SKILLS FOR SMART SPECIALISATION IN MONTENEGRO

Understanding and managing skills as a key resource for growth and competitiveness

SUMMARY REPORT

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Overview and context

This report presents findings from an assessment of the implication of skills in the Republic of Montenegro's smart specialisation strategy. The ETF's role is to support Montenegro as it endeavours to give vocational education and training (VET) systems a clear role in the implementation of its smart specialisation strategy.

Smart specialisation is an innovative policy approach that aims to boost jobs and growth by enabling countries and regions to better exploit their competitive advantage. It is a place-based, bottom-up method that encourages inclusive dialogue among all relevant stakeholders including local authorities, academia, businesses and civil society. It is recognised as a tactic to increase evidence-based public investment that fosters growth and competitiveness at the regional level and improves citizens' well-being. For example, the European Commission's next Multiannual Financial Framework 2021–2027 proposes to modernise its Cohesion Policy and create a component of 'Interregional Innovative Investments' to further strengthen interregional and cross-border cooperation. The objective is to support regions with matching smart specialisation priorities to build pan-European clusters based on complementarities and synergies in key sectors such as big data, the circular economy, advanced manufacturing or cybersecurity. Smart specialisation's success has prompted the European Commission to share the benefits of the approach beyond EU borders, where, despite different framework conditions, it is perceived as having the potential to promote decentralised, innovation-led economic transformation as well as foster interregional and cross-border partnerships.

Human capital is a key component of innovation ecosystems (on a par with science, research and technology). Yet, vocational education and training (VET) along with skills development in general are not yet central to smart specialisation strategies. To redress this imbalance and connect VET to the broader drive for innovation, growth and competitiveness, in 2019 the ETF developed and began testing a practical guide to analyse the implication of skills in smart specialisation strategies. Based on the lessons learnt from the two pilot studies on Montenegro and Moldova, in 2020 the ETF strengthened and added to the methodology with a view to adapting it to regional contexts. A fully-fledged methodological approach is due to be completed in 2021 and will take into consideration results from regional-based research carried out in Ukraine. What follows is a condensed version of the 2020 report, *Skills for Smart Specialisation in Montenegro: understanding and managing skills as a key resource for growth and competitiveness* by Dr Jelena Janusevic and Rajko Kosovic.

Montenegro and the European Union

Montenegro applied for EU membership in 2008. The Stabilisation and Association Agreement came into force in September 2010 and the country was granted EU candidate status in December 2010. Accession negotiations began on 29 June 2012. The report contains various policy and institutional elements (part of the EU's *acquis communautaire*) needed to strengthen competitiveness, facilitate structural change and encourage a business-friendly environment for SMEs. Implementing the 10 Small Business Act (SBA) principles[1] is also among the requirements.

The policy framework for innovation in Montenegro was set out in 2016 when the First Innovation Strategy and Law on Innovation Activities were adopted. In 2017, the government adopted the 2017–2022 Research Strategy, which includes some elements of innovation policy. The smart specialisation process began in 2017 and it is based on the methodology developed by the Joint Research Centre of the European Commission. The Ministry of Science coordinated the process in collaboration with the Ministry of Economy and other institutions from the public, business, academic and non-governmental

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[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Aet0001

sector. As Montenegro moves forward with the smart specialisation process, it needs to develop a comprehensive and more targeted vision for skills, which is where the ETF's support can be useful.

Key characteristics of Montenegro's economy

According to the report, Montenegro's economy can be characterised as follows:

1. It is **service based** as opposed to relying mainly on the production of tangible goods or manufacturing.

2. It is an **upper-middle income** economy, which, according to the World Bank means that its average income per capita is $12,535 (USD).

3. Finally, Montenegro is an **emerging** economy that is becoming more and more integrated with the global economy as it grows.

