13 Digital society (Dimension 10)

The six Western Balkan economies (WB6) have long recognised the significance of the digital economy and society for strengthening ties and co-operation within the region and increasing convergence with the European Union. This chapter reviews their progress through five sub-dimensions: 1) access, which explores government policies and initiatives to enable network infrastructure investment and broadband services take-up and to increase data accessibility; 2) use, which asks whether governments have planned and implemented programmes to develop a user-centric digital government and to help businesses achieve a digital transformation; 3) skills, which examines whether governments are implementing policies to nurture a digitally skilled workforce and to support the growing ICT sector to underpin the development of the digital economy; 4) society, which asks whether governments have planned and implemented programmes to reduce the digital divide and create an inclusive society through digital technologies; and 5) trust, which examines the economies' frameworks and how they are being implemented to protect data and privacy, build trust in e-commerce and ensure cybersecurity through effective digital risk management systems. Each sub-dimension section makes specific recommendations for increasing the capacity and efficiency of systems for developing the digital society in the Western Balkans.

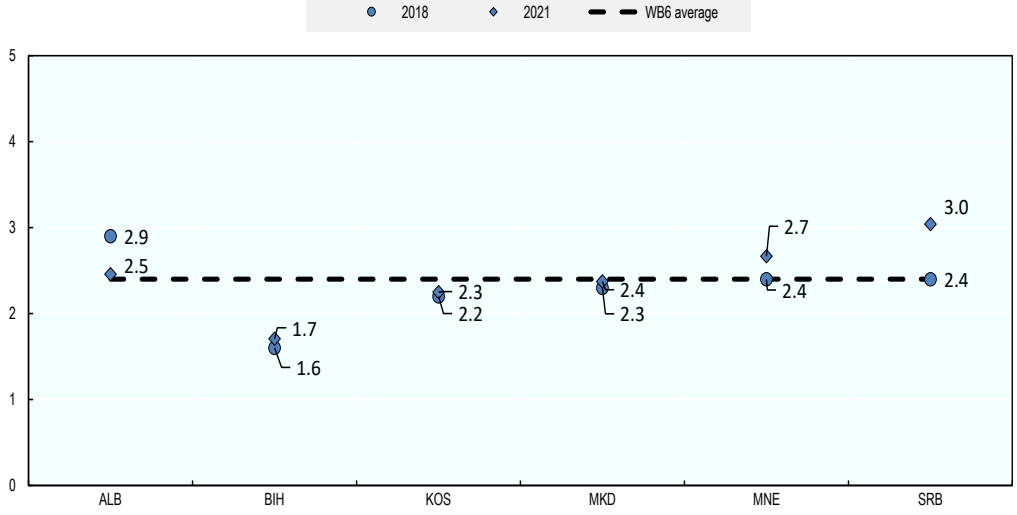
Key findings

- **Albania, Kosovo, North Macedonia, Montenegro and Serbia have put together economy-wide broadband plans and significant donor financing to develop rural broadband infrastructure**. These donor-supported projects promise to connect every household and every public building with high-speed Internet, even in the most remote areas, in the next two to four years. Moreover, these five economies are making legal and regulatory reforms to enable private sector investments and cost reduction in network deployment.
- **All the WB6 governments are in the process of transforming their public administration into a user-centric public service through digital technologies, but progress has been stronger in Albania, Serbia, Montenegro and North Macedonia**. The economies are also making progress in promoting public sector data accessibility and transparency. However, the digital literacy of the population in some WB6 economies is still low (Albania, Bosnia and Herzegovina, Kosovo, and North Macedonia), increasing the risk of a growing digital divide as over-the-counter services are replaced with online services.
- **All the economies recognise digital skills as a key competence in their education policies, but only Serbia has adopted a Digital Skills Strategy to close the skills gap**. Their governments have incorporated information technology (IT) subjects in education and training systems, but they are not co-operating sufficiently with the industry on curricula design. The COVID-19 crisis has exposed shortcomings in schools' information and communication (ICT) equipment, distance-learning platforms and IT training for teachers. Some of the WB governments (Kosovo, North Macedonia and Serbia) have responded quickly to improve the situation, but more efforts are needed.
- **All WB6 economies, except Serbia, provide insufficient support for business digitalisation and ICT sector growth**. While all the governments have implemented some legal reforms to improve e-commerce and e-business frameworks, only Serbia has implemented effective programmes to promote e-commerce and support the IT industry.
- **All the economies have legal frameworks in place for data protection and privacy, but enforcement is weak**. Although Kosovo, North Macedonia and Serbia have improved their alignment with the European Union's General Data Protection Regulation (GDPR), the WB economies have not ensured sufficient resources and executive power to the competent authorities to implement the framework, build public sector capacities and enforce compliance.
- **The WB6 economies now include measures to protect consumers using e-commerce in their legislation, but their legal frameworks are underdeveloped and opportunities for consumer education are limited**. The competent authorities for consumer protection in the WB6 do not sufficiently supervise and report on e-commerce. Only Serbia is implementing an operational programme for online consumer protection that advises citizens on their rights in e-commerce and how to exercise them.
- **All the WB6 economies are gradually aligning with the EU cybersecurity framework, but insufficient budgetary allocations continue to slow down progress**. All of the economies except Bosnia and Herzegovina have a cybersecurity strategy in place and an economy-wide computer emergency response team (CERT), but lack sufficient human and financial resources for implementation. There are few activities to raise awareness of digital security risks in the public and private sector.

Comparison with the 2018 assessment

Since the last assessment, Serbia and Montenegro have made progress on developing the digital economy and society (Figure 13.1). Kosovo and North Macedonia have not made any notable improvement between 2018 and 2021. Bosnia and Herzegovina's score is essentially unchanged, but still the lowest of all the assessed economies. Albania's overall score has decreased slightly since 2018, mainly due to an observed slowdown in the trust sub-dimension, in ICT sector support and private sector ICT adoption, but it is still above the WB6 average.

Figure 13.1. Overall scores for digital society dimension (2018 and 2021)



Note: Scores for 2021 are not directly comparable to the 2018 scores due to the addition/removal of relevant qualitative indicators. Therefore, changes in the scores may reflect the change in methodology more than actual changes to policy. The reader should focus on the narrative parts of the report to compare performance over time. See the Assessment methodology and process chapter for information on the assessment methodology.

Implementation of the Competitiveness Outlook 2018 recommendations

The previous assessment – the 2018 Competitiveness Outlook (OECD, 2018[1]) – made several recommendations to the WB6 economies for accelerating the implementation of their digital society policies (Table 13.1). Some progress has been made in introducing e-learning platforms and providing computers for students, mainly as a response to the COVID-19 crisis. However, low availability of high-speed Internet connections in schools and limited IT training for teachers remain key impediments to digital skills development. The skills gap continues to impact the labour market, deter business digitalisation, and slow down ICT sector growth. Progress has been strongest in reforming e-commerce frameworks, but support for digitalisation of small and medium-sized enterprises (SMEs) is still insufficient. Improvement has been more incremental in expanding broadband infrastructure and developing e-services for citizens, and support to allow underprivileged groups to benefit from the digital economy is weak. Monitoring and evaluation of digital inclusion is still underdeveloped. Although alignment of data protection frameworks with EU regulations is progressing, implementation is slow, while public sector capacities are still limited.

Table 13.1. Implementation of the CO 2018 policy recommendations: Digital society

Competitiveness Outlook 2021		
2018 Policy recommendations	**Main developments during the assessment period**	**Regional progress status**
Enhance the use of ICT for teaching and learning, as well as for developing e-skills for students and professionals.	• There is low use of ICTs in education and teachers are poorly-trained or tech-shy. • North Macedonia is implementing a massive teachers' training programme to enhance digital competencies for 25 000 teachers. • The skills gap is still large and co-ordination with the labour market in curricula design is limited. • The COVID-19 crisis forced WB governments to introduce distance learning tools for all education levels. Kosovo and Republika Srpska (RS) provided laptops to underprivileged students, Serbia and North Macedonia introduced learning management systems. • Rural broadband connectivity projects have been launched in all WB economies except Bosnia and Herzegovina. The "Connected Schools" project in Serbia will connect every school in the coming years. • Montenegro is the only WB economy that adopted a Digital Competence Framework in 2020 and is approaching the EU average computer-to-student ratio. • Serbia is the only economy with a Digital Skills Strategy • Serbia and Kosovo are implementing widespread digital skill training for the unemployed and women.	Moderate
Prioritise the inclusion of underprivileged groups in digital strategies.	• All WB6 economies except Bosnia and Herzegovina have adopted e-accessibility requirements for public sector websites, but implementation is limited. • Digital government strategies promote replacing over-the-counter services with e-services, but only Albania provides hands-on support for e-applications to citizens • Digital agendas and education strategies consider underprivileged groups in principle, but limited activities are funded. • Broadband development policies and programmes promise to connect every household and public building in remote areas, but are still in the initial phase.	Limited
Take steps to systematically respect privacy and data protection (PDP), especially in social media.	• Only three economies (Kosovo, North Macedonia and Serbia) have updated their PDP frameworks to align with the GDPR, but regulations and implementation are still pending. • PDP authorities continue to suffer from understaffing and challenges to their executive power and capacity to enforce the framework in the majority of the economies. • Limited resources (or none) hinder public sector capacity-building activities on data protection and privacy.	Limited
Promote the adoption of digital technology by SMEs.	• Serbia and Montenegro are the only economies implementing programmes for digitalising SMEs, but Serbia's is having more impact. • Only three economies (Montenegro, North Macedonia and Serbia) and the RS have updated their e-commerce frameworks. • Some tax relief schemes are in place for purchasing software/hardware in Kosovo, North Macedonia and Serbia.	Limited

Introduction

Digital technologies and large-scale data flows fundamentally change how people live and work, interact with one another, participate in the economy, and engage with the government (OECD, 2019[2]). Digital society policies promote the exploitation of opportunities offered by digitalisation and are cross-cutting and diverse by nature. The variety of digital technologies already used in production, or coming in the near future (e.g., the Internet of Things and advanced robotics, industrial biotechnology, 3D printing, new materials and nanotechnology), are bringing about the "next production revolution". And as they transform

production and distribution of goods and services, they have far-reaching consequences for productivity, skills, income distribution, well-being and the environment (OECD, 2017[3]).

The WB6 have long recognised the significance of the digital economy and society for the region, for strengthening ties and co-operation within the region and increasing convergence with the European Union (EU) – ultimately making the Western Balkans fit for the Digital Age. The EU is supporting these efforts by including the Digital Agenda for the Western Balkans as one of the flagships of its strategy for the WB6 (European Commission, 2018[4]). The agenda describes the joint venture between the European Commission and the six Western Balkan economies to invest in broadband connectivity (i.e. deploying broadband infrastructure across the region through a total of EUR 30 million in EU grants under the Western Balkan Investment Framework); increase cybersecurity, trust and the digitalisation of industry; strengthen the digital economy and society; and boost research and innovation (European Commission, 2018[5]).

More recently, the leaders of the WB6 endorsed the Common Regional Market (CRM) 2021-2024 Action Plan (AP) at the Berlin Process Summit on 10 November 2020 in Sofia. This action plan is to be implemented by the end of 2024 and includes commitments to implement actions in the priority Regional Digital Area. This will become the region's steppingstone for its integration into the pan-European digital area. But as the European Commission is determined to make this decade Europe's "Digital Decade", setting ambitious targets for 2030 to empower businesses and people in a human-centred, sustainable and more prosperous digital future, the WB6 need to accelerate their efforts if they are to catch up, perhaps more than in any other policy domain, to seize the opportunities lying ahead (European Commission, 2021[6]).

This policy domain spans from electronic communications and broadband infrastructure to digital security, and from digitalisation of public administration and services, education, and businesses, to the empowerment of citizens with digital skills and the promotion of the ICT sector to enable innovation and employment opportunities. As digital trends penetrate every policy domain to some extent, the digital society chapter links with almost every other chapter. The closest links are with the following chapter themes:

- **Chapter 10. Education policy** promotes digital skills development and the integration of digital technologies for enhanced teaching and learning at all levels of the education system. It also exploits and depends on information systems and digital tools to provide synchronous (live) and asynchronous (recorded) online learning and life-long learning opportunities. Education policy can shape the outcomes of the digital transformation and ensure that benefits are equally shared among and within countries' populations (OECD, 2019[7]).
- **Chapter 11. Employment policy** seeks to minimise the gap between skills developed during education and those demanded by employers. The digital economy adds another consideration for employment policy makers, as digital skills, on top of any other expertise needed for a job, can help workers easily adapt to a digitalised workplace. Workers without these skills are most likely to bear the costs of digital transformation (OECD, 2019[7]). In the near future, 90% of jobs will require some level of digital skills (European Commission, 2016[8]).
- **Chapter 12. Science, technology and innovation** drive growth and digitalisation is the most significant vector of innovation in firms, science, and governments. In 2015, at the OECD Ministerial Meeting in Daejeon (Korea), the ministers from OECD countries and partner economies recognised that digital technologies are revolutionising science, technology and innovation (STI) (OECD, 2020[9]). But the digitalisation of STI creates short- and long-term policy challenges, creating the need to align innovation policies with digital society policies.
- **Chapter 19. Anti-corruption policy** is strongly linked to the process of digitalising public administration as it enhances transparency and accountability (OECD, 2019[2]). Open data policies can allow for increased public engagement and improve public governance.

Assessment framework

Structure

This chapter assesses digital society policies in the WB6 through five broad sub-dimensions:

1. **Sub-dimension 10.1: Access** assesses the implementation of high-quality broadband infrastructure and the respective policy framework; analyses whether a regulatory framework is in place to ensure a level playing field in the ICT sector to promote competition and infrastructure investments; and examines whether a framework for data accessibility is in place.
2. **Sub-dimension 10.2: Use** analyses digital government policy development and implementation to assess the digital transformation of governments and the public sector. It also examines private sector ICT adoption to assess how policies promote the use of digital technologies as a growth enabler in firms.
3. **Sub-dimension 10.3: Jobs** explores how digital skills for students are promoted to equip them to benefit from digitalisation and contribute to the digital economy. It also examines whether a policy framework for digital skills for adults is in place and supports lifelong learning systems effectively and overall labour market adaptability. It measures the coherence of policies for ICT sector promotion, their implementation and their outcomes.
4. **Sub-dimension 10.4: Society** evaluates whether a digital inclusion framework has been adopted to overcome the exclusion of socio-economically marginalised groups. It also assesses if targeted policy actions have been implemented and monitored and adjusted in order to adapt technological developments and their impact on socio-economic groups.
5. **Sub-dimension 10.5: Trust** looks at whether the policy framework for privacy protection is based on a robust regulatory and enforcement framework that sufficiently adapts to ever-evolving threats to personal privacy. It also assesses whether a legislative and institutional framework is in place to protect consumers in e-commerce and examines whether an economy-wide framework for digital security risk management has been adopted and implemented to mitigate risks and increase trust in the digital environment, thus fostering the uptake of digital services.

