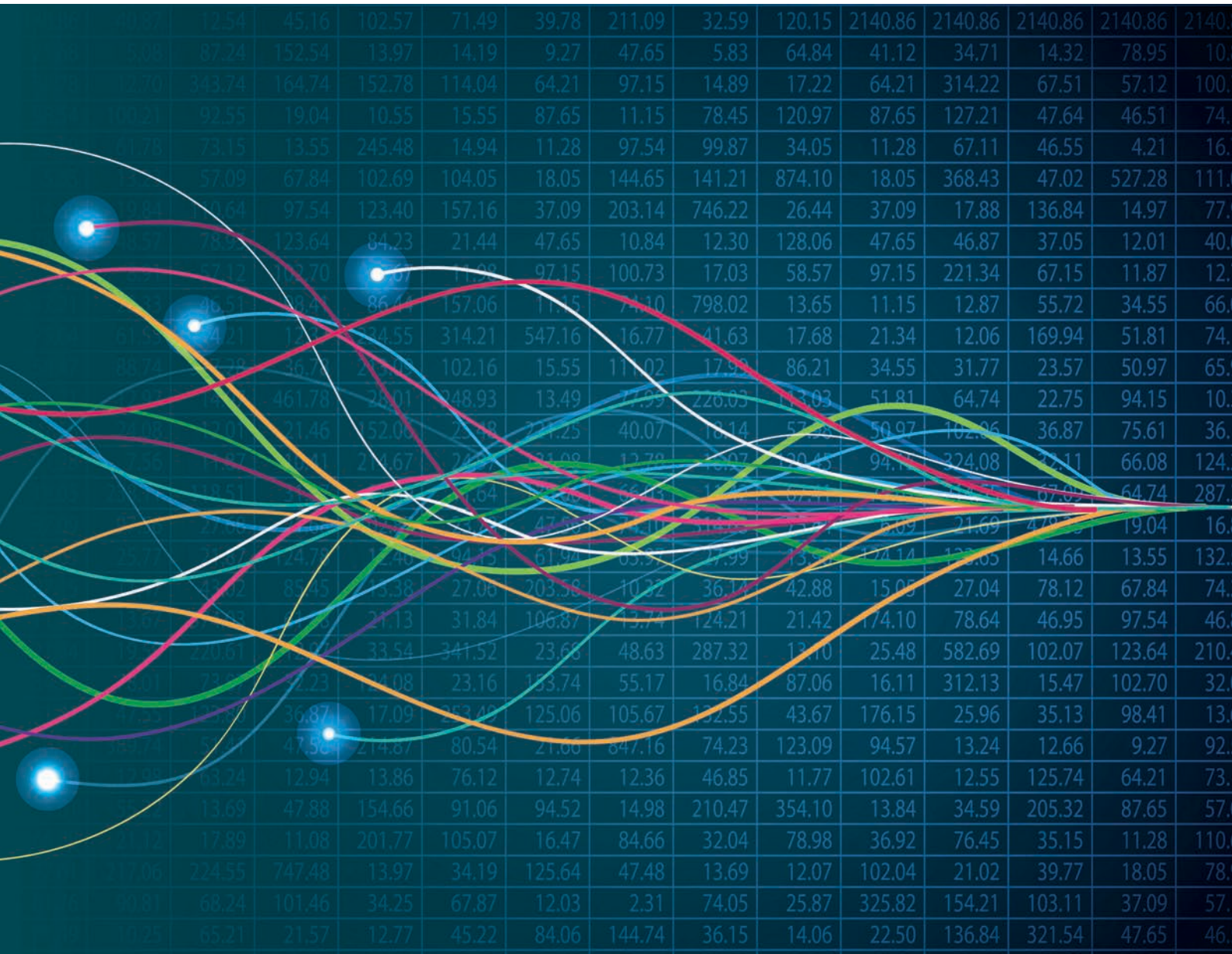
OECD

LAUNCH VERSION

Economic Convergence Scoreboard for the Western Balkans 2025



Economic Convergence Scoreboard for the Western Balkans 2025

OECD
BETTER POLICIES FOR BETTER LIVES

LAUNCH VERSION

Please cite this publication as:
OECD (2025), *Economic Convergence Scoreboard for the Western Balkans 2025*, OECD Publishing, Paris, https://doi.org/10.1787/bc0babf3-en.

ISBN 978-92-64-82998-5 (print)
ISBN 978-92-64-98696-1 (PDF)
ISBN 978-92-64-96434-1 (HTML)

Photo credits: Cover design by Baseline using elements from © Camp008/Shutterstock.com and © Natrot/Shutterstock.com.

Corrigenda to OECD publications may be found at: https://www.oecd.org/en/publications/support/corrigenda.html.

Foreword

The Western Balkans have made significant strides toward European integration over the past two decades and since the Thessaloniki Summit in 2003, when regional leaders alongside representatives of the European Union (EU) declared their aspirations for a European future for the region. Today, five economies - Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia - have candidate status and Kosovo applied for EU membership in 2022.

Poland has placed the Western Balkans' EU integration at the top of the agenda of its EU Council Presidency. This demonstrates a shared commitment to fostering regional prosperity and economic resilience and provides a critical window of opportunity to make tangible progress toward EU membership. To fully seize this momentum, it is essential for the Western Balkans to advance on structural reforms, ensuring alignment with EU policies and standards. During the EU accession negotiations, candidate countries must present data confirming the implementation of relevant policies. Their foreign policy is measured by the degree of alignment with the EU's Common Foreign and Security Policy.

Recognising the OECD's experience in evidence-based policy analysis, Poland has partnered with the OECD to analyse the extent to which candidates' economic policies converge with those of the EU. The *Economic Convergence Scoreboard for the Western Balkans 2025* report highlights the significant efforts that the Western Balkans must make to transform a range of key economic sectors and presents a new tool that measures reform outcomes and provides concrete policy guidance for further progress. It offers a comprehensive assessment of the policies and reforms needed to accelerate economic growth and deepen EU integration.

The report identifies a number of key priority areas for policy action in the Western Balkans, including:

- To support business expansion and boost market integration, further investment in infrastructure and transport is needed, with a particular focus on railway transport where the volume of goods transported per kilometre of railway in the Western Balkans is currently just 4.2% of the EU average.
- To help businesses and citizens leverage digital and emerging technologies and address digital skills gaps, where for example only 34% of the adult population in the Western Balkans has at least basic digital skills when compared to 56% in the EU, further investment in education and adult training programmes, as well as enhanced incentives for research and development, are needed.
- To meet the region's environmental targets and commitments, policies need to support more efficient use of resources and greater investment in green technologies, as waste generation per unit of GDP is on the rise across the region and its management is a challenge - more than 83% of municipal waste is disposed of in landfills, compared to 23% in the EU.

We thank all stakeholders who contributed to this report, especially the Western Balkans' national statistical offices for their data support, and the region's administrations for their invaluable insights.

This report reflects our shared commitment to supporting the Western Balkans on their path toward EU membership. Together with OECD's other flagship regional reports on the Western Balkans, such as the *Competitiveness Outlook* and *the SME Policy Index*, the OECD is providing a roadmap to support economic policy reform towards a more prosperous and European future for all citizens in the region.

Mathias Cormann,

Secretary-General, OECD

Radosław Sikorski,

Minister of Foreign Affairs, Poland

Acknowledgements

The *Economic Convergence Scoreboard for the Western Balkans 2025* is the result of work co-ordinated by the South East Europe Division of the OECD Global Relations and Co-operation Directorate (GRC), with financial support from the Government of Poland. The report was prepared under the guidance of Marzena Kisielewska, Head of the OECD South East Europe Division, and Umur Gökçe, Economic Advisor.

The methodology for the Scoreboard was led by Benoit Dicharry, with substantial contributions from Hedvig Norlén. The principal authors were Umur Gökçe (Front matter), Benoit Dicharry (Infrastructure and Connectivity, Business Environment, and Methodology), Stephanie Lizzo (Skills, Digital Transformation, and Greening), and Francesco Lacirignola (Introduction, Regional and Economy Profiles).

The report also benefited from input and review by William Tompson (OECD GRC), who served as lead reviewer. Special thanks also go to Hana Aljević, Jovana Pavlović Djukić, Dafina Marashi, and Marijana Petrović (OECD South East Europe Division), all of whom provided valuable feedback throughout the drafting process.

We extend our sincere appreciation to government officials and other stakeholders who actively participated in data collection. Their engagement and commitment were essential to the development of this report. We would especially like to acknowledge the contributions of the following individuals who have assumed a strong co-ordinating role:

Economy	Statistical offices	Governments
Albania	Elsa Dhuli	Anxhela Bushati
Bosnia and Herzegovina	Ivona Bulić	Brankica Pandurević
Kosovo*	Avni Kastrati	Fatmir Curri and Jeton Karaqica
Montenegro	Majda Savićević	Coordinated by Ivona Savićević, with support from Svetlana Stijepović and Marko Savković from the Ministry of Economic Development, through the working group on the *OECD Western Balkans Competitiveness Outlook*
North Macedonia	Marina Mijovska	Stojne Danilova Ivanoski
Serbia	Nikica Radin, Dušan Radovanović, Sanja Radonjić, Dušanka Dostanić, Uroš Rajčević, Prvoslav Mutavdžić, and Duško Bumbić.	Co-ordinated by Sanja Stojadinović through the working group on the *OECD Western Balkans Competitiveness Outlook*.

We are particularly grateful to Beata Jaczewska, Agnieszka Kowalska, Radosław Darski, Szymon Wojtasik and Piotr Wysocki, from Poland's Ministry of Foreign Affairs for their continued support and insightful guidance throughout the preparation of this report.

The report was edited and proofread by Elizabeth Zachary and was prepared for publication by Meral Gedik. The following people also contributed to the success of the project: Linda Rubene, Valeria Pelosi and Vukan Jokić.

Table of contents

FIGURES

TABLES

Reader's Guide

This guide provides an overview of how to interpret and utilise the data presented in the *Economic Convergence Scoreboard for the Western Balkans 2025*. More information on the overall approach and methodology, including the selection of indicators or the calculation of scores, are included in the annex.

Analytical framework

The Scoreboard assesses the level of convergence of the Western Balkan economies across a total of 35 indicators, grouped under five policy clusters key to economic performance:

- Infrastructure and Connectivity
- Skills
- Business Environment
- Digital Transformation
- Greening

The analytical framework builds on the growth models in the economic literature:

- **Exogenous growth models** (Solow-Swan): *Infrastructure and Connectivity* and *Business Environment* contribute to capital accumulation (physical capital) and productivity growth.
- **Endogenous growth models** (Romer and Lucas): *Skills* and *Digital Transformation* contribute to human capital and knowledge accumulation. *Greening* can drive technological change and ensures sustainability of growth.

Each policy cluster includes six to eight indicators selected based on their relevance to economic growth, as well as the availability and comparability of data.

Data coverage and timeline

The primary data source for the selected indicators was Eurostat to maximise comparability between the European Union (EU) and the Western Balkans. When this was not possible, data were directly sourced from the national statistical offices of the Western Balkan economies and other international sources, including the OECD.

The dataset used to calculate scores and rankings includes the six Western Balkan economies (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia) as well as the EU 27 member states.

Convergence for indicators is measured over three sub-periods: 2014-16, 2017-19 and 2020-23, rather than on an annual basis. Each data point represents the average value of the available years within each sub-period. This approach allows for the following: 1) integrating the inclusion of indicators not updated annually; 2) smoothing out cyclical variations or shocks; and 3) overcoming data inconsistencies or gaps.

The limited statistical coverage in the Western Balkans, compared to EU member states, influenced the selection of indicators, with many indicators initially considered for the Scoreboard due to their strong correlation with economic growth ultimately excluded primarily due to limitations in data availability. Alternative indicators were selected as proxies to effectively encapsulate comparable dimensions of economic performance and development. For indicators with incomplete time-series coverage, missing data were addressed through imputations.

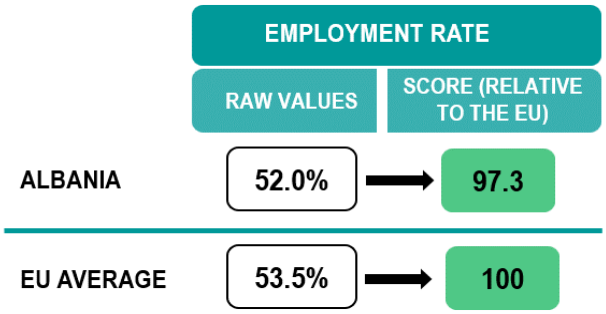
Scoring

The Scoreboard leverages two methods to calculate scores and rankings.

Each **indicator score** represents the ratio of a specific Western Balkan economy's sub-period value to the EU average, which is set at 100. Scores above 100 indicate overperformance, while scores below 100 signal lower levels of convergence in relation to the EU.

For example, Albania's employment rate was 52.0% over the period 2020-23, compared to the EU average of 53.5%. The indicator score is therefore **(52.0/53.5) × 100 = 97**, which means that Albania's employment rate is 97% of the EU average, indicating a high level of convergence (Figure 1).

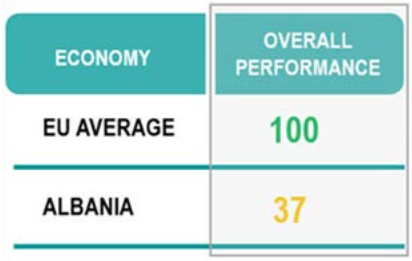
Figure 1. Example indicator score: Employment rate (2020-23)



The **cluster scores** are derived from a dedicated composite indicator. Individual indicator values were treated for outliers and then normalised before being aggregated into cluster scores. As with indicator scores, the EU average is set at 100. Scores above 100 indicate overperformance, while scores below 100 signal lower levels of convergence in relation to the EU.

For example, the calculation of Albania's seven skills-related indicators for the period of 2020-23 results in an average standardised score of 37, while the EU average remains at 100. This indicates that Albania is performing at 37% of EU levels (Figure 2).

Figure 2. Example cluster score: Skills (2020-23)



The underlying raw data used to determine scores are provided in the indicator-level graphs throughout the chapters.

Comparability

The indicators in the 2025 edition reflect the methodological improvements designed to enhance the robustness and comparability of the data, while providing better insight into the policies that drive economic growth. As a result, it is advisable not to directly compare the results of this edition with those of the first edition released in 2023.

Use and benefits

The Scoreboard serves multiple purposes, offering significant benefits for various stakeholders:

- **Policy makers in the Western Balkans**
  - The Scoreboard helps to identify economic strengths and weaknesses, assess the effectiveness of current policies, and pinpoint areas requiring targeted reforms. By leveraging a data-driven approach, it supports evidence-based policy making and the development of tailored economic strategies to accelerate sustainable growth.
  - As it was developed in close co-ordination with national statistical offices across the region, the Scoreboard strengthens the collection of high-quality, reliable data, enhancing the ability to track policy outcomes more effectively.
- **EU member states and institutions**
  - The Scoreboard provides an objective, data-driven assessment of the region's progress towards economic convergence with the EU, contributing to the European Commission's enlargement reports on the Western Balkans. It offers insights into policy implementation, highlighting the extent to which measures are effectively enforced rather than merely transposing the EU acquis into laws and regulations.
  - By identifying priority policy areas that require further efforts, the Scoreboard can help guide the EU's funding priorities, including those under the Instrument for Pre-Accession Assistance (IPA) and the Western Balkans Investment Framework (WBIF).

Abbreviations and acronyms

AI	Artificial intelligence
ALB	Albania
ARKEP	Regulatory Authority of Electronic and Postal Communications
BiEPAG	Balkans in Europe Policy Advisory Group
BIH	Bosnia and Herzegovina
BPI	Broadband Price Index
CBAM	Carbon Border Adjustment Mechanism
CEER	Council of European Energy Regulators
CEFTA	Common Economic Free Trade Area
CIT	Corporate income tax
CRM	Common Regional Market
DTT	Distance-to-target
EBRD	European Bank for Reconstruction and Development
ECEC	Early childhood education and care
EIB	European Investment Bank
EPR	Extended producer responsibility
ERP	Economic Reform Programme
ETS	Emissions Trading System
EU	European Union
FBiH	Federation of Bosnia and Herzegovina
FDI	Foreign direct investment
FTTP	Fibre to the premises
GDP	Gross domestic product
GDPR	General Data Protection Regulation
GVA	Gross value added
IC	Infrastructure and connectivity
ICT	Information and communication technology
IEA	International Energy Agency
ILO	International Labour Organization
IMF	International Monetary Fund

INSTAT	Institute of Statistics of Albania
KAS	Kosovo Agency of Statistics
KCGF	Kosovo Credit Guarantee Fund
kg	Kilogramme
KOS	Kosovo
kWh	Kilowatt hour
MAKSTAT	State Statistical Office of the Republic of North Macedonia
Mbps	Megabytes per second
MKD	North Macedonia
MNE	Montenegro
MONSTAT	Statistical Office of Montenegro
MW	Megawatts
NECP	National Energy and Climate Plans
NEET	Not in employment, education or training
NPL	Non-performing loan
OECD	Organisation for Economic Co-operation and Development
OTT	Over-the-top
PISA	Programme for International Student Assessment
PPP	Purchase power parity
R&D	Research and development
RCC	Regional Cooperation Council
RRA	Regional Roaming Agreement
RS	Republika Srpska
SDG	Sustainable Development Goals
SME	Small and medium-sized enterprises
SOE	State-owned enterprises
SORS	Statistical Office of the Republic of Serbia
SRB	Serbia
SSC	Social security contributions
TEN-T	Trans-European Transport Network
TPP	Thermal-powered plants
UNDP	United Nations Development Programme
VET	Vocational education and training
WB6	Six Western Balkan economies
WBIF	Western Balkans Investment Framework
WBL	Work-based learning
WEF	World Economic Forum

Executive summary

Economic convergence with the European Union (EU) remains a strategic necessity for the six Western Balkan economies. Beyond improving living standards, a more competitive and resilient Western Balkans is essential for fostering trade, attracting investment and deepening integration into European markets.

Over the past two decades, the region has made significant progress in sustaining economic growth. On average, growth levels in the Western Balkans have consistently outpaced those of the EU, helping to bring the region's GDP per capita closer to the EU. Since 2003, GDP per capita – adjusted for purchasing power parity (PPP) – in the Western Balkans grew by approximately 120%, rising from USD 9 725 in 2003 to USD 21 305 in 2023.

Despite this positive convergence trend, the Western Balkan economies have made only modest headway in narrowing the gap with their EU counterparts. In 2023, the region's GDP per capita at PPP remained just below two-fifths (40%) of the EU average – an improvement of approximately 13 percentage points since 2003, when it stood at 27%.

The *Economic Convergence Scoreboard for the Western Balkans 2025* identifies the key bottlenecks holding back faster and more sustainable growth in the region. It offers a comparative overview of the region's performance in relation to the EU, analysing 35 indicators grouped into five policy clusters: 1) infrastructure and connectivity; 2) skills; 3) business environment; 4) digital transformation; and 5) greening.

Infrastructure and Connectivity

The greatest convergence of the Western Balkans towards the EU has been observed in the Infrastructure and Connectivity cluster, although overall performance in this area remains weak.

Indicators	Regional performance relative to the EU (EU=100)			Change
	2014-16	2017-19	2020-23	2014-16 to 2020-23
	33	**31**	**39**	**+6**
IC.01: Road infrastructure density	26.0	22.4	22.5	-3.5
IC.02: Rail infrastructure density	47.1	46.1	43.8	-3.3
IC.03: Rail freight	4.9	4.5	4.2	-0.7
IC.04: Power losses	47.1	46.3	49.7	+2.6
IC.05: Electricity cost	60.1	55.9	77.2	+17.1
IC.06: Mobile cellular penetration	94.8	95.6	97.5	+2.7
IC.07: Broadband speed	46.3	37.5	46.7	+0.4

Transport networks, particularly rail infrastructure, continue to lag behind those of the EU, increasing costs for businesses and reducing trade efficiency. While investments in major transport corridors have accelerated, rural connectivity remains limited, restricting access to markets and economic opportunities. The Western Balkans Investment Framework (WBIF) has played an instrumental role in financing key infrastructure projects, but further efforts are needed to streamline regulatory approvals and improve project implementation.

In terms of energy infrastructure, ageing coal-based power plants contribute to inefficiencies, as reflected in high levels of power losses. Even then, substantial fossil fuel subsidies have kept electricity prices relatively low across much of the region. However, the prospect of EU accession is expected to place increasing pressure on the long-term sustainability of these low electricity costs. Cross-border energy connectivity remains underdeveloped, limiting the region's integration into regional energy markets and reducing access to enhanced energy security.

Digital infrastructure has benefited from substantial investments, significantly improving digital connectivity, with mobile penetration rates now approaching EU levels. Nonetheless, gaps remain in the development of high-speed networks, as the region's average broadband speed is less than half that of the EU. High broadband costs, limited competition in the telecommunications sector and coverage gaps in rural areas continue to impede further progress in digital connectivity.

Skills

The Skills cluster exhibits the weakest performance of the region, despite gradual convergence with the EU.

Indicators	Regional performance relative to the EU (EU=100)			Change
	2014-16	2017-19	2020-23	2014-16 to 2020-23
	34	**37**	**38**	**+4**
SK.01: Labour productivity	39.5	38.5	39.2	-0.3
SK.02: Employment rate	71.6	74.4	76.5	+4.9
SK.03: PISA average score: mathematics	81.4	84.8	82.3	+0.9
SK.04: Youth NEET rate	50.7	46.3	47.1	-3.6
SK.05: Labour force with advanced education	96.7	99.0	99.4	+2.7
SK.06: Lifelong learning	30.5	25.0	37.6	+7.1
SK.07: R&D expenditures	16.9	16.2	16.6	-0.3

Labour market conditions in the Western Balkans have improved, with notable progress in increasing employment rates and enhancing the educational attainment of the workforce. However, there have been no visible productivity improvements, with labour productivity in the region remaining at only 40% of the EU average.

Youth unemployment and inactivity remain high across the region. Education systems often face challenges in equipping youth with foundational skills, evidenced by low scores in the Programme for International Student Assessment (PISA), and in aligning curricula with labour market needs. VET students struggle to acquire in-demand skills due to outdated curricula and limited practical training, revealing weak links between education providers and industry, which constrains graduates' abilities to meet current and emerging labour market needs.

Policy efforts to expand reskilling and upskilling opportunities have gained traction. Nevertheless, the growth in available programmes has not been accompanied by an increase in participation rates. This is particularly significant given the rapidly evolving skills landscape, driven by the green and digital transitions, which risks leaving the workforce unprepared to support structural transformation. Low investment in research and development continues to limit innovation and the development of new competencies needed for future-proofing economies.

Business Environment

While the business environment represents the region's strongest area of performance, overall convergence with the EU has shown no visible progress over the past decade.

Indicators	Regional performance relative to the EU (EU=100)			Change
	2014-16	2017-19	2020-23	2014-16 to 2020-23
	66	**67**	**66**	**0**
BE.01: Bank non-performing loans	88.1	113.4	82.3	-5.8
BE.02: Domestic credit to the private sector	51.0	53.3	54.9	+3.9
BE.03: Private investment	104.0	101.2	102.9	-1.1
BE.04: FDI net inflows	119.1	208.9	422.2	+303.1
BE.05: Control of corruption	36.8	31.3	33.1	-3.7
BE.06: Estimated informal employment	14.5	14.2	17.8	+3.3
BE.07: Trade flows	37.1	40.9	44.7	+7.6
BE.08: SME export performance	119.0	110.0	105.3	-13.7

Considerable improvements have been made in banking sector stability and the promotion of investment. Non-performing loans (NPLs) have fallen on average from over 13% to 4.2% over the last decade. This trend reflects increased the resilience of the financial sector. The region has also experienced a steady rise in foreign direct investment (FDI), with net inflows averaging 6.4% of GDP in 2020-23, more than four times the EU average.

Despite these improvements, access to affordable financing remains a major bottleneck, particularly for small and medium-sized enterprises (SMEs). High borrowing costs, stringent collateral requirements and limited availability of alternative financing mechanisms continue to constrain the ability of businesses to expand and innovate. This also holds back private investment across the region. Although private investment levels are comparable to those in the EU, they remain insufficient to accelerate economic convergence.

Corruption and informality also continue to undermine fair competition and deter potential investors. Perceptions of corruption have worsened in some economies, partly due to weak political commitment and enforcement challenges. High levels of informal employment – often linked to low productivity levels – are further exacerbated by high labour taxation and underdeveloped social security systems.

Trade flows in the Western Balkans remain lower on average than those of EU member states, constrained by limited industrial bases and the persistence of non-tariff barriers. Supported by business demographics, SMEs tend to export comparatively more than their EU counterparts. However, their overall productivity and capacity to scale up export volumes have shown little improvement over time.

Digital Transformation

Digital transformation ranks as the second strongest performing area for the Western Balkans, reflecting relatively strong connectivity for citizens and businesses.

Indicators	Performance relative to the EU (EU=100)			Change
	2014-16	2017-19	2020-23	2014-16 to 2020-23
	-	-	53	-
DG.01: Population with digital skills	-	-	61.8	
DG.02: Internet use by individuals	-	-	95.8	
DG.03: Internet use for interacting with public authorities	-	-	51.6	
DG.04: Internet use for purchases	-	-	54.4	
DG.05: Businesses with a website	-	-	80.6	
DG.06: Businesses using AI technologies			69.3	
DG.07: ICT services exports	-	-	88.2	

The region's population enjoys strong digital connectivity, with internet usage levels exceeding 95% of the EU average. However, digital engagement – such as online transactions and the use of digital public services – remains limited. Fewer than 30% of individuals use the internet to interact with public authorities. This reflects both the limited availability and awareness of e-government services and a lack of digital skills across the population, indicating a broader unpreparedness to fully capitalise on the opportunities presented by digitalisation.

The region's businesses struggle to effectively leverage digital technologies. They face challenges in adopting digital solutions, with low e-commerce presence and limited access to emerging technologies, such as artificial intelligence. Cybersecurity concerns and regulatory gaps further restrict the potential for digital growth. Notably, consumer trust in online transactions is low, with 30% of citizens reporting concerns about data security.

The information and communication technology (ICT) sector has emerged as a key driver of economic growth. ICT exports now stand at nearly 90% of the EU average, thanks to a combination of targeted incentives to attract investment, improved infrastructure for start-ups and a skilled youth workforce.

Greening

The Greening cluster recorded the highest proportion of worsening outcomes across all policy areas, with a significant divergence from the EU. This widening gap stems from both relative lags, where the region's progress was outpaced by that of the EU, and absolute lag, where the region's performance either stagnated or deteriorated.

