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WP 3 Analysis and Recommendations

Qualitative comparative analysis

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Introduction

The goal of the Qualitative Comparative Analysis (QCA) of real-business background is to provide partners with a comparison of the specific characteristics of the three regions/countries. It is a data analysis technique for determining which logical conclusions a data set regarding the real-business background supports. QCA will determine which descriptive inferences or implications are empirically supported by the obtained data set.

Based on the quantitative analysis, the qualitative analysis will in form of a desk research provide information of the country and especially the regions and their educational and economic situation regarding SMEs and VET and HVET.

The major impact on both learners and business will be increased attractiveness and recognition of master vocations as providing access to employment and career advancement, as well as enabling further learning and progression to higher education based on strong WBL-basis. By connecting VET providers and SMEs the project outcomes will be relevant and entail an impact on the VET and crafts' sector.

- Providing SMEs with skilled labour force with relevant skills gained through WBL-based education.
- Enhanced employment possibilities and possibilities of widening business offers through employment of skilled labour force which is lacking, especially in craftsmanship.
- Strengthened collaboration between VET providers and businesses through active participation in development of educational offer.
- Increased awareness of WBL as key element of successful acquisition of practical occupational skills by actively participating in education and skills development.
- Increased awareness of responsibility of SMEs as WBL providers for skilled labour force.
- Increased possibility of inter-regional work based on EU-wide recognised skills and competences of employees.
- Increased competitiveness of SMEs because of enhanced quality and employability of future labour force.

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1. ECONOMY CHARACTERISTICS OF REGIONS –COMPARISON OF THE SPECIFIC CHARACTERISTICS OF THE THREE REGIONS/COUNTRIES

The global financial crisis exposed the structural weaknesses **in Serbia's** economic growth model and prompted the need for fiscal consolidation and an acceleration of the unfinished transition to a market economy. Serbia's rapid growth in 2001–08 was driven mainly by domestic consumption and led to significant internal and external imbalances that proved to be unsustainable.

The Government formed after the April 2016 elections stepped up the implementation of structural reforms, broadening the focus to include social sector transformation. Although the results of the spring 2017 presidential election led to a change in prime minister (as the incumbent became Serbia's new president), the Government experienced only minor changes, enabling it to maintain an emphasis on reforming state administration, public finances, and the economy, along with pursuing the European Union (EU) accession process. After the ruling party's comfortable win in Belgrade's local elections in March 2018, however, a central government reshuffle was announced but has since been postponed due to heightened tensions with Kosovo.

The Government's economic reform program focuses on ensuring economic and financial stability, halting further debt accumulation, and creating an environment for economic recovery and growth to foster employment and raise living standards.

These goals will be achieved primarily through fiscal consolidation measures and an acceleration of structural reforms to remove existing bottlenecks to economic growth, including reform of state-owned enterprises (SOEs), creating the foundation for faster growth and private sector-led job creation over the medium term (retrieved from, June 2018, <http://www.worldbank.org/en/country/serbia/overview>).

The total population of all three districts (**South Backa, North Backa and West Backa** administrative district) is 1.025.637. The total area is 8.218 km². Backa is a geographical region situated in Northwest part of the Autonomous Province of Vojvodina – Republic of Serbia. The region is administratively divided between the Republic of Hungary and the Republic of Serbia. The Backa region borders are: the Tisa river in the east – with Banat, the Danube River in the south – with Srem, in the west with Baranja and Slavonija. Backa's terrain is mainly flat with arable land. A large number of marshes and forests are situated by the Danube River. Titel berg, a little berg with the altitude of 152 m, is situated on the region's Southeast, at the confluence of the Danube and Tisa rivers. Backa is administratively divided into districts: South Backa, North Backa and West Backa

administrative district. The larger settlements in Backa are: Novi Sad, Subotica, Sombor, Backa Palanka, Vrbas, Becej, Senta, Apatin and other. South Backa administrative district includes twelve local self-governments (city of Novi Sad, Bac, Backa Palanka, Backi Petrovac, Beocin, Becej, Sremski Karlovci, Srbobran, Vrbas, Zabalj, Titel and Temerin). According to the census from 2011 on the territory of Juzna Backa administrative district lives 639.833 people. West Backa includes four local self-governments (city of Sombor, Apatin, Kula and Odzaci). According to the census from 2011 on the territory of West Backa administrative district lives 193.467 people. North Backa administrative district includes three local self-governments (city of Subotica, Mali Idjos and Backa Topola. According to the census from 2011 on the territory of North Backa administrative district lives 192.337 people.

Backa, and particularly its southern part, is very fertile, and is considered one of the most fertile parts of Europe. The population is primarily engaged in agriculture – production of all sorts of crops, where Backa's wheat and maize are particularly well-known. Other cereals are grown in smaller amounts as well. Horticulture is well developed, whereas fruit-growing is also significant. A cattle breeding was the main occupation of the population until the 19th century. Majority of population is engaged in agriculture and cattle breeding, and a much smaller number is engaged in crafts, trade and industry. Pig farming is also very important, while poultry husbandry, fishery, sericulture and hunting are significantly represented. Milling industry is important for the area, as well as hemp, silk and textile industry in general. The following industries are also important: pottery, cement, brick, beer, leather etc. (Retrieved from, June 2018, <https://www.rda-backa.rs/en/backa-region/>).

After a protracted six-year recession, **Croatia** returned to growth in 2015 and is now in its fourth year of recovery. However, potential growth remains low and some vulnerabilities need to be addressed, as the country faces high debt levels in the state and private sectors, a low employment rate, unfavourable demographic trends, and a cumbersome investment climate.

Access to the European Union (EU) internal market helped connect part of the economy to global value chains, and tourism is experiencing a historic high. Yet these factors are not enough to deliver pre-crisis growth rates. GDP is roughly 1% lower than in the pre-crisis period, and youth unemployment remains high at 33%. The absolute poverty rate (at US\$5.5 2011 purchasing power parity [PPP] per capita) increased from 4.7% in 2009 to 5.1% in 2017.

Croatia's economic challenges include maintaining macroeconomic stability while promoting exports and private sector productivity and competitiveness to create jobs and growth. Reducing high public sector debt and the large state presence in the economy will also help improve growth potential.

The projected population decline, due in part to out-migration, and the rapidly aging population present risks to growth and higher living standards, as well as to fiscal sustainability.

Croatia also needs to continue modernizing its public services, the judiciary, and the governance of state-owned enterprises (SOEs), including the network industries (retrieved from, June 2018. <http://www.worldbank.org/en/country/croatia/overview>).

