companies represented are headquartered in the following municipalities:

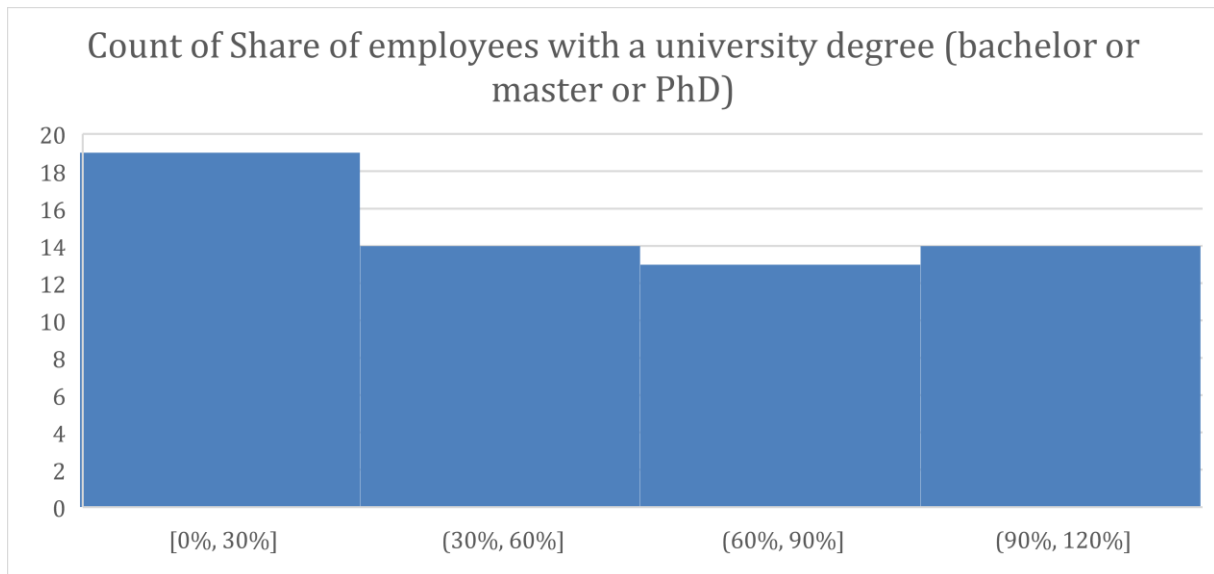
- Podgorica (56.5%)
- Herceg Novi (9.7%)
- Bar (6.5%)
- Nikšić (6.5%)
- Budva (4.8%)
- Danilovgrad (4.8%)
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- Tivat (3.2%)
- Bijelo polje (1.6%)
- Rožaje (1.6%)
- Kolašin (1.6%)



Organisations participating in this research are well balanced in terms of their sizes of employees. 17 of them are characterised as micro-business, 18 small-businesses, 13 medium-size businesses and 14 of them as large businesses.



19 out of 62 organisations only have between 0% and 30% share of employees with a university degree (bachelor or master or PhD). On the contrary, for 14 organisations over 90% of their employees hold a university degree. On average, the share of employees with a university degree in the sample organisation is 52% with a median of 50%. The lowest share represents 0% and highest 100%.



<b>average</b>	<b>52%</b>
<b>min</b>	<b>0%</b>
<b>max</b>	<b>100%</b>
<b>median</b>	<b>50%</b>