Indicators	Performance relative to the EU (EU=100)			Change
	2014-16	2017-19	2020-23	2014-16 to 2020-23
	58	**53**	**47**	**-11**
GR.01: CO2 emissions intensity	68.5	64.4	61.8	-6.7
GR.02: Installed renewable power capacities	132.8	122.6	105.0	-27.8
GR.03: Energy productivity	77.2	75.1	78.5	+1.3
GR.04: Water productivity	32.8	31.5	33.0	+0.2
GR.05: Waste intensity	68.3	62.4	63.4	-4.9
GR.06: Municipal waste in landfills	32.0	29.6	27.6	-4.4

The Western Balkans have started to implement policies aimed at a greener economy, yet progress remains slow – particularly in reducing carbon emissions. The region continues to rely heavily on fossil fuels, with coal still accounting for a substantial portion of electricity generation. While investments in renewable energy have increased, they remain, in most economies, insufficient to enable a large-scale transition towards decarbonisation. Moreover, the region's renewable energy mix remains undiversified, with a heavy reliance on hydropower, underscoring the need for greater adoption of wind and solar power to mitigate environmental concerns and climate change risks.

Concerns over inefficient resource use are also growing. In addition to the low efficiency of ageing coal plants, inefficient energy use is contributing to high energy intensity across the region. On average, the Western Balkans' energy productivity is less than half that of the EU, indicating that much more energy is used to generate the same economic output. Water use shows similar constraints, with productivity just one-third of the EU average due to outdated infrastructure and persistent pollution. Waste generated per economic output exceeds EU levels, while treatment options remain limited. Notably, the share of municipal waste destined for landfill is more than 3.5 times that of the EU.

1 Introduction

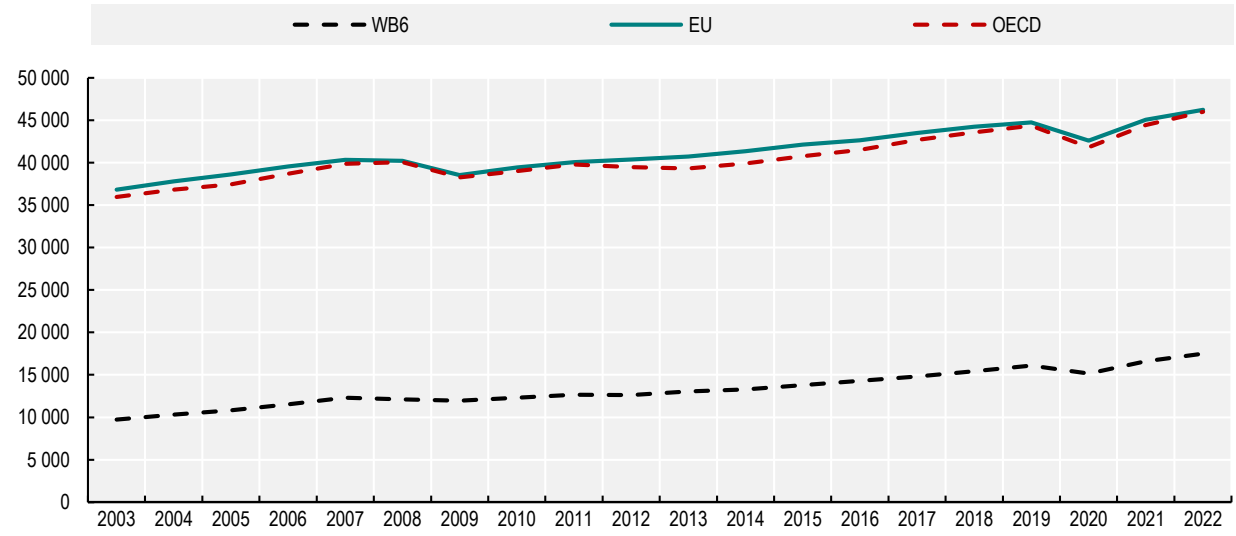
Context and rationale

The Western Balkans' (WB6) average growth rates have consistently outpaced those of the European Union (EU) over the past two decades, helping to bring the region's GDP per capita closer to the EU average. Between 2003 and 2023, GDP per capita[1] (adjusted for purchasing power parity, PPP) in the WB6 economies grew by around 120%, rising from USD 9 725 to USD 21 305. Notably, convergence towards the EU occurred every year except in 2008 and 2020, when external shocks, namely the global financial crisis and the COVID-19 pandemic, led to sharper GDP per capita declines in the WB6 than in the EU.

Despite the overall positive convergence trend, the Western Balkan economies have made only modest headway in narrowing the gap that separates them from their EU and OECD peers. In 2023, the Western Balkans' GDP per capita at PPP was only slightly below 40% of both the EU and OECD averages (Figure 1.1). This represents an increase of approximately 13 percentage points from 2003.

Figure 1.1. GDP per capita convergence of the Western Balkans, 2003-23

In constant 2021 USD in PPP



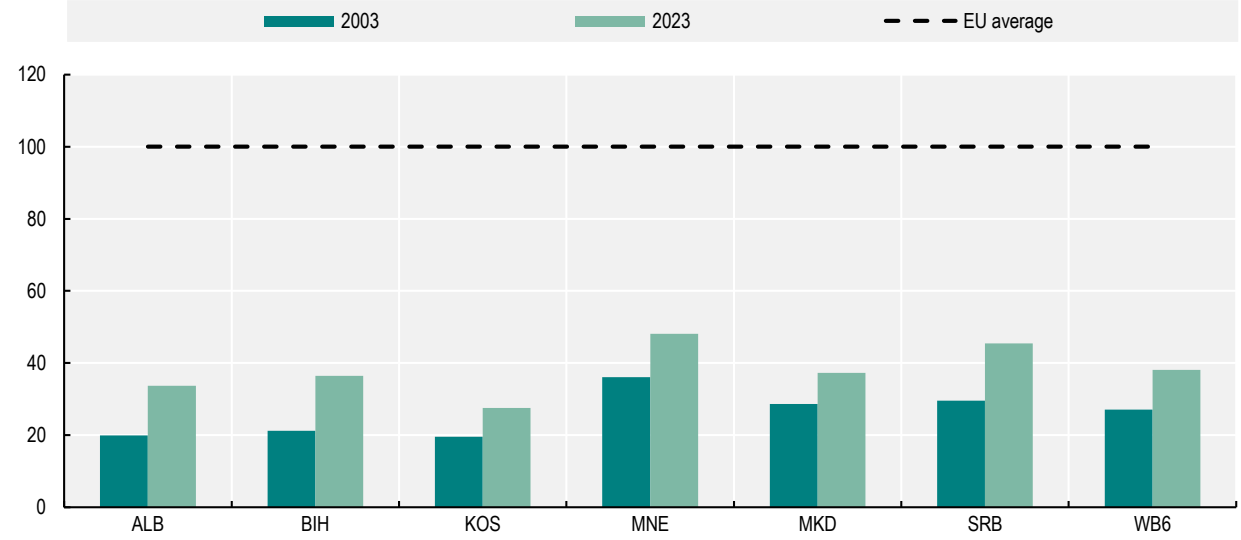
Note: The Kosovo 2003 data point in the upper most graph refers to the year 2008.
Source: (World Bank, 2025[1]).

The rate of convergence has varied across WB6 economies, with faster convergence observed in those starting from a lower GDP per capita. Between 2008 and 2023, Kosovo and Bosnia and Herzegovina reported an increase of approximately 10.1 and 11.1 percentage points, respectively, in their GDP per capita (PPP) relative to the EU average. In contrast, Montenegro and North Macedonia saw only a 5 percentage point increase during the same period.

Despite the higher growth rates of the region's poorer economies, significant disparities persist. Notably, Kosovo's GDP per capita (PPP) in 2023 stood at only 25.4% of the EU average, while Montenegro emerged as the region's top performer, with a GDP per capita rate of 50% of the EU average (Figure 1.2).

Figure 1.2. GDP per capita convergence of the Western Balkans, 2003-23

GDP per capita (PPP) relative to EU average



Note: The Kosovo 2003 data point in the upper most graph refers to the year 2008.
Source: (World Bank, 2025[1]).

At the current average growth levels for both the Western Balkans and the EU, full convergence would only be achieved in 2074.[2] This highlights the need to revisit existing economic policies, as the region's growth model remains largely driven by consumption, with limited contribution from private investment. While private investment levels as a share of GDP are broadly comparable to those in the EU, they fall short of what is needed to accelerate the region's growth and close the convergence gap (EBRD, 2024[2]).

Accelerating sustainable convergence will require decisive reforms to overcome structural bottlenecks and encourage a shift towards more competitive and productivity-driven growth. A renewed focus will be needed on revising economic growth models, with a view to attracting productive investment and supporting export-oriented growth.

EU integration

Economic convergence is a strategic priority for the Western Balkans, underpinning the region's efforts to achieve sustainable growth, reduce disparities with the European Union and advance on the path towards EU membership. Strengthening economic ties with the EU is vital not only for boosting resilience and improving living standards, but also for promoting regional stability and accelerating the integration process.

All Western Balkan economies are committed to joining the EU, and the enlargement process remains a key driver of domestic reforms. Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia are EU candidate economies, while Kosovo is a potential candidate. The revised enlargement methodology, introduced in 2020, aims to increase the credibility and predictability of the process by putting greater emphasis on fundamental reforms and stronger political engagement (European Council, 2021[3]). Since then, several economies have made tangible progress: Albania and North Macedonia have formally launched accession negotiations, Bosnia and Herzegovina was granted candidate status in December 2022 and began accession talks in March 2023, and Kosovo officially submitted its application for EU membership in December 2022 (European Parliament, 2025[4]).

Albania, Montenegro, North Macedonia and Serbia have made varying levels of progress in negotiations during the assessment period. For Montenegro, 33 of the 35 negotiating chapters have been opened, of which three have been provisionally closed as of December 2023 (European Commission, 2023[5]). So far, 22 out of 35 negotiation chapters have been opened for Serbia. The European Council's latest conclusions stated that Serbia had made overall progress, but progress on judiciary reforms, strengthening fundamental rights and the normalisation of relations with Kosovo determines the pace of negotiations (European Council, 2025[6]). The first intergovernmental conference with Albania and North Macedonia took place in July 2022, marking the formal start of accession negotiations. At the same time, the first step in the accession negotiation process was taken with the launch of the analytical examination of the EU acquis, the "screening". Since then, Albania has opened several negotiation clusters, reflecting continued progress and commitment in its EU accession process.

The EU is the region's largest source of financial assistance. The continued significant support from the EU helps the Western Balkan economies to realise their reforms and endeavours that bring them closer to the acquis. Over the past two decades, the region's economies have benefited from the Instrument for Pre-accession Assistance (IPA), loans from the European Investment Bank (EIB), and funding through the Western Balkans Investment Framework (WBIF). These instruments have supported projects to enhance infrastructure, strengthen human capital, boost competitiveness, and promote the green and digital transitions — all critical to advancing economic convergence with the EU.

Building on these efforts, the European Commission's Growth Plan for the Western Balkans, adopted in November 2023, provides a key framework to foster socio-economic convergence ahead of accession. Backed by EUR 6 billion in grants and loans, the Growth Plan aims to offer some of the benefits of EU membership before formal accession. It is structured around four main pillars:

1. enhancing integration with the EU single market
2. advancing regional economic integration through the Common Regional Market
3. accelerating structural reforms, including reforms in the fundamentals cluster of the EU accession process
4. increasing financial support through the new Reform and Growth Facility.

As part of its implementation, all Western Balkan economies, except for Bosnia and Herzegovina, have submitted reform agendas that outline key structural reforms in four priority areas: 1) business environment; 2) green and digital transformation; 3) human capital development; and 4) the rule of law. These areas serve as the basis for accessing Growth Plan funding (European Commission, 2023[7]).

Report scope

In this context, the *Economic Convergence Scoreboard* serves as a practical tool to track the outcomes of policies and measures outlined in the Reform Agendas. By providing an objective, data-driven framework, it helps identify which economies are making tangible progress in designing and implementing relevant reforms, thereby narrowing the economic gap with the EU and advancing towards convergence.

The following chapters present the results for each policy cluster:

- **Chapter 1** focuses on *infrastructure and connectivity*, assessing the development of transport, energy, and digital networks that underpin economic activity and regional integration.
- **Chapter 2** covers *skills*, examining how effectively the region develops and utilises human capital across the life course — from early childhood education to lifelong learning — and how this translates into employment outcomes and innovation capacity.
- **Chapter 3** analyses the *business environment*, focusing on conditions that enable firms to invest, grow, and compete, including access to finance, the quality of market institutions, and the capacity of SMEs to integrate into regional and global markets.
- **Chapter 4** explores *digital transformation*, evaluating the extent to which individuals, firms, and governments are adopting digital technologies to build a dynamic digital economy.
- **Chapter 5** addresses *greening*, examining how the region is advancing the green transition to align economic growth with environmental sustainability objectives.

The full Scoreboard results, including scores and rankings, for each economy — are presented in the Annex. A separate methodology annex provides information on the overall approach, including the selection of indicators, scoring methods, and data sources. The report is also accompanied by a technical note offering further insights into the monitoring framework and results.

References

EBRD (2024), *Can the Western Balkans converge towards EU living standards?*, European Bank for Reconstruction and Development, https://www.ebrd.com/home/news-and-events/publications/can-the-western-balkans-converge-towards-eu-living-standards.html#. [2]

European Commission (2023), *Montenegro 2023 Report*, https://enlargement.ec.europa.eu/document/download/e09b27af-427a-440b-a47a-ed5254aec169_en?filename=SWD_2023_694%20Montenegro%20report.pdf. [5]

European Commission (2023), *New Growth Plan for the Western Balkans*, https://enlargement.ec.europa.eu/2023-communication-new-growth-plan-western-balkans_en. [7]

European Council (2025), *Serbia: Accession Progress*, https://www.consilium.europa.eu/en/policies/serbia/#:~:text=Serbia%20applied% (accessed on 7 May 2025). [6]

European Council (2021), *Application of the revised enlargement methodology to the accession negotiations with Montenegro and Serbia*, https://data.consilium.europa.eu/doc/document/ST-8536-2021-INIT/en/pdf. [3]

European Parliament (2025), *Fact Sheets of the European Union - The Western Balkans*, https://www.europarl.europa.eu/erpl-app-public/factsheets/pdf/en/FTU_5.5.2.pdf. [4]

World Bank (2025), *GDP per capita convergence of the Western Balkans*, https://databank.worldbank.org/source/world-development-indicators (accessed on 7 May 2025). [1]

Notes

[1] Note that the WB6 average between 2003 and 2007 only contains data for Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia. Data for Kosovo are only available starting from 2008.

[2] Applying the compound annual growth rate, using average rates of 2.82% for the WB6 and 1.09% for the EU.

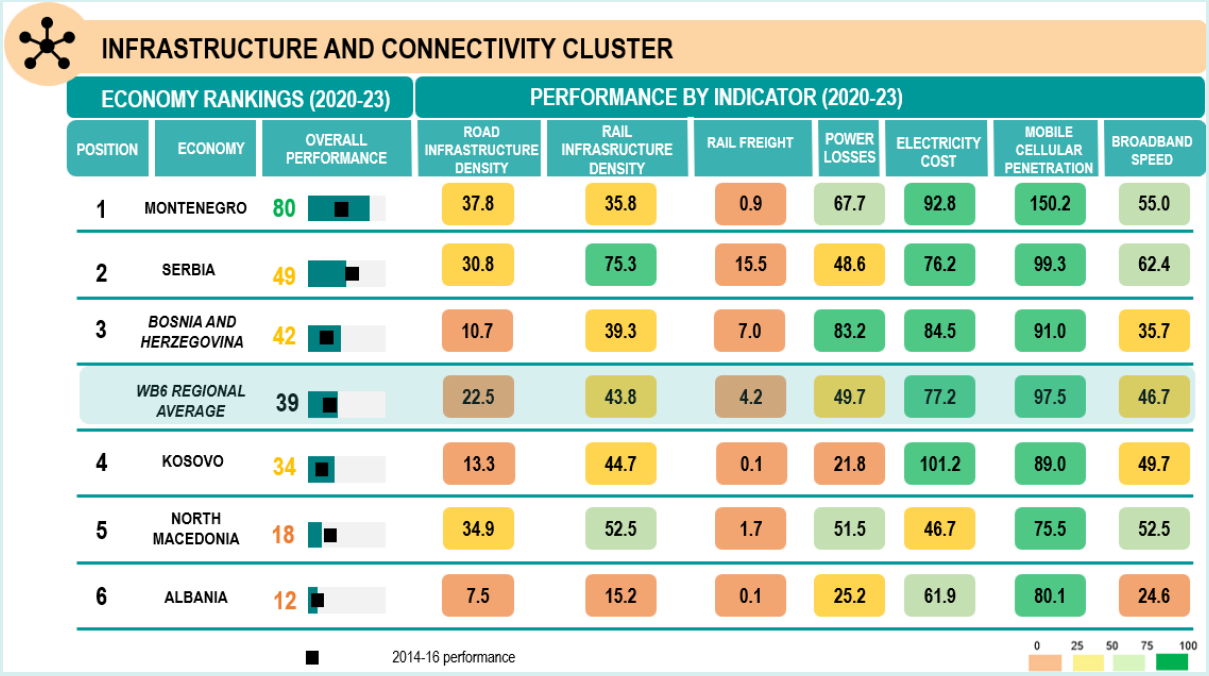
2 Infrastructure and connectivity cluster

Infrastructure and connectivity play a crucial role in fostering economic growth and regional integration by enhancing transport, energy and digital networks. This chapter explores the extent to which the Western Balkan economies, in comparison with the EU, have developed the infrastructure that serves as a foundational driver of economic growth. It first assesses the density of road and rail infrastructure and then delves into the performance of energy infrastructure, focusing on power losses and the cost of electricity. Finally, it analyses the level of development of digital infrastructure.

Key findings

While the Western Balkan economies have made some notable strides in improving infrastructure and connectivity (IC), the region still lags behind the EU. Figure 2.1 presents each economy's performance alongside the **seven key indicators** on IC development used to monitor progress and calculate scores. The average regional performance for each indicator is also shown.

Figure 2.1. Convergence of the Western Balkans with the EU: Infrastructure and connectivity cluster



Note: The scores – both overall and for individual indicators – were calculated to reflect each economy's performance relative to the EU average, which is set at 100. The exact values for each indicator are presented in the graphs within the subsequent analysis section. For more information about the calculation of the scores, as well as the overall methodological approach, please consult the Methodology Annex.

The overall regional trend is positive, with the region slightly narrowing the gap with the EU by nearly six points between 2014 and 2023. However, with a score of 39 IC is the second lowest-scoring cluster. Among the Western Balkans, Montenegro is positioned as the regional leader, while Albania ranks lowest.

Over the last decade, the Western Balkan economies have invested significant resources in upgrading road infrastructure; however, it remains relatively underdeveloped compared to EU averages, with average road density at about 23% of EU levels. In contrast, until recently, railway transport has not been sufficiently considered in investment plans, leading to a deterioration of the railway network and a continuous decline in freight transport, which accounts for less than 5% of the EU average. The economic returns from transport investment projects also raise concerns given shortcomings in the related policy frameworks, especially regarding the transparency of project selection.

In parallel, the Western Balkans have made substantial investments to close the gap with the EU in digital infrastructure, achieving convergence in mobile cellular penetration across most economies. However, gaps persist in the development of high-speed networks, as the region's average broadband speed is less than 50% of the EU average. Furthermore, making these high-speed networks financially accessible to Western Balkan consumers while extending coverage to rural areas remains a key challenge.

After decades of underinvestment, the energy infrastructure gap has become critical in the region, as evidenced by the high levels of power losses. However, despite increasing inefficiencies generated by the ageing energy infrastructure, the reliance on domestic coal coupled with substantial fossil fuel subsidies have kept electricity costs relatively low in most of the region, although EU accession prospects will put increasing pressure on the sustainability of low electricity prices.

Analysis

Infrastructure and connectivity are essential for accelerating economic convergence. Well-developed transport, energy and digital infrastructure facilitate trade, reduce production costs, and create a more competitive and integrated market, fostering long-term economic growth.

IC.01 Road infrastructure density

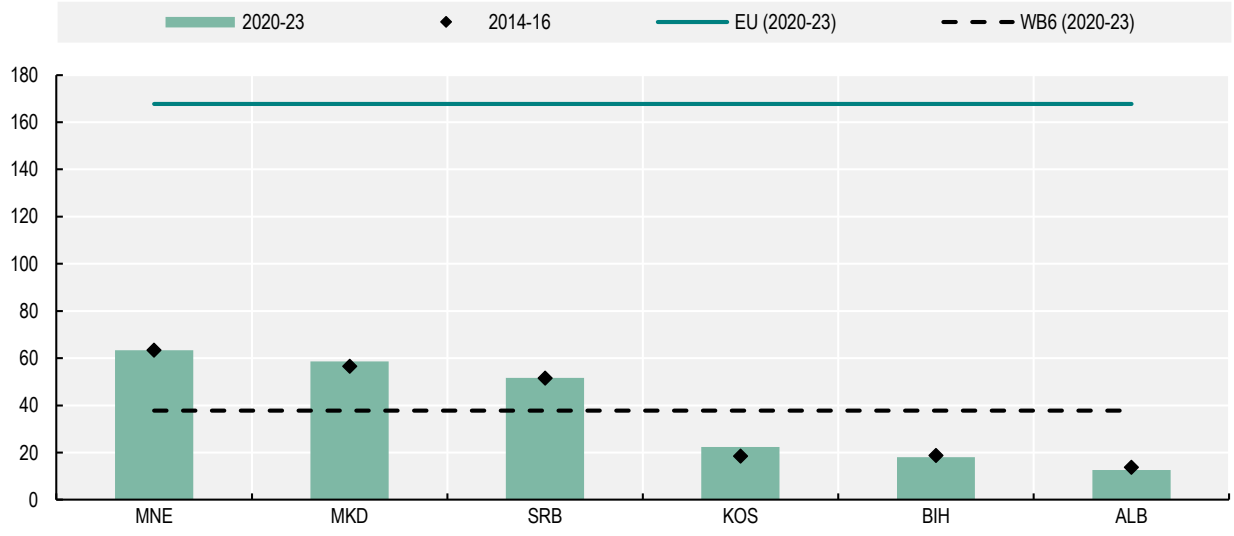
Road infrastructure density *remains low, as investments have largely focused on upgrading existing roads. Slow project implementation, along with weak selection and procurement practices, hinder faster progress in transport connectivity.*

The insufficient quality and coverage of core public transport infrastructure can be a significant obstacle to higher economic growth and faster income convergence, as inadequate transport networks can severely constrain the connectivity of producers and consumers to global and regional markets. In the Western Balkan economies, road infrastructure is less developed than in the EU, with an average density of 38 km per 100 km², compared to 168 km in the EU (Figure 2.2). Montenegro stands out with an average road density of 63.4 km in 2020-23, which, as in the other economies, has remained unchanged since 2014-16.

There are lower population densities in the Western Balkans compared to the EU, averaging 85 vs. 112 inhabitants per km² (World Bank, 2025[1]),[1] and the region's mountainous topography limits the potential for dense networks. As a result, complete convergence in road densities towards the EU cannot be expected. However, the infrastructure gaps remain evident. Even when compared to neighbouring EU economies with roughly similar geographical and population characteristics, such as Austria, Bulgaria, Croatia, Greece and Romania, which have an average road density of 69 km per 100 square kilometres, the Western Balkan average is still half (OECD, 2025[2]).

Figure 2.2. Road infrastructure density in the Western Balkan economies (2014-16, 2020-23)

Km per 100 km² area



Note: Data are unavailable for Bosnia and Herzegovina (2014, 2015, 2022, 2023).
Sources: (OECD, 2025[2]). Data for Albania sent by INSTAT to the OECD. Data for Kosovo sent by KAS to the OECD. Data for Montenegro sent by MONSTAT to the OECD.

StatLink https://stat.link/cfu0vm

Over the last ten years, the Western Balkans Investment Framework (WBIF)[2] has provided substantial financial resources to connect the region to the Trans-European Transport Network (TEN-T).[3] In the years following the launch of the WBIF, the Western Balkan economies have achieved notably **high levels of investment[4] in road infrastructure**, even exceeding those seen in the EU. North Macedonia, Albania, Serbia and Kosovo have dedicated more than 1% of their GDP annually since 2019 to road infrastructure, compared to an EU average of 0.6% (OECD, 2024[3]). In particular, Serbia more than tripled its investment spending between 2013 and 2022, from EUR 273.5 million to EUR 791.3 million, while North Macedonia nearly doubled its spending, rising from EUR 90.5 million to EUR 161.7 million (OECD, 2024[4]).[5] Regarding maintenance spending,[6] available data indicate increasing efforts in most Western Balkan economies, albeit to varying degrees. Serbia has provided the most maintenance spending, increasing from EUR 126.5 million in 2013 to EUR 318.0 million in 2022 (OECD, 2024[4]), reaching 0.67% of GDP in 2022 compared to 0.28% in the EU.[7] Spending has also risen in Kosovo and Albania, but efforts remain below the EU average at respectively 0.19% and 0.14% of GDP. In North Macedonia, annual spending remained below EUR 10 million over 2013-22 and stood for only 0.04% of GDP in 2022, posing challenges to the sustainability of road infrastructure.

Despite these efforts, road density in the Western Balkans has not increased, with investments **primarily focused on upgrading existing roads** rather than constructing new ones. Funding by international financial institutions has been mostly earmarked for transnational corridors and the rehabilitation of rural roads rather than the expansion of local road networks. Between 2009 and 2023, some 843 km of roads were upgraded in the region through the WBIF, while only 178 km were built (WBIF, 2024[5]).[8]

Slow project implementation processes and bureaucratic hurdles contribute to delays in transport infrastructure development. Most road extension projects in the region suffer delays of over two years following their approval (OECD, 2024[3]). This is particularly pronounced in Bosnia and Herzegovina, where co-operation challenges between state and entity-level institutions further impede progress.

Despite significant investments in transport infrastructure over the past decade, economic gains may remain limited due to **inadequately developed selection criteria for transport projects**. Across the region, there is scarce evidence that infrastructure investments are systematically assessed against a comprehensive set of economic, social and environmental criteria. Non-transparent procurement practices pose an obstacle to transport infrastructure development by undermining cost-efficiency and, ultimately, public trust. For instance, in North Macedonia, the State Audit Office[9] identified a lack of transparency in the selection process of the 73 transport infrastructure projects funded by the WBIF (Gallop, 2024[6]).