All five sub-dimensions are based on the OECD's Going Digital Integrated Policy Framework (see Box 13.1). The assessment was carried out by collecting qualitative data with the help of questionnaires filled out by governments, as well as face-to-face interviews undertaken with relevant non-government stakeholders. Alongside these qualitative inputs, quantitative data on certain indicators – provided by the economies' statistical offices, relevant ministries and agencies, and other databases – formed an integral part of this assessment. Figure 13.2 shows how sub-dimensions and their indicators that make up the digital society dimension assessment framework. For more information on the methodology, see the Assessment methodology and process chapter.

Figure 13.2. Digital society dimension assessment framework

Digital society dimension				
Outcome indicators 1. Fixed broadband penetration 2. Percentage of individuals with basic or above basic overall digital skills 3. ICT task intensive jobs as % of total employment				
Sub-dimension 10.1 Access	**Sub-dimension 10.2** Use	**Sub-dimension 10.3** Jobs	**Sub-dimension 10.4** Society	**Sub-dimension 10.5** Trust
Qualitative indicators 1. Broadband infrastructure 2. Regulatory policy framework 3. Data accessibility	**Qualitative indicators** 4. Digital government 5. Private sector ICT adoption	**Qualitative indicators** 6. Digital skills for students 7. Digital skills for adults 8. ICT sector promotion	**Qualitative indicators** 9. Digital inclusion policy	**Qualitative indicators** 10. Privacy protections 11. Consumer protection in e-commerce 12. Digital security risk management
Quantitative indicators 1. Fibre broadband connections per 100 inhabitants. 2. Mobile broadband connections per 100 inhabitants 3. Households with computer access at home 4. Households with Internet access at home	**Quantitative indicators** 4. Internet users as a share of individuals 5. Share of firms making e-commerce sales in past 12 months 6. Share of individuals using the Internet to connect with public authorities	**Quantitative indicators** 7. Computer-to-student ratio 8. Schools connected to the Internet 9. Enterprises that provided ICT training to their personnel	**Quantitative indicators** 10. Households without Internet at home due to lack of skills 11. Households without Internet access at home due to high access costs	**Quantitative indicators** 12. Enterprises that defined or reviewed their ICT security policy in the last 24 months
OECD Instruments *Going Digital Integrated Policy Framework* Policy dimension "Access"	**OECD Instruments** *Going Digital Integrated Policy Framework* Policy dimension "Use"	**OECD Instruments** *Going Digital Integrated Policy Framework* Policy dimension "Jobs"	**OECD Instruments** *Going Digital Integrated Policy Framework* Policy dimension "Society"	**OECD Instruments** *Going Digital Integrated Policy Framework* Policy dimension "Trust"

The CRM Action Plan (mentioned above) is made up of targeted actions in four key areas: 1) a regional trade area; 2) a regional investment area; 3) a regional digital area; and 4) a regional industrial and innovation area.

In the regional digital area, the WB6 economies commit to closely align rules and regulations with the core principles governing the pan-European digital area by providing broadband access to all, aligning with EU Digital Single Market, reducing roaming costs, promoting digital upskilling, and reskilling, improving data protection, privacy and mutual recognition of trust services across the region.

The regional digital area of the CRM 2021-24 AP includes the following four components: 1) digital infrastructure and connectivity; 2) digital skills and competence; 3) digital economy in the era of new ICT technologies; and 4) trust and security. The findings in this chapter on the access, jobs, use and trust sub-dimensions can inform the implementation of these four components (Box 13.3, Box 13.6, Box 13.8 and Box 13.12).

Key methodological changes to the assessment framework

Since the 2018 assessment, several changes have been introduced to the assessment framework (Figure 13.2). The 2021 assessment now mirrors the OECD's Going Digital Integrated Policy Framework (Box 13.1) and includes five sub-dimensions instead of the four in the CO 2018. New indicators have been included, such as data accessibility and digital government, while other previously examined indicators, such as digital strategy, e-health strategy, e-commerce law and e-authentication framework, are now assessed as integral parts of sub-dimensions such as *use* and *trust*. Thus, the 2021 assessment distinguishes between *access* and *use* of digital technologies, splitting the previously merged sub-dimension into two. It also splits the *digital empowerment* sub-dimension in CO 2018 into the *use* and *society* sub-dimensions, where *society* is mainly focused on digital inclusion. Finally, *e-commerce and e-business*, topics of the third sub-dimension in the previous assessment, are now examined under the *use* and the *jobs* sub-dimensions, where the uptake of e-commerce is a measure of firms' digitalisation and a driver that accelerates ICT sector growth and increases its contribution to the digital economy.

Box 13.1. The OECD's Going Digital Integrated Policy Framework

The digital society dimension's assessment framework mirrors policy dimensions of the OECD Going Digital Integrated Policy Framework, developed by the OECD as a key output of the OECD Going Digital project, and published in February 2020:

Sub-dimension 1: Access reflects the framework's *Access* policy dimension which demonstrates the importance of access to high-quality communication networks and services at competitive prices as foundation of digital transformation.

Sub-dimension 2: Use is based on the *Use* policy dimension of the framework. It emphasises the significance of widespread and effective use of digital technologies and data for development of a digital society.

Sub-dimension 3: Jobs mirrors the framework's *Job* dimension, which suggests that policies in place should assure that digital transformation leads towards creating more and better jobs.

Sub-dimension 4: Society is based on the *Society* dimension of the framework, according to which digital transformation needs to work for inclusive societies.

Sub-dimension 5: Trust reflects the framework's *Trust* policy dimension. It highlights the necessity for the actors of digital transformation (governments, individuals, businesses…) to be confident that engaging in digital environment brings more benefits than downsides, in order to fully embrace and benefit from digital society.

Source: (OECD, 2020[10]), *Going Digital integrated policy framework*, https://doi.org/10.1787/dc930adc-en.

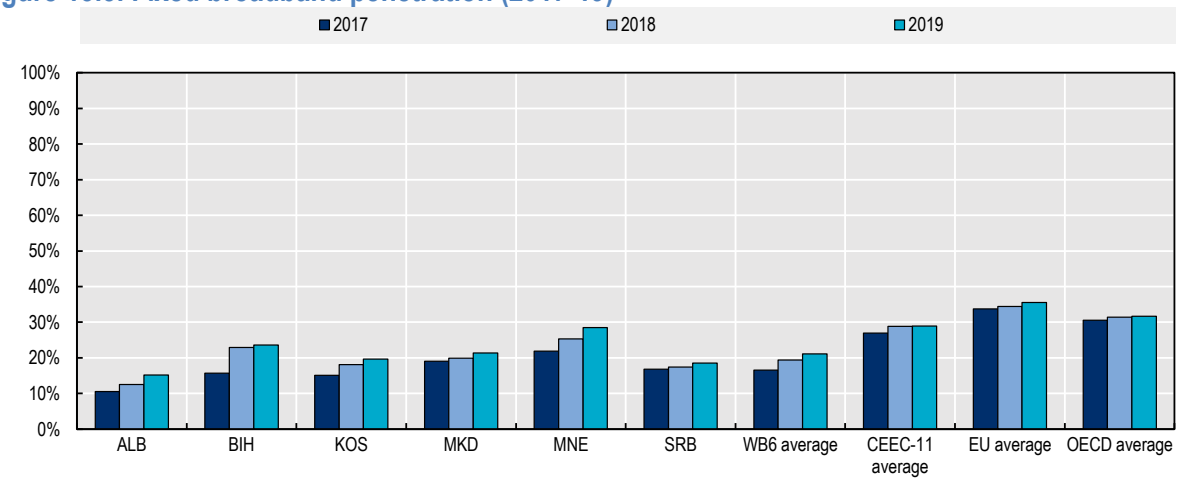
Digital society performance and context in the WB6

Outcome indicators play a key role in examining the effects of policies and they provide vital information for policy makers to evaluate the effectiveness of existing policies and the need to design new ones. The outcome indicators selected for the Digital Society dimension (Figure 13.2) are designed to shed light on the WB6 economies' performance in terms of broadband development and digital literacy of the population and to indicate the demand for highly skilled ICT professionals in the labour market. This section draws on those outcome indicators.

The assessment indicates that WB economies are still lagging behind EU and OECD economies in fixed broadband penetration, which refers to the number of broadband subscriptions per 100 inhabitants,

including households and enterprises (Figure 13.3). Montenegro is most advanced, while Albania has the lowest penetration of broadband subscriptions in the region. This indicator demonstrates that although broadband development policies have supported (or at least enabled) a steady increase in broadband penetration since 2017, in most cases, the trend is not steep enough to reduce the gap with more developed countries.[1] The Regional Cooperation Council has encouraged the Western Balkan economies to collect data on the new Digital Economy and Society Index (DESI) indicators,[2] which offer additional information on broadband connectivity. For example, the Broadband Competence Office in North Macedonia reports that in 2019, although fixed broadband take-up (i.e., percentage of households with broadband connections) was 70.9%, close to the EU average (77.6%), fast broadband take-up in households was only 21.6%, significantly lagging behind the EU average (48.7%).

Figure 13.3. Fixed broadband penetration (2017-19)



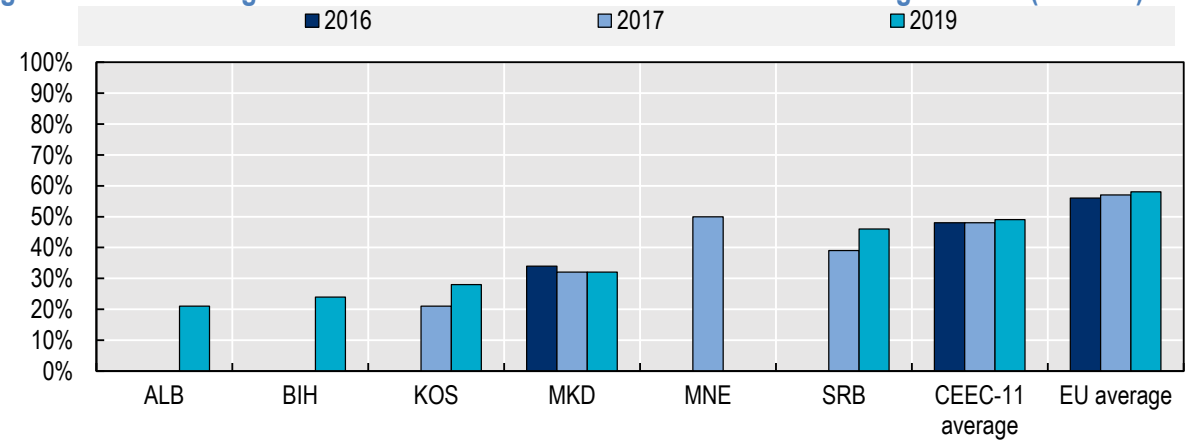
Note: OECD and EU averages are calculated as simple averages. EU includes all EU Member States in 2013-2020 period. CEEC-11 countries are Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.
Source: ARKEP (n.d.[11]) (Kosovo) and International Telecommunication Union, retrieved from the World Bank (2021[12]), http://data.worldbank.org/indicator/IT.NET.BBND.P2

StatLink https://doi.org/10.1787/888934254335

The WB6 economies' performance on digital skills development among the population varies significantly (Figure 13.4). Although digital literacy has increased in Montenegro and Serbia since 2018, closely following the CEEC-11 economies,[3] the other WB6 economies have not yet put in place policies and programmes to close the digital skills gap effectively, allowing the digital divide to grow and depriving the population of the opportunity to seize the benefits of digitalisation.

WB6 industry stakeholders agree that skilled ICT professionals are in high demand in the region to support ICT sector growth and firms' digitalisation. They also highlight the digital skills' gap between education and training systems and labour market needs. Data on the percentage of ICT specialists employed as a total of all employed in the WB6 are only available for Montenegro, North Macedonia and Serbia. Data for those three economies show that Serbia has the highest share of ICT professionals, amounting to 2.6% of total employed persons in 2019, while North Macedonia follows with 1.9% and Montenegro with 1.8%. In comparison, the CEEC-11 and EU averages were 3.6% and 3.9% respectively.

Figure 13.4. Percentage of individuals with basic or above basic overall digital skills (2016-19)



Note: EU includes all EU Member States during the 2013-20 period. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia. Data for 2018 are unavailable.
Source: Eurostat (2019[13]), "Individuals' level of digital skills", https://ec.europa.eu/eurostat/databrowser/view/isoc_sk_dskl_i/default/table?lang=en.

StatLink https://doi.org/10.1787/888934254354

Access (Sub-dimension 10.1)

High-quality access to communications networks and services at competitive prices is fundamental for the digital transformation and similarly, access to data is vital as a driver of economic activity and innovation (OECD, 2019[2]). The EU's Digital Strategy notes that "European technological sovereignty starts from ensuring the integrity and resilience of our data infrastructure, networks and communications" (European Commission, 2020[14]). Thus, public policies for access and the underlying legal and regulatory framework ensure that continued investment in communication networks and increased uptake of broadband services underpin the adoption of digital technologies, including cloud computing, Internet of Things, artificial intelligence and more.

Overall, four of the six WB economies (Albania, Montenegro, North Macedonia and Serbia) are performing well in this sub-dimension, with Kosovo following closely behind. Bosnia and Herzegovina is still working on the improvement of its policy and regulatory framework for increasing access (Table 4.3. Scores for Sub-dimension 1.1: Investment policy framework). Most of the progress made during this assessment period can be traced back to the adoption and implementation of programmes that support rural broadband development in all economies except Bosnia and Herzegovina. The assessment also indicates that the WB6 economies are still in the initial phase of preparing and implementing a data accessibility framework to support data openness and transparency, lowering the overall scores in this dimension.

Table 13.2. Scores for Sub-dimension 10.1: Access

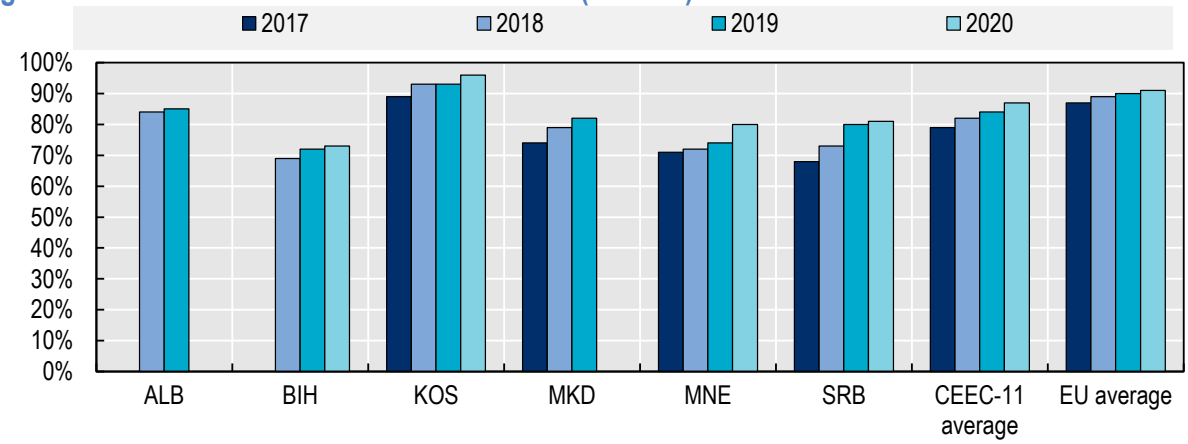
Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 10.1: Access	Broadband infrastructure	3.5	2.0	3.5	3.5	3.5	3.5	3.3
	ICT regulatory policy framework	3.5	2.0	2.5	3.5	3.5	2.5	2.9
	Data accessibility	2.5	1.5	2.5	3.0	2.5	3.0	2.5
Sub-dimension average score		3.2	1.8	2.8	3.3	3.2	3.0	2.9

Broadband infrastructure development is supported by plans to invest in rural area networks

As more people and businesses go online, developing reliable, high-quality broadband infrastructure underpins an economy's digital transformation. Extending broadband infrastructure to rural areas is essential to guarantee universal access and to provide all citizens with the opportunity to benefit from the digital economy. This section assesses whether an effective broadband infrastructure policy framework is in place and how it promotes private sector investments in high-speed communications infrastructure and accelerates the uptake of broadband services.