The Statistical Office of Montenegro (MONSTAT) provided ETF with crucial data regarding specific aspects of Montenegro's labour market including critical mass, employment growth and relative wages. The data was made available at a detailed industry level and covered the number of employees and gross wages. By using detailed four-digit data on employment, the largest clusters and growth sectors were identified. More general information regarding growth was also granted. For example, in 2018 the country's economy grew by 4.9%. Its gross domestic product or GDP was €4.679 billion. The average gross wage was €766.00 per month and €511.00 net per month. By December 2018, the unemployment rate was 15.2%, down from 16.1% in December 2017.

The report also relies on the 2020 World Bank Doing Business Report that ranks Montenegro 50 out of 140 countries, while the 2018 Global Competitiveness Index ranked Montenegro 71st out of 140 countries. The analysis by the World Economic Forum is based on several factors that affect the competitiveness of a country. Montenegro improved its position, with the most progress recorded in the labour market pillar (25th place) and 12th place in the pillar of competitiveness, making its innovation capacity ranking, 74th out of 140 countries (Janusevic and Kosovic, 13), an improvement from previous rankings. However, despite clear headway, challenges remain for Montenegro's innovation ecosystem and for the rest of the Western Balkans where 'weak integration in internationalised production processes' persists. This is 'reflected in poor export performance of local companies and limited production of higher value-added products.' The level of digitalisation also remains low (Janusevic and Kosovic, 17). Given the context, especially the need to generate momentum and more innovation-led growth in the Western Balkans the EU initiated the smart specialisation process and analysis for Montenegro in 2017.

Research methodology used in Montenegro

The ETF's methodology comprises several steps. The first involves analysing skills supply and demand in the priority areas identified by smart specialisation. This analysis uses both quantitative and qualitative data to provide evidence on current skills trends and gaps. The assessment relies mostly on secondary data analysis, as well as the use of current data sources, including Labour Force Surveys and administrative data on companies, wages/revenues, unemployment and vacancies. On the skills supply side, the methodology takes into account education statistics and the mapping of existing and relevant education and training provisions. Quantitative evidence has been enriched further with qualitative interviews and focus groups with employers, employees, experts and VET providers. The assessment also analyses the potential for additional human resources in priority areas by examining data on job switches between comparable industries. Moreover, it evaluates similarities in terms of human capital or skills requirements for industry, which provides an understanding of how likely a company is to diversify based on available skills.

The ETF worked closely with the government of Montenegro to provide a detailed assessment of skills requirements for the two priority areas in terms of both supply and demand. The purpose of this

collaboration was to demonstrate how the skills assessment is embedded within this economic framework.

Identification of priority areas and skills requirements

Montenegro's smart specialisation process identified two priority areas:

1. renewable energy sources and

2. sustainable health tourism.

In general, the economic potential and labour market analysis revealed that both priority areas have the potential to create more attractive jobs expressed in higher-than-average wages and better working conditions, including less seasonality of employment. Despite data limitations, both quantitative and qualitative research sources confirm a strong potential for inter-sectorial mobility. Indeed, the relatedness between the two sub-sectors can be observed in construction, transportation and service sectors. Economic transformation is to be expected in the context of smart specialisation, therefore people, particularly the idle workforce from regions and sectors being downsized, need to transition to new jobs in competitive sub-sectors. For that, demand-based, but also forward-looking, upskilling, reskilling and activation programmes are necessary.

Regarding initial education and training, in particular vocational streams, cooperation between industry and educational institutions in both sub-sectors need to be consolidated for more efficient planning of the curriculum and development of new occupational standards and qualifications. Smart specialisation goals in Montenegro pay a great deal of attention to sustainable development elements that require reflection in the education system at all levels. Both employers and employees, interviewed as part of the qualitative research, have underscored the value of key competences and transversal skills in jobs related to the two priority areas, in particular English proficiency. Overall, the education and training system is not fully aligned with the specific skills demand revealed through the smart specialisation process inn Montenegro.