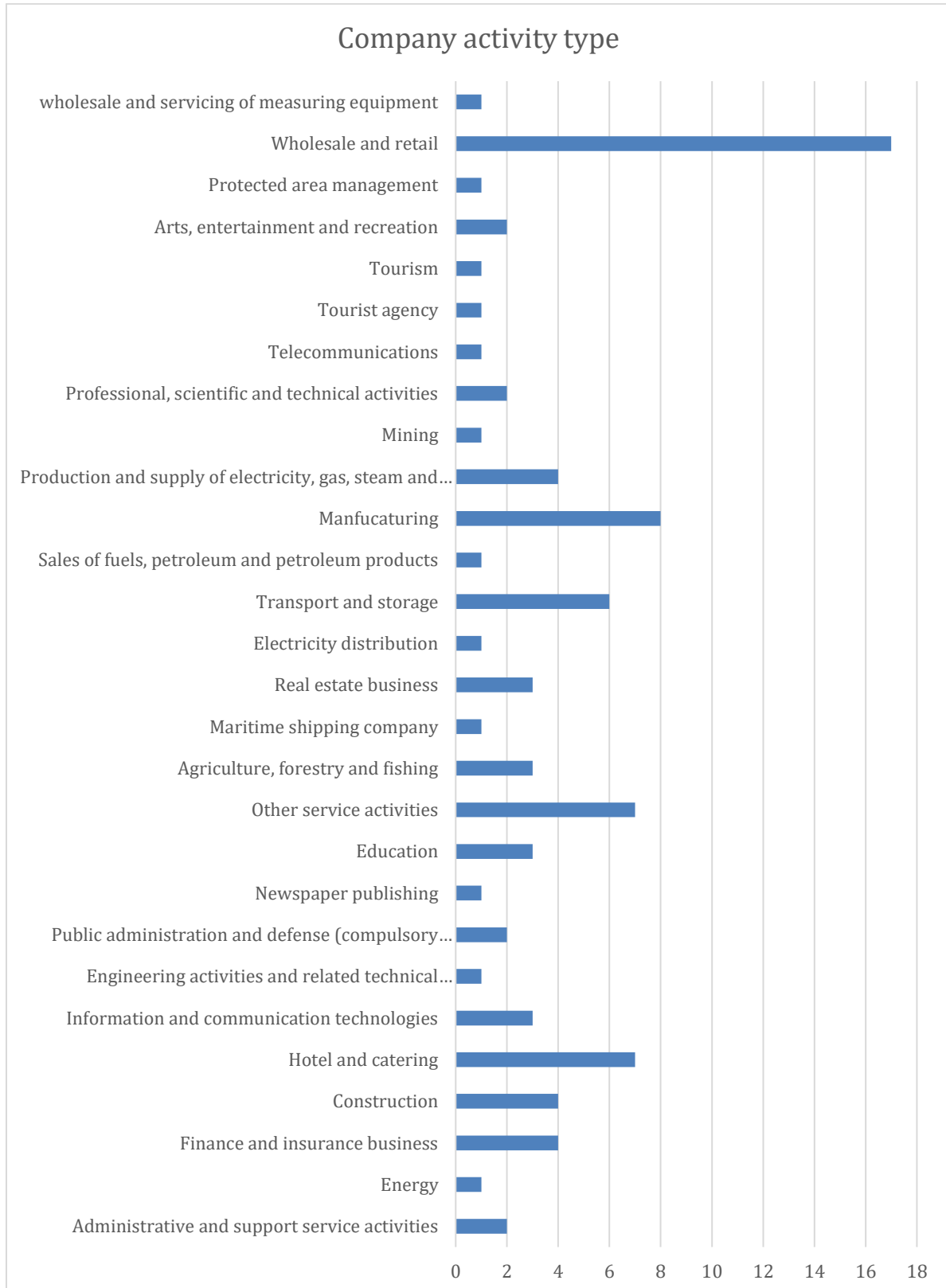
The main products and services of companies of the sampled organisations are represented by the word cloud bellow and are mostly represented by catering, construction, destitution, electricity, engineering, finance, hotels, technology, trade, transport and wine:

aggregate brandy business **catering** collection company concrete **construction**  
consulting consumer **distribution** education **electricity** engaged **engineering**  
**equipment** financial goods grapes hospitality **hotel** import installation internet  
management maritime **offer** olive packaging **panels** petroleum plantaze **products**  
programs public region **services** ships shop **solar** solutions **technology**  
telecommunications tourist **trade** **transport** waste wholesale **wine** wood