IC.02

Rail infrastructure density

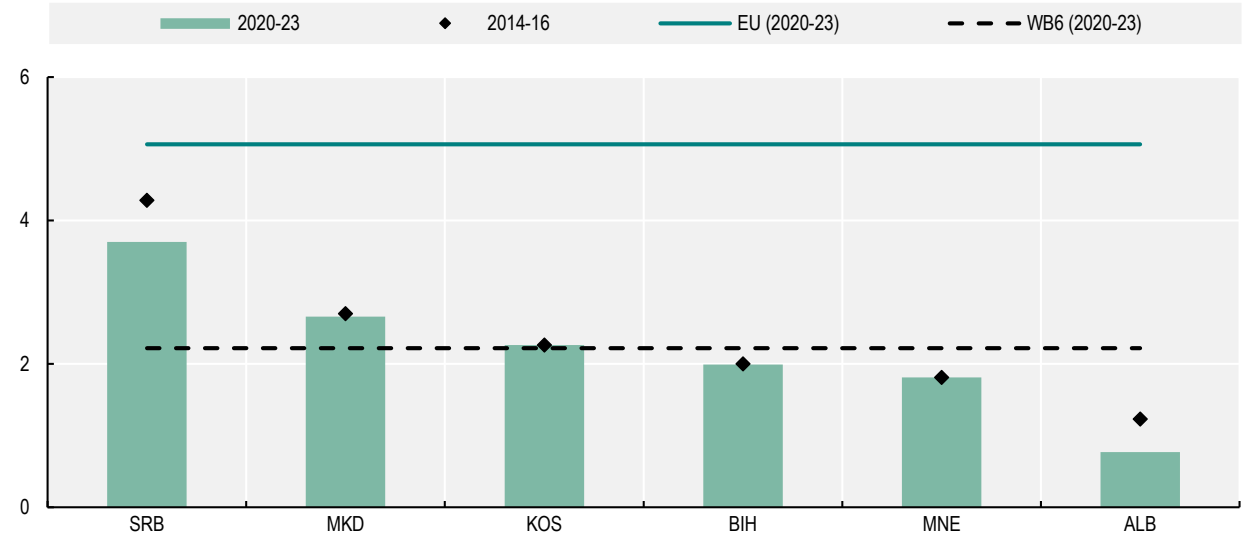
***Rail infrastructure density** has been declining in the region due to structural challenges, which are compounded by persistent insufficient investment and maintenance efforts.*

Rail has the potential to contribute significantly to the growth of a competitive and green economy by enabling a sustainable and seamless mobility network. Although the rail infrastructure gap with the EU is less pronounced than the gap for roads, the trend remains unfavourable for Western Balkan economies, with rail density not improving in any economy (Figure 2.3). The regional average stands at 2.2 km per 100 km² in 2020-23, down from 2.4 km in 2014-16, which is less than half the levels of the EU (5.1 km). Notably, the Western Balkan average reduction has largely been driven by decreases observed for Serbia and Albania, with railway densities dropping from 4.3 km and 1.2 km in 2014-16 to 3.7 km and 0.8 km in 2020-23, respectively.

As discussed with road density, challenging topography and low population densities makes full convergence with the EU unlikely for rail density; however, even compared to neighbouring EU economies with similar characteristics, the infrastructure gap is visible. The average rail infrastructure density in Austria, Bulgaria, Croatia, Greece and Romania reached 4.3 km per 100 km² in 2020-23, which is around two times higher than the Western Balkan average.

Figure 2.3. Rail infrastructure density in the Western Balkan economies (2014-16, 2020-23)

Km per 100 Km^2 area



Note: Data are unavailable for Kosovo (2014, 2015, 2023).
Source: (Eurostat, 2024[7]).

As with roads, rail infrastructure development faces implementation challenges. In addition, railways have suffered from continuous **structural disinvestment,** as investment in road infrastructure has overshadowed rail spending (WBIF, 2024[5]). In 2022, available data for Albania, North Macedonia and Serbia indicated that investment in rail amounted to, respectively, 8.5%, 14.4% and 25.8% of investment in road infrastructure (OECD, 2024[4]), compared to the EU average of 50% (OECD, 2024[3]).

This **lack of investment, especially in maintenance,** has led to the deterioration of railways and is thus a primary cause of decreasing rail density in some of the region's economies. Only 15% of the overall investment earmarked for the maintenance of the TEN-T was realised in 2023 (Transport Community, 2023[8]). Due to a lack of funding, maintenance operations are fragmented and often focus on isolated sections of the railway instead of promoting comprehensive network improvements.[10] Underinvestment in maintenance has also been aggravated by a staffing shortage across all railway segments, from operations to management, which has contributed to the further degradation of the railway infrastructure (Transport Community, 2023[8]).

However, a **shift towards investments prioritising rail transport** is expected as part of implementation of the Economic and Investment Plan for the Western Balkans 2021-27 (WBIF, 2024[5]). While only one transport infrastructure project related to rail infrastructure under the WBIF framework has been successfully implemented over the last ten years,[11] railways are expected to be rehabilitated along key corridors in the period 2024-30,[12] with plans for 196 km in Albania, 192 km in Serbia, 101 km in Kosovo, 88 km in North Macedonia and 74 km in Montenegro (WBIF, 2024[5]).

IC.03

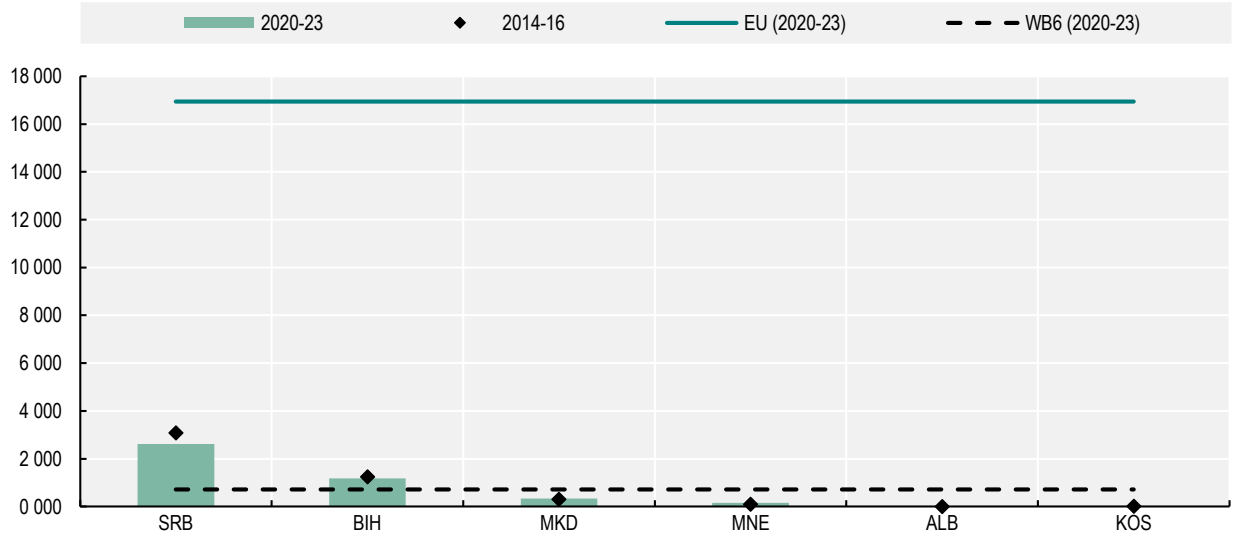
Rail freight

***Rail freight** is significantly underdeveloped due to chronically low investment and maintenance efforts in railway infrastructure.*

The underdevelopment and deterioration of rail infrastructure in the Western Balkans have led to the underutilisation of railways for freight. From 2020 to 2023, an average of 722 million tonnes of goods were transported per km of railway in the region, accounting for only 4% of the EU average level of 16 billion tonnes (Figure 2.4). Serbia, despite being the regional leader, saw a 15% decline in freight volumes between 2014-16 and 2020-23, reaching just 15% of the EU average. Freight volumes transported by rail account for only about 1% of EU levels in Montenegro and a mere 0.1% in Albania and Kosovo.

Figure 2.4. Rail freight in the Western Balkan economies (2014-16, 2020-23)

Millions of tonnes of goods transported per km of railway



Note: Data are unavailable for Albania (2014, 2015), Kosovo (2014), Montenegro (2021, 2023) and North Macedonia (2023).
Sources: (Eurostat, 2024[9]). Data for Albania from (INSTAT, 2024[10]). Data for Kosovo from (KAS, 2024[11]). Data for Montenegro from (MONSTAT, 2024[12]). Data for Serbia from (SORS, 2024[13]).

The large decline in railway freight transport in the Western Balkan economies can be attributed to the **lack of new investment and maintenance,** which causes indirect losses from underperformance and traffic disruptions, resulting in low competitiveness compared to freight transport on roads (Transport Community, 2023[8]).

The lack of competitiveness of railway freight transport is demonstrated by the fact that large portions of both the core network and the comprehensive network, which includes secondary connections, do not meet **European technical standards** for freight transportation.[13] These technical standards encompass the total weight, train speed and maximal train length that rail tracks can bear, as well as the traffic managing systems of the existing infrastructure.[14] In 2023, an estimated 42.5% of the core and 46.3% of the comprehensive networks were in poor or very poor condition (Transport Community, 2023[8]). Moreover, about 85% of both the core and comprehensive networks in the Western Balkans could not bear an operating speed of 100 km per hour (km/h) and over, leading freight transport services in the region to operate at an average speed of close to 50 km/h (Transport Community, 2023[8]).

In addition to the factors mentioned above, economic activity in the Western Balkans is largely oriented towards services and small-scale manufacturing, which limits the economic returns on large rail infrastructure investments. However, if industrial policies across the region were to promote more advanced manufacturing or support the development of heavy industries, the lack of rail transport could become a significant bottleneck to growth and competitiveness.

IC.04

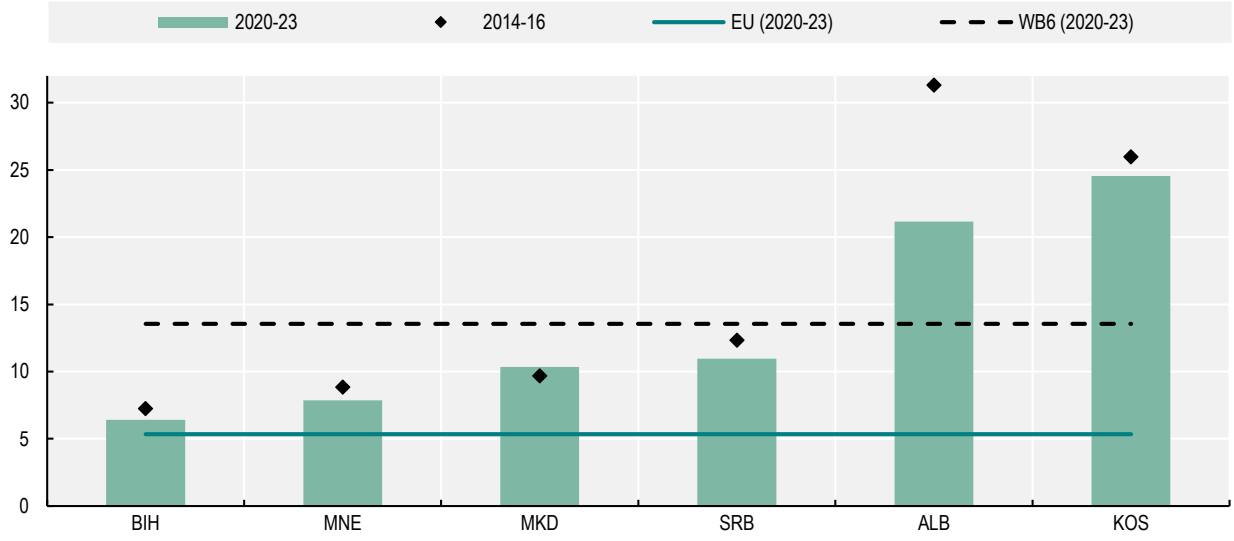
Power losses

***Power losses** remain elevated in most Western Balkan economies due to ageing energy infrastructure.*

Power losses reflect the quality of the energy infrastructure, showing to what extent businesses can rely on a reliable and affordable energy supply. In 2020-23, an average of 13.5% of the total energy injected into the distribution and transmission grids was lost in the Western Balkans – more than 2.5 times that of the EU (5.3%) (Figure 2.5). Despite progress over the last decade, Kosovo (24.5%) and Albania (21.2%) underperformed over the period 2020-23, while only Bosnia and Herzegovina (6.4%) exhibited power loss levels comparable with the EU average.

Figure 2.5. Power losses in the Western Balkan economies (2014-16, 2020-23)

Percentage (of total energy injected into distribution and transmission grids)



Notes: OECD imputations for 2020 values for Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia. For more details on this process, please refer to the Methodology Annex. Data are unavailable for Bosnia and Herzegovina (2021, 2022, 2023), Montenegro (2021, 2022, 2023), North Macedonia (2021, 2022, 2023) and Serbia (2021, 2022, 2023).
Sources: (CEER, 2017[14]; 2020[15]). Additional data for Albania from (Energy Regulatory Authority, 2023[16]). Data for Kosovo sent by KAS to the OECD.

StatLink https://stat.link/y9d50w

The energy sector in the Western Balkans is characterised by ageing infrastructure, which generates significant power losses that disrupt production processes, creating additional costs for businesses. Like transport infrastructure, regional energy infrastructure has been deteriorating following insufficient investment efforts, leading to widespread power losses due to **technical losses**.[15] Apart from Albania, all Western Balkan economies primarily rely on thermal-powered plants (TPPs) to generate electricity, with the share exceeding 60% in Bosnia and Herzegovina, Serbia and North Macedonia, and reaching 90% in Kosovo (OECD, 2024[3]). However, most regional TPPs are outdated: as of 2023, around 50% of the installed generation capacity was more than 35 years old, while the lifetime duration of TPPs is estimated to be around 40 years (CEPS, 2023[17]). As a result, power plants are operating below their intended capacity, resulting in increasingly frequent technical malfunctions and occasional

blackouts. However, plans are underway to modernise the region's energy infrastructure, stemming from the allocation of EUR 500 million to the WBIF through the Energy Support Package for the Western Balkans adopted in 2022.[16] The WBIF plans to install 1 910 megawatts (Mwt) of capacity in the region between 2024 and 2030, while 187 Mwt was installed between 2009 and 2023. The plan also includes upgrading 657 km of electricity transmission lines, a significant increase from the 165 km completed between 2009 and 2023 (WBIF, 2024[5]).

Outdated energy consumption metering systems and unbilled usage contribute to **non-technical losses,**[17] which are estimated as the difference between the total amount of energy fed into the distribution system and the total amount of energy metered (CEER, 2020[15]). Across the region, smart grids are not fully deployed, although efforts are underway in Kosovo, Montenegro, North Macedonia and Serbia (EIB, 2024[18]). In Kosovo, a significant share of non-technical losses stems from the unbilled energy in the northern municipalities, which are, due to the current political situation, treated as power losses (CEER, 2020[15]).

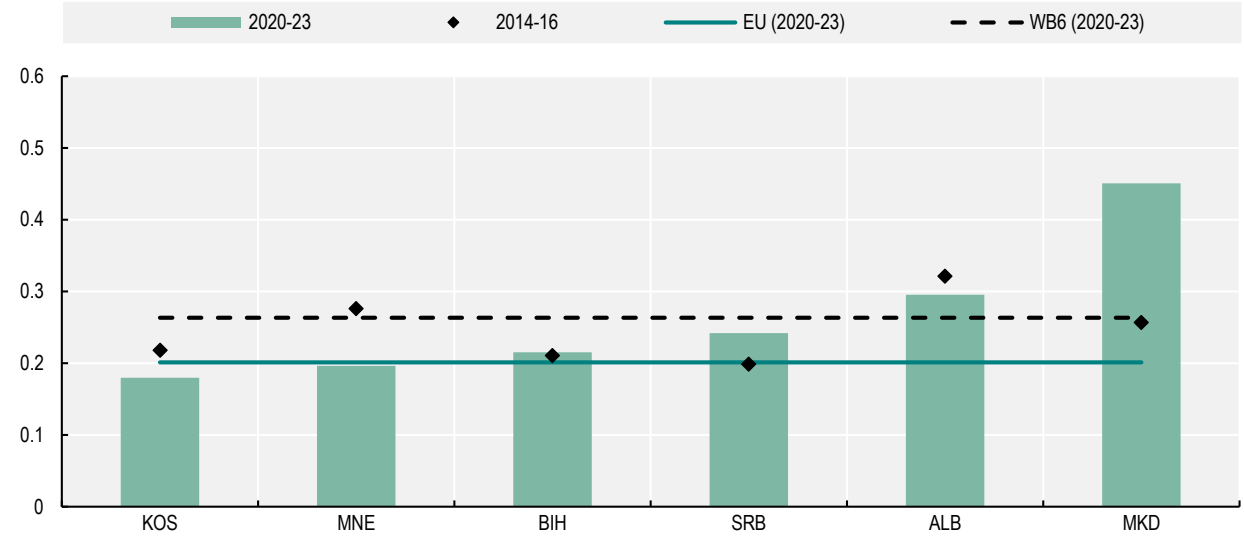
IC.05
Electricity cost

*Reliance on domestic coal coupled with electricity subsidies have kept **electricity cost** relatively low in most of the region, but EU accession prospects challenge this model.*

High electricity prices can undermine businesses' competitiveness by raising production costs, affecting their competitiveness in regional and global markets. On average, expressed in purchase power parity (PPP), electricity costs for businesses in the Western Balkans were about 30% higher than EU levels in 2020-23 (USD 0.26 vs. 0.20 per kilowatt hour [kWh], respectively), but the regional average remains elevated largely due to North Macedonia, which experienced a 73% increase in prices over the ten years to 2023, reaching USD 0.45 per kWh in 2020-23 (Figure 2.6). Kosovo stands out with an electricity cost 10% below the EU average (USD 0.18), closely followed by Montenegro and Bosnia and Herzegovina, which exhibit costs comparable to the EU.

Figure 2.6. Electricity cost in the Western Balkan economies (2014-16, 2020-23)

2021 USD per kWh in PPP



Notes: Average electricity price (excluding all taxes and levies) for non-household consumers for consumption between 500 MWh and 19 999 MWh). OECD imputations for 2016 value for Albania. For more details on this process, please refer to the Methodology Annex.
Source: OECD calculations based on (Eurostat, 2024[19]).

StatLink https://stat.link/yuvqfa

The Western Balkans heavily relies on **domestic energy resources** for electricity production, which has largely shielded the region from shocks in global energy markets following Russia's invasion of Ukraine. A prime example is lignite, a locally abundant fossil fuel, which plays a dominant role in several economies of the region: in 2020, lignite accounted for 95% of electricity generation in Kosovo and 70% in Bosnia and Herzegovina (BiEPAG, 2023[20]). The exception in the region is North Macedonia, where energy dependency stood at 63% in 2023, similar to that of the EU. This dependency coincided with a dramatic 2.4-fold increase in electricity prices between 2021 and 2022, which even threatened the financial stability of the Macedonian electricity utility.[18]

Although inefficiencies in ageing energy infrastructure, reflected in high power losses, exert upward pressure on electricity costs, **substantial financial support for coal-based electricity** has so far limited prices increases. Between 2021 and 2022, direct subsidies for coal reached EUR 180 million in the region, with the bulk of this financial support in Serbia (EUR 98 million) and Bosnia and Herzegovina (EUR 70 million) (Energy Community, 2023[21]). Moreover, Western Balkan economies support power-sector state-owned enterprises (SOEs) through public financing, including loans from state-controlled institutions and state-guaranteed loans. In 2019, state guarantees for coal-based electricity generation totalled nearly EUR 1.2 billion in Serbia and EUR 742 million in Bosnia and Herzegovina (OECD, 2022[22]). However, EU accession prospects increasingly challenge the prevalence of state-aid allocated to coal-based electricity production. Existing EU state aid rules, along with the EU's Emissions Trading System (ETS), would substantially increase the costs of coal-based electricity production in the Western Balkans, necessitating a shift in financial support towards the creation of low-carbon electricity generation capacities.

Beyond the environmental impact, high levels of fossil fuel subsidies also lead to a misallocation of investment and labour, undermining long-term competitiveness and growth prospects. These subsidies send distorted market signals, incentivising pollution intensive and inefficient industries, and potentially diverting labour away from more productive sectors. The Western Balkan economies have yet to **fully liberalise energy markets** and establish cross-border trading, leaving untapped potential for reducing electricity prices. After joining the Energy Community,[19] the economies committed to restructuring their national electricity companies to liberalise the electricity market. Up until 2022, Serbia was the only Western Balkan economy to operate a day-ahead market, although it remains not fully liberalised, with the market operator still under the authority of the Ministry of Energy (BiEPAG, 2023[20]). However, 2023 saw significant progress towards establishing free electricity markets across the region, with Albania, Montenegro and North Macedonia launching new day-ahead electricity markets, all of which have been operating continuously since their inception. Further advances came in early 2024 with the opening of the Albanian electricity market branch in Kosovo, leaving Bosnia and Herzegovina as the only economy in the region without an organised day-ahead market for electricity.[20]

IC.06

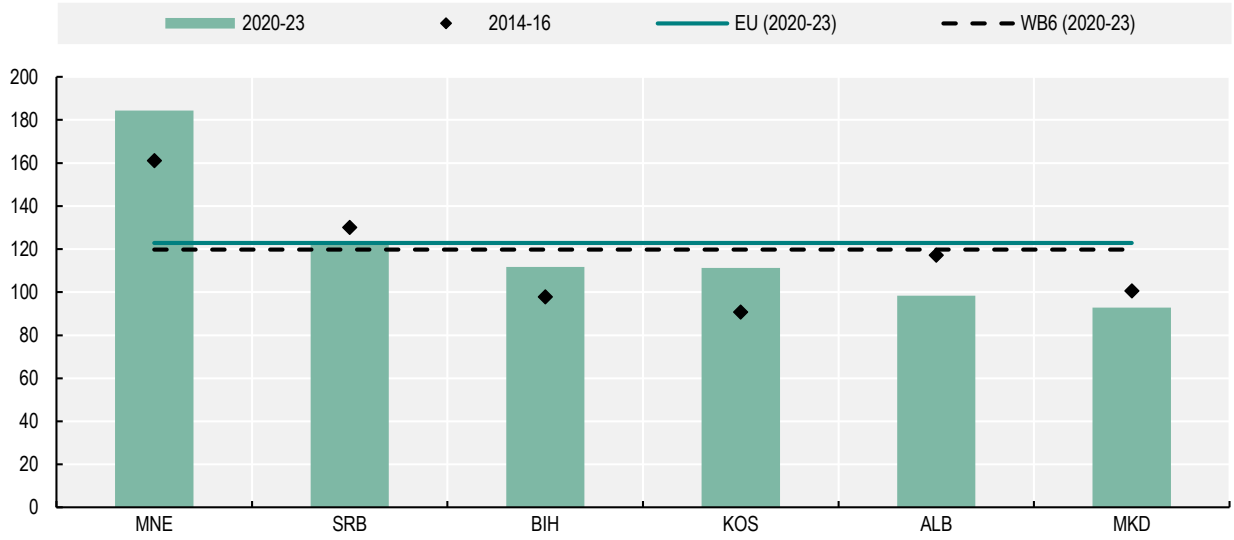
Mobile cellular penetration

*Most Western Balkan economies have achieved **mobile cellular penetration** levels comparable with the EU, but the cost of mobile services and the limited development of broadband infrastructure constrain growth.*

Mobile cellular penetration is a basic pillar of connectivity, reflecting the extent to which consumers and businesses can access and use mobile technology and services. The Western Balkans has mostly achieved convergence with the EU in terms of mobile cellular penetration, reaching 99.2% of EU levels in 2020-23 (compared to 94.8% in 2014-16) (Figure 2.7). The number of subscriptions in the region has gradually increased, rising from an average of 116.2 per 100 inhabitants in 2014-16 to 121.8 in 2020-23, while the EU average has remained stable at 123 subscriptions. Montenegro stands out with 184.4 subscriptions per 100 inhabitants in 2020-23, an increase from 161.0 in 2014-16. In contrast, mobile cellular penetration has declined in Albania by 16.0%, in North Macedonia by 7.8% and in Serbia by 6.2%.

Figure 2.7. Mobile cellular penetration in the Western Balkan economies (2014-16, 2020-23)

Number of subscriptions per 100 inhabitants



Note: Data are unavailable for Montenegro (2022), North Macedonia (2022) and Serbia (2022, 2023).
Sources: (World Bank, 2025[23]). Additional data for Albania from (ARKEP, 2018[24]; 2021[25]). Additional data for Bosnia and Herzegovina sent by the Agency for Statistics of Bosnia and Herzegovina to the OECD. Additional data for Kosovo sent by KAS to the OECD.

StatLink https://stat.link/psyknv

Over the past decade, the **cost of mobile services** has negatively affected mobile cellular penetration in the region. In the absence of comparable data for the region, the Broadband Pricing Index (BPI) composite indicator[21] may serve as a proxy for the cost of mobile services. This shows that prices in the Western Balkans in 2022 were approximately 17% higher than in the EU, with North Macedonia and Bosnia and Herzegovina seeing price gaps of 35% and 31%, respectively (RCC, 2023[26]). However, the implementation of the Regional Roaming Agreement (RRA) in July 2021 was a milestone in reducing mobile broadband costs by introducing roaming-free arrangements. In the second half of 2021, total voice call volumes increased by 50% compared to the first half of the year, while data roaming traffic more than doubled (RCC, 2022[27]). Notably, Serbia and North Macedonia saw significant increases in average data service consumption, with increases of 4.5 and 2.9 times, respectively.

The development of **broadband infrastructure** has also been crucial for driving mobile cellular penetration, particularly because contracts related to 5G technologies have enabled growth in mobile subscriptions. Nevertheless, most Western Balkan companies lack the scale needed to provide citizens with ubiquitous access to 5G broadband, which hinders the creation of a new demand cycle in the mobile telecommunications market and prevents the region from approaching EU coverage standards, which stood at 81% of the population in 2022 (European Commission, 2023[28]).[22] This is particularly visible in Albania and North Macedonia, which simultaneously exhibit the lowest download speeds and the lowest mobile cellular penetration in the region.[23]

IC.07
Broadband speed

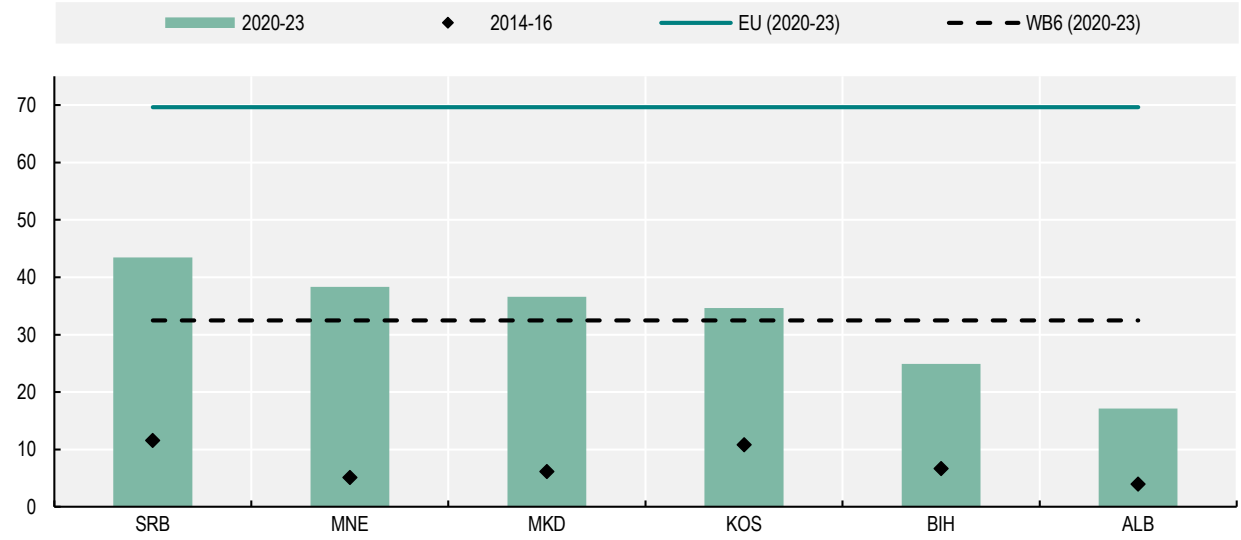
*The Western Balkans has significantly increased **broadband speed**, but geographical challenges and regulatory barriers limit further progress.*

High-speed networks are essential for supporting the development and adoption of advanced technologies, enabling more efficient data sharing and communication, and ultimately boosting productivity. The Western Balkan economies have made substantial strides in enhancing their digital infrastructure, with average download speeds

rising to 32.5 megabytes per second (Mbps) in 2020-23, four times higher than in 2014-16. This now represents 47% of EU levels, an increase from 37% in 2014-16 (Figure 2.8). Serbia leads the region, with the average download speed reaching 62.4% of the EU average in 2020-23, while Bosnia and Herzegovina and Albania lag behind at 35.7% and 24.6%, respectively.