A detailed review of vocational educational training opportunities was also carried out. This included initial vocational education and training (IVET), continuing vocational education training (CVET), SME-specific training and other skills. In order to ensure that emerging demand for skills corresponds to the available training in Montenegro, the capacity of training providers to impart relevant skills and knowledge was also analysed. The results led to recommendations on how to improve the quality of training content.

By combining quantitative and qualitative research methods, the team was able to conduct a fine-tuned analysis of the data. Since smart specialisation leads to prioritisation of an economic sector at the activity level, precision was key. When data was lacking, concerted efforts to gather qualitative data from all relevant stakeholders were made. To produce an accurate snapshot of skills profiles for the priority areas identified, both quantitative and qualitative data were necessary. However, the research team observed that the qualitative data provided more insights in terms of skills (Janusevic and Kosovic, 55).

Skills analysis for priority area 1: development of renewable energy sources

The smart specialisation process identified renewable energy sources as a priority area because of its strong potential for innovation and because it is inextricably tied to or 'highly correlated with other sectors and subsectors (e.g., tourism, transportation, construction, agriculture and industry)'. In particular, strong synergies exist between ICT and renewable energy sources where there are real possibilities for collaboration through technologies such as artificial intelligence that can be used to ensure the safety of energy systems (Janusevic and Kosovic, 24). Furthermore, Montenegro is rich in natural energy sources derived from water, wind, wood and the sun. Most of Montenegro's energy comes from hydroelectricity, but only 17% of this resource is exploited. Montenegro has over 2,000 hours of sunshine every year, which makes solar energy a viable option. Montenegrin forests contain biomass energy;

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wood waste can produce approximately 400 MW of energy. Montenegro can also become a regional energy exchange hub when the new underwater electric cable is laid, linking the country to Italy. But above all, the government has set an objective to reduce its dependence on imported energy to 31%. Thus, there is strong political will to develop renewable energy sources.

However, developing the energy sector by concentrating resources in renewable energy sources will not be easy for Montenegro. High import dependence, the negative impact of fossil fuels on the environment, significant losses in energy distribution, and the limited use of renewable energy sources are all obstacles to overcome. The stakeholders interviewed identified the lack of competent and skilled staff as also being an issue. If issues related to human capital can be resolved, then the sustainable production of energy can fulfil its true potential. However, the Montenegrin educational system has not managed to keep up with the demand for skills in this sub-sector or priority area despite the fact that nearly 'two-thirds of secondary school students are enrolled in VET programmes at upper secondary level' (Janusevic and Kosovic, 26). For now, Montenegro does not offer educational programmes that provide training in the specific skills required to work in renewable energy sources, though some of these skills can be acquired through electrical and mechanical engineering degree courses at the tertiary or post-secondary level.

What exactly are the specific skills Montenegro needs to unlock the potential of the renewable energy sources sub-sector? The report identifies four competence or skill categories; they are listed below.

1. **Technical and engineering competences**: an understanding of the science, technology and processes involved, the ability to use tools and machinery, and make evidence-based decisions.
2. **Language competences:** fluency in several languages, especially English, which is particularly relevant for companies with international stakeholders.
3. **Digital competences:** mastery of digital technologies, digital and media literacy.
4. **Personal, social and learning-to-learn competences:** self-knowledge, self-education, teamwork, resilience, time management, and career management.

More specifically, the skills required are project development, construction, installation, operations and maintenance. From these findings, it is evident that a malleable, resilient and independent labour force is what this sub-sector needs in order to innovate and become competitive.

In order to respond quickly to this relatively new and evolving demand for skills in renewable energy sources, educational institutions are also required to adapt. Resources can be allocated to creating flexible VET programmes with modular curriculum design, allowing students on different degree paths to acquire skills through courses not on their main syllabus. The demand for skills can dictate which courses should be offered and when. The private sector has also filled the skills gap by offering in-house training to staff hiring trainers from abroad. In 2016, the Montenegrin educational system started offering similar courses, which alleviated the pressure companies felt to upskill or reskill their staff and, to an extent, improved the knowledge and skills of the workforce. However, these efforts have not been enough to face growing demand.