All WB6 economies have made progress in broadband take-up since 2018, as reflected in the data for internet access in households (Figure 13.5). Kosovo had the highest household access in the region in 2020 (96%), exceeding the EU average (91%). The other WB economies are closely following the performance of the CEEC-11, except for Bosnia and Herzegovina, which is falling behind (73% in 2020).

Figure 13.5. Internet access in WB6 households (2017-20)



Note: The EU average represents data for EU-28 for the period 2017-19 and the EU-27 estimate for 2020. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.
Source: (Eurostat, 2020[15]), "Households - level of internet access", https://ec.europa.eu/eurostat/databrowser/view/isoc_ci_in_h/default/table?lang=en.

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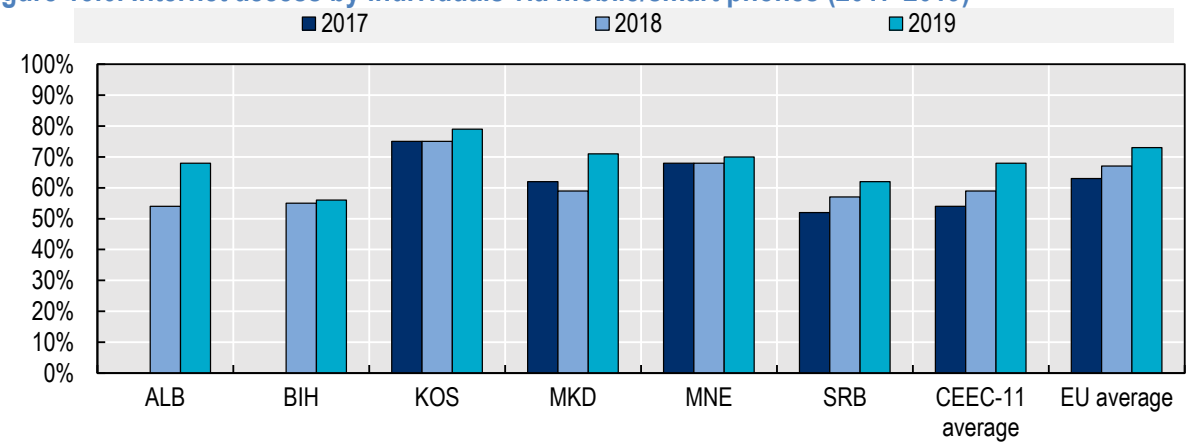
Internet access via a mobile (smart) phone is also higher in Kosovo (79%) than in the other Western Balkan economies and was above the EU average (73%) in 2019 (Figure 13.6). This could be linked to Kosovo having the youngest population in Europe, who increasingly depends on mobile devices. Use of mobile phones for Internet access is the lowest in Bosnia and Herzegovina and Serbia, the only economies below the CEEC-11 average.

Positively, all Western Balkan economies except Bosnia and Herzegovina have adopted a strategy or broadband development plan going to 2023 or beyond, and are already implementing it. They have leveraged donor support from the Western Balkan Investment Framework (WBIF),[4] the European Bank for Reconstruction and Development (EBRD), or the World Bank through grants for feasibility studies to identify appropriate models of rural broadband development, and through multi-million euro loans to co-finance private sector investment in underserved areas. Legislative reforms are also underway in these five Western Balkan economies to improve the framework for facilitating network infrastructure investment, to align state-aid rules with the EU framework for rapid development of broadband networks, and to reduce the cost of these deployments (e.g., by drafting the law to transpose the Broadband Cost Reduction Directive 2014/61/EU). Bosnia and Herzegovina is in the process of finalising its broadband strategy, which was drafted with contributions from competent bodies from all levels of the government and can be expected for adoption in 2021.

Figure 13.6. Internet access by individuals via mobile/smart phones (2017-2019)



Note: EU includes all EU Member States in the 2013-20 period. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.
Source: (Eurostat, 2019[16]),"Individuals - mobile internet access", https://ec.europa.eu/eurostat/databrowser/view/isoc_ci_im_i/default/table?lang=en

StatLink https://doi.org/10.1787/888934254392

Broadband infrastructure mapping has also progressed in the WB6. The same five economies have implemented the initial infrastructure mapping phase activities and are gradually adding layers of information over georeferenced applications. Bosnia and Herzegovina, on the other hand, is yet to make a broadband mapping application available to relevant stakeholders. The WB6 are also jointly implementing the Digital Balkan Highway project, with support from the World Bank, to investigate whether it is possible to improve regional interconnectivity and increase access to the Internet by establishing a regional broadband Internet infrastructure over the transmission grids of state-owned energy companies.

The ICT regulatory policy framework is coming into line with the EU Electronic Communications Code

The ICT regulatory policy framework plays a pivotal role in maximising the benefits of the digital transformation for the economy and society. Regulation can enable investment in infrastructure, promote innovation, and safeguard competition and consumer protection, if carefully applied (OECD, 2012[17]). This assessment measures whether an ICT regulatory policy framework has been adopted and implemented and whether its impact on society and economy is monitored.

Three out of the six WB economies (Albania, Montenegro and North Macedonia) are performing well on this indicator, having completed alignment with the EU 2009 regulatory framework and now implementing it. The other three have not yet updated their legislation to ensure financial and operational independence of their telecommunications' regulatory authorities, which continue to be financed from the state budget. The WB6 economies signed a regional roaming agreement in April 2019, which entered into force in July 2019. Since then the economies have gradually implemented cost reductions on roaming charges within the region, with calls becoming up to eight times cheaper and costs for data dropping on average from EUR 3 per megabyte to EUR 0.20. The agreement leads to the creation of a roaming free region by 1 July 2021 and dialogue has already started with the EU on reducing WB-EU roaming charges. WB citizens pay four times more than EU citizens for the same service due to these roaming costs, a significant burden that cannot be traced to market conditions.

The majority of the WB6 have made improvements to the existing framework to enable investment in communications networks and quality services. For example, Albania (in 2016) and North Macedonia (in 2019) updated their laws on electronic communications to transpose the EU Cost Reduction Directive (i.e., Directive 2014/61/EU on measures to reduce the cost of deploying high-speed electronic communications

networks). Others, like Kosovo, Montenegro, and Serbia, have prepared a new draft of the law to implement cost reductions, due for adoption in 2021.

The WB6 are progressing at different speeds towards their alignment with the EU Electronic Communications Code (EECC) (Directive (EU) 2018/1972). The EECC promotes 5G rollouts and co-investment in very high-capacity networks. It also aims to the separate incumbent operators in distinct wholesale and retail arms, and covers Internet-based services (not previously covered by electronic communications regulation) and improved spectrum management. It is complemented by various directives and regulations, including the e-Privacy Directive, the Telecoms Single Market Regulation, the Roaming Regulation, and the Radio Spectrum Decision. All WB6 economies are looking into further adaptation of their legal and regulatory framework on electronic communications to align with the key elements of the EECC. Serbia and Bosnia and Herzegovina are both preparing a new draft law on electronic communications that will improve their frameworks' alignment with the EECC, although it is still uncertain whether it will completely align with the 2009 regulatory framework.

5G development in WB economies is in the initial phase, but governments in the region are starting to prepare for future 5G rollouts. For example, Montenegro adopted a new radio frequency plan in 2020 to implement the decisions of the World Radio Communication conference (WRC-19). Both Albania and North Macedonia have included 5G rollout targets in their economy-wide broadband plans. Albania has put forward a 5G Strategy (i.e., a roadmap document by the line ministry) to set the process in motion, particularly in freeing up the low-band spectrum for 5G. It issued a test license to one operator in 2019. Serbia has already issued pilot 5G licenses and launched the first test base stations. It also signed an agreement with Bulgaria and Greece to test a 5G cross-border corridor. Kosovo recently started to connect communications towers with fibre optics and 5G-ready equipment. Bosnia and Herzegovina was the last economy in the region to award 4G licences (in March 2019), so the 5G roadmap is expected to take longer than in the other WB6 economies.

The WB6 telecoms regulators are well staffed, collect data regularly and publish reports on the electronic communications market. Three of the six economies (Montenegro, North Macedonia, and Serbia) implement regulatory impact assessments (RIAs) for new regulatory proposals and publish results online. However, implementation of RIAs on all policy and legislative proposals is not effectively systematised in the WB6. North Macedonia is the only economy with an online Unique National Electronic Registry of Regulations (ENER), where all RIA processes are published. Albania has adopted an "RIA light" system and although some progress has been made in enforcing the obligation for RIAs in line ministries, its implementation is slow. Kosovo and Bosnia and Herzegovina are not yet conducting RIAs and their capacities in the field remain low. The implementation of external evaluations and reviews of the stock of significant regulations against clearly defined policy goals is not yet systematic in the Western Balkan region.

Implementation of data accessibility frameworks is in the initial phase

Data exchanged across communications networks are important sources of economic and social value, as well as drivers of innovation. Policy makers should maximise individuals and firms' ability to access and share data, while also protecting digital security and privacy of data subjects through a well-designed overarching legal framework. This assessment measures whether a framework promoting data accessibility has been adopted and designed in such a way as to maximise its positive economic and social effects.

The WB6 economies have made progress in setting up a basic policy framework to promote data accessibility and openness since 2018. The WB6 are all implementing economy-wide action plans stemming from their commitments under the Open Government Partnership (OGP) Initiative. These action plans have led to the development of data accessibility policies, which along with the Public Administration Reform Strategies implemented in the region, promote the adoption of basic legislation on public sector

data transparency, re-use, online publication in machine readable formats, as well as data licensing. Each of the WB6 economies is moving forward at a different pace in implementing the necessary legal and regulatory framework. North Macedonia and Serbia are the only two economies in the region to have implemented an initial alignment with the Public Sector Information (PSI) Directive (2013/37/EU) on open data and the re-use of public sector information. However, only Albania has prepared a draft law to align with the new Open Data Directive (EU) 2019/1024) that replaced the PSI Directive in July 2019. This new law on open data is expected for adoption in 2021.

Serbia adopted a new law on e-government in 2018, promoting data re-use in machine readable formats, as well as an extensive set of bylaws and regulations that lay down rules on formats and registers and the operation of the Open Data Portal. North Macedonia, implementing a Transparency Strategy and an Open Data strategy, adopted a new law on the use of public sector data, amended the law on free access to information and introduced relevant rulebooks. Albania also has a policy document on open data in place, and while the dissolution of the Ministry of State for Innovation and Public Administration in September 2017 greatly affected continuity of implementation of its 2016-2018 OGP action plan (Vurmo, 2019[18]), a new 2020-2022 plan has been developed. Montenegro prepared a new draft law on access to public sector information in 2019, but the law was still pending adoption at the end of 2020. However, the previous amendment of the law from 2017 has already created the basic conditions for data re-use and the obligation for public sector institutions to publish their data in machine readable formats on the open data portal. A basic open data framework is in place in Kosovo, which performed an Open Data Readiness assessment in 2018 to identify and improve shortcomings in relevant legislation and regulations. Positively, a focal point for open data is designated for every ministry in Kosovo to co-ordinate relevant activities.

Bosnia and Herzegovina, on the other hand, has not yet adopted a policy or legal framework on data accessibility at the state level to align with the EU *acquis*. Some progress was recently made in creating obligations for public sector institutions to publish their data online. The Agency for Statistics of Bosnia and Herzegovina was the first institution to demonstrate practical compliance, publishing datasets in machine readable formats on its website. The Public Procurement Office is the next in line. It should be noted that at the entity level, Republika Srpska (RS) has included data accessibility and re-use and obligations for public sector institutions in the recently adopted e-Government Strategy for RS 2020-2022.

All Western Balkan economies, except Bosnia and Herzegovina, have established economy-wide Open Data Portals, including an increasing number of public sector data sets. However, awareness, human capacities and demand for open data are still insufficient. There is also limited understanding of data formats and data licensing in the public sector. The existing frameworks are not stimulating public-private partnerships for data innovation, but nonetheless, Montenegro was the first economy in the region to organise an Open Data Hackathon to stimulate data innovation (Box 13.2).

Box 13.2. Montenegro's open data hackathon

The open data Hackathon, "Make it accessible and useful", was organised on the 5th of October 2019 by the EU-funded project Odeon – Open Data for European Open Innovation in the framework of the Infofest 2019 Conference in Montenegro. The topic of the competition was the design of innovative applications that create added value from available open data sets for the benefit of the public administration, the business community, and citizens. Six teams participated in the hackathon, contributing their ideas.

Although this was a small-scale competition on open data innovation, it was the first time such an event was organised in Montenegro. The event was an excellent opportunity to showcase how public-private partnerships could be created to design applications based on open data sets, demonstrating how bright entrepreneurial minds can develop new products and services, generating value for the global economy.

Note: The Odeon project is co-funded by the European Regional Development Fund (ERDF) under the INTERREG Mediterranean Program 2014-2020. It is implemented by 10 partners from 7 economies (Italy, Montenegro, Croatia, Slovenia, Greece, Spain, France).
Source: (Odeon, 2019[19]), *News,* https://odeon.interreg-med.eu/pt/news-events/news/detail/actualites/hackathon-open-data-idea-presentations-in-budva-montenegro/.

Box 13.3. Towards regional digital infrastructure and connectivity in the Common Regional Market

The following key findings of the CO2021 access sub-dimension can inform the implementation of the Common Regional Market Action Plan 2021-24 actions related to the digital infrastructure and connectivity component:

- All the WB economies except Bosnia and Herzegovina are implementing digital strategies or broadband development plans and have launched rural broadband development projects with multi-million euro donor support that promise high speed connectivity to all households and public buildings in the next period. The legal and regulatory framework in these economies has been improved significantly to support private sector investments in network infrastructure. A broadband strategy in Bosnia and Herzegovina is also being prepared.
- 5G development in WB economies is in the initial phase, but governments in the region are starting to prepare for future 5G rollouts. Albania and North Macedonia have included 5G rollout targets in their broadband plans, and Albania issued a first pilot license. Serbia has already issued 5G pilot licences and Montenegro has already adopted a new radio frequency plan in 2020 to prepare for 5G. Kosovo recently started to lay down 5G-ready equipment and fibre connections between towers. Bosnia and Herzegovina is the last economy in the region to award 4G licences (in March 2019), so a 5G roadmap is not yet planned.
- The WB6 have made progress in the implementation of the Regional Roaming Agreement since July 2019, moving closer to the creation of a roaming free region by 1 July 2021. Roaming data traffic is already increasing across the region, and roaming costs have seen significant reductions, of between 83% and 96%, as of the end of 2020.