The Zagreb County is one of the most developed counties in the Republic of Croatia. It's also one of spatially larger and more densely populated Croatian counties. Over the past few years, the County has continually recorded the growth of the economy and is more appealing to domestic and foreign investors. The Zagreb County has extremely uniform basic indices according to the Regional Competitiveness Index 2013. According to statistical and survey indicators such as the surrounding, as well as the business sector, the Zagreb County was ranked among the 6th and 7th places, respectively overall in the 7th place scale competitiveness of Croatian counties. Relatively lower indicators of the level of development are to a considerable extent a consequence registration of economic activities of the Zagreb County population in the City of Zagreb, but indicators of dynamics and development of entrepreneurship suggests that it is an exceptionally entertaining County. The region has an excellent migration balance, which is a reflection of Zagreb's economic attractiveness, but also its problems overpopulation. According to the Development Index data, the Zagreb County stands at 124.23% of Croatia's average due to considerably lower unemployment rates and an exceptionally dynamic population growth (6.5% in the period 2001-2010), but also income a little above the average of Croatia. But according to education and fiscal power, the Zagreb County lags behind average of Croatia. There are significant differences in the development of its cities and municipalities in the Zagreb County. In comparison with the City of Zagreb, which is surrounded by local self-governments, the differences in development become extremely large. The cities of Zagreb County are mostly above the Croatian average, and in the leading locations, Zaprešić and Samobor with values of the Development Index at 20% or more above the average of the Republic of Croatia. Among the more developed there are, besides Velika Gorica, Dugo Selo, Sveta Nedelja, Jastrebarsko and Stupnik and Brdovec. But there are eight local self-government units below the 75% of Croatia. According to the differences between developed and underdeveloped local self-governments, uneven development is one of Zagreb's key developmental problems Counties. Despite these relatively positive trends, especially in economy and entrepreneurship, there is still strong awareness of the necessity of managing the development and therefore the County of Zagreb places great effort and resources in the preparation and implementation of its strategic development documents (Retrieved from, June 2018, http://zacorda.hr/wp-content/uploads/2017/11/glasnik_29-2017.pdf)

In Slovenia the economy is projected to continue its strong expansion in 2018, growing at 5% in 2018 and nearly 4% in 2019. Private consumption will be boosted by strong real income growth from the buoyant labour market. Favourable financial conditions and EU structural funds will underpin business and public infrastructure investment. Exports will decelerate as higher wages undermine external competitiveness. Imports will be bolstered by higher domestic demand and tighter capacity constraints. The fiscal stance is projected to remain expansionary, even though rapid growth will secure a higher budget surplus. Nonetheless, a still higher surplus is needed to contain inflationary pressures as monetary conditions will remain highly accommodative. In addition, greater privatisation efforts would boost jobs and growth. Robust private consumption growth is being boosted by real labour income gains and a decade-high level of consumer confidence. The expansion of government consumption is continuing, reflecting the relaxation of previous austerity measures. Investment remains strong, driven by the need for expanding production capacity and EU structural funds, all supported by favourable financial conditions and still optimistic business sentiment. Exports are benefiting from stronger growth in trading partner economies and market share gains from past improvements in competitiveness. A strong employment expansion has reduced unemployment to its lowest level in a decade and increased labour shortages, leading firms to progressively recruit from abroad. So far, wage growth has remained moderate. Consumer price inflation has started to increase on the back of higher food and energy prices, although prices of durable goods are declining. At the same time, core inflation has remained stable at around 1% per year. Fiscal policy is highly expansionary, implying little progress in securing fiscal sustainability. Public investment will continue to benefit from the disbursement of EU structural funds. With the expected continuation of the accommodative euro-area monetary policy, macroeconomic policies are too stimulatory in the present conjuncture and fail to address future ageing-related fiscal challenges. Exports will be buoyed by faster trading partner growth, although market share gains will diminish as cost pressures and capacity constraints build progressively. The strong labour market will push inflation to above 3% during 2019 (retrieved from, June 2018, <http://www.oecd.org/eco/outlook/economic-forecast-summary-slovenia-oecd-economic-outlook.pdf>).

In the last few years, **Posavje Region** has become increasingly recognised. In terms of its acreage, it is one of the smaller Slovenian regions, which makes it, accordingly to the local people, adorable. A little less than a thousand square kilometres in the south-eastern part of Slovenia is sparsely populated, where the pace of life and development are dictated by the Rivers Sava, Krka and Sotla.

Surface 885 km², № of municipalities 6, Population (2016) 75.711, Working population (2015) 29.662, Registered unemployment rate (2015) 13,6%, № of companies (2014) 5293, Regional GDP

(2014)15.409 EUR / na prebivalca, Tourist overnight stays (2015) 649.912, Utilised agricultural area (2013) 27.130 ha.

Six town centres, namely Krško, Brežice, Sevnica, Kostanjevica na Krki, Radeče, and Bistrica ob Sotli, are economically and culturally vibrant urban centres. The Posavje Region is a region with exceptional geo-strategic potential, as it is a border region with well-developed transport infrastructure, which is naturally and economically well interlinked.

Highway Ljubljana - Zagreb runs through the region, and a military - civilian airport Cerklje ob Krki is located in the region. The region's energy pool including Nuclear Power Plant Krško, thermal power plant in Brestanica and chain of hydroelectric power plants on the lower Sava River meets 38 % of the total electricity demand in Slovenia.

The most important industrial sectors can be found in the region, such as the paper, metal, textile, wood, and food industries. Development of economy is the region's primary focus. In order to keep highly educated youth in the region, the region has developed an effective scholarship scheme.

The largest proportion of the population lives in rural areas with natural conditions for development of agriculture, fruit cultivation, viticulture, accommodation and food service activities, and tourism. Genuine culinary offer attracts many new tourists, who can, in addition to culinary pleasures, enjoy themselves in the Terme Čatež Spa and Paradiso Spa & Wellness Centre or in recreational activities, such as cycling, golf, hunting and increasingly popular sport fishing (retrieved from, June 2018, <https://www.rra-posavje.si/en/posavje-region.html>).

1.1 SME's in countries/regions

The SME contribution to the Slovenian non-financial business economy is of the key importance. Almost two thirds of overall value added and three quarters of employment are generated by SMEs, which in both cases is almost 7 percentage points more than the EU average. Micro firms are particularly important for employment, as they provide over one third of all jobs in the country. Slovenian SMEs employ an average of 3.2 people, slightly below the EU average of 3.9. The manufacturing sector is of greater significance for SMEs in Slovenia than in the rest of the EU. With 27.3 %, manufacturing contributes the largest share of SME employment in Slovenia, and an even higher share of SME value added, at 30.1 %. SMEs in the non-financial business economy have grown steadily in recent years. In 2012-2016, SME value added increased by 18.9 %, while SME employment rose — albeit less strongly — by 6.8 %. This was significantly better than the performance of large firms, in which the increases during the same period were 12.9 % in value added and only 1.3 % in employment. In 2016, SME employment had not yet fully returned to its pre-crisis level, as it remained 1.2 % below its 2008 level. In 2015-2016, SME value added and employment both continued to rise. One sector in which SMEs have performed particularly well in recent years is information and communication. In 2012-2016, SME value added in this sector rose by 13.2 % and SME employment increased by 12.6 %. The main growth driver behind this was computer programming. SMEs in computer programming have benefited from the trend towards IT outsourcing and from increased demand for systems integration and hardware support. For example, in 2015, 17 % of all Slovenian enterprises with 10 or more employees purchased cloud-computing services. Demand also increased for security software, with sales rising by 7 % in 2014-2015. SME business expansion — particularly in innovative sectors such as IT — was helped by targeted support schemes such as the Slovene Enterprise Fund, and by a high rate of tax relief on R&D spending. This support for R&D has improved the international competitiveness of high-tech firms, resulting in a gradual shift towards a greater export share of technology intensive products in recent years. In 2012-2016, SMEs in professional activities generated high growth in both, employment (26.2 %) and value added (14.9 %). One driver was a de-regulation of certain professions, mainly in skilled manual trades, but also in services such as legal and accounting and architectural and engineering activities, in which the entry barriers in Slovenia are substantially higher than on average in the EU. In transportation and storage, SMEs also grew substantially, with value added rising by 16.8 % and employment increasing by 8.4 %. Several factors contributed to this growth, including a drop in fuel prices. Additionally, the restructuring of major firms — including privatisation of former state-owned companies — led to a rise in overall foreign direct investments in Slovenia in 2014-2015. This was one