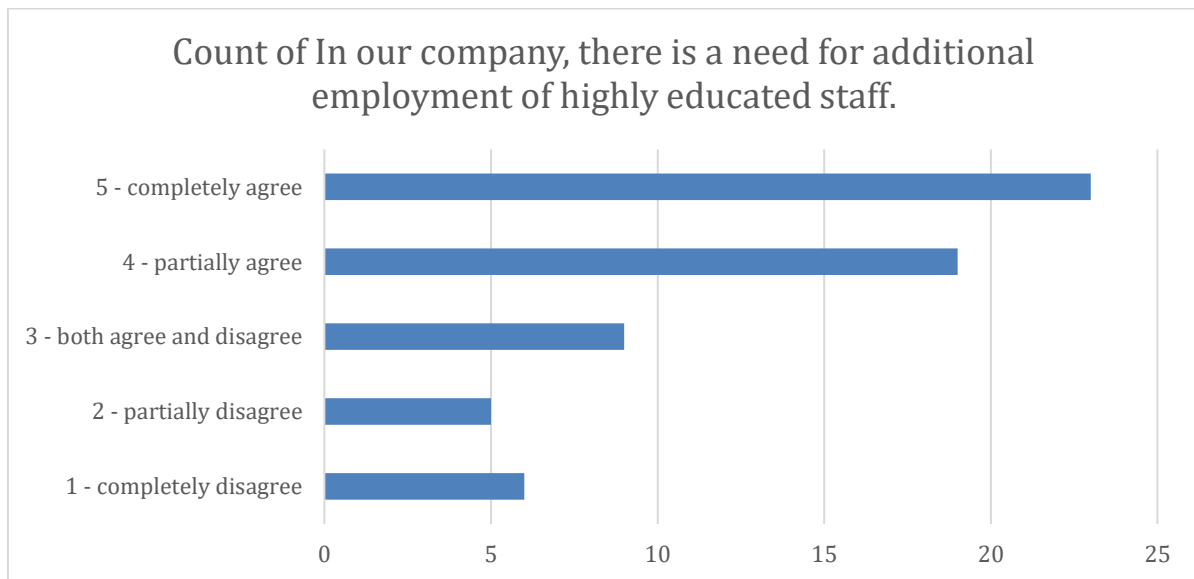
In terms of activity type companies represented in the sample are mainly active in wholesale and retails, manufacturing, hotels and catering and other service activities. Companies of every activity type are represented in this sample of research.

Company activity type (you can select more than one option):

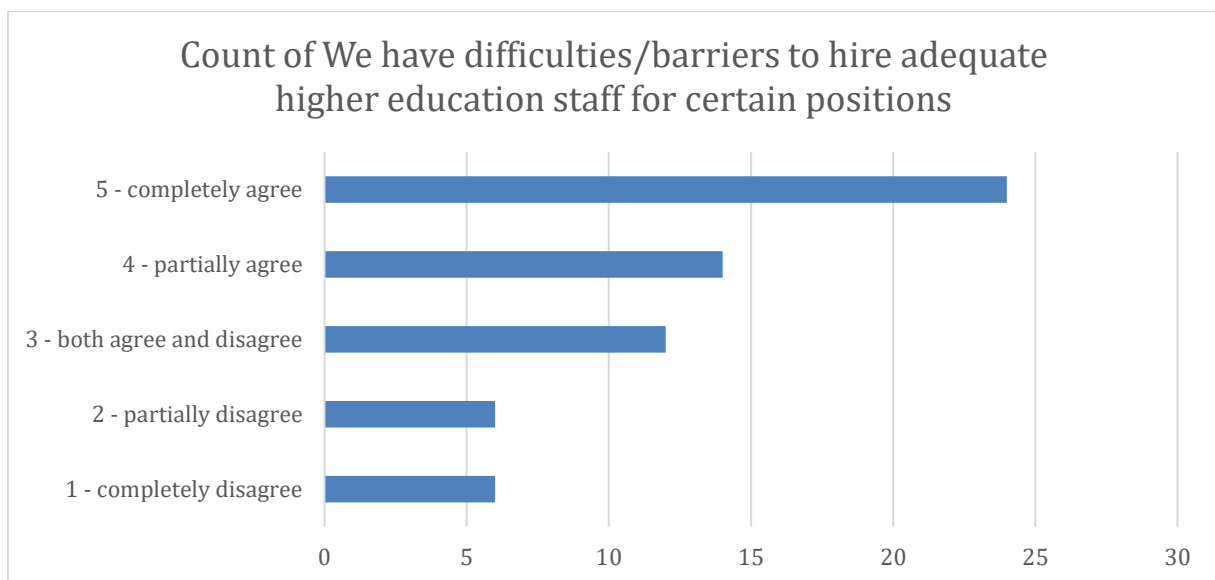
**activities** administrative agriculture air arts business catering  
communication compulsory **conditioning** construction defense education  
**electricity** engineering entertainment equipment **estate** finance fishing forestry gas  
**hotels** information insurance manufacturing metal petroleum  
**production** professional public **real** recreation restaurants **retail** sale  
scientific security **service** social steam **storage** supply support technical  
technologies telecommunications **trade** **transportation** **wholesale**