The way forward for access

- **Complete the alignment of the ICT policy regulatory framework with the EU Electronic Communications Code.** All Western Balkan economies should continue reforms to create an enabling broadband investment framework that facilitates rapid, cost-efficient co-deployment of broadband network infrastructure. They should also continue efforts to finalise and implement the roadmap on WB6-EU roaming charges reduction, as part of the CRM Action Plan 2021-24 (Box 13.3). Bosnia and Herzegovina, Kosovo, and Serbia should accelerate the adoption of the new law on electronic communications to complete alignment with the EU 2009 regulatory framework and to ensure financial and operational independence of the regulatory authority. Bosnia and Herzegovina need to accelerate the adoption of the broadband strategy and to complete the broadband mapping exercise. Serbia should also accelerate the adoption of the Law on Broadband to create an enabling investment environment.
- **Improve the legal framework on data accessibility and strengthen the demand for open data innovation through inclusive co-creation processes.** All WB economies need to prepare and complete their alignment with the Open Data Directive (EU 2019/1024) to improve re-use and openness of public sector information. It is vital that the WB6 allocate sufficient resources for public sector capacity building on data formats and data licensing. It is also critical that the economies stimulate the development of public-private partnerships on open data innovation to demonstrate the benefits of data openness through e-services and applications and to increase the demand for additional open data sets.

Use (Sub-dimension 10.2)

The rapid integration of digital technologies is transforming today's societies and economies, but creates a large challenge for governments – requiring a genuine revolution in the way they work, organise themselves, interact and provide services to citizens and firms (OECD, 2019[20]). But to realise the full potential of digital technologies for competitiveness and productivity growth, firms also need to transform. The EU's Digital Strategy notes that the growing scale and complexity of investment needed for digital transformation (in systems, skills, business processes, etc.) make the endeavour particularly difficult for non-frontier firms, such as SMEs in less digital-intensive sectors (European Commission, 2020[14]). This sub-dimension assesses WB6 policies and progress on digitalising government services and transforming businesses through digital technologies.

Overall, the WB6 economies perform moderately in this sub-dimension, although Serbia and Montenegro are moving significantly faster than the other economies (Table 13.3). The assessment indicates that the WB6 perform best in the digital government indicator, as the implementation of public administration reform strategies increases the digitalisation of government systems and the proliferation of e-services. On the other hand, four out of the six economies (i.e., Albania, Bosnia and Herzegovina, Kosovo, and North Macedonia) are performing poorly in private sector ICT adoption, which lowers the overall scores in this dimension. This can be traced back to the absence of programmes to support the digitalisation of companies, on top of legal framework inefficiencies that slow down the adoption of e-commerce and e-business practices.

Table 13.3. Scores for Sub-dimension 10.2: Use

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 10.2: Use	Digital government	3.5	2.0	2.0	2.5	3.5	3.5	2.8
	Private sector ICT adoption	1.5	1.5	1.5	1.5	2.5	3.5	2.0
Sub-dimension average score		2.5	1.8	1.8	2.0	3.0	3.5	2.4

Digital government is transforming public sector services in the region

Digital government strategies deal holistically with the incorporation of digital technology and tools into public sector functions, prioritising a "user-driven approach to design develop, deliver and monitor public policies and services centred around people and user needs" (OECD, 2019[2]). This assessment measures how policy frameworks promote public sector digitalisation and examines what progress has been achieved in respective legal and regulatory reforms to improve public service delivery, increase people's engagement, and enhance transparency and accountability.

Albania, Montenegro and Serbia are making headway in digital government, with North Macedonia following closely behind. According to the UN e-Government Survey for 2020, Serbia ranks 58th and Albania ranks 59th out of 193 nations on the EGDI[5] (e-Government development) composite index, while North Macedonia (72nd) and Montenegro (75th) are a little further behind. In the same survey, Albania scores the highest in the region on the Online Service Index (OSI) that assesses the e-government portal, followed by Serbia and North Macedonia. Albania also ranks 36th in the E-Participation Index (EPI), followed by North Macedonia (38th) and Serbia (41st).

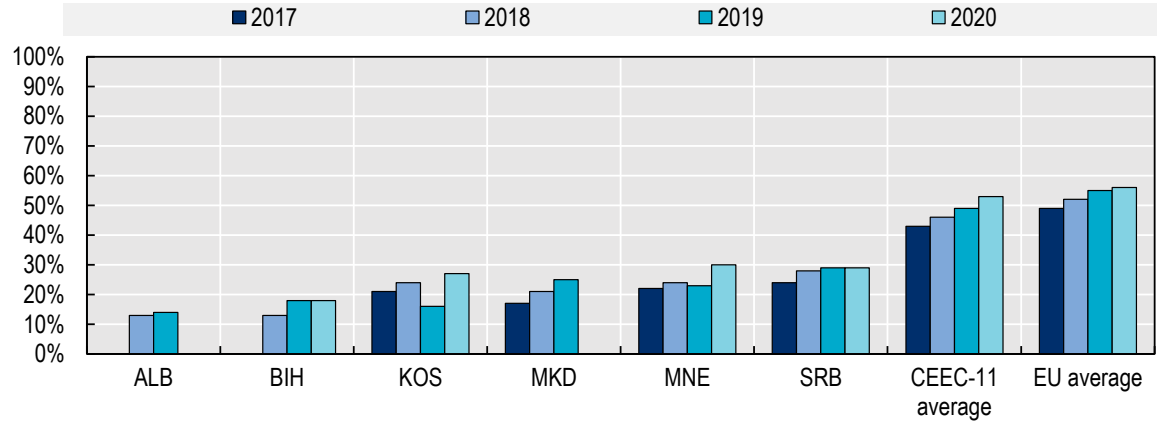
All the WB6 economies, except Bosnia and Herzegovina, are implementing Public Administration Reform Strategies (PARS) action plans and have improved the alignment of their interoperability frameworks with the European Interoperability Framework (EIF). Albania, Montenegro, North Macedonia and Serbia have achieved advanced implementation of their PARS action plans promoting reforms that aim to transform the government into a user-centric public service through digital technologies. They have improved e-services and the government service bus (i.e., the information system used by public sector institutions to exchange data) that connects to the central electronic population registers. New laws on e-government and e-services have been adopted in Serbia (2018), North Macedonia (2019) and Montenegro (2020), along with relevant secondary legislation. All economies, except Bosnia and Herzegovina, have aligned their e-identification and e-document legislation with the eIDAS Regulation on electronic identification, authentication, and trust services (EU 910/2014). Additional reforms are already planned in their respective PARS action plans for the coming period. Stepping-up as a front-runner in the region, Serbia also adopted the Artificial Intelligence (AI) Strategy in December 2019 and the action plan in June 2020, aiming to investigate the integration of AI technologies in e-government services. Positively, in August 2019, North Macedonia and Serbia signed an agreement on mutual acceptance of electronic documents.

The digitalisation of the public administration in Bosnia and Herzegovina has progressed unevenly, due to its complex governance system. A positive step was the adoption of the Strategic Framework for Public Administration Reform (PAR SF) 2018-2022 by the state and the two entity governments (completed in 2020 with the adoption by the government of the RS). However, the action plan has not yet been adopted at any level, putting implementation on hold. In the meantime, the RS government is implementing its own policy and recently adopted a new e-Government Strategy for 2019-2022, which is not yet budgeted. The Federal Ministry of Justice, at the Federation of Bosnia and Herzegovina (FBiH) entity level, has been tasked with collaborating with the cantons to harmonise legislation for the civil service and to draft a rulebook on internal organisation of the entity's government. Despite the adoption of the PAR SF, economy-wide implementation of reforms and service digitalisation is hampered by the lack of political ownership and co-ordination among different levels of the government.

Western Balkan governments have established horizontal co-ordination mechanisms for digital government, while Albania (see Box 13.4), Kosovo and Serbia have dedicated public bodies that manage data centres and e-government systems for the public sector. Serbia has recently launched a unique high-capacity data centre in Kragujevac to enable the next revolution in digital government (Box 13.5). Nonetheless, monitoring e-government indicators continues to be weak, although prescribed by the framework, and data is rarely available online.

Albania, Montenegro, North Macedonia and Serbia have created single-sign-on e-government portals and are constantly increasing the number of e-services, though at different levels of sophistication. The development of an e-government portal is still in the initial phase in Kosovo, and it is yet to be implemented in Bosnia and Herzegovina, where e-services are offered only at the entity level in Republika Srpska. These two economies are still a long way from achieving a fully digital government, and the need for increased co-operation and support in building the capacities of public officials for developing and maintaining e-services is still high. Nonetheless, citizens' engagement with e-government services has been boosted during the COVID-19 pandemic and WB6 governments have exploited existing and new e-services to connect with the population under these emergency conditions. But while participation is on the rise, it remains below the CEEC-11 and EU averages (Figure 13.7).

Figure 13.7. Rate of Internet use when interacting with public authorities (2017-20)



Note: EU average is for the EU-28 for 2017-19 and EU-27 for 2020. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.
Source: (Eurostat, 2020[21]), "E-government activities of individuals via websites", https://ec.europa.eu/eurostat/databrowser/view/isoc_ciegi_ac/default/table?lang=en.

StatLink https://doi.org/10.1787/888934254411

Box 13.4. Co-ordinating a whole-of-government digital transformation in Albania

The National Agency for Information Society (NAIS) is the core institution in Albania for the digitalisation of the government and its services to citizens, businesses and public sector employees. It is responsible for co-ordinating government work in the information and communication technology (ICT) area and the e-services government portal (e-Albania.al). NAIS promotes new technologies, connecting systems to the Governmental Interoperability Platform, drafts strategies and policy implementation plans for e-Government and the Information Society. It is the co-ordinating regulatory authority, responsible for the state databases and electronic signature services in Albania.

Since 2017, based on the Decision on the Reorganisation of the National Agency for Information Society, the information technology (IT) staff of line ministries and institutions have been placed under the organisational chart of NAIS, although they are physically working in the premises of those institution. Their role is to support the employees of the institutions in their daily IT activities, namely in using the IT systems and tools for public administration and managing the e-services provided by their institution. This close co-ordination mechanism has directly connected centralised NAIS staff to all decentralised IT staff around the country, enabled service standardisation and increased the quality of e-services.

NAIS is primarily state funded and employs more than 330 employees, of which more than 90% are highly skilled technical staff. The main challenge that they face is modernising the legal and regulatory framework and changing public officials' mindsets while they attempt to redesign and reform public administration processes through ICT. The top-level government and high-ranking public officials have been strong supporters of online services and digitalisation. In 2018, NAIS prioritised the list of ICT projects needed to improve the e-government infrastructure in Albania and during 2019, approximately 30 systems were either created or upgraded in collaboration with the respective institutions. By mid-2020, more than 139 institutions have access to the e-Signed Documents Circulation System and 53 institutions are connected to the Government Interoperability Platform. By the end of 2020, 1 021 e-services were available to citizens and businesses through the E-Albania Portal.

Source: National Agency for Information Society (NAIS), Albania.

Box 13.5. A high-capacity data centre in Serbia promoting AI in digital government

On 18 December 2020, the Prime Minister of Serbia, Ana Brnabić, inaugurated the State Data Centre in Kragujevac, which represents an infrastructural milestone in e-government and ICT development in Serbia. Serbia is opening a new chapter, making unprecedented data storage and high computing capacities available, in a facility unique to Central and South Eastern Europe. With a capital investment of EUR 30 million for the construction of the state data centre, the government will work with domestic and global partners, from the private sector and academia, to investigate AI integration in digital government and e-services and will support data innovation demonstrating its commitment to improving public administration services in order to simplify the daily lives of citizens and businesses in the digital economy.

The data centre in Kragujevac has a capacity of approximately 1 200 rack rooms distributed across two facilities, with a total footprint of 14 000 square metres and is designed to host mission-critical servers and computer systems. The Office for IT and eGovernment (ITE) has signed MoUs with major global companies and will also make the services of the state data centre available to commercial users, science, and technology parks and start-ups. The ITE will work to establish an AI platform based on high-performance computers and, together with NVIDIA, will develop a special capacity improvement plan for building one of the fastest AI supercomputers in Southeast Europe. NVIDIA has agreed to provide additional support to start-up companies, including training and applied AI knowledge, as well as joint research in order to create additional value.

Source: (Government of the Republic of Serbia, 2020[22]), *Construction of State Data Centre in Kragujevac goes as planned*, https://www.srbija.gov.rs/vest/en/157502/construction-of-state-data-centre-in-kragujevac-goes-as-planned.php.

Private sector adoption is not well supported in the majority of WB6 economies

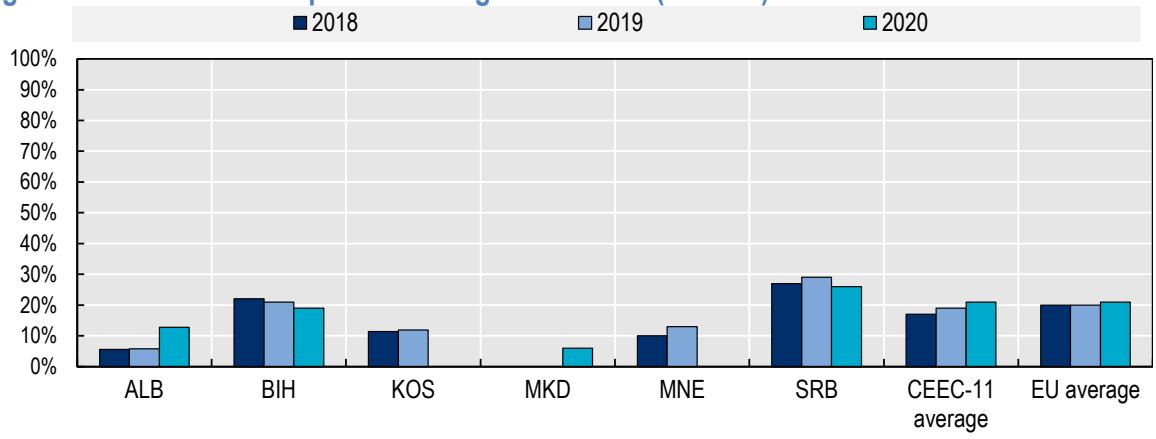
Incorporating digital tools and processes into business practices is essential to increase productivity, access new markets and remain competitive within increasingly digital markets. This section assesses whether a well-designed policy framework to promote private sector ICT adoption is in place and is being implemented in the WB6.