of the contributing factors for growth in transportation and storage. For example, after the privatisation of Slovenia's largest airport in 2014, the airport's capacity increased, leading to a rise of 19 % in passenger numbers in 2015-2016. Sector growth was further boosted by support from the Slovenian Eco Fund in 2013-2015, which promoted investment in eco-friendly transport vehicles. Consequently, the volume of goods transported by road increased by 15 % in 2015-2016. SMEs were fully able to benefit from these positive sectoral developments, having achieved an overall improvement in financial health in 2010- 2015, including a marked reduction in their ratio of debt to capital. After an all-time high of 21 405 registrations in 2013, the number of newly registered businesses dropped by 14.1 % in 2014. However, the total of 18 379 registrations in 2014 was still the second highest since 2004. Estimates indicate an even higher level of registrations both in 2015 and 2016 — approximately 20 000 — signalling that start-up activity has been flourishing in recent years. In 2015, Slovenian start-ups raised EUR 114 million from investors, which was double the investment of the previous year and as much as in the previous 7 years combined. According to the latest available data for 2016, 11.6 % of all people employed in Slovenia were self-employed, a lower share than the EU average of 14 %. Meanwhile, the number of company de-registrations fell by 21.8 % in 2013-2014, to 11 131 de-registrations in 2014. In 2014, 532 firms — 7.6 % of all firms with at least 10 employees — were high-growth firms. This is one of the lowest shares in the EU, where in 2014 on average 9.2 % of firms with at least 10 employees were high-growth firms. After electricity and gas (12.2 %), the second largest share of high growth firms was in transportation and storage (11.7 %), slightly above the EU average of 11 %. The outlook for Slovenian SMEs is optimistic. In 2016-2018, SME value added is forecast to increase by 9.7 %, while SME employment is predicted to rise by 3.1 %. Micro firms will be the main driver of this growth, with value added and employment increasing by 12.5 % and 5.2 % respectively. Overall, around 13 800 new SME jobs are forecast to be generated between 2016 and 2018. Slovenia performs in line with the EU average in this Small Business Act area. However, since 2008, Slovenia's overall performance on skills & innovation has been on a slight downward trend. While the percentage of businesses providing ICT skills training to their employees is above the EU average, this effort is not yet translating into businesses having a stronger online presence. In fact, the share of SMEs selling online dropped from 15.5 % in 2015 to 13.1 % in 2016. Likewise, the share of SMEs purchasing online declined in the same period, from 14.4 % to 12.7 %. (Retrieved from, June 2018, [2017 SBA Fact Sheet Slovenia - European Commission - Europa EU](#)).

The strong contribution made by SMEs to the Croatian nonfinancial business economy is consistent with the EU average: Croatian SMEs generate almost 60 % of overall value added and over 70 % of employment. Micro firms are particularly important for employment, as they provide almost one

third of all jobs. Croatian SMEs are larger than average for the EU, employing 4.8 people on average, compared with an average of 3.9 in the EU. With a contribution of 25.1 %, the manufacturing sector generates the largest share of SME employment, 6 percentage points more than on average in the EU. Croatian SMEs in the non-financial business economy have performed well in recent years. In 2012-2016, SME value added grew substantially by 25.0 %. SME employment did not catch up with value added growth, but it also increased, by 6.2 %, in the same period. Overall employment growth was driven mainly by strong growth in small firms, in which employment increased by 22.7 %. In contrast, employment in medium-sized firms fell by 10.2 % in 2012-2016. SMEs generally outperformed large firms, in which employment levels dropped by 7.5 % in 2012-2016. More recently, in 2015-2016, this considerable SME growth has persisted, with SME employment and value added rising by 3.7 % and 5.5 % respectively. One sector in which SMEs performed particularly strongly was information and communication. SME value added and employment increased by 21.4 % and 25.4 % respectively in 2012-2016. In the most important subsector, computer programming, SMEs performed even better, with exceptional growth rates of 28.7 % and 43.4 % respectively in value added and employment. Exports were the main engine of growth, with exports of software and IT services growing by 63.2 % in 2013- 2015. In addition to increasing global demand for IT services, the success of SMEs in information and communication was based on the country's highly skilled workforce and the ability of SMEs to adapt to changing market demand. Furthermore, the government has introduced a number of measures to support the development of the ICT sector, including tax incentives to encourage foreign ICT companies to open subsidiaries in Croatia. SMEs have also prospered in accommodation and food services, with SME value added growing by 46 % in 2012-2016. SME employment increased too, albeit less strongly, by 6.3 %, in the same period. The strong performance of SMEs in this sector is largely due to the continuing growth of tourism in recent years. Tourism is of key importance to the Croatian economy: the tourist industry's overall contribution of 18.1 % to GDP in 2015 is among the highest in the EU. In 2015, 14.3 million tourists visited Croatia, 35.3 % more than in 2010. The combination of increased investment in tourist infrastructure — particularly in hotel modernisation, along with the introduction of low-budget airlines, and the general stability and safety of Croatia compared to rival destinations, have all strengthened growth in this sector. After 2 years of decline, registration of new businesses recently showed signs of recovery. In 2016, there were 15 475 registrations, an increase of 8.3 % on the previous year. In 2016, 72 746 businesses were de-registered, compared with 339 in the previous year. The comparatively large number in 2016 was mainly due to the removal of inactive businesses from the business register. In 2016, of all the listed businesses in the business register, only 56.6 % were active. From 2012 to 2016, the share of self-employment in total employment substantially

decreased, by 4 percentage points, so that in 2016, only 12 % of all persons employed in Croatia were self-employed. This is lower than the average in the EU, where the share of self-employment is 14 %. In 2014, 1 275 firms — 10.6 % of all firms with at least 10 employees in the business economy — were high-growth firms, surpassing the EU average of 9.2 %. Administrative activities and transportation and storage have the largest shares of high growth firms with at least 10 employees, 15.5 % and 14.1 %, respectively. In both sectors, substantially more firms were scaling up their operations than on average in the EU, where the respective sector shares were lower, at 12.7 % and 11 %. SME growth is predicted to continue. The forecast for SME value added in 2016-2018 is an increase of 7.7 %. SME employment is also predicted to rise in the same period, by 1.7 %, resulting in the creation of roughly 12 500 new SME jobs by 2018. Croatia continues to perform below the EU average in this SBA policy area, with its overall performance down for most indicators. There were drops in the percentage of employed people with specialist ICT skills and in the percentage of businesses providing ICT skills training to their employees. One particularly interesting indicator concerns SMEs' online presence. While the percentage of SMEs selling online fell from 18.85 % in 2015 to 18.02 % in 2016 and the percentage of SMEs purchasing online dropped from 10.61 % in 2015 to 10.53 % in 2016, turnover from e-commerce increased during the same period. This suggests that while the number of SMEs selling/purchasing online dropped, the quality of those expanding their online presence improved, resulting in increased e-commerce turnover. (Retrieved from, June 2018, [2017 SBA Fact Sheet Croatia - European Commission - europa.eu](https://ec.europa.eu/economy_finance/files/2017_sba_fact_sheet_croatia))