Figure 2.8. Download speeds in the Western Balkan economies (2014-16, 2020-23)

Mean download speed in megabytes by second



Note: OECD imputations for 2016 for all economies. For more details on this process, please refer to the Methodology Annex.
Source: (Cable.co.uk, 2024[29]).

In line with the Gigabit Society targets,[24] the Western Balkan economies have invested significantly in **developing high-speed networks,** leading to the emergence of fibre to the premises (FTTP) technology[25] in the region. As of 2022, 33.1% of households in the Western Balkans used FTTP technology, up from 29.2% in 2021; however, these figures remain far below the EU average of 56.4% in 2022 (Eurostat, 2024[30]).

To close the gap with the EU, the Western Balkans must address the challenge of the **geographical coverage** of existing infrastructure. About 40% of the region's population resides in rural areas, notably above the EU average of 24% (World Bank, 2024[31]). To extend the coverage of the high-speed network infrastructure, supported by EU and donor funding through the WBIF, many economies in the region are either implementing (Kosovo and Serbia) or preparing (Albania, Montenegro, North Macedonia) high-speed network development projects targeting rural areas (see the *Digital Transformation* chapter for more details). Additionally, Kosovo, Montenegro, North Macedonia and Serbia have made strides in establishing broadband mapping to guide the development of these networks and prioritise underserved regions (OECD, 2024[3]).

The Western Balkan economies have yet to encourage private investors to expand the digital infrastructure due to **barriers that increase the costs** of deploying high-speed communication networks. For example, Bosnia and Herzegovina and Serbia have yet to transpose the European *acquis* regarding the reuse of existing physical infrastructure from utility companies to deploy high-speed telecommunications networks under the most cost-effective conditions (OECD, 2024[3]).[26] Overall, the full transposition of the European *acquis* from the EU Connectivity Toolbox and the recent Gigabit Infrastructure Act in the Western Balkan economies will be crucial for boosting regional private investment in high-speed infrastructure.[27]

References

ARKEP (2021), *Annual Work Report 2021 [in Albanian]*, Regulatory Authority of Electronic and Postal Communications, http://www.arkep-rks.org/desk/inc/media/3753DC00-E80D-4297-A425-F5779F9933D6.pdf. [25]

ARKEP (2018), *Annual Work Report 2018 [in Albanian]*, Regulatory Authority of Electronic and Postal Communications, http://www.arkep-rks.org/desk/inc/media/A6F11C95-9ACD-4DB8-A02D-C45625CFC66E.pdf. [24]

BiEPAG (2023), *Energy in the Western Balkans*, Balkans in Europe Policy Advisory Group, https://www.biepag.eu/wp-content/uploads/2023/05/Energy-in-the-Western-Balkans-2.pdf. [20]

Cable.co.uk (2024), *Worldwide Broadband Speed League 2024*, http://www.cable.co.uk/broadband/speed/worldwide-speed-league/ (accessed on 5 November 2024). [29]

CEER (2020), *2nd CEER Report on Power Losses*, Council of European Energy Regulators, http://www.ceer.eu/wp-content/uploads/2024/04/C19-EQS-101-03_Report_on_Power_Losses_3.pdf. [15]

CEER (2017), *CEER Report on Power Losses*, Council of European Energy Regulators, http://www.ceer.eu/publication/ceer-report-on-power-losses/. [14]

CEPS (2023), *The Solution to Phasing Out Coal in the Western Balkans? Extending the EU ETS to the Region*, Centre for European Policy Studies, https://cdn.ceps.eu/wp-content/uploads/2023/12/CEPS-PB2023-04_Phasing-out-coal-in-Western-Balkans.pdf. [17]

EIB (2024), *Smart Metering in Serbia*, European Investment Bank, http://www.eib.org/en/projects/pipelines/all/20200695#:~:text=The%20project%20will%20finance%20the,to%20approximately%203.7%20m%20meters. (accessed on 27 January 2025). [18]

Energy Community (2023), *Analysis of Direct Subsides to Coal and Lignite Electricity Production for the Year 2021 and 2022 in the Energy Community Contracting Parties*, http://www.energy-community.org/dam/jcr:1a15066f-1c55-44ae-8ca0-34ef37ff6999/%EF%BF%BD%C3%BF%3Cfont%20color=. [21]

Energy Regulatory Authority (2023), *Annual Report: The Situation of the Power Sector and ERE Activity during 2022*, https://ere.gov.al/images/files/2023/07/26/Annual_Report_2022.pdf. [16]

European Commission (2023), *5G Observatory Biannual Report*, https://5gobservatory.eu/wp-content/uploads/2023/06/BR-18_draft_11.05.2023_CLEAN_Final-EC.pdf. [28]

European Commission (2023), *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: New growth Plan for the Western Balkans*, https://neighbourhood-enlargement.ec.europa.eu/document/download/8f5dbe63-e951-4180-9c32-298cae022d03_en?filename=COM_2023_691_New%20Growth%20Plan%20Western%20Balkans.pdf. [33]

Eurostat (2024), *Broadband Internet Coverage by Technology*, https://doi.org/10.2908/ISOC_CBT (accessed on 28 January 2025). [30]

Eurostat (2024), *Electricity prices for non-household consumers – bi-annual data (from 2007 onwards)*, https://ec.europa.eu/eurostat/databrowser/view/nrg_pc_205__custom_11870801/default/table?lang=en (accessed on 5 November 2024). [19]

Eurostat (2024), *Goods transported*, https://doi.org/10.2908/RAIL_GO_TOTAL (accessed on 5 November 2024). [9]

Eurostat (2024), *Length of railway lines by number of tracks and electrification of lines*, https://doi.org/10.2908/RAIL_IF_LINE_TR (accessed on 5 November 2024). [7]

Gallop, P. (2024), "Western Balkans: Chaotic, Opaque Selection Process for EU Infrastructure Funding Needs Major Improvements", *Bankwatch Network*, https://bankwatch.org/blog/western-balkans-chaotic-opaque-selection-process-for-eu-infrastructure-funding-needs-major-improvements (accessed on 2025 January 30). [6]

INSTAT (2024), *Publication: Transport, Accidents and Characteristics of Road Vehicles*, Institute of Statistics (INSTAT), http://www.instat.gov.al/en/themes/industry-trade-and-services/transport-accidents-and-characteristics-of-road-vehicles/#tab3 (accessed on 5 November 2024). [10]

KAS (2025), *Welcome to KAS*, Kosovo Agency of Statistics, https://ask.rks-gov.net/ (accessed on 14 April 2025). [35]

KAS (2024), *Transportation Statistics 2023*, Kosovo Agency of Statistics, https://askapi.rks-gov.net/Custom/793bd5c5-fa63-4f00-a914-2a234bfb4885.pdf. [11]

Mirbabaeva, N. (2023), *EBRD Supports Macedonian Public Utility JSC Elektrani na Severna Makedonija*, European Bank for Reconstruction and Development, http://www.ebrd.com/news/2023/ebrd-supports-macedonian-public-utility-jsc-elektrani-na-severna-makedonija.html (accessed on 27 January 2025). [34]

MONSTAT (2024), *Annual Statistics of Transport, Storage and Communications*, Statistical Office of Montenegro, http://www.monstat.org/eng/page.php?id=1856&pageid=36 (accessed on 5 November 2024). [12]

OECD (2025), *Annual Length of Inland Transport Infrastructure*, OECD, Paris, https://data-explorer.oecd.org/?pg=0&fc=Topic (accessed on 31 March 2025). [2]

OECD (2024), *Transport Infrastructure Investment and Maintenance Spending*, OECD, Paris, https://data-explorer.oecd.org/?lc=en (accessed on 13 January 2025). [4]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Regional Profile*, OECD Publishing, Paris, https://doi.org/10.1787/170b0e53-en. [3]

OECD (2022), *Multi-dimensional Review of the Western Balkans: From Analysis to Action*, OECD Publishing, Paris, https://doi.org/10.1787/8824c5db-en. [22]

RCC (2023), *Digital Economy Society Index 2022*, Regional Cooperation Council, http://www.rcc.int/files/user/docs/43a521a624cf08523a2268a67a7be2ff.pdf. [26]

RCC (2022), *Western Balkans Roaming Report 2022*, Regional Cooperation Council, http://www.rcc.int/download/docs/Western-Balkan-Roaming-Report-02022022.pdf/5ff562394a840ab1007a1d36df12de99.pdf. [27]

SORS (2024), *Transport of Passengers and Goods*, Statistical Office of the Rebublic of Serbia, http://www.stat.gov.rs/en-us/oblasti/saobracaj-i-telekomunikacije/prevoz-putnika-i-robe/ (accessed on 5 November 2024). [13]

Transport Community (2023), *Development of Indicative TEN-T Extension of Comprehensive and Core Network in Western Balkans*, http://www.transport-community.org/wp-content/uploads/2023/12/TEN-T-Report-2023-WEB.pdf. [8]

United Nations (2022), *Albania Digital Development Country Profile*, https://albania.un.org/sites/default/files/2022-05/Digital%20Development%20Country%20Profile_Albania_final_02.22.pdf. [32]

WBIF (2024), *WBIF From Plan to Action, Key Achievements 2023*, Western Balkans Investment Framework, http://www.wbif.eu/storage/app/media/Annual%20Report/WBIF%20Key%20Achievements%202023/WBIF%20Key%20Achievements%202023.pdf. [5]

World Bank (2025), *Mobile Cellular Subscriptions (per 100 people)*, World Bank, Washington DC, https://data.worldbank.org/indicator/IT.CEL.SETS.P2 (accessed on 8 January 2025). [23]

World Bank (2025), *Poulation Density (people per sq. km of land area)*, https://data.worldbank.org/indicator/EN.POP.DNST (accessed on 14 April 2025). [1]

World Bank (2024), *Rural Population (% of Total Population)*, World Bank, Washington DC, https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS (accessed on 16 January 2025). [31]

Notes

[1] Due to data unavailability for Kosovo, the population density calculation uses data from the last census, estimating the total population at 1.6 million inhabitants in 2024 (KAS, 2025[35]).

[2] The WBIF is a joint initiative of the EU, international financial institutions (Council of Europe Development Bank, European Bank for Reconstruction and Development, European Investment Bank, KfW, World Bank and Agence Francaise du Development), bilateral donors and the governments of the Western Balkans. It supports socio-economic development and EU accession across the Western Balkans through the provision of finance and technical assistance for strategic investments, particularly in infrastructure, energy efficiency and private sector development. Financial support of EUR 1 billion was earmarked for infrastructure investment over the period 2015-20 under the Instrument for Pre-Accession framework (IPA) II. This initiative was followed by the adoption of the Economic and Investment Plan in October 2020, which allocated EUR 9 billion under the IPA III 2021-27 framework. Finally, an additional EUR 3 billion has been allocated to the WBIF after the adoption of the New Growth Plan for the Western Balkans (European Commission, 2023[33]).

[3] The TEN-T network consists of three layers: the core network, the extended core network and the comprehensive network. The core network includes the most important connections between major cities and nodes and must be completed by 2030. The extended core network needs to be completed by 2040. The comprehensive network connects all regions of the EU to the core network and needs to be completed by 2050.

[4] Investment expenditures denote capital expenditure on new road infrastructure or the extension of existing roads, including reconstruction, renewal (major substitution work on existing infrastructure that does not change its overall performance) and upgrades (major modification work improving the original performance or capacity of the infrastructure). Infrastructure includes land, permanent way constructions, buildings, bridges and tunnels, as well as immovable fixtures, fittings and installations connected with them (signalisation, telecommunications, toll collection installations, etc.) as opposed to road vehicles.

[5] The data are expressed in euros, 2015 prices.

[6] Maintenance expenditures are non-capital expenditures to maintain the condition and capacity of the existing road infrastructure. This includes surface maintenance, patching and running repairs (work relating to the roughness of carriageway's wearing course, roadsides, etc.).

[7] EU countries with available data are Austria, Bulgaria, Croatia, Czechia, Estonia, Finland, France, Hungary, Ireland, Lithuania, Latvia, North Macedonia, Netherlands, Poland, Slovak Republic, Slovenia and Sweden.

[8] Over 2009-23, two cross-border bridges have been built: the first one at Gradiška on the Sava River, connecting Bosnia and Herzegovina and Croatia, and the second connecting Albania to Montenegro across the Buna river.

[9] The State Audit Office (SAO) is an independent audit institution of the Republic of North Macedonia. It aims to inform the competent authorities and the public about audit findings identified with performed audits.

[10] This fragmented approach hinders the implementation of the Transport Community Rail Action Plan, which advocates for more sustainable and cost-effective strategies in the long run.

[11] The project has been conducted in Serbia, see: www.wbif.eu/project-detail/PRJ-SRB-TRA-007.

[12] Corridor VIII and Corridor X are pan-European corridors for transport flows. Corridor VIII connects Albania and North Macedonia with Bulgaria, and Corridor X connects Serbia and North Macedonia with Greece and Central Europe.

[13] The legal foundation governing the establishment of the Indicative Extension of the TEN-T Core and Comprehensive Rail Network to the Western Balkans is established in Regulation No 1315/2013, last updated in 2019. This regulation outlines a comprehensive, long-term strategy for the creation of a unified Trans-European transport Network (TEN-T), encompassing all modes of transportation infrastructure, with a particular focus on railways.

[14] The European TEN-T standards for railway freight transport are related to: 1) axle load: freight lines must bear 22.5 tonnes axle load by 2030; 2) line speed: freight lines must allow 100 km/h by 2030; 3) train length: freight lines must allow for 740 m trains by 2030; and 4) European Rail Traffic Management System (ERTMS): core network to be equipped with ERTMS by 2030 (Transport Community, 2023[8]).

[15] Technical losses in energy refer to the energy lost during the process of transmission and distribution through the power grid, primarily due to factors such as equipment inefficiencies.

[16] The second part of the package, consisting of the remaining EUR 500 million in grants, is dedicated to advancing the Western Balkans' energy transition, efficiency and independence, see: https://ec.europa.eu/commission/presscorner/detail/en/ac_23_3196.

[17] Non-technical losses can be thought of as electricity that is consumed but not billed. The three main types of non-technical losses are energy theft, errors in unmetered supplies and conveyance errors.

[18] The Macedonian electricity utility Elektrani na Severna Makedonija (ESM) faced a large liquidity gap following the record prices of energy imports. The European Bank for Reconstruction and Development (EBRD) had to intervene with a EUR 100 million loan to help ESM maintain its financial resilience and continue to provide its essential services (Mirbabaeva, 2023[34]). The other Western Balkan economies heavily rely on local energy resources to produce electricity. Albania and Montenegro rely on hydroelectricity, whereas Kosovo, Bosnia and Herzegovina and Serbia rely on lignite. Notably, these latter three economies rank among the world's top 10 economies regarding the share of lignite in electricity production, at 95%, 70% and 68%, respectively, in 2020 (BiEPAG, 2023[20]).

[19] The Energy Community is an international organisation that brings together the European Union and its neighbours to create an integrated pan-European energy market. The organisation was founded by the treaty establishing the Energy Community, signed in October 2005 in Athens and in force since July 2006. The key objective of the Energy Community is to extend EU internal energy market rules and principles to economies in South East Europe, the Black Sea region and beyond on the basis of a legally binding framework. For more information, see: www.energy-community.org/aboutus/whoweare.html.

[20] While an advanced stage of development has been reached in Republika Srpska, progress in the Federation of Bosnia and Herzegovina remains ongoing, and there is currently no market in the special district of Brčko, which benefits from an exception.

[21] The Broadband Price Index (BPI) measures the level of prices of representative baskets of fixed (13), mobile (12) and converged broadband (9) offers. Prices of 34 broadband consumption baskets that include different services (standalone broadband, double play, triple play and quadruple play services) and different speeds are included in the BPI calculation. A higher score means lower broadband prices. For more information, see: https://ec.europa.eu/newsroom/dae/redirection/document/88557.

[22] No data available for the Western Balkan economies, but available evidence indicates that 5G coverage is low. For example, see: https://seenews.com/news/serbia-to-launch-5g-auction-in-q4-2025-1261994.

[23] The rise of over-the-top (OTT) applications such as Viber that do not require a SIM card has notably contributed to the decline in the mobile cellular penetration indicator, particularly in Albania (United Nations, 2022[32]). Indeed, the mobile cellular penetration indicator includes all mobile cellular subscriptions that provide voice communication but excludes those that offer only data services.

[24] The Gigabit Society targets are to ensure that very-high-capacity connectivity (above 100 Mbps) reaches citizens and businesses by 2025, and that 1 Gbps (Gigabytes per second) reaches them by 2030.

[25] Fibre to the premises (FTTP) technology is a high-speed internet connection that uses optical fiber cables to deliver internet service directly to a building or home, providing faster and more reliable broadband than traditional copper lines.

[26] See the "Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks". For more information, see: http://data.europa.eu/eli/dir/2014/61/oj.

[27] The EU Connectivity Toolbox is a set of best practices for timely rolling out 5G and fast broadband. On the one hand, the measures help network operators reduce the cost of deploying networks. On the other, Member States can use these measures to give operators access to the spectrum they need to rollout 5G and to encourage operators to further invest in 5G coverage. The Connectivity Toolbox is the result of exchanges between Member States, in cooperation with the Commission, following the Commission's Recommendation. For more information, see: https://digital-strategy.ec.europa.eu/en/policies/connectivity-toolbox.

The Gigabit Infrastructure Act entered into force on 11 May 2024 and will be fully applicable in November 2025. The act updates the rules to ensure faster, cheaper, and more straightforward rollout of Gigabit network installations, addressing the main hurdles, such as expensive and complex procedures for network deployment. For more information, see: https://digital-strategy.ec.europa.eu/en/policies/gigabit-infrastructure-act.

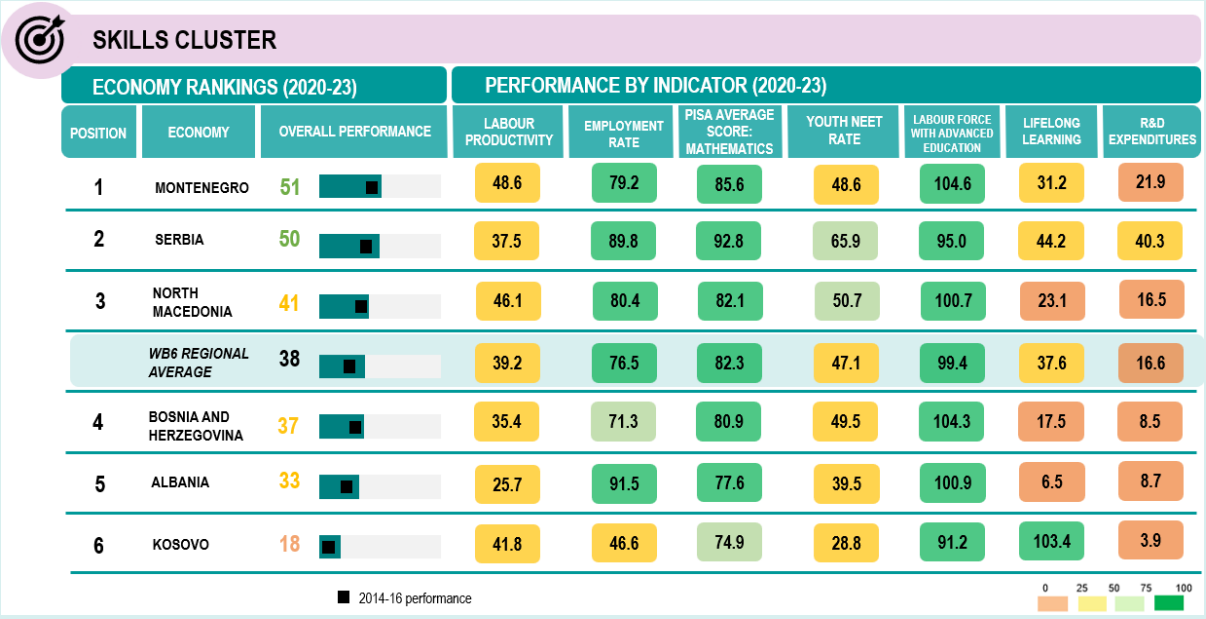
3 Skills cluster

Skills development is a key driver of long-term growth and convergence, strengthening human capital and boosting productivity. This chapter benchmarks the progress of Western Balkan economies against the EU, exploring how effectively the six economies develop and utilise skills to improve education, employment and innovation outcomes. It highlights the role of quality education throughout individuals' lives – starting with early childhood education through to lifelong learning once in the labour force – in shaping the skills and competencies needed to meet labour market demands. The chapter further explores how these skills contribute to enhanced employment outcomes and productivity gains, while emphasising the importance of innovation in adapting and enhancing capabilities to ensure regional competitiveness and resilience.

Key findings

While the Western Balkan economies have made some strides in improving skills outcomes, the region still lags far behind the EU. Figure 3.1 presents each economy's performance alongside the **seven key indicators** on skills development that were used to monitor progress and calculate scores. The average regional performance for each indicator is also shown.

Figure 3.1. Convergence of the Western Balkan economies with the EU: Skills cluster



Notes: The scores – both overall and for individual indicators – were calculated to reflect each economy's performance relative to the EU average, which is set at 100. The exact values for each indicator are presented in the graphs within the subsequent analysis section. For more information about the calculation of the scores, as well as the overall methodological approach, please consult the Methodology Annex. NEET = not in employment, education or training.

The overall regional trend is positive, with the region narrowing the gap with the EU by four points between 2014-16 and 2020-23. Yet, at just 38% of EU levels, skills remains the lowest scoring cluster of the five assessed. Among the Western Balkan economies, Montenegro is positioned as the regional leader, whereas Kosovo ranks lowest.

Structural challenges within the region's education systems impede further improvements. Although advanced education attainment is high and nearly aligned with the EU, substantial quality issues remain, particularly at the primary and secondary levels. The region's score for mathematics on the OECD's Programme for International Student Assessment (PISA) is 80% of the EU's average, reflecting sluggish progress in closing the performance gap. These quality-related issues adversely impact the school-to-work transition, contributing to a youth not in employment, education or training (NEET) rate that, despite recent declines, remains significantly higher than the EU average.

In turn, these obstacles within the education system have negatively impacted employment outcomes in the region. While the Western Balkans has experienced consistent increases in employment rates, with many economies reaching historic highs in 2023, labour productivity remains low. Output per hour worked remains below 40% of EU levels and has shown little improvement in recent years. However, this is not necessarily a negative outcome, as the apparent stagnation may conceal underlying gains, with productivity levels remaining stable despite a significant increase in labour force participation and the continued emigration of skilled workers. Low productivity can be attributed to, amongst other things, inefficiencies in educational and training systems, which often fail to equip individuals with the skills required by the labour market, ranging from foundational skills to digital competencies, with the latter limiting the adoption of emerging technologies within the workforce.

While lifelong learning initiatives have the potential to address these skills imbalances, participation rates have only risen to slightly above one-third of the EU average.

Innovation represents the region's weakest area of performance, as research and development (R&D) investments account for only 17% of the EU average. This low level of expenditure limits the capacity to create and sustain research opportunities that foster advanced skills. While greater public spending on R&D could help build this capacity and stimulate private investment through crowding-in effects, persistently low private R&D spending highlights more systemic issues that need to be prioritised. These include gaps in human capital, an underdeveloped innovation ecosystem and weaknesses in both the broader business environment and firm-level capabilities.

Analysis

Skills are essential for driving economic growth and thus accelerating economic convergence. A highly skilled population enhances labour productivity and can foster innovation, resilience and adaptability to the constantly evolving demands of the labour market.

SK.01

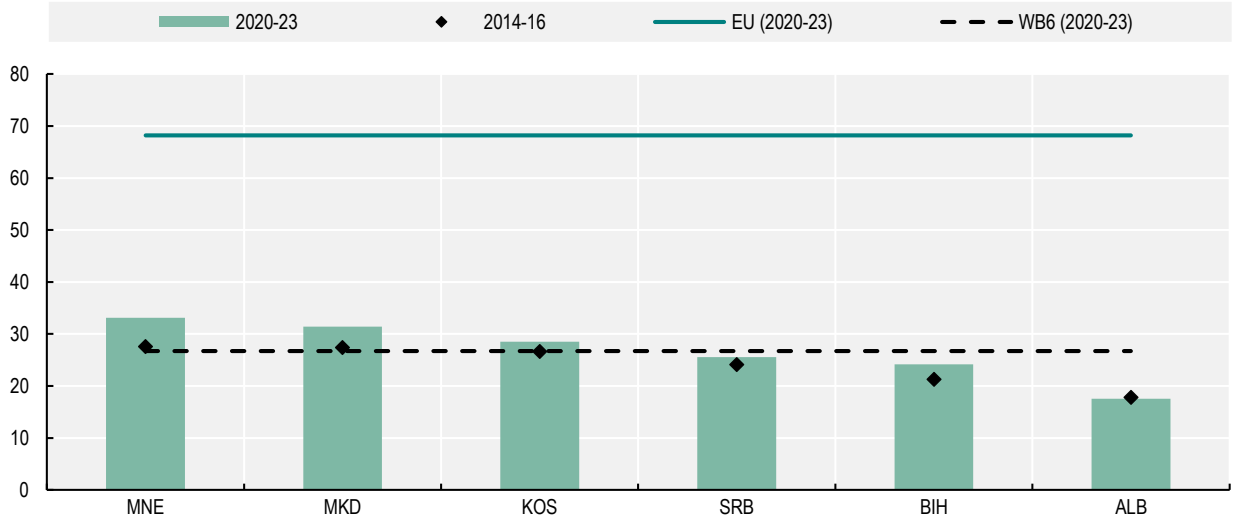
Labour productivity

Labour productivity *remains low and continues to diverge from the EU, hindered by limited adoption of emerging technologies and persistent skills gaps.*

Labour productivity, measured as output per hour worked, represents one of the Western Balkans' most pressing challenges to skills, with a regional average of USD 26.7 between 2020 and 2023, just 39% of EU levels (Figure 2.2). The performance of individual economies shows relatively limited variation, ranging from USD 17.6 in Albania to USD 33.1 in Montenegro. In addition to this low level of convergence, the trend from 2014 to 2023 shows a widening gap between the region and the EU: while the Western Balkans increased output per hour worked by only USD 2.6, the EU average rose by more than USD 7.0 during the same period.