Only two Western Balkan economies, Montenegro and Serbia, have adopted policies to support private sector ICT adoption. Albania, and Kosovo mention firms' digitalisation in their broader policies, such as the Digital Agenda 2020, but no linked programmes or measures are being implemented. North Macedonia, in the absence of an overarching ICT policy, uses the Innovation Strategy and Fund that mainly target start-ups or firms with innovation investment plans. Tax relief schemes for the purchase of ICT equipment and software have been adopted by Kosovo, North Macedonia and Serbia. Despite the significance of a

comprehensive e-commerce framework as a driver for private sector ICT adoption, some of the WB6 governments (like Albania, Bosnia and Herzegovina -excluding the RS entity, and Kosovo) have not yet updated their legal frameworks to support the regulated use of e-commerce and have not designed e-commerce support programmes for SMEs. Republika Srpska amended its e-commerce law in 2016 and created a one-stop-shop e-registration service for businesses, while its Chamber of Commerce offers webinars on e-commerce. Kosovo is implementing an EU-funded IPA II project[6] that aims to reduce the barriers to the practical implementation of e-commerce, like online payment security and discouraging banking sector practices (e.g., fees for international online payment transactions with credit cards) (TEB JSC, 2021[23]). The situation is reflected in the share of WB6 enterprises doing e-sales, which is lower than the EU and CEEC-11 averages in all economies, except Serbia (Figure 13.8).

Serbia is the single economy in the region to have achieved notable impact in this domain. The government is supporting e-traders, and helping to reduce the grey economy from e-sales on social media platforms through the Programme for e-Commerce Development. It is also financing consulting services for digitalisation and equipment purchases through the IT Industry Strategy. The Center for Digital Transformation (CDT) was established in 2018 as a service unit for business digitalisation. It is implementing the GIZ[7]-funded MSMEs 2019-2020 Digital Transformation Support Programme, which was intensified during 2020 to address the adverse effect of the COVID-19 pandemic on micro, small and medium-sized enterprises (MSMEs) through two emergency support programs, SPEED 1.0 and 2.0. This programme has supported more than 700 companies so far, in Serbia and the RS in Bosnia and Herzegovina.

Figure 13.8. Share of enterprises offering online sales (2018-20)



Note: EU average is EU-28 for 2017-19 and EU-27 for 2020. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.
Source: INSTAT (ALB), ASK (KOS), (Eurostat, 2020[24]), "E-commerce sales", https://ec.europa.eu/eurostat/databrowser/view/isoc_ec_eseln2/default/table?lang=en.

StatLink https://doi.org/10.1787/888934254430

Montenegro, on the other hand, despite adopting the Strategy for the Development of MSMEs 2018-2022, has seen slow progress in promoting business digitalisation and e-commerce. The Ministry of Economy's Programme for Improving the Competitiveness of the Economy includes a special budget line for business digitalisation in 2020 that can finance just over 60 companies. A similar business digitalisation programme in 2018 received only 10 applicants (MEK, 2018[25]). This reveals a pattern of limited effectiveness and impact of such programmes, explained by a combination of factors such as low resource allocation, demanding application and project management procedures and misalignment with actual market needs. North Macedonia faced a similar situation with its Support for Digital Transformation in SMEs project, funded by the Ministry of Economy under the Programme for SMEs Competitiveness and implemented by MASIT (the Chamber of Commerce for ICTs), as only 13 companies applied.

Box 13.6. Towards a digital economy in the Common Regional Market

The following key findings of the CO2021 sub-dimension on use can inform the implementation of the Common Regional Market (CRM) Action Plan 2021-24 actions related to the digital economy in the era of new ICT technologies component:

- The majority of the WB6 economies have improved digital government and e-services development. They have established central e-government portals and are increasing the number of e-services offered to citizens and businesses. They have also improved alignment with the EU Interoperability framework and created e-government systems to exchange data between public sector institutions.
- The majority of the WB6 economies have e-commerce legislation in place, but at least three need to complete these frameworks with regulations and improve e-payment systems.
- Only Montenegro and Serbia have adopted policies that support SMEs' digitalisation. Serbia is the only economy that is implementing a budgeted programme promoting e-commerce, providing financial support, and mentoring for e-traders. On the other hand, Montenegro's SMEs digitalisation programme is having limited impact (like similar projects in other economies during the previous assessment).
- Serbia is the only economy in the region to have adopted an artificial intelligence (AI) strategy to investigate integration of AI in digital government. It has recently established a second state data centre in Kragujevac that will be used to promote AI and high-performance computing (HPC) projects and investments.

The way forward for use

- **Increase resources for government digitalisation and systematise the monitoring of digital government indicators to inform policy making**. All the WB6 economies should continue reforms to create high-quality fully transactional e-services and ensure sufficient funds to implement action plans. Public sector training is particularly important for digital government and should not be neglected in budget allocations. The remaining obstacles to frameworks on e-signatures should be removed in Albania, Bosnia and Herzegovina, Kosovo, and North Macedonia. Bosnia and Herzegovina should also intensify efforts to align with the EU Interoperability Directive (EU) 2016/797 to ensure compatibility of information systems and processes within its territory and with EU Member States.
- **Improve the legal framework for e-commerce and e-business**. While the WB6 economies continue their reforms, Albania, and especially Bosnia and Herzegovina and Kosovo, need to improve their legislation on e-commerce and to reduce bottlenecks in e-payment systems and courier services.
- **Scale up programmes to support SMEs' digitalisation and boost the take up of e-commerce**. The WB6 governments should improve the design of their support programmes and increase budgetary allocations to have a widespread impact on all industry sectors. Chambers of commerce could help assess the type of support needed and propose appropriate financial schemes to make them more attractive to companies (e.g. subsidies for equipment and digitalisation consulting services, tax relief, social security incentives to hire ICT specialists and train staff). The governments could consider the example of Serbia's Center for Digital Transformation (CDT) and MSMEs 2019-2020 Digital Transformation Support Programme or they could review Ireland's successful "Digital Online Trading Voucher" programme (Box 13.7) to design new e-commerce voucher schemes or improve their existing ones.

Box 13.7. A Digital Online Trading Voucher programme from Ireland

Back in 2014, the Irish government estimated that despite the increasing trend towards online spending, only 23% of small Irish businesses were engaged in any meaningful way in e-commerce sales, and the share was even lower among businesses employing under 10 people. The government recognised the urgency of ensuring that domestic businesses understood that over 70% of e-sales made in Ireland took place in overseas markets and encouraging them and supporting them to adjust to this digital reality. In order to support this goal, the National Digital Strategy, focused on getting more businesses trading online. To this end, the Department of Communications, Climate Action & Environment (DCCAE) launched a Trading Online Voucher Scheme and teamed up with the Local Enterprise Offices (LEO) to deliver this to Irish business. The scheme started with approximately EUR 3 million funding per annum. The scheme is now funded by the Department of Enterprise, Trade and Employment (DETE).

Micro-enterprises in Ireland can get a EUR 2 500 voucher for developing sales on line and access free online training. The vouchers can be used to co-finance up to 50% (initially the scheme offered a 90% funding rate) of costs for third-party services and IT consultation, development or upgrade of an e-commerce website; implementation of online payments or booking systems; purchase of Internet-related software; app development (or multiplatform webpages); development and implementation of a digital marketing strategy; training and skills development specifically to establish and manage an online trading activities; subscription costs to low-cost online retail platform solutions to quickly establish a retailing presence online; purchase of online advertising and purchase of professional photography for e-sales. Following approval of their application, a successful applicant can engage suppliers and, upon completion of the work, submit a request for payment to the LEO in line with the terms and conditions of their voucher.

In the context of COVID-19, the scheme has received unprecedented demand that prompted the government to expand the funding made available to this scheme. By June 2020, the total budget made available reached EUR 20 million, providing approximately 7 700 vouchers in 2020 to small businesses, compared to 1 200 in 2019. At the end of April 2020, the government also launched a EUR 2 million scheme to help retailers in Ireland with a physical store and more than 10 employees to boost their digital presence.

Source: (Local Enterprise Office, 2021[26]), *Trading Online Voucher Scheme*, Ireland, www.localenterprise.ie/Sligo/Financial-Supports/Trading-Online-Vouchers-Scheme/; (OECD, 2021[27]), "The Digital Transformation of SMEs", *OECD Studies on SMEs and Entrepreneurship*, https://doi.org/10.1787/bdb9256a-en.

Jobs (Sub-dimension 10.3)

Economies' preparedness to seize the benefits of a digital world largely depends on the skills of their populations and a comprehensive set of skills-related policies, reflecting the range of policies on digitalisation. Digital technologies profoundly change jobs and the workplace, as well as the skills people need to remain in employment (OECD, 2019[7]). This makes lifelong learning critical and calls for policies that provide high-quality education and training for all and ensure that education and training systems are well aligned with labour market needs. It is also essential to promote a dynamic, competitive, and innovative ICT sector to stimulate job growth and encourage adequate labour market flexibility.

Overall, the WB6 economies perform moderately on the jobs sub-dimension (Table 13.4). Although Serbia is making headway in digital skills development and ICT sector support, the assessment indicates that the other five economies are weak in ensuring digital skills align with labour market needs and ICT sector

promotion policies. Despite the cross-cutting recognition of the contribution of the ICT sector to the economy, only Kosovo and Serbia have specific policies in place to support the ICT industry, and only Serbia has put together the right mix of instruments to have an impact.

Table 13.4. Scores for Sub-dimension 10.3: Jobs

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 10.3: Jobs	Digital skills for students	2.0	2.0	2.0	2.5	3.0	3.0	2.4
	Digital skills for adults	2.0	1.5	2.5	2.0	2.5	2.5	2.2
	ICT sector promotion	2.0	1.5	2.5	2.0	2.0	3.5	2.3
Sub-dimension average score		2.0	1.7	2.3	2.2	2.5	3.0	2.3

Students' digital skills are hindered by insufficient connectivity and equipment

Digital skills are a fundamental aspect of the digital economy – it is vital that students leave school with the basic skills needed to navigate digital environments and to innovate in a digital world. The COVID-19 crisis has forced education systems to depend more on ICTs and online teaching methods and forcing Western Balkan governments to respond to the rising demand for technical infrastructure and policies that maximise the effectiveness of online learning (OECD, 2020[28]). This section assesses whether a policy framework promoting digital skills for students has been adopted that equips them to benefit from and contribute to the digital economy.

The WB6 have made uneven progress in developing digital skills for students since 2018. While all economies have set-up basic frameworks that recognise digital skills as a key competence, how this is translated into education practice differs significantly. While Montenegro and Serbia are making headway and North Macedonia is not far behind, the other three economies (Albania, Bosnia and Herzegovina, and Kosovo) have not yet made notable progress in digital skills' development and fine-tuning their curricula to labour market needs. Montenegro is the only Western Balkan economy to have adopted a Digital Competence Framework (DCF), effective since September 2020, in alignment with the European DCF. Serbia, on the other hand, is the only economy to have adopted a Digital Skills Strategy (2020-2024), although a budgeted action plan is still pending. The new Education strategy 2025 in North Macedonia and the Higher Education Strategy in Montenegro promote the integration of ICTs and digital teaching material in schools and curricula design tuned to the needs of the labour market. Albania also recognises digital skills as one of seven key competencies in its National Pre-University Curriculum Framework. Kosovo's Strategic Plan for Education (KESP) 2017-2021 promotes the integration of ICTs in schools, but does not directly address digital skills development.

Bosnia and Herzegovina (at the state level) has adopted Guidelines for the Common Core Curricula in BiH. These recognise digital skills as a key competence and will guide digital competences in the economy's education systems until 2030, in accordance with the European DCF. However, due to the complexity of the education governance system in this economy, with 14 line ministries at different levels of the government, harmonisation of digital skills development is highly challenging. Republika Srpska, however, adopted a new framework law on Vocational Education and Training (VET) during 2019 that delineates digital skills development for VET students.

IT subjects are taught in Western Balkan schools from primary to secondary levels, but only Montenegro, North Macedonia and Serbia can claim a coherent approach to digital skills' development across all levels of the education system. Weak technical and human resources in schools still challenge the development of digital skills in the majority of the WB6. The COVID-19 experience has exposed disparities between private and public schools, and urban and rural areas in terms of Internet connectivity speeds, availability of functional computers and portable electronic devices (e.g., laptops and tablets), as well as teachers' digital competency and readiness to employ e-learning technologies.

But the crisis has also propelled developments in this field. For example, since September 2020 North Macedonia has been implementing a massive programme to enhance the digital competencies of 25 000 teachers. Serbia is implementing the Connected Schools project to connect all schools to high-speed Internet through the Serbian Academic Network –AMRES or through WLAN technologies by the end of 2021, and has delivered 10 000 laptops to classrooms. Both economies introduced learning management systems and e-learning platforms into schools, along with software tools, during 2020. The Republika Srpska entity government has provided IT equipment to VET schools and computers to 1 000 primary school students in 20 underdeveloped municipalities. Kosovo provided EUR 160 000 worth of equipment to schools in 12 municipalities and is developing a data centre for Education and Research and a platform for videoconferencing.

Despite efforts to improve technical resources, schools' connectivity to the Internet remains low in Bosnia and Herzegovina, Kosovo and Albania (in Albania, only 25% of schools have access to the Internet). On a positive note, all schools in Montenegro have access to the Internet and the computer-to-student ratio (1:10) is the highest in the region and approaching the EU average (1:7). In Serbia, 92% of schools are connected with broadband speeds above 10Mbps, while the figures in North Macedonia are 80.7% of primary and 93.6% of secondary schools. In Republika Srpska, the computer-to-student ratio is higher in primary schools (1:5) than in secondary schools (1:14), and while 100% of high schools are connected, only 14% of remotely located primary schools have access to the Internet. However, rural broadband development programmes in the WB6 promise to connect every school with broadband Internet in the next two or three years.

In general, monitoring indicators on digital skills for students are not well systematised in the WB6 and data are not regularly published on online databases. Montenegro is the only economy that conducts external evaluations of the teaching process and progress towards digital skills development, and co-ordinates follow-up activities (including teacher training, modernisation of equipment and methods, preparation of digital textbooks, etc.).

The adult digital skills gap persists, constraining the rise of the digital economy

The OECD estimates that 14% of jobs (on average across OECD member countries) face a high risk of being automated and as many as 32% of jobs are expected to undergo substantial changes in the digital age. Governments must help individuals develop the right skills through an effective lifelong learning system; one that quickly responds to labour market needs (OECD, 2019[7]). This section assesses whether a framework promoting digital skills for adults is in place to help workers adapt to shifting skills' needs and evolving work environments.

Kosovo, Montenegro and Serbia are intensifying efforts in this domain. Serbia is developing a strong framework for adults (workers and marginalised groups), with its Digital Skills Strategy starting in 2021. Although local coalitions for digital skills are not yet in place to ensure stakeholder participation in curricula development, Sector Skills Councils were established in 2018 to reduce skills mismatches. The National Employment Service launched an IT requalification programme that offers specialist IT training for 778 participants in various cities in Serbia during 2018. The government also adopted the Programme for Enhancing Women in ICT 2019-2020 to increase digital and online entrepreneurship competencies for women in rural areas.