Serbia made further progress in implementing the Small Business Act. Since 2008, Serbia has put in place policy measures addressing all SBA policy areas. Overall, Serbia continues to follow a positive trend, with a well-developed approach to SME policy. In general, the indicators used to assess SBA performance show close to average performance compared to EU peers. This is consistent with the level of economic development in Serbia and its recent growth rates. However, in some areas, progress in comparison with last year needs to be treated with caution. SBA indicators measuring access to finance show progress but they do not show the full picture in the financial markets, in particular for SMEs, which remain dependent on their own resources. Therefore, SMEs continue to find it difficult and expensive to access finance. Similarly, in the area of state aid and public procurement, there are not enough indicators to assess performance, which points to policy weaknesses in this field. Past SBA recommendations were pursued on a selective basis. However, in 2016, the ministry responsible for SMEs launched a major initiative — Year of Entrepreneurship — which saw more comprehensive efforts to improve the situation for SMEs. In particular, the amount of grants to boost the most desirable SME activities was increased. These grants targeted investment,

internationalisation and innovation. To improve the business environment, Serbia continued to implement its programme to combat the grey economy and started developing a comprehensive registry of administrative procedures, which will be later used as a basis for suggestions to simplify these same procedures. Action have been undertaken to improve access to finance and the number of SMEs which have access to banking and nonbanking financial instruments. However, the majority of SMEs still remain dependent on their own resources. IPA and COSME EU funds have been used to develop these new instruments, while the World Bank is working on optimising the functioning of the state-run Development Fund, which in the past invested heavily in failed public companies. Serbia's score for entrepreneurship shows that its policies in this area are comparable with policies of EU peers. During the reference period for the fact sheet, the government adopted the 'Proposal for the introduction of a dual education system in secondary vocational schools' and started preparations for the related law — expected to be adopted in 2017. It will support the development of practical skills for young people about to enter the labour market. The practical work experience is to be integrated into secondary education curricula, for qualifications profiles with duration of three or four years. Throughout 2016 and 2017, the government has provided financial support to Junior Achievement Serbia (JAS), the only accredited provider of entrepreneurship education services in Serbia in secondary schools. With the support and guidance of business volunteers from the local business community, the Junior Achievement Company Programme provides basic economic education for high school students. By organising and operating an actual company, students not only learn about how businesses function, they also learn about the structure of Serbia's market economy and the benefits it provides. In 2016, 220 schools participated in the JAS Programme, involving 3000 students with 150 companies being founded. Serbia's performance in this area has continued to be in line with the EU average and since 2008 this has been the second-best area in terms of progress. Also since 2008 the government's policy efforts have been focused on this SBA area where they addressed the main SBA recommendations. Some of the indicators are falling such as the percentage of SMEs introducing marketing or organisational innovations, which fell by more than 7 percentage points to 32.86 %. The same happened to sales of new-to-market and new-to-firm innovations (percentage of turnover) that fell by more than 4 percentage points. The percentage of innovating in-house SMEs also decrease. Both of the newly-introduced indicators, related to ICT skills, stood in line with their average EU levels. During the reference period no new significant measures were implemented. Although the Strategy for scientific and technological development for the 2016-2020 period 'Research for innovation' — was adopted over a year ago a concrete set of measures (Action Plan) is still missing (retrieved from, June 2018, [2017 SBA Fact Sheet Serbia - European Commission - europa.eu](https://ec.europa.eu/europa.eu))

1.2 Development and projects/incentives for development of crafts and enterprises and liaison with education

In Communication from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions entrepreneurship 2020 action plan reigniting the entrepreneurial spirit in Europe /* com/2012/0795 final */ (retrieved from, June 2018, <https://eur-lex.europa.eu>), action pillar 1 is entrepreneurial education and training to support growth and business creation. It is stated that education should be brought to life through practical experiential learning models and experience of real-world entrepreneurs. Defined entrepreneurial learning outcomes for all educators are needed, to introduce effective entrepreneurial learning methodologies into the classroom. Partnerships with businesses can ensure that education and training curricula are relevant to the real world. Education institutions should be encouraged to become more entrepreneurial in their wider approach, to ensure that they develop and live a culture of entrepreneurship and innovation through their missions, leadership, stakeholder engagement, curricula and learning outcomes.

Various programs support development of enterprises and make possible liaison of SME's and education, to present some:

COSME is the EU programme for the Competitiveness of Enterprises and SMEs, running from 2014 to 2020, and supports SMEs in the following areas: facilitating access to finance, supporting internationalisation and access to markets, creating an environment favourable to competitiveness, encouraging an entrepreneurial culture. COSME backs the implementation of the Entrepreneurship 2020 Action Plan through a wide range of activities. These include mobility exchanges, research, best practices diffusion and pilot projects in areas such as entrepreneurship education, mentoring or the development of guidance and support services for new and potential entrepreneurs, including young, women and senior entrepreneurs (Retrieved from, June 2018 https://ec.europa.eu/growth/smes/cosme_en).

Small- and Medium-sized Enterprises (SMEs) are encouraged to participate across Horizon 2020. Horizon 2020 introduced a new funding instrument specifically designed for innovative SMEs. The attractiveness of the instrument to many of the smaller states proves its accessibility. By coupling research and innovation, Horizon 2020 is helping to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation. Horizon 2020 is open to everyone, with a simple

structure that reduces red tape and time so participants can focus on what is really important. This approach makes sure new projects get off the ground quickly – and achieve results faster.

(Retrieved from, June 2018, <https://ec.europa.eu/programmes/horizon2020>).

Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. Key Action 2: Innovation and good practices has amongst its activities Sector Skills Alliances to tackle skills gap and ensure a better alignment of vocational education and training with labour market needs. There are opportunities to modernise VET, exchange knowledge and best practices, encourage working abroad, and increase the recognition of qualifications. (Retrieved from, June 2018, http://ec.europa.eu/programmes/erasmus-plus/node_en)

In order to contribute to the implementation of the flagship initiative “Innovation Union of the Europe 2020 Strategy” in the Danube Region countries, the programme pays specific attention to a number of innovation topics of broad relevance in the cooperation area such as eco-innovation, knowledge transfer, cluster policy, social innovation and skilled entrepreneurship including technological and non-technological innovation aspects. The social dimension in innovation (social innovation, educational aspects, and entrepreneurship skills) is given high importance. (Retrieved from, June 2018, <http://www.interreg-danube.eu>)

The number of support service providers for SMEs in Serbia was estimated to be about 500 by the European Union funded Improved SME Competitiveness and Innovation Project, with services from the public sector accounting for about a third of the total. The National Employment Service (NES), the RAS (previously National Agency for Regional Development (NARD), along with chamber organizations and rural development agencies, were the main promoters of SME development in the country (Assessment of financing needs of SMEs in the Western Balkans countries, retrieved from, June 2018,

http://www.eib.org/attachments/efs/assessment_of_financing_needs_of_smes_serbia_en.pdf).

The Innovation Fund, amounting to EUR 6 million provided by the EU’s Instrument for Pre-Accession Assistance, is the main government-sponsored start-up assistance program, though it does not receive any funding from the Serbian government. The fund provides capacity building services, small grants (EUR 8,000) to start-ups, and larger grants (up to EUR 300,000) to later-stage, revenue producing start-ups. Though 60% of the start-ups funded through the program belong to the information technology sector, all industries are eligible for the program, and technology hardware projects are also widely represented among grant recipients.