Currently, companies operating in renewable energy sources hire recent graduates and/or people with experience. Employees in small companies are mostly engineers, but for operational tasks such as installing solar panels, low skilled workers are temporarily employed. Larger companies always need educated, skilled employees who are willing to work hard and continue learning. However, Montenegrin labour laws protect long-term employees who are difficult to motivate and not the easiest to re-train or re-skill. It is also not easy to dismiss them, which prevents new people, with perhaps more relevant skills and experience, from entering the labour force. Once again, this demonstrates how a lack of flexibility can hinder the development of this priority area and how the current skills supply does not meet demand.

In order to meet demand, Montenegro can improve current training programs at the tertiary level and for vocational training and continuing education as well. The Electrical Engineering and Mechanical Engineering universities provide relevant training to an extent. Specialised vocational schools in Podgorica and Nikšić also provide training that partially meets the skills demand of the renewable energy

sources sub-sector. In 2019, the VET Centre of Montenegro designed 39 modularised educational programmes, six of which are specific to the energy sector. Training providers have recognised modularisation as an innovative way to fill the skills gap in the energy sector. Capitalising on the transferable skills workers in energy-related sectors possess (e.g., construction, transportation and housing) is another solution to meet the skills demand. The labour force's geographical mobility, which is not an issue in Montenegro given the relatively short distances between places, facilitates the transfer of skilled labour from sector to sector. Making training affordable can also help as high costs for training programmes can be prohibitive for many learners. The more Montenegro does to upskill and reskill its labour force in the renewable energy sub-sector, the less companies will look abroad to hire highly qualified workers who are capable of designing, managing and supervising challenging projects.

Skills analysis for priority area 2: sustainable health tourism

The smart specialisation process identified sustainable health tourism as a priority area because of its innovation potential. Tourism, in general, is one of Montenegro's strongest economic assets. In 2018, it made up almost 25% of the country's GDP. Indeed, with an abondance of natural resources, its rich history, vibrant culture and strong industrial background, Montenegro is a very attractive destination for tourists. Before the COVID-19 crisis, both revenue and investment in this sector were steadily increasing. The tourism sector is also tied to other strategic economic sectors such as energy, agriculture, industry, transportation and ICT. This means that growth in tourism will have a spill-over effect on the other sectors. Health tourism grows between 15% to 20% globally. The potential for innovation and growth for the sustainable health tourism subsector in Montenegro is, therefore, real. Its health system currently offers a broad range of services and has a strong network of healthcare providers in the private sector.

Recognising the potential of bringing health and tourism together, in 2019 the Ministry of Sustainable Development and Tourism issued a call for public tender that aimed to select consultants who would be tasked with creating a strategy on how to develop health tourism in Montenegro. This strategy involves a broad range of stakeholders from both the public and private sector. They include the Ministry of Health, the Chamber of Commerce, the Agency for Nature Protection and Environment, the Health Tourism Cluster of Montenegro, the Dr Simo Milošević Institute, the National Tourist Organisation, health-rehabilitation centres (both public and private), businesses, municipalities and all relevant civil society groups. Sustainable health tourism is, thus, a priority for the Montenegrin government.

The sustainable health tourism sub-sector requires the same level and type of skills as the renewable energy sources sub-sector, with slight differences related to context.

1. **Technical and health competences**: an understanding of the science, technology and processes involved, the ability to make evidence-based decisions in terms of diagnosis and therapy prescription.

2. **Language competences:** fluency in several languages, especially English, which is particularly relevant for tourism as many tourists come from abroad.

3. **Digital competences:** mastery of digital technologies, digital and media literacy in order to promote and market the health tourism services offered.