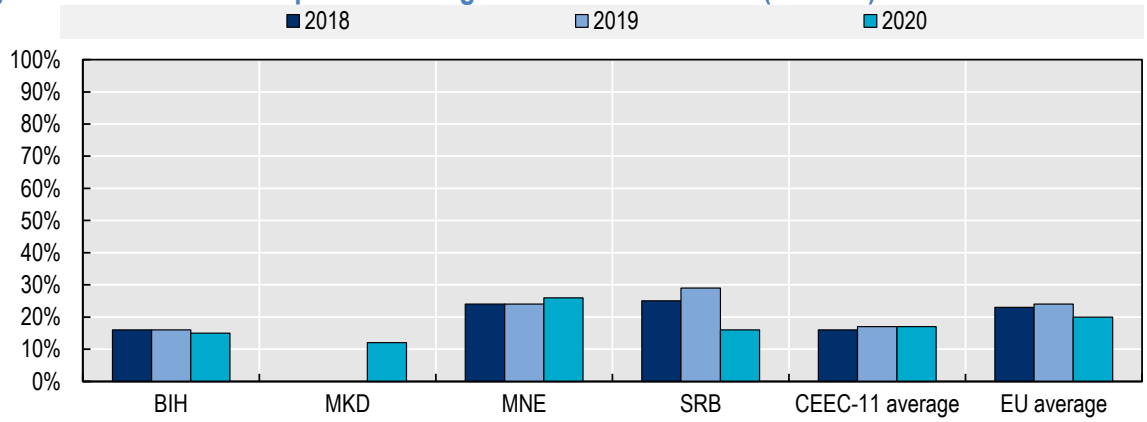
Montenegro has adopted an Adult Education Plan 2019-2022 and a VET strategy to 2021, allocating around EUR 8 million for implementing the strategy (including a EUR 6 million loan from the European Investment Bank). In Kosovo, while the education policy (KESP 2017-2021) makes no specific reference to digital skills, the Employment Agency manages eight Vocational Training Centres (VTC) in seven regions that offer ICT training to the unemployed. It is currently implementing a EUR 3 million IPA 2017 project to train 1 500 men and women in advanced programming skills and to assess their follow-up employability in the local ICT market. The government is also implementing the Youth Online and Upward

(YOU) Programme under the Kosovo Digital Economy (KODE) project, to train 2 000 young people in digital and soft skills.

Progress is slower in Albania, Bosnia and Herzegovina, and North Macedonia. In Albania, digital skills are not prioritised in the Employment and Skills Strategy 2019–2022 or the ongoing VET system reform based on a law from 2017. In North Macedonia, the implementation of the Education Strategy 2018-2025 is not sufficiently co-ordinated with industry stakeholders. Nonetheless, the Adult Education Centre and the Employment Agency offer IT programmes, such as one for unemployed young people that covers both introductory and advanced IT training. In Bosnia and Herzegovina there is no economy-wide framework for digital skills for adults; in the RS entity, 100 unemployed university graduates attended the first IT adult training programme in 2019. The Bit Alliance (the Association of ICT companies) maintains a portal aggregating IT education providers and organises the CoderDojo Free Programming School, (already implemented in 11 cities in Bosnia and Herzegovina).

Recently, under the pressure created during the COVID-19 pandemic, the use of distance learning platforms has been incorporated in some adult training programmes. Companies in the WB6 economies are increasingly providing training opportunities to their employees. According to the European Training Foundation, 67.5% of IT companies in Bosnia and Herzegovina rely on in-house training and 9% of IT companies are providing various adult training courses (ETF, 2019[29]). According to Eurostat, 16% of enterprises from all sectors in Bosnia and Herzegovina provided ICT training to upskill their employees in 2019, which is similar to the CEEC-11 average (17%), while the respective share of enterprises in Serbia (29%) and Montenegro (24%) exceeded both the CEEC-11 and the EU (20%) average (Figure 13.9).

Figure 13.9. Share of enterprises training their staff in ICT skills (2018-20)



Note: Data for Albania and Kosovo are unavailable. EU average is EU-28 for 2017-19 and EU-27 for 2020. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia
Source: Eurostat (2020[30]), "Enterprises that provided training to develop/upgrade ICT skills of their personnel", https://ec.europa.eu/eurostat/databrowser/view/isoc_ske_ittn2/default/table?lang=en.

StatLink https://doi.org/10.1787/888934254449

However, the mismatch between the skills provided by the education and training systems and those needed by the labour market continues to reduce the impact of WB digitalisation policies. There is insufficient co-operation with industry stakeholders on curricula design (particularly in terms of learning outcomes), except for Serbia, where specific measures are planned to improve it (e.g. the planned establishment of local coalitions for digital skills and the existing Sector Skills Councils). In Kosovo, the ICT Industry Association STIKK has repeatedly signalled the poor quality of digital competencies and IT skills acquired through the education system, as well as the deficit of skilled workers in 83% of companies (STIKK, 2019[31]). Industry stakeholders in North Macedonia and Montenegro paint a similar picture. Finally, quality control of adult education remains insufficient, while statistical data, evidence and analysis on adult education are relatively weak.

ICT sector support is not effective

The ICT sector in North Macedonia, Montenegro and Serbia accounted for 4-5% of GDP in 2017. Despite this relatively small share, it is increasing, and could make a relatively large contribution to growth and productivity performance by growing more rapidly than the rest of the economy. The OECD estimates that 42% of all jobs created between 2006 and 2016 across the OECD were in highly digital-intensive sectors (OECD, 2019[2]). This section measures whether a coherent framework to promote the ICT sector exists and to what extent it is implemented and evaluated.

Only Kosovo and Serbia have dedicated policies or programmes to directly support the growth of the ICT sector. The ICT sector in Serbia enjoys constant export growth and salaries more than twice as high as any other sector. In clear recognition of its contribution to the economy, the Serbian Government has provided sufficient resources and high-level co-ordination by the Office of the Prime Minister to implement the IT Industry Strategy 2020 and is currently preparing a follow up strategy. Kosovo has also adopted an IT Strategy 2020. However, its implementation has been slowed down by limited financial resources and low prioritisation. The Innovation Centre Kosovo (ICK) was established back in 2012 to support entrepreneurship, innovation and commercial business development with a focus on ICT start-ups, leveraging financial support from the Norwegian and Swedish governments. During the period 2018-19, the ICK financed 220 companies with a total of EUR 1.8 million. Positively, 61% of IT companies in Kosovo work in international markets.

Montenegro has adopted the first Smart Specialisation Strategy (S3) in the region, which highlights ICT as a cross-cutting priority and includes the flagship initiative Digital Montenegro, promoting digitalisation of businesses and ICT-related innovation. However, the Montenegrin ICT Association at the Chamber of Commerce points out that the ICT sector has not been supported to underpin this ambitious initiative and suffers from the absence of a dedicated government institution to refer to, since three line ministries implement digitalisation polices. In North Macedonia, the COVID-19 crisis has further postponed the preparation of an economy-wide ICT strategy. In Bosnia and Herzegovina, the Bit Alliance (association of ICT companies) takes initiatives and implements projects to strengthen the IT industry in the absence of relevant government initiatives. The Bit Alliance has adopted the IT Manifesto as a model strategy for the development of the IT industry. This defines the three most significant pillars for the further development of the industry as education, legislation and the economy, in line with the EU 2020 Strategy (Bit Alliance, 2019[32]).

Positively, ICT sector companies in Albania, Kosovo, and Serbia benefit from tax relief (e.g., profit tax rate reduced to 5% in Albania, and VAT reduced to 8% for ICTs in Kosovo). Also, in all WB6 economies, except Bosnia and Herzegovina, the ICT industry benefits from horizontal co-funded programmes for the industry, such as competitiveness or innovation funds, start-up support (e.g., through incubators, hubs, and tech-parks) and research and development grants. The communications subsector is also indirectly supported through broadband development programmes in these five economies. But support to the IT subsector is not sufficient to underpin the economies' agendas for digital transformation.

Western Balkan industry stakeholders consulted for this assessment report that finding or training highly skilled ICT professionals is difficult and retaining them is even harder, since brain drain heavily affects this industry. Tax incentives and social security relief have not been provided to help retain talent. In most WB6 economies, IT companies suffer from limited access to finance and are not sufficiently specialised or differentiated in terms of technologies, target industries (vertical specialisation) and specific functional areas (horizontal specialisation), which limits their competitiveness.

Box 13.8. Towards a regional skills and competence framework in the Common Regional Market

The following key findings from the CO2021 jobs sub-dimension can inform implementation of the Common Regional Market Action Plan 2021-24 actions related to the digital skills and competences component:

- Only Serbia has adopted a Digital Skills Strategy and implementation is starting in 2021. The other WB economies include references to digital skills in education sector strategies, but mainly focus on ICT integration in education systems.
- Only Serbia and North Macedonia have introduced Learning Management Systems that include a platform for e-learning, software tools for students and teachers and learning resources. All economies introduced some e-learning platforms in education and training systems during 2020, as an emergency response to the COVID-19 crisis, but the creation of digital content is not adequately systematised in the region.

The way forward for jobs

- **Adopt a common digital competence (CDC) framework for students and a CDC framework for ICT professionals and involve the ICT industry in curriculum design to reduce the skills gap**. WB6 governments should prioritise measures to empower citizens, equip students and up-skill workers with the digital skills necessary for seizing the opportunities and reaping the benefits of digital transformation. Gradual transition from basic to advanced skills should be carefully designed for the education system. Closer co-operation with ICT industry stakeholders should be embedded into curricula design, especially for VET education and training and life-long learning programmes. WB6 governments can benefit significantly from regional initiatives on digital upskilling (Box 13.9).
- **Design dedicated policies and programmes to help the ICT industry grow and in turn boost the digitalisation of the economy**. WB6 governments need to invest in empowering the domestic ICT industry to find, train and retain talent through favourable social security or taxation regimes. The industry also needs support to strengthen exports and technology transfer and to gradually re-brand the domestic ICT industry from an outsourcing destination to an innovation hub. Serbia's positive example could be followed, focusing on IT industry promotion policies that align with the digital agenda in each economy.

Box 13.9. A regional working group on digital upskilling in the Western Balkans

According to the Regional Cooperation Council (RCC), the Western Balkan Digital Economy and Society Index (DESI) for 2019 shows that while around 80% of the citizens are active Internet users (at least once a week), approaching the EU average (85%), knowledge of basic digital skills in the WB6 remains below the EU average (58%) for all economies except Serbia (67%), ranging from 50% in Montenegro to 32% in Kosovo.

In an attempt to close the digital skills gap in the Western Balkan economies, the RCC created a Regional Working Group (RWG) on Digital Skills to open a regional dialogue on the challenges of digitalisation, upskilling and digital literacy. The newly established RWG is tasked to support economies to develop digital skills strategies and to regularly review the needs and challenges in implementing them. The first RWG meeting was held in April 2020 and was attended by representatives of Western Balkan governments, agencies, academia, and the European Commission, as well as representatives from international organisations dealing with digital skills.

Source: (RCC, 2020[33]), *RCC initiates regional working group on digital upskilling in the Western Balkans*, https://www.rcc.int/news/620/rcc-initiates-regional-working-group-on-digital-upskilling-in-the-western-balkans.

Society (Sub-dimension 10.4)

The EU's digital strategy encourages the development of "technology that works for the people", meaning that the digital transition should put people first and make a real difference to their lives, by creating opportunities for all (European Commission, 2020[14]). As digitalisation increases, it becomes increasingly important that governments find the right policy mix to reduce the use gap between those with high versus low education levels, and empower everyone with skills to thrive and trust in a digital world (OECD, 2019[2]).

Overall, only two economies, Serbia and Albania, have improved their performance on the society sub-dimension since 2018 (previously assessed as e-inclusion) (Table 13.5). Some of the other four economies have made small improvements in their frameworks but have not advanced their enforcement and implementation significantly.

Table 13.5. Scores for Sub-dimension 10.4: Society

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 10.4: Society	Digital inclusion	2.5	1.5	1.5	1.5	2.0	3.5	2.1
Sub-dimension average score		2.5	1.5	1.5	1.5	2.0	3.5	2.1

Digital inclusion is not systematically reviewed

Digital transformation promises benefits and opportunities, but also creates inclusiveness challenges. Governments need to put together policies to reduce digital divides and include everyone in the digital society – notably women, the elderly, low-income individuals, remotely located communities and marginalised groups. This section assesses if policies are being implemented to achieve digital inclusion, and how progress is being monitored to inform policy design and programme adjustments.

Digital agendas and information society policies implemented in the WB6 build on digital inclusion principles. The rural broadband development programmes recently launched in five WB economies, except Bosna and Herzegovina, promise to connect every household with high-speed Internet, ensuring inclusive access in terms of network availability. The WB6 are also deploying, though at varying speeds, public administration digitalisation and e-government services to gradually replace over-the-counter services. Albania, Montenegro, North Macedonia and Serbia are implementing e-government service bus systems

that enable data exchanges between public sector bodies and e-services without document collection by citizens. In this process, governments and public authorities need to ensure that nobody is left behind. Notably, Albania provides assistance to all those who are unable to apply online for e-services from trained employees at local Post Offices or ADISA[8] counters. Serbia has planned specific regulations for digital inclusion under its education reform, such as the regulation for Resource Centres for Assistive Technologies (supporting schools in inclusive education) and the instructions for the development of teaching materials in line with universal design principles to ensure accessibility, inclusiveness and usability of materials for teachers and students by accommodating gender, race, ethnicity, age, stature, disability and learning preference.

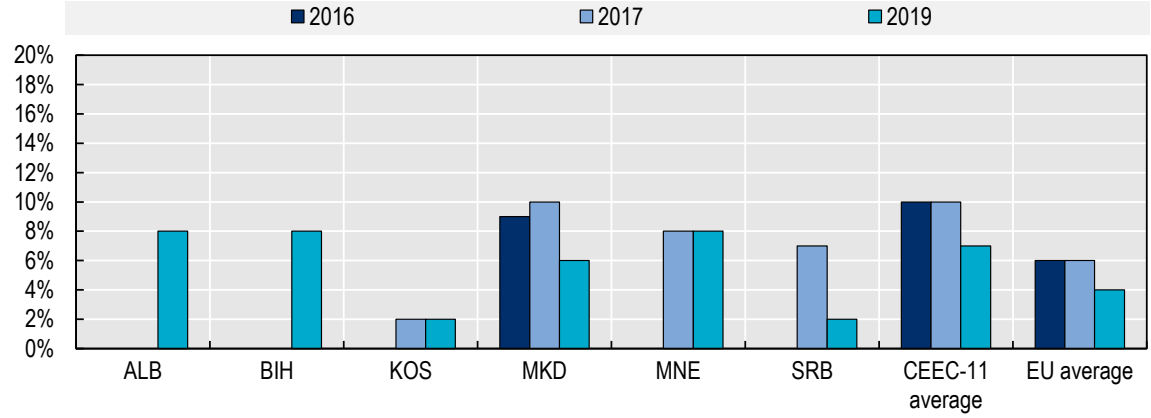
E-consultation portals for legislative and policy proposals have been created and are gradually being used in all WB6 economies to enable inclusive decision-making processes through digital technologies. Albania and Serbia, and Kosovo and North Macedonia to a lesser degree, are creating registries and Multi-user Information Systems (MIS) for social services (e.g., economic aid and disability payments, registries of persons with disabilities and other marginalised groups, registries for domestic violence, etc.).