For all parts of Serbia to develop evenly, RAS has 16 accredited regional development agencies (ARPA) in its network, as follows: in Belgrade, Novi Sad, Subotica, Zrenjanin, Pančevo, Ruma, Požarevac, Loznica, Kragujevac, Zaječar, Užice, Kraljevo, Kruševac, Niš, Novi Pazar, Leskovac, and RAS is intensively cooperating with them in the implementation of the programs (Retrieved from, June 2018, www.ras.gov.rs)

In June 2017 Innovation fund renewed its two hallmark programs for the support to innovative entrepreneurs. Today, The Mini Grants Program, with grants of up to EUR 80,000, aims to stimulate the creation of innovative knowledge-based start-ups and/or spin-offs in the private sector by providing financing for development of innovative market-oriented technologies, products and services with significant commercial potential. It is designed to support the survival of companies during the critical phase of research and development and to allow Serbian entrepreneurs to grow effective business capacities through which they will launch their innovations on the market. The Matching Grants Program, with grants of up to EUR 300,000, is designed for enterprises that require significant financial resources for the implementation of the development cycle of technological innovation and to cover the high costs of the transfer of research into a commercially viable product. (Retrieved from, June 2018, <http://www.innovationfund.rs>).

Other notable start-up and equity finance support organizations include the Serbian Venture Network (SeVeN) and the Private Equity Association: SeVeN's main activity is organizing an annual forum and pitch competition that brings together start-ups and potential angel investors (120 investors attended the 2015 forum), as well as putting on smaller educational meet-ups for start-ups throughout the year; The Private Equity Association works to improve the investment readiness of SMEs, collaborating with chambers of commerce to organize seminars on topics such as financial reporting and governance. Support services from the public sector as well as from donors are concentrated in the cities of Belgrade, Nis, Kragujevac, and Novi Sad, with services outside of these regions being very limited (2–15 providers per region in the remaining 17 regions). Business planning, organizational management, HR services, marketing and public relations, and start-up advice are the most common services offered. EBRD provides financing to SMEs through targeted credit lines to banks and leasing companies, as well as a risk sharing mechanism for loans to rural businesses via a microfinance institution. EBRD also provides financing directly to Serbian agricultural businesses, but these investments benefit larger agricultural producers and processors. Through its Advice for Small Business program, EBRD also offers direct technical assistance to SMEs in the food and beverage, trade, retail distribution, construction, and engineering sectors by providing them with consulting services for a range of topics, including governance and process improvement. EFSE offers funding to

banks and a leasing for on-lending to MSMEs, with a total of EUR 120 million in MSME funding provided. The EFSE Development Facility provides technical assistance to partner financial institutions to develop operational capacities and professional management. EFSE has a special focus on microenterprise support, and has partnered with institutions such as Opportunity Bank in Serbia to help the organization reach MSMEs in rural areas. IFC provides funding to SMEs through credit lines to commercial banks and leasing companies, including lines specifically intended for agriculture and energy efficiency. Like EBRD, IFC also provides direct funding to agricultural and other large enterprises. IFC's technical assistance projects in Serbia target financial institution capacity building in energy efficiency lending and corporate governance, provide energy efficiency improvement advisory directly to businesses, help with agricultural business food safety capacity building, and work with the public sector to improve trade logistics and tax administration procedures. USAID's direct financial assistance to SMEs is limited to its support of Opportunity Bank, totalling USD 11.9 million. USAID also supports SME finance through its Business Enabling Project, which was effective in lobbying to improve the liquidity positions of leasing companies and speed up tax refund timelines for SMEs. Guarantees under USAID's Development Credit Authority program are not used in Serbia. Technical assistance to SMEs is provided primarily through USAID's Private Sector Development Project, which provides consulting and mentoring services to companies in the less developed southern regions with the aim of increasing sales and creating additional jobs. The Private Sector Development Project includes a special component for female entrepreneurship support. (Assessment of financing needs of SMEs in the Western Balkans countries retrieved from, June 2018, http://www.eib.org/attachments/efs/assessment_of_financing_needs_of_smes_serbia_en.pdf)

In the period 2014 – 2020 altogether 8,3 billion EUR were allocated for Croatia from the proceeds of the European Structural and Investment Funds – the European Regional Development Fund, the Cohesion Fund and the European Social Fund, and EUR 2.3 billion out of the proceeds of the European Agricultural Fund for Rural Development, the European Agricultural Guarantee Fund and the European Maritime and Fisheries Fund. Out of the 3.125 contracts funded from the Operational Program Competitiveness and Cohesion 2014-2020, 2.065 contracts were signed with entrepreneurs and craftsmen. Thanks to the great interest and willingness of entrepreneurs, 63 percent of the funds from that Operational Program were used. The funds are intended to increase competitiveness, develop new technologies and products and strengthen the position of SMEs on the domestic, but also European and world markets. Even though the state has so far promoted and subsidized entrepreneurship, the funds available to SMEs from EU funds are many times bigger and offer more

opportunities. In the Operational Program Competitiveness and Cohesion 2014-2020 so far following Calls were opened:

WWW vouchers for SMEs (15.200.000,00 HRK or 2 Mil EUR) has the aim to strengthen the market position and increase the competitiveness of SMEs through improved network marketing solutions to improve their market presence and visibility of their products and services as well as support for the development of information society in the Republic of Croatia. Improving the competitiveness and efficiency of SMEs through information and communication technologies (53.000.000,hrk OR 7,1 Mil EUR) has the aim to strengthen the market position, increase the competitiveness and efficiency of the SMEs operations by using information and communication technology as well as supporting the development of information society in the Republic of Croatia. The Call is co-financing project activities that include the development/acquisition/procurement of ICT business solutions designed to optimize business operations, business processes or production, and implement, adapt and integrate business solutions with the existing or new ICT systems. Internationalization of SMEs business (56.000.000 HRK or 7,5 Mil EUR) has the aim of to increase the Croatian economy's ability to participate in global markets and to increase the share of SMEs in total exports of goods and services by improving the conditions for their work in the international environment. Quality signs (7.500.000,00 HRK or 1 Mil EUR) has the aim to increase the quality of service and product quality recognition, thus ensuring the prerequisites for increasing revenue from sales, exports and overall competitiveness and, consequently, contributing to the creation of Croatian identity on the common and global market. Innovative vouchers for SMEs (50.000.000,00 HRK or 7 Mil EUR), entrepreneurs will be granted voucher support to provide expert support by scientific-research organizations in the form of contractual provision of services to SMEs for testing, demonstration activities, as well as use of expert technical knowledge for the needs of innovative processes and commercialization of innovation. The call is aimed at strengthening the capacity of SMEs for research, development and innovation through fostering cooperation with scientific research organizations to develop new products, services or processes, with emphasis on commercialization of products and services. Construction and equipping of SMEs production capacities (200 Mil HRK or 27 Mil EUR) helps to improve SMEs business development and the technological readiness of SMEs through initial investment in the construction and / or equipping of business units. The call aims to strengthen the regional competitiveness of SMEs through the development of identified strategic industry activities. The purpose of the Call is to improve business development and technological readiness of MSAs operating in identified eligible activities. Investments in SME capacities are encouraged, through initial investment in construction and / or equipping of business units. Increase the development of

new products and services that result from research and development activities (785 Mil HRK or 105 Mil EUR) has the aim to award state aid to research and development activities of the business sector with a view to developing new products, services, technologies and business process improvements and increasing their cooperation with scientific research institutions.