Most of the employers completely agree on the need for additional employment of highly educated staff.



At the same time, companies are struggling to hire employees with adequate higher education degree. Please note that this research has been conducted in the year of 2021, where most of European economies are rebounding from COVID-19 recessions and have difficulties finding human resources across the continent.

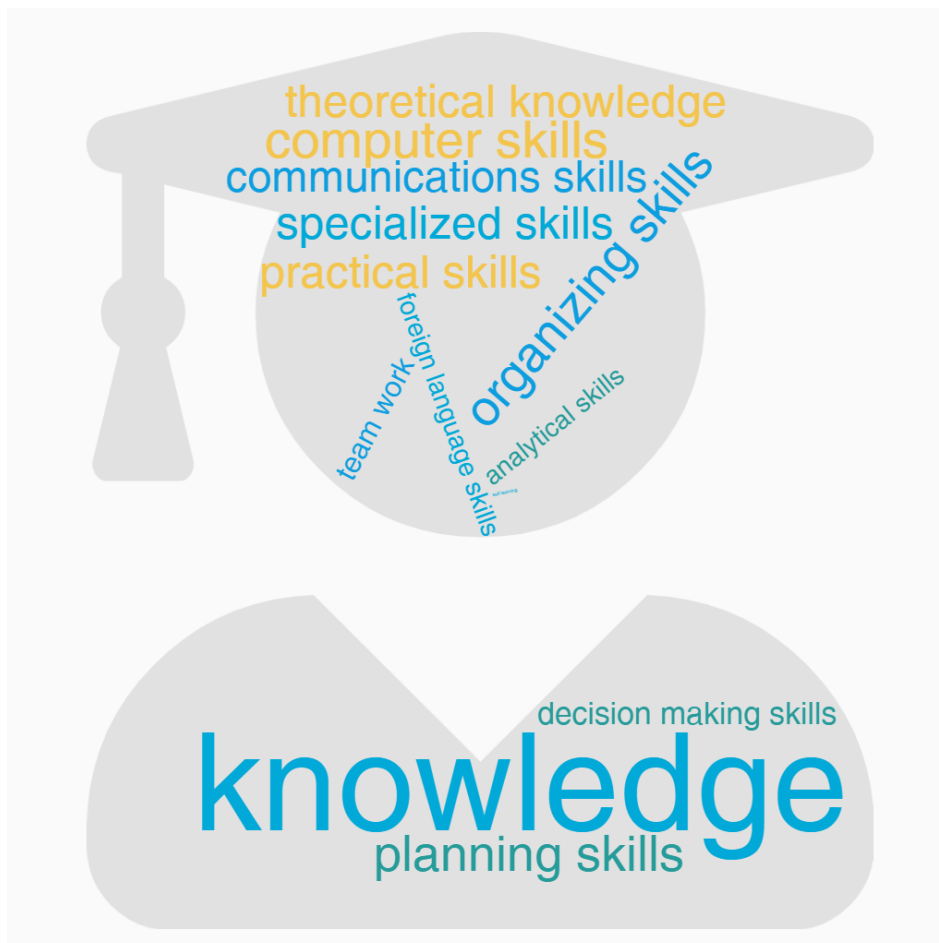




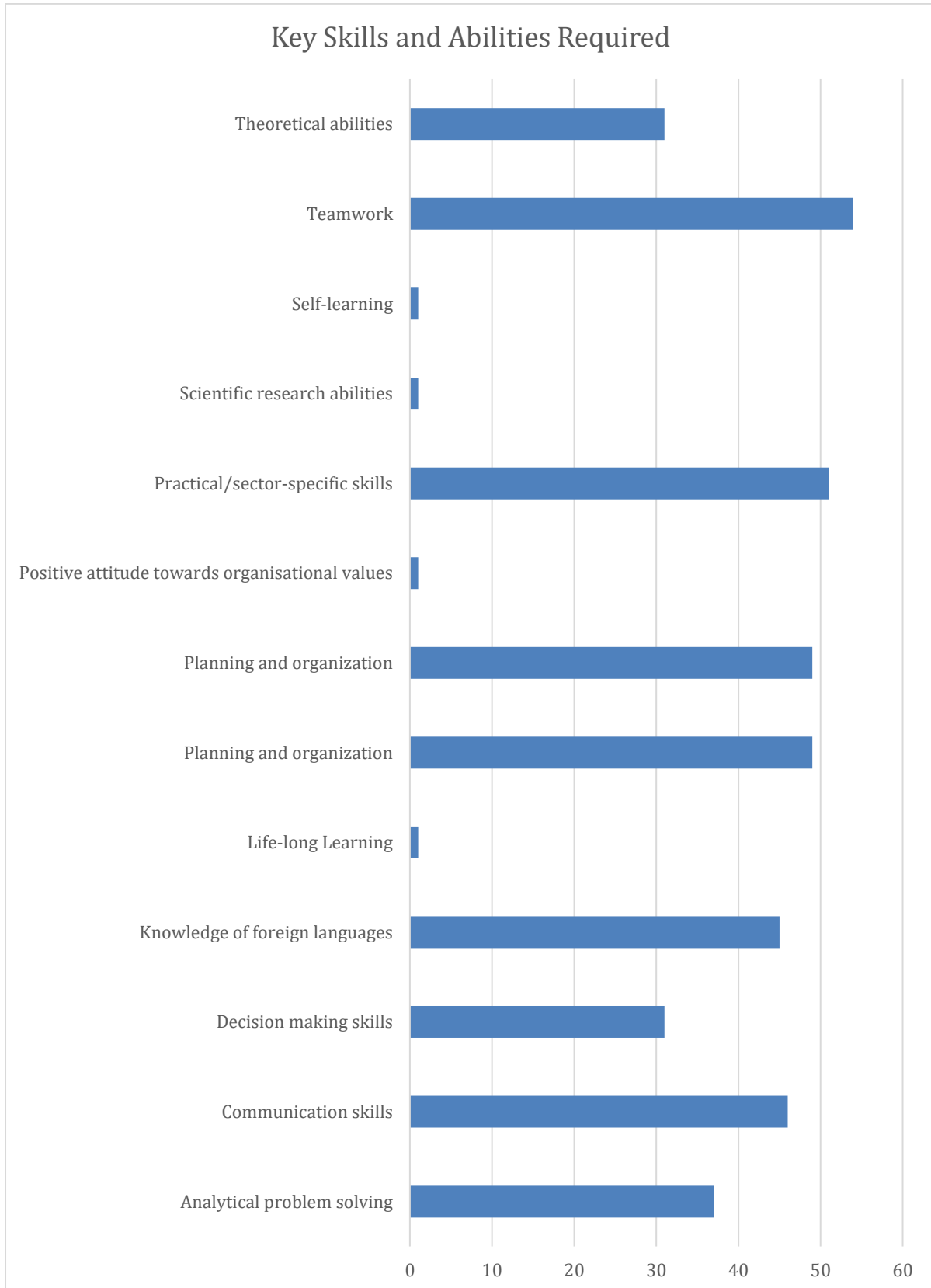
However, survey provides answers to what profiles are in scarcity in Montenegro at the time of the research. Among them, mostly companies are struggling to find engineers, developers, salesmen, lawyers and accountants.

accounting administration affairs agricultural assistant civil designer **developers** electrical energy  
**engineers** finance food graduate graphic hr ichthyofauna jobs kitchen **lawyer** maintenance  
**manager** maritime marketing mechanical ml ornithofauna profession project reception **salesman**  
salespeople seafarers software sport **technical** technology top ui ux vendors web

Companies are looking for the following abilities and skills when hiring higher education graduates:



Above all, companies mostly look for teamwork abilities, followed by practical/sector-specific skills, planning and organisation, foreign language and communication skills.