Figure 3.2. Output per hour worked in the Western Balkan economies (2014-16, 2020-23)

2021 USD in purchasing power parity



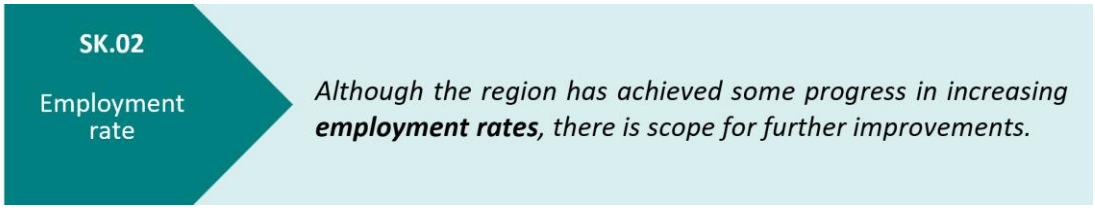
Note: Data are unavailable for Kosovo (2022, 2023).
Sources: (ILO, 2024[1]). OECD calculations for Kosovo from (Government of Kosovo, 2019[2]; 2020[3]; 2022[4]; 2023[5]).

StatLink https://stat.link/avw1e7

Although factors such as physical capital (e.g. equipment and infrastructure) and technological advancements significantly affect labour productivity, skills remain essential. Education, training and skills levels directly influence the workforce's efficiency and effectiveness. While foundational skills such as literacy and numeracy are essential for workers' productivity, the development of **digital skills** has become increasingly critical as they are among the most sought after by employers in the region (see the *Digital Transformation* chapter for more details). Among adults, only 33.8% of individuals in the region possess basic or above-basic digital skills,[1] compared to 55.6% in the EU.[2]

This shortfall limits the labour force's capacity to capitalise on the **digital transition** to boost productivity, such as through the adoption of emerging technologies like artificial intelligence (AI). Recent studies offer preliminary evidence linking AI use to productivity gains at both the firm and worker levels (Filippucci et al., 2024[6]). However, only around 5% of firms in the Western Balkans use AI technologies, which is significantly below the rate of usage among enterprises in the EU (see the *Digital Transformation* chapter for more details). AI has particular potential to boost productivity in knowledge-intensive areas like information and communication technology (ICT) – one of the Western Balkans' fastest-growing sectors. However, the region's low level of digital skills constrains its ability to fully leverage these technologies.

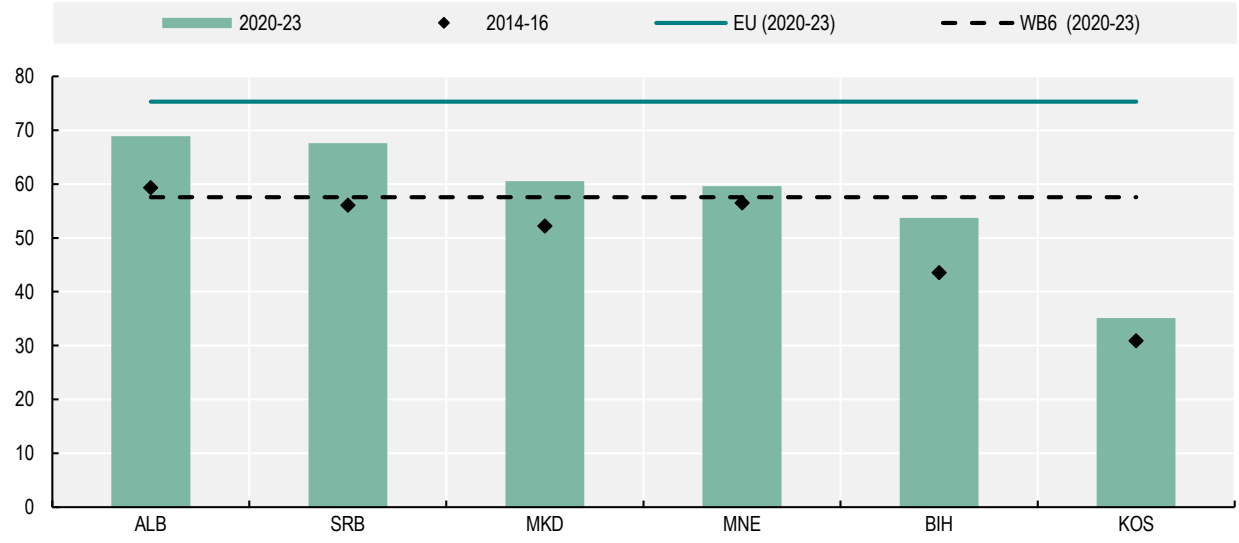
Skills gaps in the region extend beyond digital skills, collectively undermining overall labour productivity. Underqualification due to weak educational outcomes and low participation in continuous learning can leave many individuals without the skills needed to perform their jobs effectively. High rates of emigration can further exacerbate these challenges, although the impact may vary across economies. For example, Bosnia and Herzegovina and Montenegro both see a higher share of highly educated individuals leaving, which depletes the talent pool, lowering the average skill level of the remaining workforce. In contrast, emigrants from the other economies tend to have lower levels of education than the average population in their place of origin, making this effect less pronounced (De Silva, 2024[7]; OECD, 2022[8]).



The Western Balkan economies have made some strides in enhancing employment levels, both in absolute terms and relative to the EU (Figure 2.3). Between 2020 and 2023, the average employment rate reached 57.6%, which was 77% of the EU average. This marked a 7.8 percentage point increase relative to 2014-16, narrowing the gap with the EU by two percentage points and indicating that employment growth in the region slightly outpaced that of the EU.[3] Notably, regional leaders Albania and Serbia, with employment rates of 68.9% and 67.6%, respectively, have made significant progress, although they still remain several percentage points below the EU average. In contrast, Kosovo lags behind its regional counterparts, with an employment rate of only 35.1%,[4] representing less than half of the average EU level.

Figure 3.3. Employment rates in the Western Balkans (2014-16, 2020-23)

Percentage of population aged 20-64



Sources: (Eurostat, 2025[9]). Data for Albania from (INSTAT, 2024[10]) and (European Commission, 2020[11]; 2024[12]). Data for Bosnia and Herzegovina from (European Commission, 2020[13]; 2024[14]). Data for Kosovo from (European Commission, 2020[15]; 2024[16]). Additional data for Montenegro from (MONSTAT, 2024[17]). Additional data for North Macedonia from (MAKSTAT, 2023[18]; 2024[19]).

This increase in employment levels has several drivers, including job creation by the private sector and increased public and private investment. However, policies targeting traditionally women, have also contributed. All six Western Balkan economies have either implemented or are finalising strategies and action plans aimed at increasing **women's employment**, with specific initiatives focused on improving work-life balance (e.g. Albania's "Family Hub" services and increased vacation time for single parents in Serbia) or promoting women's entrepreneurship (OECD, 2024[20]). Additionally, each economy has introduced active labour market programmes that target women, providing resources such as information, counselling and training to enhance employability and facilitate job matching. These measures have helped drive gains in women's employment rates, with an average regional increase of 10 percentage points since 2014.[5] Nevertheless, progress has been uneven across the Western Balkans. While some economies have significantly narrowed the gap with the EU – such as Albania, where the female employment rate reached 61.7% in 2023, just four percentage points below the EU average of 65.7% – others continue to lag significantly behind. In stark contrast, Kosovo's rate stood at just 19.8%, less than one-third of the EU level.[6]

Despite the progress made toward increasing employment levels, **activation programmes** remain insufficient, especially for disadvantaged groups like older and low skilled persons**.** Their scope and duration are inherently limited by the constrained human and financial resources of employment agencies in the region. For instance, staff shortages affect all economies, with the ratio of counsellor to registered unemployed individuals ranging from 1:159 in Montenegro to 1:1 160 in Bosnia and Herzegovina (in the Federation of Bosnia and Herzegovina) (OECD, 2024[20]). Consequently, any efforts to expand these programmes would necessitate substantial increases in dedicated budget allocations and the expansion of staff capacity.

It is also important to note that the region's average employment rate may be artificially inflated due to high levels of **emigration**, which, in combination with declining birth rates and an ageing population, has resulted in a shrinking workforce. In 2024, the region's estimated emigration rate – calculated as the proportion of the native population living abroad – was 23.6%. Individual economies' rates spanned from 14.0% in Serbia to 33.8% in Bosnia and Herzegovina.[7] Moreover, between 2015 and 2024, the total number of emigrants from the region grew by more than 635 000 – rising from 3.8 million to 4.4 million –resulting in modest increases in emigration rates across most Western Balkan economies, from 3.1 percentage points in Serbia to 5.2 percentage points in Albania (United Nations, 2024[21]). As emigration trends upward, individuals who struggle to find employment in their home economies increasingly seek opportunities abroad, reducing both the number of unemployed individuals and the

overall base population used to calculate employment rates. Indeed, the impact of emigration on the workforce is evident for businesses, with firms in the region ranking shortage of labour force as the single most prevalent obstacle to doing business in 2024 (RCC, 2024[22]).

SK.03

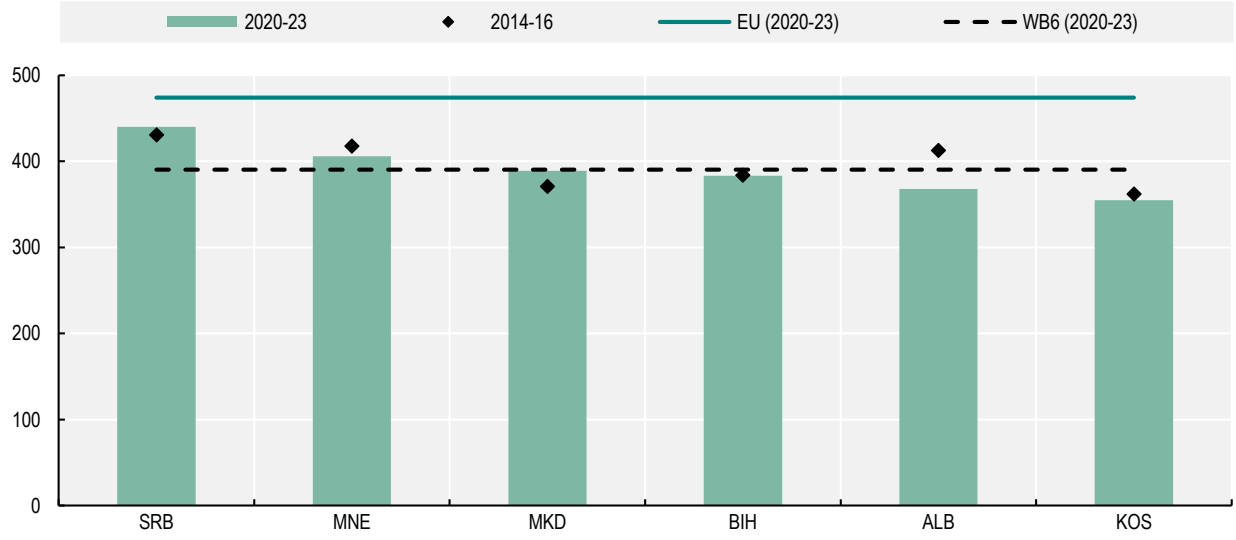
PISA average score: Mathematics

***PISA scores** highlight deficiencies in education systems in the Western Balkans and the difficulties these systems encounter in cultivating strong foundational skills among students.*

Given the critical role of early education in shaping skills development, the below-average student performance in OECD's PISA 2022 highlights challenges in providing quality education in the region. In the 2022 assessment, the Western Balkans averaged 390 points in mathematics, with variation across economies: Serbia scored the highest at 440 points, while Kosovo had the lowest at 355 points (Figure 2.4).[8] While the regional average decreased slightly from 396 points in the 2014-16 period (a drop of six points), this decline was only half of that observed among EU member states. Thus, despite a dip in performance, the Western Balkans has effectively – albeit slightly – narrowed the gap with the EU.

Figure 3.4. Performance in mathematics in PISA in the Western Balkans (2014-16, 2020-23)

Score points



Note: Bosnia and Herzegovina has only participated in PISA in 2018. As a result, its scores for both the 2014-16 and 2020-22 periods were estimated through imputation. Similarly, Serbia did not participate in PISA 2015, so its data for that period was also imputed. For more details on this process, please refer to the Methodology Annex.
Sources: (OECD, 2015[23]; 2022[24]).

StatLink https://stat.link/1b3kms

The Western Balkans' regional average PISA 2022 scores were 82% of EU levels, which may initially appear promising; however, a considerable issue remains: 57% of students were classified as low performers, lacking baseline proficiency in mathematics as either a standalone subject or in conjunction with reading and/or science. This figure significantly exceeds the OECD/EU average of 27%.

The low proficiency levels observed among students can be attributed to barriers that hinder the region's **education systems** from meeting international learning standards. A critical factor in this issue is insufficient and inefficient public spending on education, which in the Western Balkans amounts to 3.9% of GDP – approximately 20% lower than the EU average of 5.0% (OECD, 2024[20]). Limited funding constrains economies' ability to provide essential materials for students, such as textbooks and classroom supplies, and hampers the development of adequate

infrastructure. As a result, student-to-computer ratios remain high, reaching 20:1 in economies like Kosovo and Bosnia and Herzegovina (OECD, 2024[20]). Indeed, more than 50% of students in the region attend schools that have constrained capacity due to these material shortages, limiting learning opportunities and thus negatively impacting learning outcomes. Inadequate funding also hampers teaching quality, as 80% of budgets are devoted to salaries, leaving scant resources for professional development and talent retention.

Another relevant factor is the relatively low participation rates in **early childhood education and care** (ECEC). Enrolment in high-quality ECEC has been shown to significantly enhance educational success later in life (OECD, 2023[25]). Yet, in the Western Balkans, only 50% of children from age 3 to the starting age of compulsory education are enrolled in pre-primary education – more than 40 percentage points below the EU average (OECD, 2024[20]). Thus, without early exposure to structured learning environments, students may struggle to acquire the skills needed to keep pace with curriculum demands, leading to weaker academic performance and widening disparities in educational outcomes.

SK.04

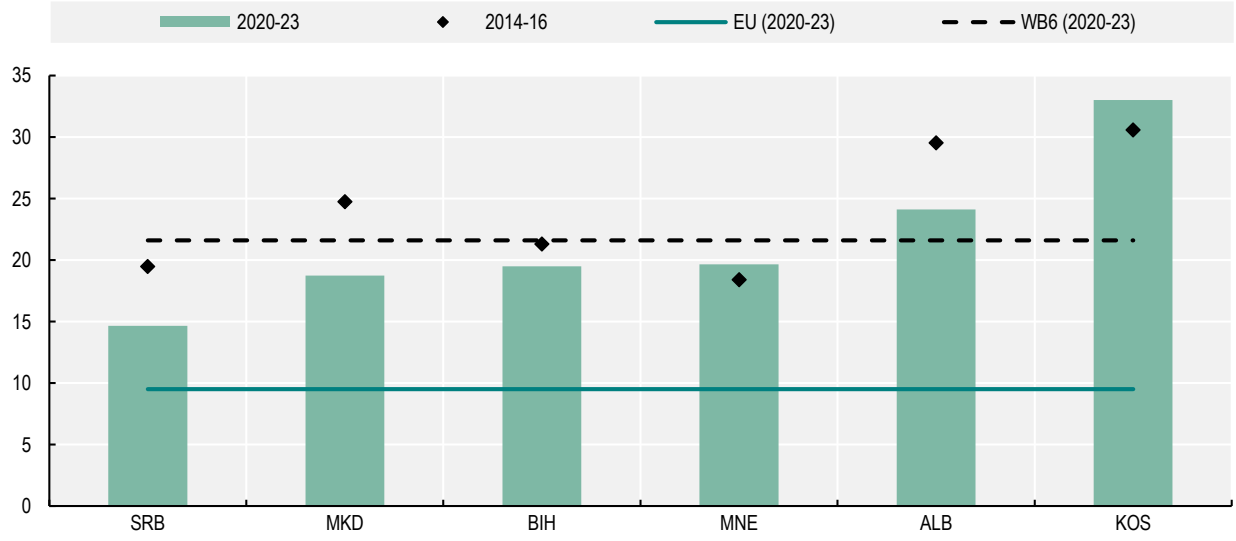
Youth NEET rate

*Despite moderate progress in reducing **youth NEET** rates, quality and relevance gaps in vocational education and training (VET) and higher education hinder the effective transition from education to employment.*

Between 2020 and 2023, the youth NEET rate in the Western Balkans averaged 21.6%, reflecting a 2.4 percentage-point decrease since the 2014-16 period (Figure 2). However, progress has been uneven: Serbia reduced its youth NEET rate by nearly 5 percentage points,[9] while Kosovo's rate remains more than triple the EU level. Despite decreases in four of the six Western Balkan economies, the overall gap with the EU has only marginally narrowed, as the EU has similarly sustained efforts to lower the proportion of youth NEET. As noted earlier, some of the improvement in the youth NEET rate may be attributed to high rates of youth emigration.

Figure 3.5. Youth NEET rates in the Western Balkans (2014-16, 2020-23)

Percentage of 15-24 year-olds



Sources: (Eurostat, 2024[26]) and (ILO, 2024[27]). Additional data for Albania sent to OECD from INSTAT. Additional data for Montenegro from (MONSTAT, 2024[28]). Additional data for North Macedonia from (MAKSTAT, 2024[29]). Additional data for Kosovo from (KAS, 2024[30]).

StatLink https://stat.link/td1zjb

Insufficiently developed **vocational education and training (VET)** also negatively affects the school-to-work transition for youth. As the region's economies boast relatively high VET enrolment rates compared to the EU average (44.5% versus 18.6%, respectively), the quality and relevance of VET is crucial (OECD, 2023[31]). However, VET programmes in the Western Balkans are frequently characterised by outdated curricula, obsolete technologies and inadequate equipment, all of which impede learners' skills development. While there have been efforts to enhance the relevance of curricula through engagement with the private sector, the efficiency and systematic nature of these partnerships remain limited in most economies.

VET programmes in the Western Balkans also fail to provide sufficient opportunities for learners to gain practical experience and develop workplace-relevant skills. The majority of firms in the region report challenges in hiring workers for "routine jobs" (those typically associated with VET) due to a lack of necessary skills and experience among applicants (OECD, 2024[20]). Although there has been momentum in developing dual education systems that promote work-based learning (WBL), with initiatives ranging from pilot programmes in Albania and Bosnia and Herzegovina to national roll outs in Montenegro and Serbia, these advances have not yet been complemented by concrete mechanisms for bolstering employers' willingness to offer WBL opportunities.

Like their VET counterparts, students enrolled in **higher education** face significant challenges regarding how well their studies align with labour market demands. This misalignment does not necessarily arise from students selecting fields with limited demand – for instance, the Western Balkan economies, on average, produce a higher proportion of tertiary graduates in ICT programmes than the EU.[10] Instead, there is often outdated and insufficient infrastructure at universities. In one tracer survey of students who attended university in the region, over 70% recommended that their home university modernise its facilities, with responses ranging from 65% in Serbia to 79% in Kosovo (Unger et al., 2022[32]). Another issue, again echoing that of VET, is the rigidity of curricula, which often lacks opportunities for practical application. Indeed, nearly three-quarters of students expressed a need for universities to develop more practice-oriented courses or adopt a more application-based approach to teaching and learning.

To further reduce youth inactivity and unemployment, Western Balkan governments have committed to implementing **Youth Guarantees**, a flagship project under the Economic and Investment Plan for the Western Balkans aimed at expanding access to education, training and employment opportunities for young people. By the end of 2023, only North Macedonia had achieved national implementation.[11] However, recent developments include Albania and Serbia launching their pilot programmes in October 2023 and January 2024, respectively, and Montenegro being expected to initiate its pilot in 2025. As these economies gradually expand the scope of their initiatives, it is anticipated that youth NEET rates will decline further (OECD, 2024[20]).

SK.05

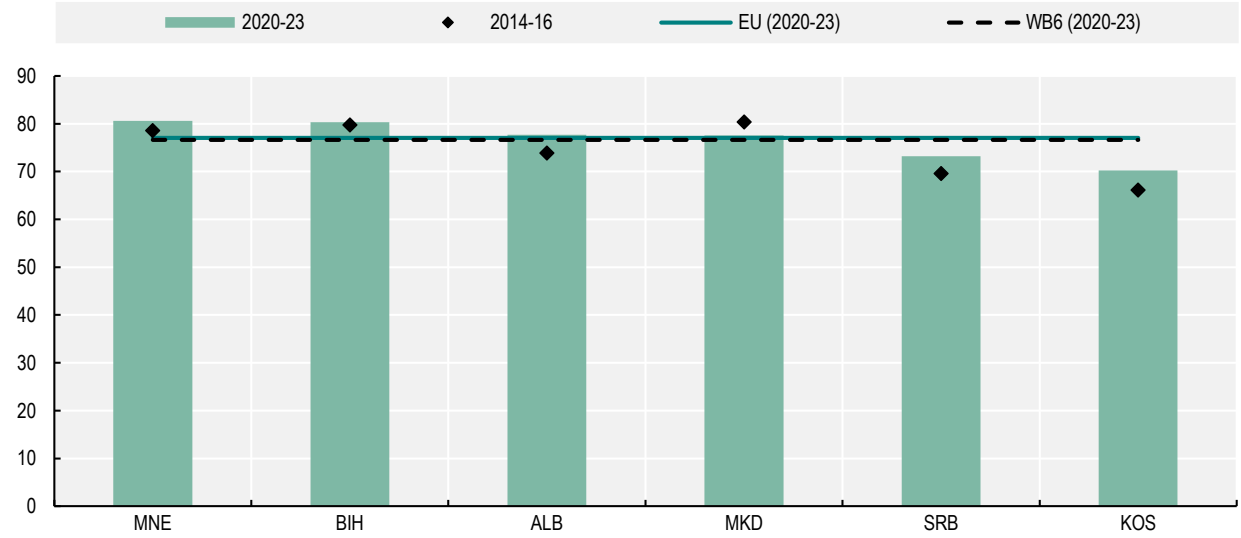
Labour force with advanced education

*Levels of **advanced education** have converged to EU levels, although graduates still face high over-education and unemployment rates.*

While the region grapples with challenges related to educational quality and relevance, it nonetheless has achieved high levels of advanced educational attainment among its working-age population. With 76.7% of the labour force holding advanced qualifications, this represents a convergence of 99% with EU levels (77%) (Figure 3.6). Notably, several economies, including Montenegro, Bosnia and Herzegovina, Albania and North Macedonia, exceed the EU average; even Kosovo, the region's lowest performer, trails by only a few percentage points.

Figure 3.6. Proportion of the labour force with advanced education in the Western Balkans (2014-16, 2020-23)

Percentage of total working-age population



Notes: Advanced education includes short-cycle tertiary education, a bachelor's degree or equivalent education level, a master's degree or equivalent education level, or doctoral degree or equivalent education level according to the International Standard Classification of Education 2011. For economies without 2023 data, the average for the period was calculated using all available data. For more information on the data availability of this indicator, please see the Methodology Annex. Data are unavailable for Kosovo (2023) and Montenegro (2023).
Sources: (ILO, 2024[33]). Additional data for Albania sent by INSTAT to the OECD. Additional data for Montenegro sent by MONSTAT to the OECD.

StatLink https://stat.link/zcvrhk

Across the region, high levels of advanced education among the workforce seem to signal rising demand for highly skilled workers. For example, unemployment drops from 16.5% for individuals with basic education to 9.9% for those with advanced qualifications (World Bank, 2025[34]). However, these levels may also have been artificially boosted by the persistently elevated unemployment rates across the region (10.9% in 2023) and not be linked to a corresponding need for more specialised skills (World Bank, 2024[35]). For example, when facing a tight labour market, individuals may pursue advanced education to increase their competitiveness and stand out among other jobseekers. Higher education may also be seen as a temporary alternative to job searching, especially when employment opportunities are scarce. This can lead to a workforce that is overqualified for existing roles, resulting in more time spent in education and fewer productive years. Data indeed points to the prevalence of over-education, with 20.8% of employees in Western Balkan economies reported as over-educated, ranging from 13.2% in North Macedonia to 28.4% in Serbia.[12]

While the high levels of educational attainment in the Western Balkans may initially appear promising for the region's skills development, they do not necessarily equate to relevant skills or direct pathways to employment. In fact, among the unemployed, many recent graduates struggle to find jobs soon after completing their studies, with the Western Balkans reporting significantly longer transition periods between university and first employment than in the EU (RCC, 2021[36]).

SK.06
Lifelong learning

*Participation in **lifelong learning** has stagnated or declined across most Western Balkan economies, constrained by scarce programme availability and inadequate financial support.*

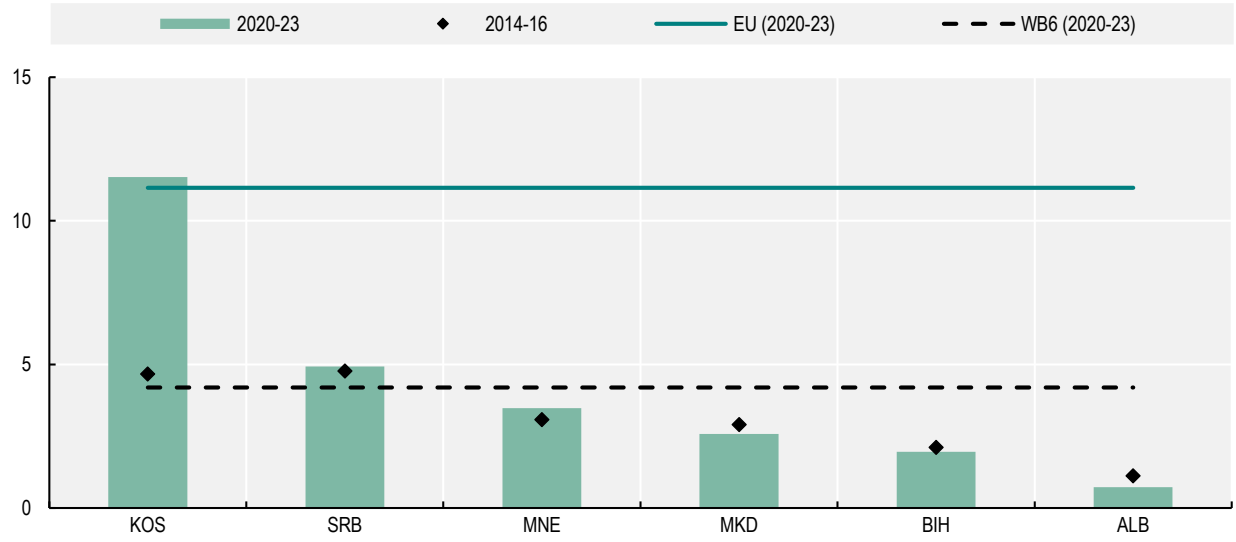
Lifelong learning participation across the region remains limited at 4.2% in 2020-23, reaching just over one-third of the EU average (Figure 2.7). This low engagement persists despite existing gaps in education and training systems that hinder individuals from acquiring the skills demanded by employers. Kosovo distinguishes itself as the regional leader,

demonstrating a 2.5-fold increase in participation rates from 2014-16 to 2020-23, with an average surpassing even that of the EU (11.5% versus 11.2%, respectively). Conversely, Albania reports the region's lowest rate, at just 0.7%.