On the other side through the Operational Program Competitiveness and Cohesion 2014-2020 Croatia is developing and expanding its entrepreneurial support. The Funds offer finances for developing the infrastructure of entrepreneurial zones as well as development of services for SMEs offered by business support institutions. The biggest focus is however on the development of Centres of Competences (785 Mil HRK or 105 Mil EUR). The call is intended for the Centres of Competence (CEKOM), which are individual (networked) subjects guided by the needs of the industry, designed to support the capacity building of the business sector (mainly small and medium sized enterprises lacking their own R & D capacities) research and development (especially those focused on development and applied research and commercialization of results) in line with the thematic priority areas specified in the Strategy of Smart Specialization of the Republic of Croatia.

In order to facilitate SMEs the application to EU funds the Ministry of Regional Development and EU Funds have developed within the Operational Program Competitiveness and Cohesion 2014-2020 Program of ESIF Micro and Small Leases. These financial instruments help to mobilize additional public and/or private sources of funding for the purpose of addressing market failures. Given the current economic situation and the increasing scarcity of public resources, financial instruments are expected to play a more significant role in the future.

Next to the national funds, there is a range of EU programs in which Croatian SMEs and institutions can participate. These include among others EUROSTARS, EUREKA, HORIZON 2020 etc.

Slovenia performs in line with the EU average in this SBA area. Innovation processes in SMEs have benefited from a new strategic approach set out in the smart specialisation strategy, which became the main nationwide document for facilitating development, research and innovation in Slovenia. This new approach should lead to R&D policies being implemented more efficiently, as currently they are still very fragmented and thus less effective. Slovenia has no specific policies to stimulate the digitisation of businesses in general or e-commerce in particular and has not introduced any specific and targeted tax breaks for investment in digitisation. Investments in R&D also need to be further increased. In 2016 and the first quarter of 2017, significant progress was made in this SBA area, thanks to the implementation of several new policy measures to facilitate skills and innovation in SMEs:

A new public call for proposals to set up competence centres for human resources development in the priority areas of the smart specialisation strategy (*Kompetenčni centri za razvoj kadrov*) was published in October 2016 by the Slovenian Human Resources Development and Scholarship Fund. The aim of this measure is to improve the competences, productivity, creativity and innovativeness of employees and thus help make the industry more productive and competitive. The target is to support the establishment of at least 10 competence centres in the priority areas laid down in the smart specialisation strategy, cofinancing them in the amounts ranging from EUR 250 000 up to EUR 400 000.

The Law on apprenticeships lays down the basic rules, forms and methods of introducing apprenticeship into secondary vocational education system in Slovenia (*Uvajanje vajeništva v srednje poklicno izobraževanje*). The aims of this policy measure are to: (i) make it easier for students to transition into employment; (ii) boost the employment possibilities of young people; and (iii) better align educational programmes with the needs of the labour market. The first apprenticeship programmes will be tested in the 2017/2018 academic year in various secondary vocational programmes. It is expected that up to 200 students per academic year will join the apprenticeship programme.

In February 2016, a public call for proposals was launched to strengthen entrepreneurial skills and facilitating the flexible transition between education and the working environment in primary schools (*Krepitev kompetence podjetnosti in spodbujanje prožnega prehajanja med izobraževanjem in okoljem v osnovnih šolah*). The measure aimed at developing, testing and implementing a comprehensive model for strengthening entrepreneurial competences among pupils, teachers and other professionals in primary schools, including new didactic approaches and strategies and mechanisms for implementing the activities in primary schools. The measures and activities included in the model should provide pupils with a better understanding of the business environment by giving them the possibility to develop their business ideas, together with the business community, research institutions and NGOs. The target is to include 120 primary schools in the pilot implementation of the model.

In addition, three sector-specific policy measures on skills & innovation were launched by the Ministry of Economic Development and Technology in 2016, namely:

- support for development of new and innovative tourist products and services (*Podpora razvoju novih in inovativnih proizvodov*);

- incentives for the growth of SMEs in the wood-processing and usage sector (*Spodbude za rast MSP na področju rabe lesa*), aimed at facilitating SME growth in the targeted wood-processing and usage sector;

- establishment of a Competence Centre for the Development of Human Resources in the Wood-Processing Sector (*Vzpostavitev kompetenčnega centra za razvoj kadrov v lesarski industriji*). (Retrieved from, June 2018, **2017 SBA Fact Sheet , Slovenia**, Ref. Ares(2018)2717562 - 25/05/2018, Slovenia -2017 SBA fact sheet.pdf).

2. DESCRIPTIVE CONCLUSIONS AND IMPLICATIONS - EMPIRICALLY SUPPORTED BY THE OBTAINED DATA SET AND SUPPORT TO MASTER SCHOOL MODEL DEVELOPMENT

SMEs face particular challenges in engaging with WBL, given their smaller workforces, limited resources and lack of familiarity with the WBL regulatory and administrative framework. Their engagement can be encouraged by intermediary organisations that offer expertise, information and help to support and motivate employers participating in WBL. Intermediary bodies can relieve employers from the administrative burdens that are often associated with different forms of WBL provision and assist them in locating information, for example advice on tax incentives to train young people. Intermediary organisations can, for example, provide advice to SMEs on curricula or on how to organise different forms of WBL. Countries should therefore support networks of companies and empower intermediary bodies such as Chambers to facilitate high-quality WBL, notably involving SMEs.

2.1 What do entrepreneurs say?

In many forms of WBL, learners are required to take responsibility for identifying and securing work placements. In preparing learners for their transition to the workplace, there are key issues to consider in relation to how learners are being prepared, particularly in terms of acquiring and developing the skills demanded by employers today. This is particularly important given that employers often complain about the level of basic skills and key competences learners have when they enter the workplace. As such, ensuring appropriate selection criteria is in place provides one such approach to ensure that learners are allocated to placements that give them the potential to grow and develop. Placing dedicated personnel in charge of recruitment/placement procedures, though resource intensive is another approach to ensure learners are placed appropriately. A key issue in relation to finding suitable placements for learners is the extent to which the placement matches the expectations from the perspective of the learner and the employer. Matching expectations is important so as to avoid a negative learning experience for the learner and to avoid

situations where employers feel they are not able to support the needs of the learner or are no longer willing to provide work placements in the future. With respect to placements offered by SMEs, a number of barriers arise, in particular that:

- a) SMEs may not have the structures in place to take on apprentices;
- b) The value proposition is not always clear for the SMEs;
- c) Educational Institutions are not always suited to mass-market their supply of students for placements, and to operate them at scale with large numbers of SMEs.

Results of the survey conducted as a part of the project show that over 80% of companies that participated are SME's. In Serbia 47% of them work mainly on national market, in Slovenia equally on national and outside Slovenia market - 37% each, while in Croatia they mostly do their business locally (80%). Business systems of SME's that participated in survey are in conformance with some management system in 80% in Serbia, only 6% in Croatia and 54% in Slovenia (ISO 9001, ISO 14001, CE mark etc.).

In companies in Serbia most of the employees are with secondary education and/or VET (54%), and mainly from 1-10 years of (48%). In Croatia most of the employees are with HVET (upper secondary education, specialized VET) - 55%, and in 46% of cases they have 10-20 years of work experience, while in Slovenia most of employees in companies that participated in survey, have secondary education and/or VET (38%) and they have 10-20 years of work experience mostly (37%).

Most of the companies in the survey do not have specific organizational units that are involved in human resources (Serbia 79%, Croatia 89%, Slovenia 82%), they do not have specific HR development plans mostly (Serbia 62%, Croatia 69%, Slovenia 86%), nor do they do specific training needs surveys (Serbia 59%, Croatia 56%, Slovenia 75%). Such results are understandable since participants in the survey are mainly SME's and entrepreneurs.