Over 75% (three-quarters) of companies and organisation in Montenegro already have a cooperation formed with Higher education institutions from Montenegro or even other countries (mostly Serbia).

Companies and organisations are generally satisfied with the cooperation with higher education institutions.



Two-thirds (67.7%) of companies cooperating with higher education institutions have cooperation formalized via a cooperation agreements.

Higher education institutions mentioned by employers for existing cooperation among others are:

- Elektrotehnički fakultet Podgorica
- Ekonomski fakultet Podgorica
- Univerziteta Crne Gore.
- Prirodno-matematički fakultet u Novom Sadu
- Visoka hotelijerska skola Beograd
- Pomorski fakultet u Kotoru
- Biotehnički fakultet Univerzitet Crne Gore
- UDG, Fakultet za tehnologiju i bezbjednost hrane
- Biotehnicki fakultet
- Fakultet za pomorstvo i turizam Bar, Univerzitet Adriatik
- ETF, PMF, UDG - IT Fakultet...

Companies and organisations cooperating with higher education institutions mostly cooperate in the following fields: providing students with internship opportunities (15x), providing space for laboratory practice (1x), holding practical lectures at higher



education institutions (4x), collaboration on joint research (3x), project collaboration (9x) and collaboration on bachelor, master or PhD thesis of students (4x).

Most companies and organisations agree (average 4,16 on a scale 1-5) that dual form of higher education could help and support the business processes and provision of services in their organisations.

*Average = 4,16, Min = 2, Max = 5, Median = 4*

Furthermore, represented companies and organisation believe that the dual model of higher education can compensate for existing and future shortcomings of staff in their organisations.

*Average = 4,05, Min = 1, Max = 5, Median = 4*

Over two-thirds of represented companies and organisations (66.1%) have the capacity to offer students practical education in their organisation. Only 4.8% of companies do not have the capacity, while remaining 24.2% are unsure of their capacities.

Most of the represented companies with capacity to offer students practical education would be able to accept only 1-2 students per year into their organisations (42.9%). Over a third of them would be able to accept between 3 and 9 students per year. Less than 10% of companies would be able to accommodate more than 20 students per year:

- 1-2 students per year (42,9%)
- 3-9 students per year (38,8%)
- 10-20 students per year (10,2%)
- 21-50 students per year (4,1%)
- More than 50 students per year (4,1%)

When it comes to the delivery model of dual higher education that would most suit each company, organisations represented in the sample are equally split in their decisions. For a third of them a shared week model (Study the one half of the week and work in the other half at the company. Work 20 hours a week. - 30.6%) would suit them most. Another third would rather use the weekly change model (Students alternate between theory (University) and practice (Company) on a weekly basis. One week at University (HEI), one week 40 hours of work at the Company. - 29%). Last third would prefer semester change model (Students study 1 semester at university and work in 2nd semester at company 40 hours a week. 21%) or end of programme placements (Students study for 4 semesters (2 years) and conduct the work full-time in the last year 19.4%).

Most employers (83.9%) would value the student internship contract and student status over part-time employment status (16.1%).

Furthermore, business expect to be compensated for their share in mentoring and training of students. The following three models would be the best financial motivator for the company to conduct dual higher education:

- Financial compensation for mentorship and training of in-company mentors (46.8% of companies),
- Tax reliefs corresponding to the costs of employment (66.1% of companies) and
- Social contribution reliefs corresponding to the costs of the employment (53.2% of companies).

They are on the other hand willing to financially compensate and support students, while conducting dual higher education:

*Average 3,61, Min = 1, Max = 5, Median = 4*

Most of the companies can already identify employees who could be named in-company mentors if dual higher education model is developed and implemented.

*Average = 4,37, Min = 2, Max = 5, Median = 5*

Almost all (62% Yes and 39% Maybe) of represented companies are willing to part in further development of dual higher education in Montenegro in their fields of expertise.



## Appendix A - Questionnaire

- All presentations and recording are available on the following [link](#).