At first glance, it appears that the region made some, albeit marginal, progress in improving participation rates in lifelong learning over the observed period. However, this increase is largely driven by Kosovo's substantial gains. Without Kosovo's contribution, the regional average participation rate for 2020-23 drops to 2.7% – falling below the level recorded in 2014-16 (3.1%[13])- as most of the Western Balkan economies either stagnated or regressed over the assessed period.

Figure 3.7. Participation in lifelong learning in the Western Balkans (2014-16, 2020-23)

Percentage (of 25-64 years old population)



Notes: Participation in lifelong learning is measured as the percentage of persons aged 25-64 who have taken education or training.
Data are unavailable for Albania (2014, 2015), Bosnia and Herzegovina (2014, 2015), Kosovo (2014).
Sources: (Eurostat, 2024[37]). Data for Albania and Bosnia and Herzegovina from (European Commission, 2024[38]). Additional data for Albania sent by INSTAT to the OECD. Data for Kosovo sent by KAS to the OECD.

StatLink https://stat.link/c8pzr2

A key constraint on participation in lifelong learning is the **limited availability of programmes** that develop skills in demand in the labour market. The rapid pace and transformative nature of the digital and green transition changes the skill composition desired by the market. However, programmes are often ad hoc or dependent on donor funding, leading to inconsistent, short-term implementation.

Most existing initiatives focus on cultivating **digital skills** among the unemployed, with employment agencies in Albania and Kosovo, for example, training jobseekers in programming and coding. While targeted efforts are important given the high incidence of long-term unemployment across the region, the limited availability of training restricts workers' adaptability to evolving skills demands and thus their ability to maintain relevant competencies (OECD, 2024[20]). By contrast, initiatives supporting **skills for the green transition** are nearly non-existent. As the region phases out fossil fuels – and with nearly 140 000 jobs tied to coal mining and coal-based power generation – workers in carbon-intensive industries may face job displacement (Ruiz Castello et al., 2021[39]). This shift underscores the need for robust reskilling and upskilling programmes to support a smooth transition and to enhance workers' preparedness – an area where the region currently lacks sufficient development.

Insufficient financial incentives – such as vouchers, grants or tax breaks – also present a barrier to participation in training offered by private providers. This issue is particularly critical for low-skilled workers, who would most benefit from reskilling and upskilling to enhance their labour market prospects but often face financial barriers that limit their participation (OECD, 2019[40]).

SK.07

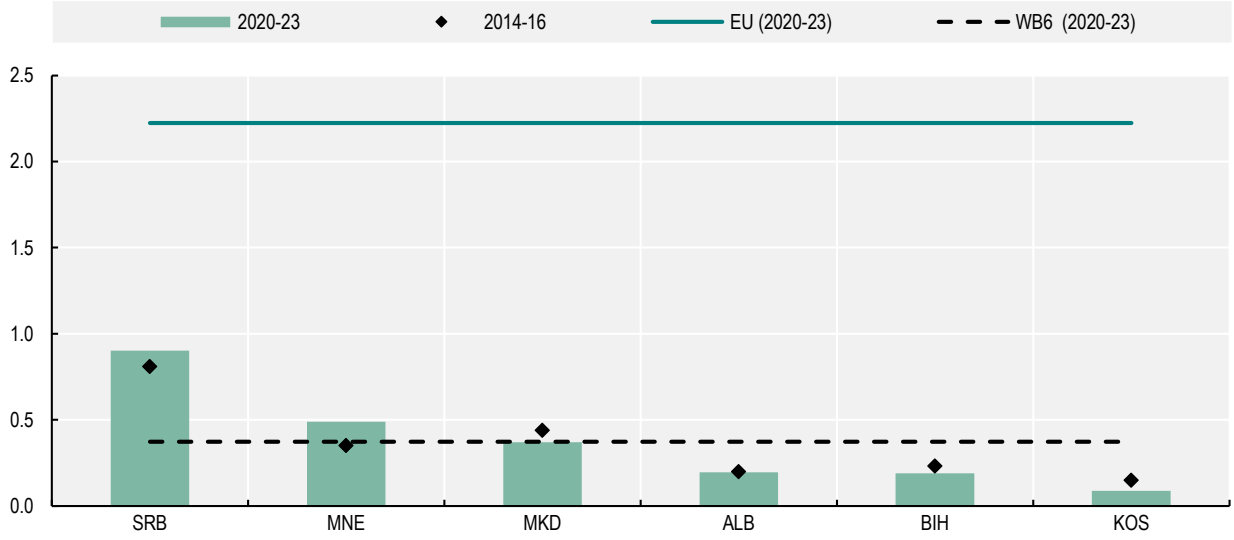
R&D expenditure

***Research and development expenditure** remains low across the region, with gaps in infrastructure, skills and businesses' absorptive capacity further constraining innovation.*

Investments in R&D and skills development are mutually reinforcing: increased R&D investment drives demand for advanced skills and promotes knowledge transfer, while a more skilled workforce enhances the effectiveness of R&D activities, improving returns on investment and potentially incentivising further R&D expenditure. Yet, R&D expenditure for all six Western Balkan economies remains significantly below the EU average (Figure 2.8). At the regional level, investment in R&D is 0.37% of GDP, corresponding to 17% of EU levels, with most investment financed by the public sector. This average is bracketed by Serbia, which achieved 40% of the EU average, and Kosovo, which reached only 4% of EU levels. These low levels of R&D expenditure can constrain innovation, as investments have typically correlated with increased innovation output in higher-income economies (Dritsaki and Dritsaki, 2023[41]; OECD, 2023[42]).

Figure 3.8. Research and development expenditure in the Western Balkans (2014-16, 2020-23)

Percentage of GDP



Notes: R&D expenditure as a percentage of GDP encompasses spending by governments, higher education institutions, business enterprises and private non-profit organisations. OECD imputations for 2021 and 2022 values for Albania. For more details on this process, please refer to the Methodology Annex. Data are unavailable for Albania (2014, 2016, 2020, 2023), Bosnia and Herzegovina (2022), Kosovo (2014, 2015), Montenegro (2021, 2022, 2023) and North Macedonia (2014, 2021).

Sources: (Eurostat, 2024[43]) and (World Bank, 2024[44]). Additional data for Albania from (Hach and Trenkmann, 2019[45]) and sent by INSTAT to the OECD. Additional data for Bosnia and Herzegovina sent by the Agency for Statistics of Bosnia and Herzegovina to the OECD. Data for Kosovo from (Bertelsmann Stiftung, 2020[46]; 2022[47]). Data for Montenegro from (European Commission, 2024[38]). Additional data for North Macedonia sent by MAKSTAT to the OECD. Additional data for Serbia sent by SORS to the OECD.

StatLink https://stat.link/1s93ek

Current funding levels for research and development not only fall significantly short of the EU average but also highlight widespread challenges in meeting economy-specific commitments to enhance investments in R&D. Several economies have established **targets for increasing R&D funding**: for example, Albania aims to reach 1% of GDP by 2030, necessitating a more than five-fold increase, while Serbia's government has pledged to raise R&D funding by 50%, with aims to reach 1.5% of GDP by 2028. Kosovo has taken an additional step by implementing a legal requirement to allocate at least 0.7% of GDP to R&D funding, more than eight times its expenditure in 2023. These pledges have yet to result in sustained growth in actual funding.

Although government spending on R&D is limited, **private sector investment** in innovation is even lower. Private investment typically targets commercially viable solutions, driving the development of competitive, market-driven products that are readily adopted by consumers and industries. Such investment can thus accelerate growth. However, while most Western Balkan economies do not report precise data on the private sector's share of overall R&D expenditure, governments acknowledge that private contributions remain minimal.[14] The exception is Serbia, where 44% of overall investment in R&D originates from the private sector.

However, raising R&D expenditure in the Western Balkan economies is unlikely to yield innovation gains comparable to those seen in the EU without simultaneous improvements in **foundational enablers** such as infrastructure and skills. In terms of infrastructure, critical gaps remain in several economies; for example, Albania and North Macedonia still lack established science and technology parks (OECD, 2024[20]). At the same time, persistent skills shortages, intensified by the brain drain of highly skilled individuals and limited success in attracting new talent, continue to constrain domestic R&D capacity. The number of researchers in the region ranges from 447 per million inhabitants in Bosnia and Herzegovina to 2 781 in Serbia[15] – all well below the EU average of 4 450 researchers per million inhabitants (OECD, 2024[20]).Moreover, financial incentives designed to stimulate R&D, such as voucher schemes, competitive co-operative grants and tax incentives (which include R&D tax credits and VAT exemptions), are unlikely to be fully effective until firms have the internal capacity – namely, the skilled staff, management practices and knowledge – to utilise these incentives effectively.

Thus, as the region's economies ramp up their R&D spending, they would need to concurrently prioritise **infusion** – the adoption and diffusion of ideas, technologies, capital and knowledge from abroad – to achieve greater economic gains in the short to medium term (Iacovone et al., 2025[48]). A key step for infusion is ensuring that local businesses have the absorptive capacity to understand and integrate external innovation so that they can fully take advantage of these positive spillovers.[16] In this context, deeper integration into EU value chains presents an opportunity to accelerate the infusion of technology and expertise by leveraging existing cross-border linkages.

References

Bertelsmann Stiftung (2022), *BTI 2022 Country Report – Kosovo*, Bertelsmann Stiftung, https://bti-project.org/fileadmin/api/content/en/downloads/reports/country_report_2022_RKS.pdf. [47]

Bertelsmann Stiftung (2020), *BTI 2020 Country Report - Kosovo*, https://bti-project.org/fileadmin/api/content/en/downloads/reports/country_report_2020_RKS.pdf. [46]

De Silva, S. (2024), *Labour Migration in the Western Balkans: Consequences for the Region's Democratic Life*, Foundation for European Progressive Studies, Vienna, https://feps-europe.eu/wp-content/uploads/2024/04/The-Western-Balkans-labour-migration-1.pdf (accessed on 15 April 2025). [7]

Dritsaki, M. and C. Dritsaki (2023), "R&D Expenditures on Innovation: A Panel Cointegration Study of the E.U. Countries", *Sustainability*, Vol. 15/8, p. 6637, https://doi.org/10.3390/su15086637. [41]

ETF (2022), *Skills Mismatch in ETF Partner Countries: Cross-Country Report*, European Training Foundation, https://www.etf.europa.eu/sites/default/files/2022-08/Skills%20Mismatch%20Measurement_final%20report_EN.pdf. [52]

European Commission (2025), *Youth Wiki: Republic of North Macedonia. 3.6 Integration of young people in the labour market*, https://national-policies.eacea.ec.europa.eu/youthwiki/chapters/republic-of-north-macedonia/36-integration-of-young-people-in-the-labour-market (accessed on 31 March 2025). [51]

European Commission (2024), *Albania Report 2024*, https://enlargement.ec.europa.eu/albania-report-2024_en. [12]

European Commission (2024), *Bosnia and Herzegovina 2024 Report*, https://enlargement.ec.europa.eu/bosnia-and-herzegovina-report-2024_en. [14]

European Commission (2024), *European Innovation Scoreboard – EU Countries and Neighbouring Countries Database*, https://research-and-innovation.ec.europa.eu/document/download/e0f6f806-6f34-4574-a06f-32be59b47a70_en?filename=ec_rtd_eis-2024-neighborhood-database.xlsx (accessed on 5 November 2024). [38]

European Commission (2024), *Kosovo Report 2024*, https://enlargement.ec.europa.eu/kosovo-report-2024_en. [16]

European Commission (2020), *Albania Report 2020*, https://enlargement.ec.europa.eu/albania-report-2020_en. [11]

European Commission (2020), *Bosnia and Herzegovina 2020 Report*, https://enlargement.ec.europa.eu/bosnia-and-herzegovina-report-2020_en. [13]

European Commission (2020), *Kosovo Report 2020*, https://enlargement.ec.europa.eu/kosovo-report-2020_en. [15]

Eurostat (2025), *Employment and Activity by Sex and Age - Annual Data*, https://doi.org/10.2908/LFSI_EMP_A (accessed on 6 March 2025). [9]

Eurostat (2024), *GERD by Sector of Performance*, https://ec.europa.eu/eurostat/databrowser/view/rd_e_gerdtot/default/table?lang=en (accessed on 5 November 2024). [43]

Eurostat (2024), *Individuals' level of digital skills (2015-2019)*, https://doi.org/10.2908/ISOC_SK_DSKL_I (accessed on 31 March 2025). [57]

Eurostat (2024), *Individuals' level of digital skills (from 2021 onwards)*, https://doi.org/10.2908/ISOC_SK_DSKL_I21 (accessed on 31 March 2025). [56]

Eurostat (2024), *Participation Rate in Education and Training (Last 4 Weeks) by Sex and Age*, https://ec.europa.eu/eurostat/databrowser/product/view/trng_lfse_01 (accessed on 5 November 2024). [37]

Eurostat (2024), *Statistics Explained: Gender Statistics*, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Gender_statistics#:~:text=The%20EU%20employment%20rate%20for,%25)%20by%2010.2%20percentage%20points (accessed on 31 March 2025). [49]

Eurostat (2024), *Young People Neither in Employment nor in Education and Training by Sex, Age and Labour Status*, https://doi.org/10.2908/EDAT_LFSE_20 (accessed on Day March 2025). [26]

Filippucci, F. et al. (2024), "The impact of artificial intelligence on productivity, distribution and growth: Key mechanisms, initial evidence and policy challenges", *OECD Artificial Intelligence Papers,* No. 15, OECD Publishing, Paris, https://doi.org/10.1787/8d900037-en. [6]

Government of Kosovo (2023), *Economic Reform Programme (ERP) 2023-2025*, https://mfpt.rks-gov.net/desk/content/media/131FBDC9-AD9B-48D9-9714-29A7F2F1C5F4.pdf. [5]

Government of Kosovo (2022), *Economic Reform Programme (ERP) 2022-2024*, https://kryeministri.rks-gov.net/wp-content/uploads/2022/08/Economic-Reform-Programme-2022-24.pdf. [4]

Government of Kosovo (2020), *Economic Reform Programme 2020-2022*, https://mfpt.rks-gov.net/desk/content/media/8578F7DC-479A-4C30-BE55-69D44F7988C7.pdf. [3]

Government of Kosovo (2019), *Economic Reform Programme (ERP) 2019-2021*, https://neighbourhood-enlargement.ec.europa.eu/system/files/2019-04/kosovo_erp_2019-2021.pdf. [2]

Hach, K. and E. Trenkmann (2019), *Entrepreneurial Ecosystem in Albania with Focus on Tirana*, https://challengefund.euforinnovation.al/entrepreneurial-ecosystem-in-albania-with-focus-on-tirana/. [45]

Iacovone, L. et al. (2025), *Greater Heights: Growing to High Income in Europe and Central Asia*, International Bank for Reconstruction and Development/The World Bank, Washington DC, https://openknowledge.worldbank.org/server/api/core/bitstreams/c8e58c9b-3c03-48af-947f-a07e28d1f8f7/content (accessed on 15 April 2025). [48]

ILO (2024), *Labor Force with Advanced Education (% of Total Working-Age Population with Advanced Education)*, International Labour Organisation, https://data.worldbank.org/indicator/SL.TLF.ADVN.ZS (accessed on 5 November 2024). [33]

ILO (2024), *SDG indicator 8.2.1 – Annual Growth Rate of Output per Worker (GDP Constant 2017 international $ at PPP) (%)*, International Labour Organisation, https://ilostat.ilo.org/data/# (accessed on 5 November 2024). [1]

ILO (2024), *SDG indicator 8.6.1 - Proportion of Youth (aged 15-24 years) not in Education, Employment or Training*, International Labour Organisation, https://ilostat.ilo.org/data/# (accessed on 5 November 2024). [27]

INSTAT (2024), *Publications: Labour Market Books*, Institute of Statistics, https://www.instat.gov.al/en/publications/books/ (accessed on 6 March 2025). [10]

INSTAT (2024), *Quarterly Labour Force Survey: Fourth quarter 2023*, Institute of Statistics, https://www.instat.gov.al/media/13103/lfs-q4-2023-pressrelesase-anglisht.pdf. [54]

Kacani, J. and G. Shaqiri (2023), "Emerging ICT clusters in the Western Balkans: A convergence model based on financial statement analysis", *Regional Science Policy & Practice*, Vol. 16/4, pp. 1-16, https://doi.org/10.1111/rsp3.12687. [58]

KAS (2025), *Të punësuar dhe raporti punësim ndaj popullsisë - shkalla e punësimit, sipas gjinisë dhe grupmoshës 2012 - 2023 [Employed and employment ratio to population - employment rate, by gender and age group 2012 - 2023]*, Kosovo Agency of Statistics, https://askdata.rks-gov.net/pxweb/sq/ASKdata/ASKdata__Labour%20market__Anketa%20e%20Fuqis%c3%ab%20Pun%c3%abtore__Annual%20labour%20market/tab2.px/ (accessed on 31 March 2025). [50]

KAS (2024), *Labour Force Survey*, Kosovo Agency of Statistics, https://askdata.rks-gov.net/pxweb/en/ASKdata/ASKdata__Labour%20market__Anketa%20e%20Fuqis%C3%AB%20Pun%C3%ABtore__Annual%20labour%20market/ (accessed on 7 March 2025). [30]

MAKSTAT (2024), *Active Population in the Republic of North Macedonia, 2023*, State Statistical Office, https://www.stat.gov.mk/pdf/2024/2.1.24.05_mk.pdf. [19]

MAKSTAT (2024), *Labour Market Survey - Revision*, State Statistical Office, https://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__PazarNaTrud__PazarTrudRevizija/ (accessed on 7 March 2025). [29]

MAKSTAT (2023), *Active Population in the Republic of North Macedonia: Results from the Labour Force Survey, 2022*, State Statistical Office, https://www.stat.gov.mk/pdf/2023/2.1.23.05_mk.pdf. [18]

MONSTAT (2024), *Statistical Yearbook 2024*, Statistical Office of Montenegro, https://monstat.org/eng/novosti.php?id=4064 (accessed on 7 March 2025). [28]

MONSTAT (2024), *Statistical Yearbook 2024: Employment and Earnings*, Statistical Office of Montenegro, https://monstat.org/eng/publikacije_page.php?id=2005 (accessed on 6 March 2025). [17]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Kosovo*, Competitiveness and Private Sector Development, OECD Publishing, Paris, https://doi.org/10.1787/ff74ae0e-en. [53]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Regional Profile*, OECD Publishing, Paris, https://doi.org/10.1787/170b0e53-en. [20]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Serbia, Competitiveness and Private Sector Development*, OECD Publishing, Paris, https://doi.org/10.1787/3699c0d5-en. [59]

OECD (2023), *Education at a Glance 2023: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en. [25]

OECD (2023), *OECD R&D tax incentives database, 2022 edition*, Working Party of National Experts on Science and Technology Indicators, OECD, Paris, https://one.oecd.org/document/DSTI/STP/NESTI(2023)2/FINAL/en/pdf. [42]

OECD (2023), *PISA 2022 Results (Volume II): Learning During – and From – Disruption*, OECD Publishing, Paris, https://doi.org/10.1787/a97db61c-en. [31]

OECD (2022), *Labour Migration in the Western Balkans: Mapping Patterns, Addressing Challenges and Reaping Benefits*, OECD Publishing, Paris, https://doi.org/10.1787/af3db4f9-en. [8]

OECD (2022), *PISA 2022 Database*, OECD, Paris, https://www.oecd.org/en/data/datasets/pisa-2022-database.html (accessed on 29 April 2024). [24]

OECD (2019), *Getting Skills Right: Engaging Low-Skilled Adults in Learning*, OECD, Paris, http://www.oecd.org/employment/emp/engaging-low-skilled-adults-2019.pdf. [40]

OECD (2015), *PISA 2015 Database*, OECD, Paris, https://www.oecd.org/en/data/datasets/pisa-2015-database.html. [23]

RCC (2024), *Balkan Barometer 2024: Business Opinion*, Regional Cooperation Council, https://www.rcc.int/balkanbarometer/publications (accessed on 18 March 2025). [22]

RCC (2021), *Study on Youth Employment in the Western Balkans*, Regional Cooperation Council, https://www.rcc.int/download/docs/Study-on-Youth-Employment-in-the%20Western-Balkans-08072021.pdf/7464a4c82ee558440dfbea2e23028483.pdf. [36]

Ruiz Castello, P. et al. (2021), *Recent trends in coal and peat regions in the Western Balkans and Ukraine*, Publications Office of the European Union, https://doi.org/10.2760/238209. [39]

Unger, M. et al. (2022), *WBAA Tracer Study 2021*, Institute for Advanced Studies/Western Balkans Alumni Association, https://www.western-balkans-alumni.eu/uploads/download-content/wbaa_tracer-study_2021.pdf. [32]

United Nations (2024), *International Migrant Stock*, United Nations Department of Economic and Social Affairs, https://www.un.org/development/desa/pd/content/international-migrant-stock (accessed on 15 April 2025). [21]

World Bank (2025), *Population, total*, https://data.worldbank.org/indicator/SP.POP.TOTL (accessed on 26 April 2025). [55]

World Bank (2025), *Unemployment by level of education (%)*, https://genderdata.worldbank.org/en/indicator/sl-uem-elv-zs?gender=total&education=Advanced (accessed on 31 March 2025). [34]

World Bank (2024), *Research and Development Expenditure (% of GDP)*, https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS (accessed on 5 November 2024). [44]

World Bank (2024), *Western Balkans Regular Economic Report No. 25, Spring 2024: Invigorating Growth*, World Bank, Washington DC, https://openknowledge.worldbank.org/entities/publication/272078c3-53ca-4047-9b3e-23a4a7801dcc (accessed on 6 November 2-24). [35]

Notes

[1] "Basic" digital skills refer to individuals who demonstrate at least a basic level (i.e. completion of at least one activity) in each of the five assessed areas: information and data literacy, communication and collaboration, digital content creation, safety, and problem solving. To be classified as having "above-basic" digital skills, an individual must achieve an above-basic level in all five areas, typically by completing multiple activities. For detailed methodology, see the indicator's metadata at (Eurostat, 2024[56]).

[2] The regional average was calculated using Eurostat's Data Browser for the indicator, "Individuals' level of digital skills (from 2021 onwards)". For the economies for which this data was not available (Kosovo), the predecessor to this indicator, "Individuals' level of digital skills (until 2019)", was used. To access the datasets used, please see: (Eurostat, 2024[56]) (2021 onwards); (Eurostat, 2024[57]) (until 2019).

[3] Between 2014-16 and 2020-23, the average regional employment rate in the Western Balkans grew by nearly 8 percentage points, rising from 49.7% to 57.6%. Over the same period, the EU employment rate increased from 69.5% in 2014-16 to 75.3% in 2020-23 (+5.8 percentage points).

[4] Kosovo's low employment rate results from several factors, including: 1) high levels of informality, which are exacerbated by the absence of unemployment benefits; 2) high remittance inflows, which have been shown to negative affect activity rates, particularly among women; and 3) population dynamics, notably a relatively young population. For further details on these factors and the overall state of employment policy in Kosovo, please see (OECD, 2024[53]).

[5] Employment rates for women were calculated using the population aged 15-64 years as the base between the years 2014 and 2023. In the instances where 2023 data were not yet available (North Macedonia), data from 2022 were used to calculate the regional average. Data came from either official databases or the annual labour force surveys conducted by each economy's national statistical office.

[6] Data for Albania were provided by the Institute of Statistics – see (INSTAT, 2024[54]). Data for Kosovo came from the Kosovo Agency of Statistics' annual indicators database (KAS, 2025[50]). Data on the EU average came from (Eurostat, 2024[49]).

[7] To estimate emigration rates, data from the United Nations Department of Economic and Social Affairs (UN DESA) and the World Bank were used. The number of emigrants for each available economy was drawn from UN DESA figures on international migrant stock by country of origin. Total population figures were sourced from the World Bank, using 2023 data due to the unavailability of 2024 estimates (World Bank, 2025[55]). Emigration rates were calculated as Mi / (Mi + Ni), where Mi refers to the number of emigrants born in origin economy and residing abroad and Ni is the total native population born in origin economy, both at home and abroad. To approximate Ni, the number of immigrants residing in each economy – based on UN DESA international migrant stock by destination – was subtracted from the total population. Data for Kosovo were not available in the UN DESA dataset and are therefore excluded from these estimates

[8] It is important to note that Bosnia and Herzegovina has participated in the assessment only once, in 2018.

[9] One of the primary initiatives implemented in Serbia to decrease the youth NEET rate has been the "My First Salary" programme, which was designed to benefit young jobseekers without work experience. These individuals

work in selected public and private sector entities for nine months to gain knowledge, skills and competencies to enhance their employability (OECD, 2024[59]).

[10] An examination of the most recent data for each economy reveals that 6.9% of all graduates from tertiary education in the Western Balkans graduated from ICT programmes, compared to 5.3% among EU member states. For more, please see: https://data.uis.unesco.org/index.aspx?queryid=3830.

[11] North Macedonia was the first Western Balkan economy to implement a Youth Guarantee scheme, launching its pilot programme in 2018. The economy more recently adopted its new Youth Guarantee Implementation Plan 2023-26. For more information on North Macedonia's ongoing efforts to reduce youth NEET and unemployment, please see (European Commission, 2025[51]).

[12] Vertical mismatches are as follows: 18.7% in Bosnia and Herzegovina, 18.3% in Montenegro, 18.9% in Albania, 13.2% in North Macedonia, 27.8% in Kosovo and 28.4% in Serbia. For more, see (ETF, 2022[52]). A direct comparison with the EU is not feasible due to differences in definitions.

[13] This 2014-16 average includes Kosovo, which recorded the second highest participation rate in the region, at 4.7% (surpassed only by Serbia, which reported 4.8%).

[14] These acknowledgments were provided in the qualitative questionnaires completed by government counterparts as part of the Western Balkans Competitiveness Outlook 2024 assessment cycle.

[15] This figure is from 2023 and was provided by counterparts at the Statistical Office of the Republic of Serbia (SORS).

[16] Evidence suggests that absorptive capacity among businesses remains a key constraint: for example, in the ICT sector, firms in the Western Balkans have struggled to absorb and apply cluster-based technological spillovers from European enterprises operating in the region (Kacani and Shaqiri, 2023[58]).