Regardless the fact that there are no specific organizational units for human resources or no training needs surveys, all companies expressed their needs for human resources development. Companies that participated in project survey mainly lack employees with specific competencies for work (Serbia 61%, Croatia 81%, Slovenia 62%) and in most of the percentage they can not be found on any labour market (Serbia 52%, Croatia 71%, Slovenia 64%), though all SME's plan in next three years to employ new workers (Serbia 93%, Croatia 82%, Slovenia 96%), and the plan is to employ up to 5 new workers (Serbia 69%, Croatia 92%, Slovenia 76%).

As main reasons why workers with required competencies can not be found on the labour markets, entrepreneurs state:

- In the most percentage in Serbia – underdevelopment of industry sector of enterprise, workers leave market and work abroad, lack of possibilities for practice and experience, education system that doesn't teach young workers to work, deficiency of qualifications.
- In the most percentage in Croatia – no knowledge that companies need, no educated labour force and interest for profession, decreased number of available qualified workers, obsolete school programs, not enough practice, no learning motivation, workers not interested to work, young people that come from schools are not ready for labour market.
- In the most percentage in Slovenia – deficiency of practice for non monitored work in production, no interest in industry sector, lack of workers in labour market and VET programs in education system, workers not interested to work.

What companies need is:

- Serbia – welders, CNC machine operators and programmers, repairers, toolmakers, turners
- Croatia – welders, repairers, various craftsman.
- Slovenia – CNC machine operators and programmers, welders, mechanics, turners and toolmakers.

Qualifications that are assessed as most important are categorized into 5 groups: theoretical knowledge, practical competencies, licences, motivation for further learning and improvement in the field and innovations. Everywhere practical competencies and motivation for further learning and improvement in the field are assessed as the most important (Serbia 27% and 22%, Croatia 27% and 26% and Slovenia equally in both categories 26%). It can be observed from the results that licences are not all that important to companies (Serbia only 14%, Croatia only 9% and Slovenia only 8%). Needs for competencies will be satisfied mainly through internal trainings (Serbia 49%, Croatia 54% and Slovenia 50%).

It is estimated in Serbia, by companies, that today's needs for knowledge and skills are in the following areas: metalworking professions, scrapers, construction millwrights, knowledges in the field of machine construction, metal processing, welding, assemblage, CNC machine experienced workers, light metal casting workers, management skills and organization and other transversal skills, machine construction workers, programming - 3D models and 2D drawings in CNC programming, CNC programming experts, technical drawing, valve mounting, quality control experts, process monitoring skills, sales skills, connecting cables workers, assembling elements skills, as well as computer literacy and foreign language skills.

Over the next three years they will need as follows: machining, CNC programming and robotics, welding, working on CNC machines and metalworking, light metal casting, machine construction and programming, as well as competencies in the areas of management, quality control, information literacy and foreign language knowledge, process management, and a constant desire for learning.

In Croatia companies estimated following skills and knowledges as needed today: knowledge of electrical engineering, mechanics, hydraulics, knowledge of pneumatics and materials technology, construction of steel constructions, construction and installation of building materials elements, knowledge of (various) crafts, foreign languages (English and German), computer work, and transversal skills such as communication, independence in work, resourcefulness and innovation.

In the course of three years, they will need knowledge, skills and experience in the field of mechanics, hydraulics, tire and material knowledge, steel construction, fabrication and assembly, craftsmanship and transversal skills.

In Slovenia, companies estimate that today they need knowledge, skills and experience in the field of machine handling, metal forming, welding, CNC machines, knowledge of materials and technology, tool making, construction millwright, knowledge of technical documentation and reliability, precision, innovativeness, self-control, programming.

It is estimated that in the next three years the following knowledge, skills and experience will be necessary: independent understanding of technical drawings, welding, machine handling, metal forming, programming, CNC work and CNC programming, toolmakers, transversal skills - dedication, flexibility, responsibility, knowledge foreign languages, planning and guidance.

The needs for competencies are mainly to be satisfied by organizing and conducting internal trainings (Serbia 49%, Croatia 54% and Slovenia 50%) and they are ready to pay workers in average (gross earning amounts shown for all) 69.800 RSD (app. 600,-EUR) in Serbia, 7.748 HRK (app 1.000,- EUR) in Croatia, and on average 1.012 EUR in Slovenia.

In Serbia most of the companies that participated in survey did not cooperate with educational institutions as a way to suit needs for competent workforce (54%), whilst in Croatia and Slovenia cooperation is much higher (74% in Croatia and 71% in Slovenia). In all three countries cooperation was mainly through engagement of companies in conducting professional practice (Serbia 55%, Croatia 83%, and Slovenia 63%).

Main obstacles for more efficient cooperation with educational institutions are estimated in lack of quality candidates that come from education system (motivation to work, lack of theoretical knowledges etc.) - 49% in Serbia, 37% in Croatia and 35% in Slovenia. It is possible that the reason is what is estimated as a second obstacle – compatibility of education programs and plans, curriculum, with companies business needs (Serbia 25%, Croatia 28%, and Slovenia 21%). Not being able to influence on curriculum and content of professional practice is third obstacle (Serbia 14%, Croatia 19%, Slovenia 16% as well as lack of mentors); in Serbia and Croatia lack of mentors is only on 5%. Also, as an obstacle in Slovenia, a legal procedure is estimated in 12% of cases.

Entrepreneurs suggest similar activities that could contribute to improvement of efficiency in cooperation with education sector:

Croatia	Serbia	Slovenia
<ul style="list-style-type: none"> • Provide incentives for retraining • Provide revisions of curriculums • More impact and longer professional practices • Modernization of theoretical and practical work with students and modernization of curriculums • Expert gatherings with open discussions • The presence of masters in practice • Student scholarship • More practice hours 	<ul style="list-style-type: none"> • More and longer professional practices • Improve cooperation between business and education sectors • Development of education profiles that business need • Constant training/education of workets • Harmonization of theoretical and practical education (20% of theory and 80% of practice) • More frequent conversing with employers about their needs for workers • Increasing the offer of education sector for cooperation with educational institutions 	<ul style="list-style-type: none"> • Co-financing by the state • More practice and practical training • Adapting the program to the demands of the profession and the demands of businessmen • Training mentors • Theoretical and practical training of personnel • Harmonizing the needs of businesses and educational institutions • Better cooperation between business and education sectors

2.2 Needs for masters (level 5) in companies

To ensure the best match of skills, people should acquire a combination of transversal core skills alongside the specific skills needed for a job and then develop their skills further throughout life. This also requires employers to better use the skills and talents of their staff and to stimulate people's development. This calls for a rebalancing of the various sectors of education and training in order to make sure that sufficient resources, both public and private, are allocated to the upskilling and reskilling taking place beyond initial education and training, to support the multiple transitions in the labour market that people will be facing.

Considering that economically 'active' adults spend a large share of their time in the workplace, it can also be an important learning environment. When asking workers which skills are most important or useful at work and where they learnt them, the answer will mostly often be 'at work' rather than "in an educational institution". Through learners' involvement in actual production, resolving challenges

and through their formal and informal interaction with colleagues and /or clients they are stimulated to develop not only job-related skills, but also basic and transversal competences that make people more resilient to changes in their career and life.