Obligations for the web presentation of public sector bodies in line with international e-accessibility standards were enacted in 2018 in North Macedonia and Serbia, and in 2019 in Albania, with some evidence of practical implementation. Montenegro updated its framework in 2020 with a new Rulebook on e-Accessibility standards, which includes e-accessibility requirements for ICT products and services – the first in the WB6. Kosovo has not yet adopted e-accessibility standards for public bodies' websites and Bosnia and Herzegovina has an outdated state law from 2009 that was never enforced.

The WB6 are implementing some projects to improve digital inclusion for marginalised groups. Serbia is implementing the Programme for Enhancing Women in ICT (in rural areas), as well as donor-funded projects in the field of online safety, protection from digital violence and support to increase digital literacy among vulnerable groups of the population.[9] Donor-funded or civil society projects for women in the digital economy are also available in Bosnia and Herzegovina, Kosovo and North Macedonia, where the Innovation Fund also provides grants for companies that minimise social exclusion through technological solutions. The Ministry of Justice and Human and Minority Rights in Montenegro has provided free training and certification testing for the Roma population, campaigns for persons with disabilities, etc. Positively, the number of households that does not access the Internet due to lack of skills is decreasing across the WB6 (Figure 13.10). In Serbia and Kosovo, the share of total households with no Internet skills was 2% in 2019, lower than the EU average (4%). Lack of Internet access at home due to the high cost of access has also been steadily decreasing in the WB6. In 2019, the share of households without internet access due to high costs was close to the EU average (2%) in all economies, except Montenegro, where it was estimated around 8% (Figure 13.11).

Serbia is the only economy that provides strong co-ordination for implementing the digital inclusion framework at the highest level and across government bodies, through the Social Inclusion and Poverty Reduction Unit (SIPRU). The SIPRU publishes a Report on Digital Inclusion every four years, but despite their efforts, monitoring is insufficiently systematised and is dispersed across government bodies implementing respective programmes, which is also the case in all WB6 economies.

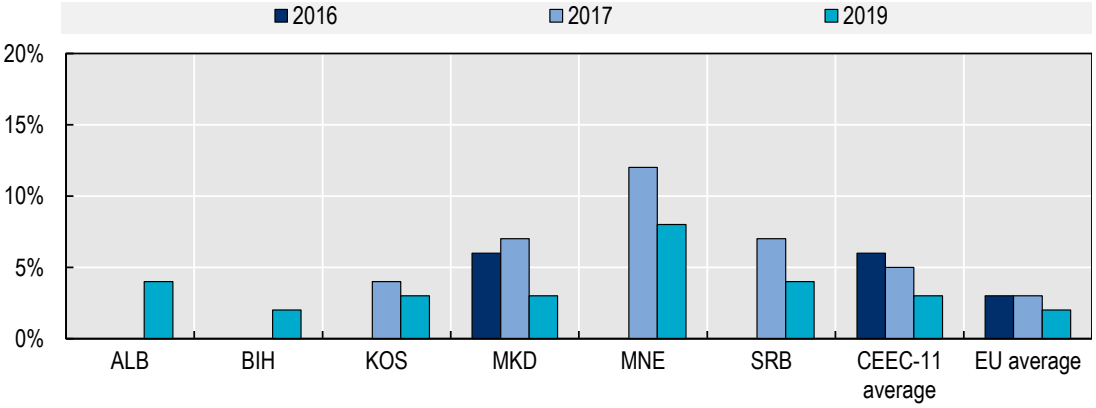
Figure 13.10. Households without access to the Internet at home because of lack of skills (2016-19)



Note: EU average includes all EU Member States in the period 2013-20. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.
Source: ALB (INSTAT), (Eurostat, 2019[34]), "Households - reasons for not having internet access at home", https://ec.europa.eu/eurostat/databrowser/view/ISOC_PIBI_RNI__custom_366736/default/table?lang=en

StatLink https://doi.org/10.1787/888934254468

Figure 13.11. Households without access to the Internet at home because of high access costs (2016-19)



Note: EU average includes all EU Member States in the period 2013-20. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.
Source: (Eurostat, 2019[34]), "Households - reasons for not having internet access at home", https://ec.europa.eu/eurostat/databrowser/view/ISOC_PIBI_RNI__custom_1065139/default/table?lang=en.

StatLink https://doi.org/10.1787/888934254487

The way forward for society

- **Adopt accessibility requirements in public procurement procedures for ICT products and services**. Bosnia and Herzegovina and Kosovo need to adopt and enforce e-accessibility requirements, while all WB6 economies except Montenegro need to complete their frameworks to include accessibility requirements in public procurement for ICT products and services and to create corresponding certification schemes. WB governments could consider how the Swedish government is approaching the implementation of ICT accessibility standards in public procurement (Box 13.10).
- **Systematise indicator monitoring for digital inclusion.** Western Balkan governments should create a dedicated public sector body to oversee, co-ordinate and monitor the various activities on digital inclusion, following the model of the Social Inclusion and

Poverty Reduction Unit (SIPRU) in Serbia. All WB6 governments need to create public databases that provide access to regularly collected data and analysis of digital inclusion.

Box 13.10. Working for digital inclusion in procurement in Sweden

The COVID-19 crisis has tested our societies' response to implementing digital accessibility of public goods and services. It has highlighted how people with disabilities could have been so much more included in education, work, healthcare and making everyday life work, if governments had improved their use of tools for accessibility in public procurement of ICT. According to G3ict's DARE Index 2020, only 46% of 105 countries surveyed are in the process of implementing policies on accessibility of ICT products and services in public procurement.

In January 2021, about 100 individuals from the public sector, disability rights organisations and industry joined a roundtable on digital accessibility and universal design in procurement organised by The Swedish Disability Rights Federation, G3ict, Microsoft, and the European Disability Forum, to discuss sustainable strategies to systematically include digital accessibility in all procurement procedures.

Accessibility requirements are mandatory in the Swedish Public Procurement Act, implemented after receiving a special recommendation from the UN in 2014 to systematically set requirements for accessibility in all agreements on public procurement. The Swedish national procurement strategy emphasises universal design and accessibility, but many organisations still find it difficult to specify accessibility requirements in procurement of ICT products and services, among others. For this reason the Swedish Public Procurement Agency provides tools and support for the whole procurement process, including how to follow up accessibility requirements. They also welcome questions via their online forum where they answer questions on how to apply standards like the EN 301 549 accessibility standard developed to support EC rules that add accessibility criteria to the public procurement of ICT products and services and the EN 17161:2019 standard on accessibility following a Design for All approach in products, goods and services.

Note: Sweden transposed the EU Procurement Directive (2014/24/EU) on 1st January 2017, which requires that the requirements defined in other EU Acts, such as the Web Accessibility Directive (EU 2016/2102) or the European Accessibility Act (EEA) ((EU) 2019/882) on the accessibility requirements for products and services, are used in public procurement procedures. Member states need to comply with the EEA by 28 June 2022 and complete its implementation by 2025.

Source: The National Agency for Public Procurement of Sweden (n.d.[35]), *Public Procurement*, www.upphandlingsmyndigheten.se/en/about-public-procurement/; G3ict (2020[36]), *The DARE INDEX 2020 Report Global Progress in Digital Accessibility Implementation by CRPD States Parties*, https://g3ict.org/upload/accessible_DARE-Index-2020-Global-Progress-by-CRPD-States-Parties-ENGLISH.pdf; G3ict (2021[37]), *Time to Act! Make Digital Inclusion in Procurement a Habit in Sweden*, https://g3ict.org/blogs/time-to-act-make-digital-inclusion-in-procurement-a-habit-in-sweden.

Trust (Sub-dimension 10.5)

Trust in the digital economy and society is critical for reaping the benefits of digitalisation. The COVID-19 crisis has demonstrated the importance of digital technologies for business continuity, both in the public and the private sector. It has also moved more consumers online and challenged the balance between data protection rights and public health protection. Digital infrastructures had to be rapidly scaled-up and processes had to be adjusted, creating opportunities that malicious actors leverage for their purposes. Thus, increased e-commerce activity has come with more reports of unfair, misleading and fraudulent commercial practices online, making the elderly and low-income consumers more vulnerable (OECD, 2020[38]). Under these circumstances, preparedness is key and there is a need for proactive policies to ensure trust and improve digital security (OECD, 2020[39]).

Overall, WB6 economies perform moderately on the trust sub-dimension (Table 13.6). All six economies have at least some relevant policies and a basic legal framework being implemented. However, lower scores in this assessment than in 2018 indicate that some economies need to improve their alignment with EU and international frameworks and ensure their implementation to address today's challenges in terms of data and privacy protection, online consumer protection and digital security. The majority of WB6 governments have not allocated sufficient resources for implementing existing frameworks, and more importantly they have not implemented awareness-raising campaigns to help citizens and business understand the risks and how to manage them.

Table 13.6. Scores for Sub-dimension 10.5: Trust

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 10.5: Trust	Privacy protections	2.5	2.0	2.0	2.5	2.0	2.5	2.3
	Consumer protection in e-commerce	2.0	1.5	2.5	2.0	2.0	2.5	2.1
	Digital security risk management	2.0	1.5	2.0	2.0	3.0	3.0	2.3
Sub-dimension average score		2.2	1.7	2.2	2.2	2.3	2.7	2.2

Privacy and data protection frameworks are not sufficiently enforced

The growing volume of personal data collected, analysed and exchanged has created new risks to people's privacy that call for comprehensive and agile policy and regulatory frameworks on data and privacy protections. This section assesses whether the policy and regulatory framework for data protection and privacy is in place and examines if competent authorities have the resources to implement it.

All WB6 economies have personal data protection (PDP) frameworks in place, but the majority have not improved their enforcement significantly since 2018. The assessment suggests that the WB6 economies have not sufficiently instilled a culture of data privacy and access-to-information mindsets in the public sector. Only three economies in the region have updated their existing PDP frameworks to align with the General Data Protection Regulation (EU 2016/679): Serbia in 2018, Kosovo in 2019 and North Macedonia in 2020. Albania and Montenegro have started preparations for a new law, while Bosnia and Herzegovina drafted a new PDP law in 2018, but has not adopted it yet. The government of the RS is preparing a law on information security that will also cover digital privacy issues at the entity level.

However, even in the three most advanced economies, the main difference between the GDPR and the new PDP legislation lies in the the penal policy, which remains mild in comparison to the stringent penal policy and extremely high fines introduced by the GDPR. The new PDP law in Serbia (applied in the second half of 2019) and the secondary legislation adopted in the course of 2019 and 2020 are in line with the principles and rules envisaged by the GDPR. However, the new law does not cover rules on video surveillance and processing of biometric data, which are important aspects of data processing (RCC, 2020[40]). Sectoral or special laws and regulations governing data processing activities in Serbia require harmonisation with the new PDP law. In Kosovo, by-laws deriving from the new law (such as allowing fines to be imposed) and sub-normative acts for certification criteria and procedures for data controllers and processors, are pending. North Macedonia's new law will only come into force in August 2021, after an 18-month transition period. The new law is aligned with the GDPR, but further harmonisation of existing special or sectoral legislation is required.

Serbia has partially aligned its new PDP law with the EU Police Directive (EU 2016/680) on the protection of natural persons with regard to the automatic processing of personal data by competent authorities. It is also the only WB economy to have ratified the 2018 Council of Europe (CoE) Protocol amending the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (CETS No.223).[10] Bosnia and Herzegovina and North Macedonia have signed the protocol, and Albania is preparing relevant legislation.

All WB6 economies face difficulties enforcing their existing PDP frameworks. The competent authorities (PDP agencies or commissioners) for supervising enforcement and implementing compliance inspections lack staff and resources for internal training and public sector capacity building. In Albania, Kosovo, Montenegro and Serbia, the responsibilities of these authorities extend to supervising the framework for access to public information. The assessment shows that the majority of public officials are not prepared to fully respect the right to access public information. In some cases, the lack of political commitment exacerbates the situation. In Kosovo, for example, a PDP Commissioner has not been appointed for more than three years, which means that there is practically no institutional mechanism in place to perform inspections. In Serbia, the Commissioner's annual report was considered by the National Assembly in 2018, for the first time since 2014. Certain conclusions to strengthen the enforcement of the framework were adopted, although are yet to be implemented.

The COVID-19 crisis has further exposed challenges of limited awareness of PDP rights and obligations, with authorities struggling to find the right balance between health protections and respecting the confidentiality of personal health data and the right to the private life of citizens. For example, measures on personal data disclosure taken by public institutions in Montenegro to address the COVID-19 pandemic have raised questions by civil society organisations on disproportionality (AZLP, 2020[41]). In this context, the Information and Data Protection (IDP) Commissioner in Albania strengthened the personal data protection framework by adopting three guidelines in 2020.

Consumers have limited opportunities to learn about their rights in e-commerce

The absence of direct contact in online commerce makes a predictable and trustworthy e-commerce marketplace all the more important. In this context, the role of consumer protection authorities becomes essential and creates a need to strengthen policies and capacities for consumer protection in e-commerce (OECD, 2016[42]). This section assesses if policies or programmes are in place and whether they adequately educate online consumers on their rights and how to exercise them.

The majority of the WB6 economies have not sufficiently updated their frameworks to promote consumer protection in e-commerce. Serbia is the only economy that has demonstrated commitment to improve the alignment of its consumer protection framework with international practices and to prioritise consumer awareness. The UNCTAD B2C e-Commerce Index 2020[11] includes Serbia, North Macedonia and Bosnia and Herzegovina in the top-10 transition economies. Serbia ranks 43rd out of 152 economies (excluding Kosovo), followed by North Macedonia (52nd), Bosnia and Herzegovina (70th), Montenegro (78th) and Albania (86th) (UNCTAD, 2020[43]).

All WB economies (except Bosnia and Herzegovina) have adopted polices or programmes for consumer protection that include some measures for e-commerce, but implementation is slow. The laws on consumer protection have been updated to increase alignment with the EU Directive on consumer rights (2011/83/EU) in Albania (2013), Kosovo (2018), Montenegro (2019) and Serbia (2018), as well as in the RS in Bosnia and Herzegovina (2017). Albanian legislation is being updated to reduce the cost of shipping and to transpose the EU regulation on cross-border parcel delivery services (2018/644/EU), which is expected around June 2021. Montenegro is also working on subsequent secondary legislation and two relevant regulations were adopted in 2020. On the other hand, although North Macedonia prepared a new draft of the Law on Consumer Protection in 2019, it has not been adopted. Legislation at the state level in Bosnia and Herzegovina is outdated, and the government of the FBiH has not yet adopted a relevant framework. E-commerce legislation is in place in all WB6 economies and in line with the e-Commerce Directive (2000/31/EC). However, only North Macedonia, Serbia and the RS have updated their legislation since 2017 to further improve their alignment with the EU *acquis*.