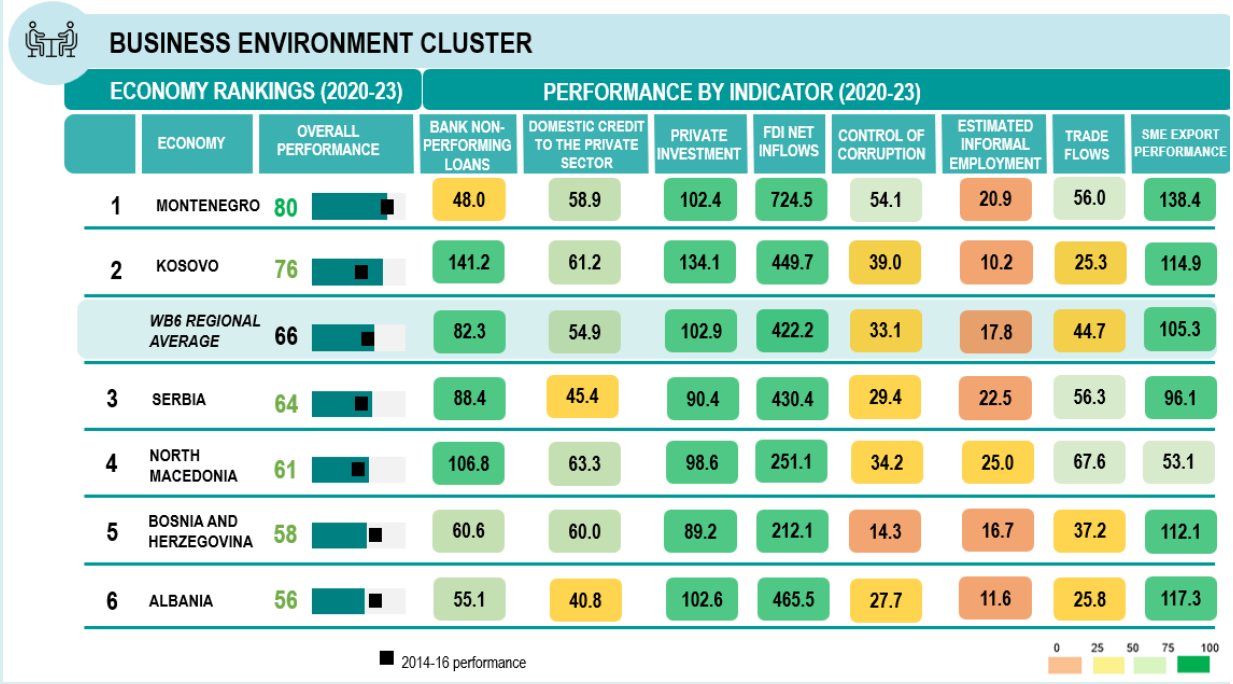
4 Business environment cluster

A sound business environment supports economic growth by creating the right conditions for businesses to thrive, invest and innovate. This chapter evaluates the progress of the Western Balkan economies in converging with the EU, focusing on the conditions that enable businesses to enhance their competitiveness and compete on an equal footing. It specifically examines credit provision and the financial stability of banks as drivers of private investment. Additionally, it analyses fair market competition by shedding light on corruption and informality. Finally, the chapter explores trade integration, with a particular focus on the capacity of small and medium-sized enterprises to participate in international trade.

Key findings

The Western Balkan economies have worked to improve their business environments, but the region still lags behind the EU. Figure 4.1 depicts each economy's overall convergence in the business environment cluster, with scores reflecting their relative distance from the corresponding EU averages. It also breaks down the performance of the individual economies across **eight key indicators** that measure progress in this cluster, along with the regional average for each indicator.

Figure 4.1. Convergence of the Western Balkan economies with the EU: Business environment cluster



Note: The scores – both overall and for individual indicators – were calculated to reflect each economy's performance relative to the EU average, which is set at 100. The exact values for each indicator are presented in the graphs within the subsequent analysis section. For more information about the calculation of the scores, as well as the overall methodological approach, please consult the Methodology Annex.

The regional outlook for the business environment cluster is positive, with all economies having surpassed half of the EU average scores. However, progress has been limited, as the region narrowed the gap with the EU by only 1 point between 2014 and 2023. Montenegro leads the region, while Albania ranks the lowest.

Difficulties in accessing affordable financing constrain businesses' ability to meet their investment needs across the region, limiting broader economic growth prospects. While banks demonstrate strong financial stability, as reflected by low non-performing loan (NPL) rates, the high cost of borrowing, stringent collateral requirements and the absence of targeted schemes designed for small and medium-sized enterprises (SMEs) restrict the growth of corporate credit. Despite these challenges, private investment levels by businesses remain comparable with those in the EU – yet they are likely insufficient to provide the boost needed to accelerate growth and convergence.

Meanwhile, persistent and sometimes growing perceptions of corruption affect fair competition and deter investors. Weak political commitment to the establishment of comprehensive anti-corruption frameworks and limited resources for enforcement agencies hinder an effective and consistent policy response. Additionally, the continued presence of informality distorts the level-playing field and reduces labour productivity. The low labour

productivity levels in the region, coupled with high labour taxation and underdeveloped social security systems, present obstacles to curbing informal employment.

Nevertheless, the Western Balkan economies have been attracting increasing levels of foreign direct investment (FDI), supported by an open and non-restrictive environment and generous incentive regimes. These high levels of FDI carry the potential to boost the long-term economic growth needed for convergence; however, they are not always directed towards export-oriented and high-value-added sectors. Moreover, trade flows in goods and services in the region remain lower than those of EU counterparts and are constrained by limited industrial bases and the presence of non-tariff barriers. SMEs, which form the backbone of the Western Balkan economies' economic activity, show signs of weakening compared to their EU counterparts, and Support programmes aimed at improving the integration of SMEs into regional and global value chains and promoting the update of e-commerce remain weak and underutilised.

Analysis

A sound business environment encourages investment, promotes entrepreneurship and enhances productivity by enabling businesses to operate efficiently. It is essential for driving economic growth, and in the Western Balkans, it is an important way of accelerating economic convergence.

BE.01

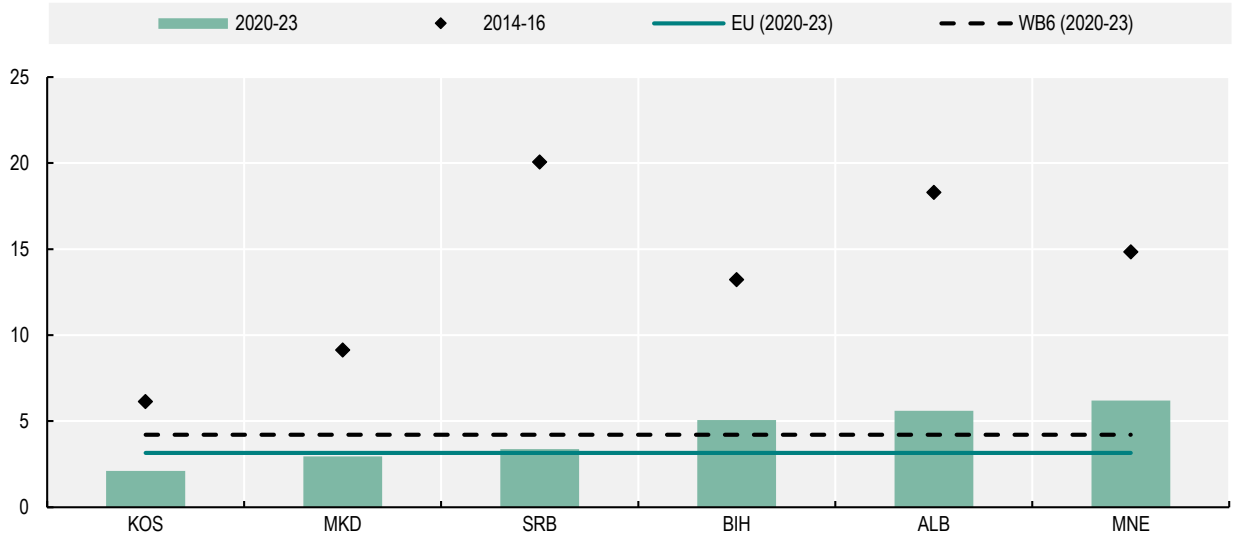
Bank non-performing loans

*The Western Balkan economies have reduced the **share of non-performing loans** following substantial efforts to align with international financial standards.*

Non-performing loans (NPLs) can undermine credit availability by threatening the financial stability of banks, limiting business access to finance, and hindering investment. The Western Balkan economies have made significant strides in reducing their NPL share (Figure 4.2), with an average NPL ratio of 4.2% in 2020-23, down from 13.6% in 2014-16. This trend aligns with improvements seen in the EU, where the NPL share decreased to 3.2% in 2020-23. Kosovo stands out with a substantially low NPL ratio of 2.1%, outperforming the EU; in contrast, Montenegro has the highest NPL share, exceeding 6%.

Figure 4.2. Bank non-performing loans in the Western Balkan economies (2014-16, 2020-23)

Percentage of total outstanding loans



Sources: (IMF, 2025[1]). Data for Serbia from (National Bank of Serbia, 2024[2]).

Since the launch of the Vienna Initiative[1] in 2009, the Western Balkan economies have made continuous strides in enhancing **banking supervision** to ensure adherence to proper credit underwriting standards and risk management practices, resulting in a decline in the share of NPLs.

In 2017, Serbia became the first economy in the region to comply fully with Basel III standards, which are a set of internationally agreed-upon regulations to strengthen the regulation, supervision and risk management of banks. In this context, Serbia's co-ordinated efforts under a broader strategic framework, the NPL reduction plan, helped to reduce its share of NPLs by nearly 17 percentage points between 2014 and 2023. The plan included a comprehensive asset quality review that resulted in adjustments in bank capital ratios, capital injections and loan restructuring, and tax incentives for NPL sales (IMF, 2017[3]).

In the other Western Balkan economies, where full compliance with the Basel III standards has not yet been achieved, NPL shares have also significantly improved due to prudent supervision. For instance, in Kosovo, actions undertaken by the Central Bank have contributed to the lowest NPL share in the region. Measures included the active use of moral suasion to encourage banks to lower their loan-to-deposit ratios to prudent levels, enhanced daily monitoring of the banking sector, and stress testing. As a result, Kosovar banks have adopted a cautious approach, particularly during the 2000s (IMF, 2013[4]), while still managing to sustain credit growth (see next section). However, excessively low NPLs may also point to overly conservative lending practices, with banks avoiding the riskiest segments such as start-ups – in fact, a relatively higher level of banking sector concentration in Kosovo, which exceeds the EU average, may limit competition and reduce incentives to move beyond safe and traditional lending models, hence meriting closer policy attention (IMF, 2024[5]).

BE.02

Domestic credit to the private sector

***Domestic credit to the private sector** in the region remains significantly below the EU average, constrained by difficult financing conditions and the lack of tailored schemes targeting SMEs.*

Easy and affordable access to credit is crucial for economic growth as it empowers businesses to invest, innovate and expand. However, despite signs pointing to the overall health of the financial system, domestic credit to the

private sector across the region remains limited at 47.3% of GDP in 2020-23, significantly below the EU average of 86.0% (Figure 4.3). Overall, the performance of individual economies shows limited variation, ranging from 35.1% in Albania to 54.5% in North Macedonia.

Figure 4.3. Domestic credit to the private sector in Western Balkan economies (2014-16, 2020-23)

Percentage of GDP

Sources: (World Bank, 2024[6]). Data for the European Union from (Eurostat, 2024[7]).

The share of credit-constrained firms across the region was estimated at 45.0% in 2022, compared to close to 6.2% in the EU (EIB, 2022[8]; 2023[9]).[2] This disparity reflects key structural barriers, including **high interest rates**, which have curbed the demand for bank financing. Available data suggest that Western Balkan businesses face higher borrowing costs than their EU peers: in January 2023, average lending rates in the Western Balkan economies were at 5.4%, which was 1.4 percentage points higher than the EU average levels (4.0%), with particularly high levels observed in Serbia (7.5%), Montenegro (6.6%) and Albania (6.3%) (CEIC, 2025[10]).

In the context of increased banking supervision and improved oversight, there has been a significant decrease in NPLs, as discussed in the previous section. However, the more cautious approach adopted by banks is evident in the continued use of **stringent collateral requirements**. According to the only available data among the Western Balkan economies, 37.2% of firms in Serbia required collateral to issue a new loan in 2022, whereas this figure was much lower in most EU economies, such as Greece (28.5%) or the Slovak Republic (21.0%) (OECD, 2024[11]). Higher perceived risks stemming from corporate governance deficiencies, along with challenges regarding collateral enforcement and liquidation processes, have tightened collateral requirements for businesses across the region (Statovci et al., 2023[12]; OECD, 2022[13]).[3]

Meanwhile, access to finance is further constrained by incomplete **asset registration**. While cadastre information systems are generally up-to-date and cover all territories – apart from Montenegro – registries for security pledges are often incomplete in Western Balkan economies (except Albania and Serbia). This situation leaves local banks with insufficient information on assets, making the assessment of movable assets especially challenging.

Beyond bank financing, there are few financing options for the region's businesses, with 88% of credit-constrained firms choosing not to rely on any form of external financing (EIB, 2023[9]). Therefore, tailored policies such as **public credit guarantee schemes** and **dedicated credit lines** can be crucial policy tools to improve access to credit for businesses, especially SMEs. Across the region, Kosovo is the only Western Balkan economy surpassing the EU average with respect to access to bank finance for SMEs, with more than 61.8% of corporate credit directed towards SMEs in 2022, compared to 49.5% in the EU (OECD, 2024[14]). This is partly due to Kosovo's business landscape being disproportionately dominated by SMEs compared to its Western Balkan peers and the EU, both in terms of number and key economic indicators.[4] However, Kosovo also stands out in terms of public

financial support for SMEs, which reached 3.7% of GDP in 2022 – significantly higher than in Serbia and Albania, where it remained below 1% (OECD, 2024[14]). Most of this support is provided by the Kosovo Credit Guarantee Fund (KCGF), which supplied EUR 116.7 million (1.3% of GDP) of credit guarantees to 6 865 SMEs in 2022, as well as EUR 98 million (1.1% of GDP) of loans to 1 750 SMEs (KCGF, 2023[15]).[5]

BE.03

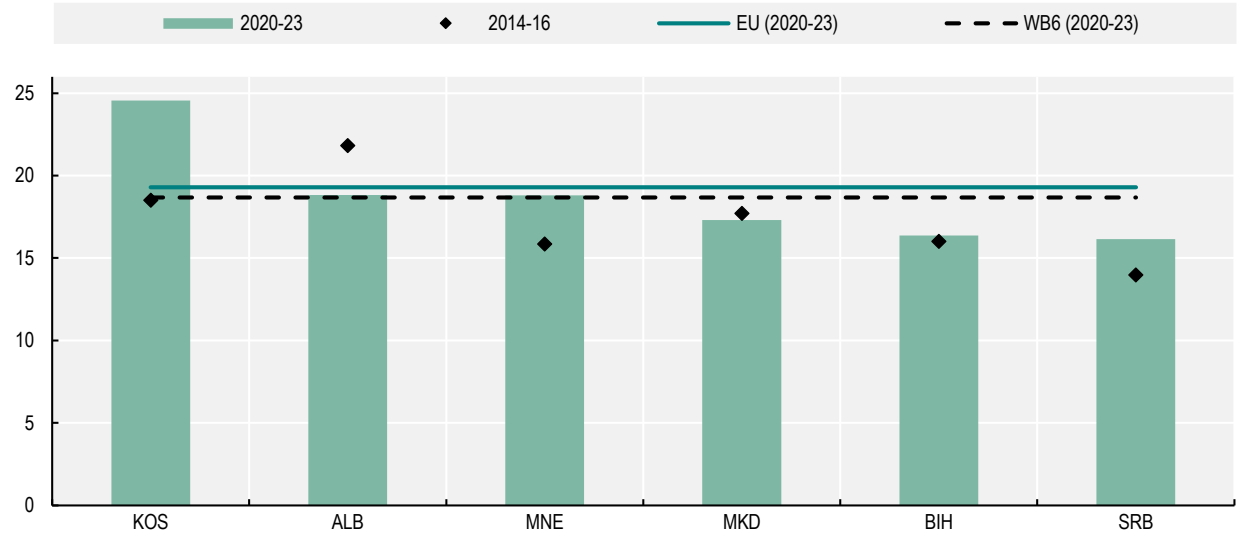
Private investment

*An uneven playing field and an underdeveloped innovation ecosystem constrain **private investment**.*

Private investment is essential for long-term economic growth as it contributes to driving the accumulation of physical capital, such as factories and machinery, which boosts business productivity and expands the production of goods and services. Between 2020 and 2023, private investment in the Western Balkan economies averaged 18.7% of GDP, a figure comparable to the EU average of 19.3% (Figure 4.4). However, this average largely reflects the figure for Kosovo, which, at 24.6% of GDP, exceeded the EU average. In contrast, private investment in all remaining economies lags the EU average, with Serbia and Bosnia and Herzegovina recording levels as low as 16.2% and 16.4% of GDP, respectively. This is particularly significant, given that middle-income economies converging to higher levels of income would be expected to exhibit substantially higher investment rates.

Figure 4.4. Private gross fixed capital formation in the Western Balkan economies (2014-16, 2020-23)

Percentage of GDP



Notes: OECD imputations for Bosnia and Herzegovina and Montenegro. For more details on this process, please refer to the Methodology Annex. Data are unavailable for Bosnia and Herzegovina (2022, 2023) and Montenegro (2022, 2023).
Sources: (Eurostat, 2024[16]) and (World Bank, 2024[17]). Additional data for Albania sent by INSTAT to the OECD.

StatLink https://stat.link/9k4j2v

As stated in the previous sections, **low levels of corporate credit** represent the primary obstacle to private investment growth in the Western Balkans, with an estimated financing gap for the region's businesses amounting to 2.5% of GDP (Akbas, Betz and Gattini, 2023[18]). However, enterprises in the region also continue to face significant non-financial barriers that hinder their ability to scale up and expand operations. In particular, there is an uneven playing field, with preferential treatment for certain firms or sectors or informal practices distorting competition.

The **informal sector** in the Western Balkans is sizeable and contributes to market imbalances. As a result, formal firms may see reduced profits and lower returns on investment, discouraging expansion or new investment. The informal sector in all Western Balkan economies except Serbia is estimated to account for over 30% of GDP, compared to the EU average of 23%. This distortive impact is recognised by the private sector across the region: 32% of businesses in North Macedonia identify practices of informal competitors as a major or very severe constraint, while over 20% report similar concerns in Montenegro and Serbia, compared to around 5% in the most advanced EU economies (World Bank, 2025[19]).[6]

The level-playing field is further compromised by the sizeable economic footprint of **state-owned enterprises (SOEs)**, which sometimes enjoy favourable treatment. In Serbia and Montenegro, SOEs account for about 5% of total employment, a share that rises to 8.4% in Bosnia and Herzegovina – significantly above the OECD average of 3.8% (OECD, 2024[14]).[7] In most of the region's economies, SOEs receive public subsidies and indirect financial support, often because they fail to achieve positive rates of return or are outright loss-making. Some SOEs maintain their market power through quasi-monopolistic positions and insufficient competition policy enforcement. For example, in Serbia, SOEs receive approximately 60% of all corporate subsidies in the economy, benefit from explicit loan guarantees for investment projects, and, if primarily funded by the state budget, are protected from bankruptcy proceedings (OECD, 2024[20]).

The region lacks a robust **innovation** ecosystem to stimulate private investment in intellectual property products. Private sector investments in research and development (R&D) remain negligible, accounting for less than one-third of total R&D investment in most economies (OECD, 2024[14]). While the reasons for this underinvestment are multifaceted, ranging from limited financing options to a shortage of highly skilled scientists and researchers, the lack of meaningful collaboration opportunities between businesses, research institutions and government bodies further restricts private sector engagement in R&D. Infrastructure to support such collaboration is scarce across the region, with the notable exception of Serbia. For example, plans to establish centralised science and technology parks have yet to materialise in Albania, Montenegro and North Macedonia. Furthermore, most Western Balkan economies offer only limited direct financial support, such as voucher schemes, competitive co-operative grants or tax incentives, to encourage business-academia co-operation (see the *Skills* chapter for more details).

BE.04

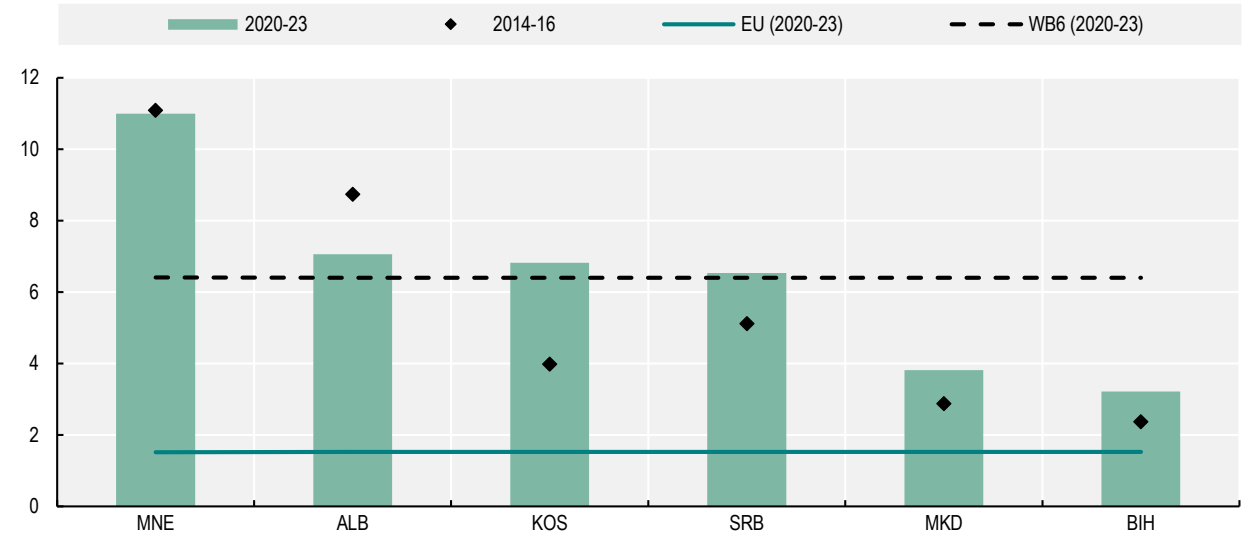
FDI net inflows

***FDI net inflows** in the Western Balkan economies have been steadily increasing, supported by solid legal frameworks and generous incentive regimes.*

FDI is a vital source of capital accumulation and technology transfer, enhancing productivity and promoting long-term economic growth. The Western Balkan economies continue to attract significant FDI, with net inflows reaching 6.4% of GDP between 2020 and 2023, more than four times the EU average of 1.5% (Figure 4.5). Montenegro stands out with net FDI inflows nearing 11% of GDP during the period, followed by Albania, Kosovo and Serbia, which were all clustered around 7% of GDP.

Figure 4.5. Foreign direct investment net inflows in Western Balkan economies (2014-16, 2020-23)

Percentage of GDP



Source: (World Bank, 2024[21]).

The Western Balkan economies are among the most **open to FDI** globally, as measured by the OECD FDI Regulatory Restrictiveness Index, which covers statutory measures discriminating against foreign investors.[8] The region's score was just under half that of the OECD average in 2020, indicating a less restrictive investment regime (OECD, 2024[22]). Notably, all foreign investors are treated as domestic legal entities once incorporated and headquartered in the domestic market. In all economies except for Kosovo, there are FDI restrictions for only a few sectors deemed of strategic importance, such as defence, energy and media. Despite these minimal restrictions, the Western Balkan economies have yet to implement a framework for comprehensive **FDI screening** mechanisms. In addition, although the relative openness to FDI may be beneficial for attracting investment, it may also expose the region to potentially harmful impacts from specific types and sources of investments.

The Western Balkan economies have established **solid legal investment frameworks**, which streamline investor entry and safeguard their assets. The extensive investment agreement network of the region's economies also provides extra safeguards for foreign investors. However, in Bosnia and Herzegovina, the varying regulations between its entities and cantons create an increased administrative burden and heighten uncertainty for investors.

Investor incentives have also been a cornerstone of FDI attraction strategies. The Western Balkans already offer low corporate income tax (CIT) rates -none exceeding 15% - compared to an OECD average of 21.5% (OECD, 2024[14]). These are further complemented by generous tax breaks with an emphasis on R&D, as seen in Bosnia and Herzegovina, Kosovo and Serbia, along with land concessions and streamlined procedures for business registration and licensing.[9] Such incentives have been most notably applied within the region's network of special economic zones (numbering approximately 40), which provide foreign investors with value-added tax and customs exemptions, along with efficient transport links, reliable utilities, and facilities for industrial production (RCC, 2024[23]).[10]

Although the Western Balkan economies have been attracting higher levels of FDI inflows, these investments do not always target export-oriented and high-value-added sectors that would sustain long-term economic growth. For instance, manufacturing accounts for less than 10% of FDI inflows in Albania, Kosovo and Montenegro, as most investments are directed towards the real estate sector. In Kosovo, 63% of FDI inflows in 2023 went into real estate (CEFTA, 2024[24]).[11]

BE.05

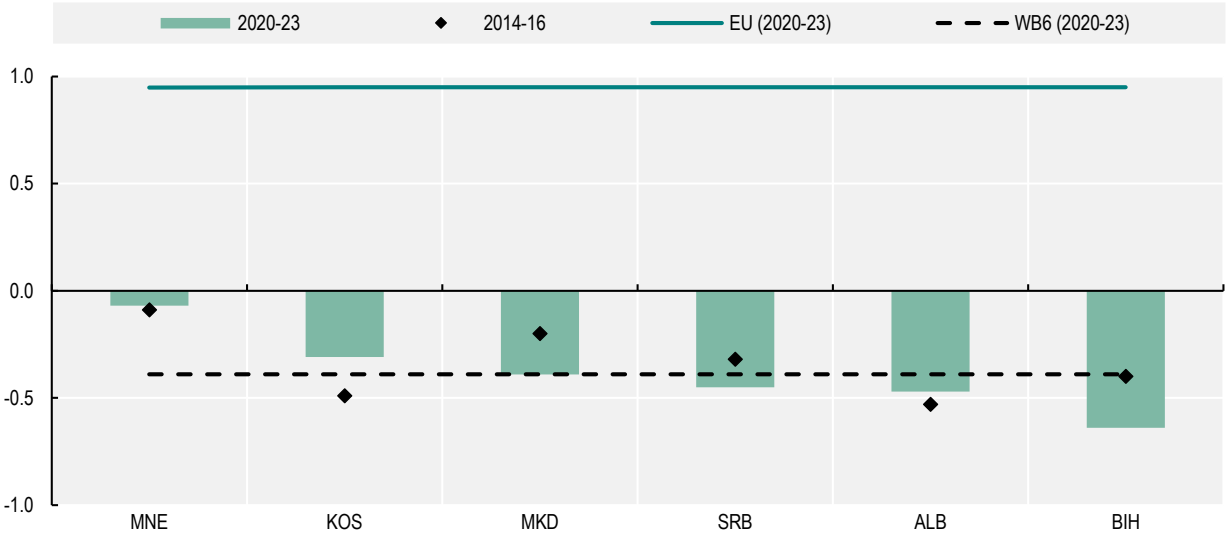
Control of corruption

*Perceived **corruption** remains high across the region, undermining trust in public institutions and limiting businesses' growth.*

Corruption increases businesses' operating costs, distorts competition and renders the regulatory environment unpredictable. In the Western Balkans, corruption remains a persistent challenge for businesses. The region's performance on the World Bank's Control of Corruption indicator, which assesses perceptions of corruption and the effectiveness of anti-corruption policies, reveals worsening outcomes for Western Balkan economies. Between 2020 and 2023, the region's average score declined to -0.39, compared to -0.34 in the previous period (2014-16), remaining significantly below the EU average (0.95). Kosovo and Albania are the only Western Balkan economies that have managed to improve their performance over time, although their levels still fall far below the EU average (Figure 4.6). By contrast, the extent of perceived corruption has increased considerably in Bosnia and Herzegovina, North Macedonia and Serbia.