Medium and high-skilled individuals benefit from adult learning in the workplace because, for experienced workers, the competences they require will change over time due to changes in work practices and as the speed (and quality) of their work improves. This means they will also need to develop continuously, essentially reskilling or even upskilling themselves. Additionally, adult learning in the workplace can stimulate medium- and high-skilled workers to progress beyond competence into proficiency (i.e. from novice to expert) through acquiring 'tacit knowledge', which can appear in three forms: situational understanding, (increasingly) intuitive decision-making and routine procedures.

The value of adult learning in the workplace for employers.

Employers make profit from providing opportunities for adult learning in the workplace as well, with their main benefits across three dimensions: innovation, benefits to the workforce and economic. Innovation: Skills shortages or gaps can delay the development of new products and/or services. Adult learning in the workplace can be an effective strategy to address the problem of inadequate skills. Because of the increased skills and competences of the workforce, a firm's innovation performance can be increased, which will in turn benefit their economic competitiveness with other firms. Motivated workforce: As mentioned above, adult learning in the workplace can break the monotony of work, while allowing workers to be trainers or mentors could stimulate their self-confidence and their commitment to the company. Workers feeling a sense of loyalty or commitment are more likely to stay with the same employer because they see better opportunities for personal and professional development. For the company, this means a higher rate of staff retention. Additionally, participation in adult learning in the workplace can benefit labour market signalling in the recruitment process by serving as a signalling 'device' other than a formal qualification. For employers, it means that participants are indicating they are job-ready and their work-placement schemes can be seen as 'suitability testing' of potential employees, improving the skills matching overall. Economic: Adult learning in the workplace helps employees adapt to new processes or machinery, reduces breakdown rates (of machinery), reduce incidents at work, speeds up the induction of newly hired personnel, facilitates direct assessments of the training's impact on functioning of the enterprise and allows for combining sustained production with the promotion of training and professional development of employees. This increase in their capacities, combined with a higher workforce motivation and an increased innovation performance, leads to an increase in

productivity and thus an increase in economic benefit. Additionally, staff retention (fewer workers leaving) will reduce expenses as there is less need for new hiring and training employees. Collaboration between employers and work-based learning (WBL) delivery organisations to provide a steady supply of potential employees can also lower recruitment costs (Promoting adult learning in the workplace, Final report of the ET 2020 Working Group 2016 – 2018 on Adult Learning, European commission, 2018).

In Serbia it is important to fully implement activities from the Action plan for implementation of the strategy for development of education in the Republic of Serbia by the year 2020, (retrieved from, June 2018, <https://erasmusplus.rs/wp-content/uploads/2015/05/Action-plan.doc>), specifically activity PU-SV02 Introduction of craft education. Activities include: establishing the crafts education system (actors, institutions, legal framework, funding); development of individual curricula of crafts education and master craftsman exam; certification and accreditation of master craftsman – instructor. Expected outcomes are system of vocational / crafts education aligned with the market needs established; master craftsman accreditation system established. Today specialization and master craftsman education is realized in various VET schools, but systematization as per action plan is needed.

In Croatia in Needs Analysis Report – Croatia, March 2017, it is shown that many of the respondents (176) think that apprenticeship is useful practice, also stating that apprenticeship was necessary, absolutely / extremely / very useful and indispensable. Some of the respondents associated the term “apprenticeship” with training for crafts and stated that apprenticeship is the most important part of crafts education, because apprentices learn the craft from older, more experienced and more skilled Master Craftsmen, as “apprenticeship” in Croatian (“naukovanje”) means “to study the craft”. They think that, without apprenticeship and without practice, there will be no future Master Craftsmen and that apprenticeship is the only right way to train a future employee and potential craftsman. However, they also said that our system does not provide apprenticeship in the true sense of the word and the main obstacles for participation were: lack of interest, motivation, gratitude and independence among students, as well as their inadequate behaviour. Furthermore, they state that the students lack knowledge, have bad manners, are apathetic, indifferent, immature, and impolite and have no work ethic (Retrieved from, June 2018, https://supportapprenticeships.eu/wp-content/uploads/2016/12/EP4A_Needs_Analysis_Report_HOK_final_2017-03-20_HR-EN.pdf).

The master's exam is the highest level of education in craft's professions in which one acquire professional qualification and title of master craftsmen. After successful passing of master's exam, master craftsmen acquire the 5th level according to the Croatian Qualifications Framework (CroQF)

which is associated with the same level of education in European Qualifications Framework (EQF) and thus provides competitiveness and mobility on the European labour market. The master's exam is a state recognized exam, and master Diploma is a document that is proof of expertise and quality and will open the possibility for further career advancement, in the workplace, opening company-craft, in practical work exercises, apprenticeship and greater competitiveness in the entrepreneurship (Retrieved from, June 2018, <http://www.projectshine.eu/wp-content/uploads/2016/09/P7-Croatia.pdf>).

In Slovenia unemployment among young people is a problem that is also encounter across Europe. One of the answers to the question why is that young people do not recognize the opportunities in the labour market because they do not have skills in employing profiles, they do not opt for a career in professions that were once considered to be heavy, "dirty "professions, because they have a negative calling for professions that are considered as difficult and difficult to work with, and where it is assessed that the payment is not appropriate. It is necessary to identify and develop vocational education and training opportunities in partnership with the local community, educational institutions, businesses and social partners, focusing on the needs for higher education, education and training at sectoral level through a dual system of education (workplace learning) recognize these professions as attractive professions, with a master's school they will be more easily promoted, and they will be enabled to continue their education at higher education level. Interested parties are convinced that young people with completed mastering schools will have more employment opportunities, as they will gain practical skills that will enable them to participate independently in the work process and a positive impact on businesses.

SOURCES:

1. [2017 SBA Fact Sheet Croatia - European Commission - europa.eu](#)
2. [2017 SBA Fact Sheet Serbia - European Commission - europa.eu](#)
3. [2017 SBA Fact Sheet Slovenia - European Commission - Europa EU](#)
4. Action Plan For Implementation Of The Strategy For Development Of Education In The Republic Of Serbia By The Year 2020, retrieved from, June 2018, <https://erasmusplus.rs/wp-content/uploads/2015/05/Action-plan.doc>
5. Assessment of financing needs of SMEs in the Western Balkans countries http://www.eib.org/attachments/efs/assessment_of_financing_needs_of_smes_serbia_en.pdf.
6. Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions Entrepreneurship 2020 Action Plan Reigniting the entrepreneurial spirit in Europe /* COM/2012/0795 final */ <https://eur-lex.europa.eu>
7. http://ec.europa.eu/programmes/erasmus-plus/node_en
8. <http://www.interreg-danube.eu>
9. <http://www.oecd.org/eco/outlook/economic-forecast-summary-slovenia-oecd-economic-outlook.pdf>
10. <http://www.projectshine.eu/wp-content/uploads/2016/09/P7-Croatia.pdf>.
11. <http://www.worldbank.org/en/country/croatia/overview>
12. <http://www.worldbank.org/en/country/serbia/overview>
13. http://zacorda.hr/wp-content/uploads/2017/11/glasnik_29-2017.pdf)
14. https://ec.europa.eu/growth/smes/cosme_en
15. <https://ec.europa.eu/programmes/horizon2020>.
16. <https://www.rra-posavje.si/en/posavje-region.html>
17. Needs Analysis Report – Croatia, march 2017, https://supportapprenticeships.eu/wp-content/uploads/2016/12/EP4A_Needs_Analysis_Report_HOK_final_2017-03-20_HR-EN.pdf
18. Promoting adult learning in the workplace, Final report of the ET 2020 Working Group 2016 – 2018 on Adult Learning, European commission, 2018

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