All the WB6 economies apart from Bosnia and Herzegovina have tasked their consumer protection authorities with enforcing the framework and monitoring consumer protection in e-commerce, but data collection is poor. The consumer protection authorities in the five economies publish monitoring reports,

but few include information on e-commerce complaints, either because data are insufficiently monitored or because complaints on e-commerce are infrequent. Positively, the Ministry of Trade and Industry in Kosovo published a report in 2020 that includes data on online shopping complaints. The situation is different in Bosnia and Herzegovina, where the Ombudsman for Consumer Protection and Market Surveillance Agency of Bosnia and Herzegovina operates under the consumer protection law of 2006, which does not address e-commerce transactions.

WB6 citizens' online shopping culture is changing and trust is increasing with gradual improvement of e-payment systems, but e-commerce is still low in the region compared to the EU average. In 2019, the share of the population that had made Internet purchases in the previous 12 months was 34% in Serbia, 30% in Kosovo, 29% in North Macedonia, 23% in Bosnia and Herzegovina, 16% in Montenegro and 7% in Albania. All of these are much lower than the EU average of 63% (Eurostat, 2021[44]). WB6 governments provide limited opportunities for consumer education in e-commerce. Although their frameworks foresee awareness-raising activities, resources to implement them are limited. Serbia is an exception, launching a good practice initiative that could be replicated in the region (Box 13.11).

Box 13.11. Promoting trust in e-commerce and online consumer education in Serbia

Serbia has demonstrated commitment to improving consumer protection in e-commerce through its Strategy for Consumer Protection for 2019-2024 and Programme for the Development of e-Commerce (2019-2020). These aim to address obstacles to e-commerce growth (e.g., strengthening consumer confidence in online shopping, empowering e-traders, improving logistics flows, promoting electronic payment, etc.).

A platform for e-commerce, the '*Smart and Safe*' platform, has been created offering information and web services for consumers on a dedicated portal hosted by the Ministry of Trade, Tourism and Telecommunications (MTTT). A public awareness campaign was also implemented to boost consumers' trust in e-commerce, promoting e-banking and card payments. The platform includes a guide for consumers in e-commerce and tips for e-traders (https://pametnoibezbedno.gov.rs/elektronska-trgovina) and the "eShop fast, easy and simple" video campaign (https://pametnoibezbedno.gov.rs/video/4).

Serbia has also leveraged donor funding to build public sector capacities for consumer protection. An example is the twinning project Further Development of Consumer Protection in Serbia, jointly funded by the EU and the Republic of Serbia to the tune of EUR 1.425 million, and implemented from 2017 to 2019. The project supported the transfer of expertise on consumer protection from the Ministry of the National Development of the Republic of Hungary and the Regional Development Agency Senec-Pezinok of Slovakia.

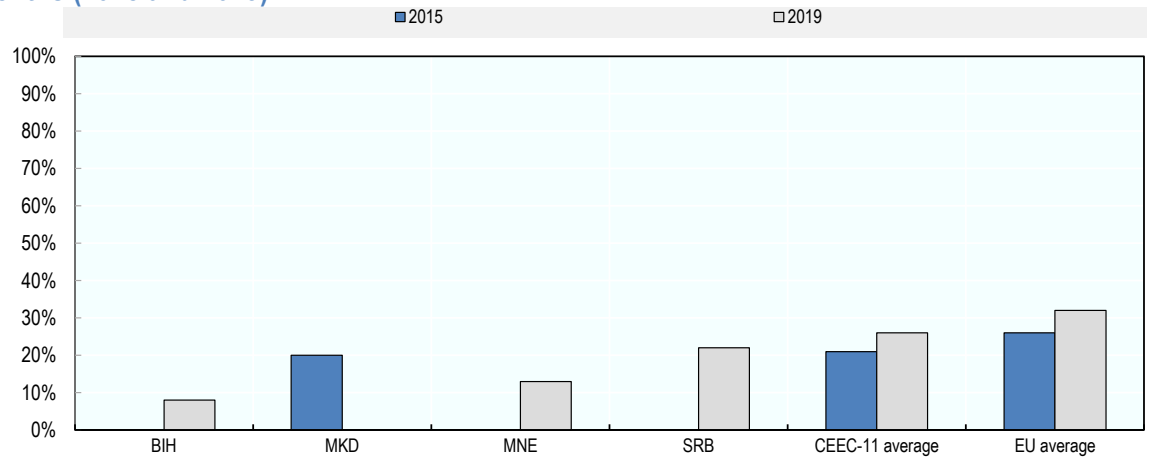
Source: (Government of the Republic of Serbia, n.d.[45]), *eCommerce The Future is Now*, www.srbija.gov.rs/tekst/en/129967/ecommerce.php ; (Ministry of Trade Tourism and Telecommunications, n.d.[46]), *Sektor za zaštitu potrošača*, https://zastitapotrosaca.gov.rs/o-nama#S4.

Digital security risk management is slowly coming into line with the EU cybersecurity framework

Digital security threats are growing in number and sophistication, pushing governments to adopt digital security risk management policies that strengthen digital security and ensure that all stakeholders understand the risks and how to manage them (OECD, 2015[47]). This section examines whether the WB6 have established comprehensive cybersecurity strategies and allocated sufficient resources to protect critical infrastructure and sensitive data.

All WB6 economies have ratified the CoE Convention on Cybercrime (CETS No.185) and all, apart from Bosnia and Herzegovina, have a cybersecurity strategy in place and are implementing it. However, Kosovo has not updated its strategy beyond 2019 and North Macedonia has not fully budgeted its action plan since 2018. Republika Srpska (RS) in Bosnia and Herzegovina is preparing a cybersecurity strategy at the entity level. Kosovo, Montenegro, North Macedonia and Serbia have each established a dedicated cybersecurity council or body to provide cross-cutting co-ordination for implementing the strategy and overall data collection. However, relevant reports are not publicly available in any economy. Overall, monitoring of digital security and risk management awareness activities among public and private sector stakeholders are weak in the WB6, which is reflected in the low share of enterprises that have created an ICT security policy in the last two years (Figure 13.12).

Figure 13.12. Enterprises that have defined or reviewed their ICT security policy in the last 24 months (2015 and 2019)



Note: No data are available for Albania and Kosovo. EU includes all EU Member States in the 2013-20 period. The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.
Source: (Eurostat, 2019[48]), "Security policy: measures, risks and staff awareness", https://ec.europa.eu/eurostat/databrowser/view/isoc_cisce_ra/default/table?lang=en

StatLink https://doi.org/10.1787/888934254506

The majority of WB6 economies have made progress in aligning with the eIDAS Regulation on electronic identification, authentication, and trust services (EU 910/2014). Serbia adopted a new law on e-identification and trusted services in 2017 and has completed the regulations needed for full alignment with the eIDAS Regulation. North Macedonia and Montenegro adopted new legislation in 2019 and Kosovo followed in 2020, but subsequent regulations in the economy are still pending. Albania adopted a new law in 2015, but full transposition of eIDAS is planned in 2021. Relevant legislation in Bosnia and Herzegovina is based on an outdated e-signature law from 2006 that was never implemented. However, in October 2019, the Office for the Supervision and Accreditation of Certifiers in Bosnia and Herzegovina registered the first trust service provider to introduce qualified electronic signatures in the economy. In the Republika Srpska, updated legislation on eID is already being implemented and relevant bylaws are in place.

The WB6 economies are also in the process of aligning their laws with the Network and Information Security (NIS) Directive on security of network and information systems (EU 2016/1148). New laws on information security or cyber security have been adopted in Albania, Montenegro, North Macedonia and Serbia, although each economy has a different harmonisation pathway for completing the alignment. Kosovo is also preparing a relevant new law. In Bosnia and Herzegovina, the state government is planning to draft relevant legislation, while the entity government in Republika Srpska is already preparing a new Law on Information Security in line with the NIS Directive, to replace the existing law from 2011. Since 2018, Albania, Kosovo, Montenegro and Serbia have all adopted legislation identifying critical infrastructure, further improving their alignment with the EU framework.

The WB6 have established economy-wide computer emergency response teams (CERTs), in line with the NIS Directive, though most are significantly understaffed and only marginally operational. In Kosovo and North Macedonia they are operating with only two staff members each. Montenegro's CIRT.ME, Albania's AL-CSIRT (an integral part of the National Authority on Electronic Certification and Cyber Security; AKCESK) and the Serbian NCERT have recently increased their staff to six or seven employees. Bosnia and Herzegovina has not established a CERT at the state level, but an entity-level CERT is operating in the RS. The WB6, except Serbia, have not made satisfactory progress in creating additional public and private computer security incident response teams (CSIRTs). In Serbia, in contrast, 13 additional special CERTs have been created. In most WB6 economies, CERTs depend significantly on donor-funded projects for capacity building and international co-operation, which is critical in this line of activity, although Serbia is stronger than the other economies in technology transfer and tools for digital security risk management. Positively, Albania (AL-CSIRT), Kosovo (KOS-CERT) and North Macedonia (MKD-CIRT) have signed an MoU on co-operation, which is a step towards implementing the CRM Action Plan (Box 13.12).

Box 13.12. Towards a common regional approach to digital trust and security

The following key findings of the CO2021 sub-dimension on trust can inform implementation of the Common Regional Market (CRM) Action Plan 2021-24 actions on the CRM trust and security component:

- Three WB economies (Kosovo, North Macedonia and Serbia) have aligned their frameworks on data protection with the EU GDPR (EU 2016/679) and the other three WB economies (Albania, Bosnia and Herzegovina, and Montenegro) are preparing to follow, but in most cases secondary legislation and full harmonisation are pending.
- Competent authorities for data protection and privacy in the majority of the WB6 have limited human resources and power to supervise and enforce the frameworks.
- The WB6 economies (except Bosnia and Herzegovina) have a cybersecurity strategy and legislation in place and are gradually aligning with the NIS Directive (EU 2016/1148). These five economies have established an economy-wide CERT team for incident response. However, budgetary allocations for action plans and CERT technical and human resources are limited in the majority of WB economies.
- The majority of WB governments have updated legislation on e-identification to align with the eIDAS Regulation (EU 910/2014), but further work is needed in some WB economies to complete the alignment, adopt regulations and improve implementation of e-signature schemes. Mutual recognition of e-identification schemes across the region has not been promoted.

The way forward for trust

- **Complete alignment with the EU General Data Protection Regulation and ensure stronger enforcement of the framework.** Albania, Bosnia and Herzegovina, and Montenegro need to accelerate the adoption of new legislation on data protection and privacy, aligning with the GDPR (EU 2016/679). Kosovo, North Macedonia and Serbia should prioritise the harmonisation of sectoral legislation and improve regulatory compliance to complete alignment with the GDPR. All WB6 economies need to ensure that authorities supervising implementation of the data protection and access to public information framework have sufficient human and financial resources to fulfil their enhanced responsibilities. WB governments also need to guarantee the authorities' executive power and capacity to enforce compliance by public and private sector entities. An adequate

budget is also vital to build the capacity of public officials to cultivate a new data privacy and transparency culture.

- **Complete the framework on consumer protection in e-commerce and provide opportunities for consumers to learn about their rights and how to exercise them.** Bosnia and Herzegovina and North Macedonia need to accelerate the adoption of a consumer protection policy or programme that includes protection in e-commerce and a law on consumer protection that aligns with the EU framework. Albania, Kosovo and Montenegro need to continue legislative improvements to remove any obstacles to e-commerce take-up. All economies need to ensure that consumer protection legislation addresses fraudulent or misleading practices, privacy issues, dispute resolution, and redress in e-commerce transactions. They also need to increase efforts to monitor online consumer protection indicators and to implement awareness-raising campaigns such as Serbia's (Box 13.11), to educate consumers and build trust in e-commerce.
- **Strengthen human and technical capacities for cybersecurity and complete alignment with the NIS Directive on information systems and networks security**. Bosnia and Herzegovina and Kosovo need to adopt new policies on cybersecurity that go beyond 2021 and accelerate the adoption of legislation aligned with the NIS Directive (EU 2016/1148), including also the definition of critical infrastructure. Bosnia and Herzegovina needs to increase efforts to establish a CERT to start international co-operation on incident response management. Kosovo and North Macedonia need to increase the human and financial resources of their CERTs, while all economies need to invest in public sector capacity building to strengthen cybersecurity and improve digital security risk management capabilities.

Conclusion

The WB economies have made strides in promoting broadband development and digital government to underpin the digital economy. They have continued on their path to EU integration by aligning – to varying degrees – their legal and regulatory frameworks on interoperability, e-identification, e-commerce, e-accessibility, data protection, and cybersecurity. They have also laid the foundations for data accessibility, openness and transparency by setting out and harmonising legal frameworks.

However, weaknesses remain. Support for SME digitalisation and ICT sector growth is underfunded. Lack of co-ordination with industry stakeholders on digital skills development is hindering the closure of the skills gap. Digital inclusion programmes and awareness-raising activities for building trust in the digital economy are also poorly supported.

The successful implementation of the digital society and economy in the WB6 is closely tied to implementing the recommendations put forward in this chapter. Achieving greater digital literacy for the population; improving access to high-speed Internet, data and digital technologies for individuals and businesses; and leveraging regional co-operation will ultimately help increase integration with the global digital economy.

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Notes

[1] It should be noted, however, that this indicator is affected by the average number of people in a household, which may be higher in some of the WB6 (e.g. in Kosovo) than in EU Member States, leading to fewer subscriptions as a percentage of the population. A more careful look into the data behind this indicator may also find that WB6 subscriptions often offer much lower data speeds on average than those in the EU Member States.

[2] The Digital Economy and Society Index (DESI) is s a composite index that summarises relevant indicators on Europe's digital performance, under the EU's digital strategy Shaping EU's Digital Future. Data for the EU average retrieved from https://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries.

[3] The 11 Central and Eastern European countries (CEECs) which have joined the European Union: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

[4] An initiative funded by the European Union https://www.wbif.eu/.

[5] The EGDI, which assesses e-government development at the economy level, is a composite index based on the weighted average of three normalised indices: the Telecommunications Infrastructure Index (TII) based on ITU data, the Human Capital Index (HCI) based on UNESCO data, and the Online Service Index

(OSI) based on data from an independent Online Service Questionnaire (OSQ), conducted by UNDESA, and a Member State Questionnaire (MSQ).

[6] The IPA II three-year project EU Support to Digitalisation of Businesses through ICT (European Commission, 2019[49]).

[7] German Organization for International Cooperation (GIZ).

[8] The Agency for the Delivery of Integrated Services Albania (ADISA) is an agency of the Albanian Government under the supervision of the Prime Minister's Office (https://adisa.gov.al/).

[9] A variety of projects on digital inclusion in Serbia and North Macedonia are referenced in the Digital Inclusion Atlas (https://digitalinclusion.eu/digital-map/), which was created by the European Knowledge Community on Digital Inclusion, supported by the MEDICI project *(*Mapping the Evolving Digital Inclusion Landscape to Support Cohesion and Integration) and funded by the European Parliament.

[10] All EU member states have signed the Protocol (Council of Europe Treaty 223), but not all states have ratified it until 31/03/2021 (www.coe.int/en/web/conventions/full-list/-/conventions/treaty/223/signatures?p_auth=oUeuTKBx).

[11] The UNCTAD B2C E-commerce Index measures an economy's preparedness to support online shopping.