4. **Personal, social and learning-to-learn competences:** self-knowledge, self-education, teamwork, resilience, time management, and career management.

That the same skills are in demand in both renewable energy resources and sustainable health tourism serves to underscore how important it is for the labour force to have transferable skills. They are just as important as technical, job-specific skills. Indeed, it is not only what you know, but how you communicate your expertise or knowledge to others.

Montenegro has a solid set of IVET programmes to meet the health sector's demand for technical skills in all areas: health, pharmaceuticals, medicine, cosmetics, physical therapy and dentistry. The CVET offer covers the fields of cosmetology, geriatric nursing and transfusion medicine. Tertiary education

offers degrees in medicine, dentistry, nursing, pharmacy and physical therapy. On the whole, the skills demand is met by the training on offer for the health sector. While there is some unemployment in the field amongst doctors and technicians, this is not a serious issue because these workers can find employment. For a country the size of Montenegro, the major threat is brain drain as there is a growing trend of doctors leaving for opportunities in Germany or elsewhere in Europe.

Bringing together the health and tourism sectors also creates confusion in terms of jurisdiction, responsibility and accountability (Janusevic and Kosovic, 42). The seasonal aspect of the work, especially in the accommodation sector, makes it less attractive for domestic labour. However, the lack of a coherent long-term strategy was identified as the main obstacle. The government needs to do more to analyse the current state of the sector, find the gaps, provide financial support where necessary and articulate a goal-orientated vision. For example, health tourism could also include sport tourism. Montenegro's wonderful climate lends itself well to this type of service. Sports teams could quite conceivably take advantage of high-end accommodation facilities to prepare for and recover from matches. New services such as aesthetic medicine could also be introduced. This, of course, will require that the right skills and competences are developed. An even bigger challenge than diversifying the health tourism offer will be to create a tourism industry that is year-round and not seasonal. If this is achieved, it will lead to a skilled and educated labour force (Janusevic and Kosovic, 46).

Conclusion

From the quantitative and qualitative research carried out by both Montenegrin government authorities and the ETF, it is clear that there is strong potential for growth in both renewable energy sources and sustainable health tourism. The current skills supply in Montenegro can be enhanced through more flexible and targeted programmes in post-secondary or tertiary education as well as VET. Transferable skills need to be developed in initial education and in continuing, life-long learning courses. Fluency in English is essential as are ICT skills. Standard qualifications for careers in the two sectors need to be established. In order to have greater precision in terms of skills and training gaps, better data collection at the subsector level is recommended.

The report identifies several policy proposals in order to improve the current system and enhance skills development that will lead to growth and innovation in Montenegro. They are as follows:

1. **Prioritise** the development of more sensitive human capital-related statistics and analyses that are crucial to proper education planning by assessing the current situation, estimating needs and emerging trends.
2. **Consolidate** the human capital dimension of government strategies to shore up SMEs' innovation capacity, reduce skill mismatches and increase the potential for job creation, economic growth and competitiveness.
3. **Integrate** VET and skills analysis within the smart specialisation approach – with a strong role for industry and business, which are profit-oriented and as such are exposed to market competition to the highest extent. This group has the greatest needs and the greatest potential for human capital development. Industry and business should, therefore, take the lead in human capital needs identification as well as skills development and planning.
4. **Develop** a strategic framework for health tourism so that Montenegro can become a health tourism destination. For this to happen, new services, new skills and new competences will be necessary.
5. **Update** and increase the education offer relevant for the smart specialisation priorities by developing occupational and qualification standards for the renewable and health tourism subsectors.
6. **Embed** key competences, transversal skills and sustainable development concepts in the educational programmes. These should be acquired at all levels of education and beyond through lifelong learning.
7. **Expand** vocational training to secure a skilled workforce for smart specialisation economic priorities by reinforcing the links between IVET and CVET providers. In general, SMEs and family-run businesses require innovative and flexible forms of education and training to meet skills needs.

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