Figure 4.6. Control of corruption in the Western Balkan economies (2014-16, 2020-23)

Composite score



Note: The composite score ranges from -2.5 (perception of widespread corruption) to 2.5 (perception of very low corruption).
Source: (World Bank, 2024[25]).

The **lack of strong political commitment** across the region has presented obstacles to effectively combating corruption. This is particularly evident in the absence of long-term strategic frameworks for anti-corruption policy. At the time of writing, and despite ongoing efforts, Kosovo's anti-corruption efforts were not based on any strategic framework, with the last framework having expired in 2017.[12] Montenegro and Bosnia and Herzegovina adopted new strategies in 2024 after five years without such documents.[13] At the same time, **corruption prevention bodies** across the region struggle to fully implement their mandate due to limited human and financial resources and a constrained ability to fight high-level corruption effectively. For instance, from 2018 to 2022, the total number of imprisonments for high-level corruption remained below 10 in Albania, Kosovo and Montenegro (OECD, 2024[14]).[14]

The Western Balkan economies need to do more to encourage businesses to adopt strong internal controls and anti-corruption measures for enhanced **business integrity**. Business integrity policies in the region are generally weak, and existing laws do not explicitly address corruption risk management in companies. There is no evidence

that any of the region's economies actively incentivise companies to adopt corporate anti-corruption policies that could mitigate potential liabilities. In Bosnia and Herzegovina, Kosovo and North Macedonia, if a business is found guilty of corruption, those who have implemented measures to prevent such behaviour may still incur the same legal penalties as those who have not, which discourages businesses from fostering a culture of integrity (OECD, 2024[14]).

However, over the last few years, Western Balkan economies have made progress towards **disclosing beneficial owners** to improve business transparency and prevent the misuse of corporate structures for illegal activities. Such registers have been established in all economies except Bosnia and Herzegovina; however, the reliability of recorded information remains uncertain, as it is difficult to determine to what extent the accuracy and completeness of the data are verified.

BE.06

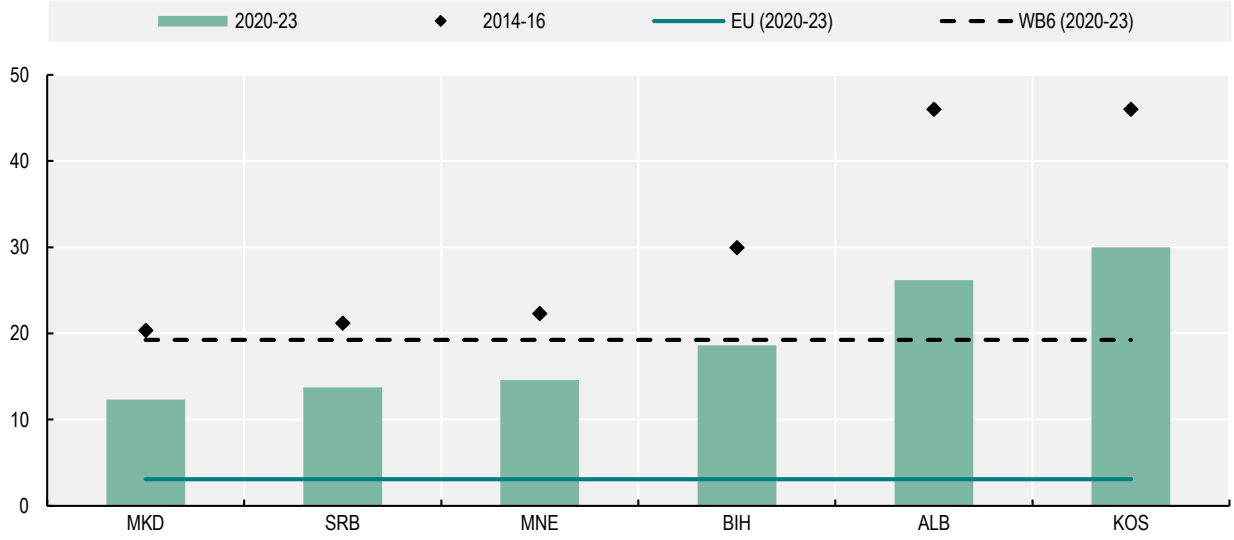
Estimated informal employment

*Despite improvements, **informal employment** remains high across the region, primarily driven by low labour productivity and exacerbated by high labour taxation and undeveloped social safety nets.*

Informality distorts market competition, puts formal businesses at a disadvantage and results in lower government revenues, restricting public investment in areas essential for long-term economic growth. Moreover, informal firms tend to have lower productivity due to limited access to capital, training and technology (OECD, 2024[26]). Informality remains a significant concern in the Western Balkan economies, with informal employment[15] levels substantially higher than the EU average: 19% of total employment compared to about 3% in the EU (Figure 4.7). In Albania and Kosovo, despite substantial decreases since 2014, informal employment was still estimated to account for over 25% of total employment in 2020-23.

Figure 4.7. Estimated informal employment in the Western Balkan economies (2014-16, 2020-23)

Percentage of population in employment



Notes: OECD imputations for Kosovo (2014, 2015, 2016, 2023) and Montenegro (2017, 2023). For more details on this process, please refer to the Methodology Annex. Data are unavailable for Albania (2021, 2022), Kosovo (2021, 2022) and Montenegro (2014, 2015, 2021, 2022).
Sources: Data for Albania are from (WIIW, 2024[27]) and additional data sent by INSTAT. Data for Bosnia and Herzegovina are from (ILO, 2024[28]). Data for Kosovo are from (ETF, 2024[29]) and additional data sent by KAS. Data for Montenegro are from (UNDP, 2016[30]). Data for North Macedonia are from (MAKSTAT, 2025[31]). Data for Serbia are from (SORS, 2025[32]).

StatLink https://stat.link/jfbtdu

Low labour **productivity** across the Western Balkan economies, at around 40% of EU average levels, is one of the key reasons driving informality. Firms with higher productivity potentially face greater opportunity costs from informal practices, which incentivises formalisation under the right conditions (La Porta and Shleifer, 2014[33]). While labour productivity is shaped by a combination of structural, institutional and economic factors, evidence suggests that policies aimed at strengthening human capital, with a particular focus on managerial and entrepreneurial skills, can support the shift towards formal employment. Inefficiencies in the Western Balkan education systems, which often fail to equip individuals with labour market relevant skills, drive informal employment, particularly among the youth (RCC, 2021[34]). Moreover, the development of managerial skills in the region seems to be constrained by the lack and quality of business support services, such as training programmes and business advisory services, which shows the need for enhanced public support (OECD, 2022[13]).

In addition to low labour productivity levels, the high cost of hiring labour is another barrier to formalisation, as businesses may avoid facing the associated tax burden. As noted earlier, the average CIT rate in the Western Balkan economies is relatively low compared to the OECD, but this trend does not apply to **labour taxation**. In fact, the share of social security contributions (SSCs) relative to gross income exceeds 20% in the region, excluding Kosovo, and is particularly high in Serbia and Bosnia and Herzegovina. Notably, in Serbia, despite the reduction of the contribution rate for mandatory pension and disability insurance from 25.5% in 2021 to 24.0% in 2023, SSCs remain high at 35.1% of gross wages, compared to the OECD average of 26.1%. Bosnia and Herzegovina exhibits comparable figures, with SSCs reaching 41.5% of gross wage in the Federation of Bosnia and Herzegovina (FBiH) and 31.0% in Republika Srpska (RS) (OECD, 2024[14]).

By offering unemployment benefits, health insurance and pensions, robust **social security systems** can also make formal employment more attractive by offsetting the costs of SSCs and taxes with long-term benefits. However, across Western Balkan economies, underdeveloped social assistance and security systems discourage individuals from participating in the formal sector. Social assistance benefits are generally low, often leaving recipients below the at-risk-of-poverty risk thresholds. In this context, Kosovo remains the only Western Balkan economy that has not developed an unemployment benefits scheme, with no planned reforms to introduce such a system (OECD, 2024[35]).

BE.07

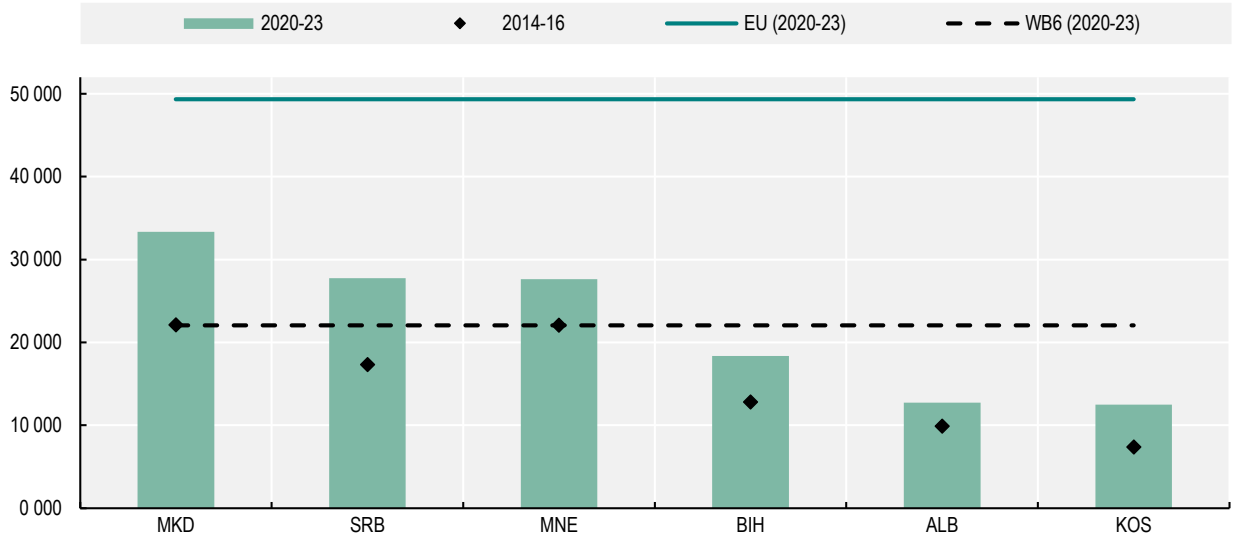
Trade flows

***Trade flows** have converged to EU levels but are still hindered by non-tariff obstacles and a weak industrial base.*

Trade can significantly enhance economic growth by expanding market access, encouraging specialisation in production and driving innovation. However, while all Western Balkan economies increasingly trade more goods and services, they still fall short of the average EU levels.[16] In 2020-23, trade flows per capita represented 44.7% of EU levels, up from 35.9% in 2014-16, with the most substantial progress observed in Serbia and North Macedonia, which saw respective gains close to 15 percentage points (Figure 2.2).[17] There is considerable variation among economies, with Kosovo and Albania at 25% of EU levels in 2020-23, and North Macedonia close to 70%.

Figure 4.8. Trade flows in the Western Balkan economies (2014-16, 2020-23)

Sum of exports and imports of goods and services per capita in 2021 USD in PPP



Sources: OECD calculations are based on (World Bank, 2024[36]) and (World Bank, 2024[37]).

StatLink https://stat.link/qulyr6

Since the adoption of the Central European Free Trade Agreement (CEFTA) agreement in 2006, the Western Balkan economies have consistently worked to enhance **trade facilitation**, making trade easier and less costly in the region. Efforts have especially intensified since 2017, beginning with implementing the Multi-Annual Action Plan on a Regional Economic Area in the Western Balkan economies (2017-20), followed by the Common Regional Market (CRM) Action Plan for 2021-24. These efforts have focused on harmonising trade policies and regulations with EU standards and improving intra-regional infrastructure, including the establishment of Green Lanes *(*see the *Connectivity and Infrastructure* chapter for more details*)* (RCC, 2023[38]).

The effectiveness of these initiatives is reflected in the performance of the Western Balkan economies in the OECD Trade Facilitation Indicators, with average performance increasing from 1.16 in 2017 to 1.35 in 2022. However, the region still trails behind the OECD average of 1.76 (OECD, 2024[14]; 2018[39]). Ongoing **non-tariff barriers** such as limited co-operation between trade authorities for data exchange, lengthy pre-arrival processing and clearance of shipments, and the absence of a paperless trade environment limit the trade potential of the Western Balkan economies (OECD, 2024[14]). These challenges have notably contributed to the stagnation of intra-regional trade, which remained steady at 11% of the region's total trade between 2016 and 2023 (CEFTA, 2024[40]).

The trade performance of the Western Balkan economies is also curbed by their low **industrial base**. The exports of goods in the region stood at 18.7% of GDP in 2023, which is far below the EU's average level of 38.0% (Eurostat, 2024[41]; 2024[42]). Apart from North Macedonia, which outperforms the EU average (44.8%), primarily due to its chemicals and machinery sectors, exports of goods remain low across the region. This is especially evident in Albania (13.2%), Montenegro (3.5%) and Kosovo (2.8%), where exports of services play a much more significant role in total trade (Eurostat, 2024[41]).[18] Tourism is the most significant economic sector in both Albania and Montenegro, accounting for, respectively, 21.5% and 25.6% of employment in 2023 (OECD, 2024[43]).

BE.08

SME export performance

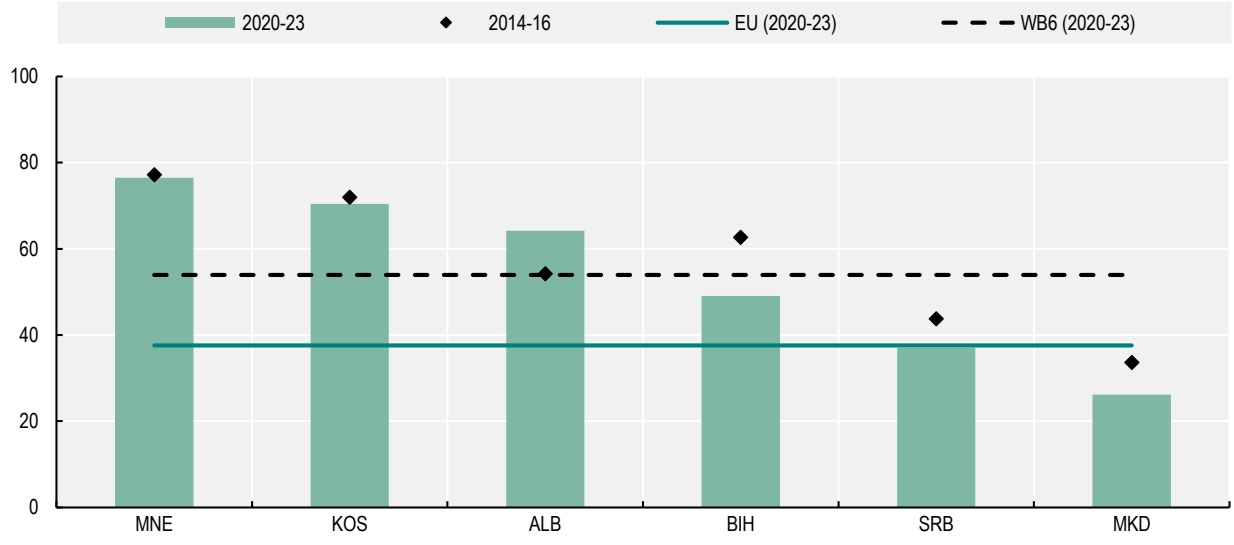
*The region's **SME export performance** shows signs of weakening, as e-commerce opportunities and tailored public support to facilitate entry into new markets remain underutilised.*

SMEs that export can tap into larger markets, allowing them to scale beyond the limitations of constrained domestic demand in the small Western Balkan economies. This not only contributes to GDP growth but also generates broader positive spillover effects across the economy. On average, SMEs in the region contribute a higher share to total exports compared to their EU peers. However, their export share has shown a declining trend – accounting for 53.9% of total goods and services exports in 2020-2023, down from 57.3% in 2014-2016 (Figure 4.9).

Despite SMEs' export share being comfortably higher than that of their EU counterparts, there are some concerning signs. First, given the **business demographics** of the Western Balkans – particularly the relatively greater economic weight of SMEs compared to those in the EU – a higher SME export share may be expected and should not necessarily be interpreted as a reflection of effective policies or strong competitiveness. In fact, the declining share of SME exports in the Western Balkans is occurring in a context where their overall economic weight is proportionally increasing, a trend not observed in the EU. Between 2020 and 2023, SMEs in the region contributed an average of 70.1% to gross value added (GVA), up from 65.7% in 2014-2016. In contrast, the SME contribution to GVA in the EU declined over the same period, from 58.3% to 52.3% (Table 4.1). Moreover, there is limited evidence suggesting that SMEs across the region **scale up** and experience **productivity growth** – an outcome typically expected as a result of exporting. Based on the available data, the average productivity of Western Balkan SMEs was estimated at just 26.6% of their EU peers in 2020, ranging from 18.3% in Albania to 30.8% in Serbia (European Commission, 2025[44]).

Figure 4.9. Exports generated by SMEs in the Western Balkan economies (2014-16, 2020-23)

SME exports in percentage of total exports



Notes: OECD imputations for Kosovo (2017, 2020) and Montenegro (2019, 2020). For more details on this process, please refer to the Methodology Annex. Data are unavailable for Albania (2014), Bosnia and Herzegovina (2015, 2016, 2021, 2022, 2023), Kosovo (2014, 2015, 2021, 2022, 2023), Montenegro (2014, 2021, 2022, 2023), North Macedonia (2014, 2021, 2022, 2023) and Serbia (2023). To better evaluate SMEs' export performance in the Business Environment cluster score calculations, the ratio of their share in total exports to their share in total GVA has been considered. A ratio greater than 1 indicates that SMEs export goods and services more than their proportional contribution to the economy, whereas a ratio below 1 suggests that they are exporting less relative to their economic weight.

Sources: (Eurostat, 2025[45]), (OECD, 2022[13]) and (OECD, 2019[46]). Additional data for Albania were sent to the OECD by INSTAT. Additional data for Kosovo were sent by KAS to the OECD. Additional data for Serbia were sent by SORS to the OECD.

StatLink https://stat.link/nt69w4

Table 4.1. SME contribution to exports, GVA and employment in Western Balkan economies and the EU (2014-16, 2020-23)

	Share of SMEs in total exports (%)		Share of SMEs in total GVA (%)		Share of SMEs in total employment (%)	
	2020-23	2014-16	2020-23	2014-16	2020-23	2014-16
Albania	64.3	53.9	76.2	65.6	82.0	79.4
Bosnia and Herzegovina	49.1	62.3	64.4	65.5	67.6	66.5
Kosovo	70.4	72.0	86.5	80.9	80.4	76.1
North Macedonia	26.2	33.7	68.0	64.8	73.5	74.9
Montenegro	76.5	77.2	76.3	68.8	n/a	78.2
Serbia	37.0	43.8	54.0	48.4	63.9	59.2
WB6	53.9	57.3	70.1	65.7	n/a	72.4
EU	37.6	43.6	52.3	58.3	64.5	66.8

Sources: (Eurostat, 2025[47]), (OECD, 2022[13]) and (OECD, 2019[46]). Additional data for Albania from (INSTAT, 2024[48]). Additional data for Bosnia and Herzegovina from (Agency for Statistics of Bosnia and Herzegovina, 2020[49]; 2023[50]; 2024[51]) and (European Commission, 2025[44]). Additional data for Kosovo from (European Commission, 2024[52]; 2025[44]). Additional data for Montenegro from (MONSTAT, 2024[53]). Additional data for North Macedonia from (MAKSTAT, 2024[54]; 2024[55]). Additional data for Serbia from (SORS, 2024[56]).

While trade facilitation measures have generally made exporting and importing cheaper and easier, SMEs continue to face unique challenges that necessitate additional support to engage effectively in international trade. **Export promotion programmes** are essential tools to facilitate SMEs' access to foreign markets, and all Western Balkan economies provide a combination of financial and non-financial export assistance to SMEs. The most prevalent programmes support trade fair participation, advisory services and business-to-business (B2B) matchmaking. However, information about available export promotion support remains fragmented, which hampers its overall uptake (OECD, 2022[13]). Notably, Kosovo, Montenegro and Serbia lack dedicated, centralised portals for accessing information about existing operating export programmes (OECD, 2022[13]).

Cross-border **e-commerce** can also support SMEs' export growth by reducing transaction costs and streamlining logistics processes, enabling SMEs to reach a broader customer base. Available data indicate that Serbia has the highest percentage of firms using e-commerce for sales in the region at 28.9%, followed closely by Bosnia and Herzegovina at 22.9%, with both economies exceeding the EU average of 22.1% (Eurostat, 2024[57]). However, the adoption of e-commerce significantly trails behind in the remaining economies, revealing the need for policies to develop SMEs' capabilities to adopt e-commerce *(*see the *Digital Transformation* chapter for more details*).*

While export promotion programmes and e-commerce can facilitate access to new markets, **economic structures** also play a role in some of the region's low share of SMEs in exports. Economies with larger industrial sectors, such as Serbia and North Macedonia, tend to exhibit higher export levels combined with a lower contribution of SMEs. SMEs remain underrepresented within these sectors, primarily due to the higher fixed costs associated with production. For example, in the EU, while the manufacturing sector generated two-thirds of total exports of goods in 2022, it only accounted for 6% of SMEs (European Commission, 2023[58]; Eurostat, 2025[45]).

References

Agency for Statistics for Bosnia and Herzegovina (2023), *Structural Business Statistics 2021*, https://bhas.gov.ba/data/Publikacije/Bilteni/2023/SBS_00_2021_TB_1_EN.pdf. [50]

Agency for Statistics of Bosnia and Herzegovina (2024), *Structural Business Statistics 2022*, https://bhas.gov.ba/data/Publikacije/Bilteni/2024/SBS_00_2022_TB_1_EN.pdf. [51]

Agency for Statistics of Bosnia and Herzegovina (2020), *Business Statistics*, https://bhas.gov.ba/data/Publikacije/Saopstenja/2020/SBS_00_2019_Y1_0_BS.pdf. [49]

Akbas, O., F. Betz and L. Gattini (2023), *Quantifying Credit Gaps Using Survey Data on Discouraged Borrowers*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4629235. [18]

CEFTA (2024), *FDI by Sectors*, Central European Free Trade Agreement, https://transparency.cefta.int/StatisticalPortalRawData/FDIBySectors (accessed on 23 December 2024). [24]

CEFTA (2024), *Statistical Portal*, Central European Free Trade Agreement, https://transparency.cefta.int/TradeStatistics/Reports (accessed on 22 December 2024). [40]

CEIC (2025), *Bank Lending Rate*, https://www.ceicdata.com/en/indicator/bank-lending-rate (accessed on 20 January 2025). [10]

EIB (2023), *The Impact of the EIB's Intermediated Lending to Businessess in the Western Balkans*, European Investment Bank, https://www.eib.org/en/publications/20230344-the-impact-of-the-eibs-intermediated-lending-to-businesses-in-the-western-balkans. [9]

EIB (2022), *EIB Investment Survey 2022*, European Investment Bank, https://www.eib.org/attachments/lucalli/20220219_econ_eibis_2022_eu_en.pdf. [8]

ETF (2024), *Key Policy Developments in Education, Training and Employment - Kosovo 2024*, European Training Foundation, https://www.etf.europa.eu/sites/default/files/2025-02/Country%20Fiche_Kosovo_2024_EN_web.pdf. [29]

European Commission (2025), *SME Performance Review, SME Fact Sheets*, https://enlargement.ec.europa.eu/enlargement-policy/policy-highlights/sme-performance-review_en (accessed on 16 April 2025). [44]

European Commission (2024), *Kosovo Report 2024*, https://enlargement.ec.europa.eu/kosovo-report-2024_en. [52]

European Commission (2023), *Annual Report on European SMEs 2022/2023*, https://single-market-economy.ec.europa.eu/document/download/b7d8f71f-4784-4537-8ecf-7f4b53d5fe24_en?filename=Annual%20Report%20on%20European%20SMEs%202023_FINAL.pdf. [58]

Eurostat (2025), *Enterprise Statistics by Size Class and NACE Rev. 2 Activity (from 2021 onwards)*, https://doi.org/10.2908/SBS_SC_OVW (accessed on 31 January 2025). [47]

Eurostat (2025), *Trade by NACE Rev.2 Activity and Enterprise Size Class*, https://ec.europa.eu/eurostat/databrowser/product/page/ext_tec01__custom_14777946 (accessed on 11 January 2025). [45]

Eurostat (2024), *E-commerce Sales of Enterprises by Size Class of Enterprise*, https://doi.org/10.2908/ISOC_EC_ESELS (accessed on 19 December 2024). [57]

Eurostat (2024), *International Trade of EFTA and Enlargement Countries*, https://doi.org/10.2908/EXT_LT_INTERCC (accessed on 22 December 2024). [41]

Eurostat (2024), *International Trade of EU, the Euro Area and the Member States by SITC Product Group*, https://doi.org/10.2908/EXT_LT_INTERTRD (accessed on 22 December 2024). [42]

Eurostat (2024), *Investment Share of GDP by Institutional Sectors*, https://doi.org/10.2908/NASA_10_KI (accessed on 5 November 2024). [16]

Eurostat (2024), *Investment Share of GDP by Institutional Sectors (Business Investment and Households Investment)*, https://ec.europa.eu/eurostat/databrowser/product/page/SDG_08_11 (accessed on 18 November 2024). [7]

ILO (2024), *Statistics on the Informal Economy*, International Labour Organization, https://ilostat.ilo.org/topics/informality/ (accessed on 5 November 2024). [28]

IMF (2025), *Financial Soundness Indicators*, International Monetary Fund, https://data.imf.org/en/datasets/IMF:EXTERNAL_DATASET_CARDS/IMF.STA:LFSI (accessed on 10 March 2025). [1]

IMF (2024), *IMF Country Reports: Republic of Kosovo*, International Monetary Fund, https://www.elibrary.imf.org/downloadpdf/journals/002/2024/364/002.2024.issue-364-en.pdf. [5]

IMF (2017), *Regional Economic Outlook: Europe Hitting its Stride*, International Monetary Fund, https://doi.org/10.5089/9781484319611.086. [3]

IMF (2013), *Republic of Kosovo: Selected Issues Paper*, International Monetary Fund, https://www.elibrary.imf.org/view/journals/002/2013/223/002.2013.issue-223-en.xml. [4]

INSTAT (2024), *Structural Business Statistics*, Institute of Statistics, https://www.instat.gov.al/en/themes/industry-trade-and-services/structural-business-statistics/#tab3 (accessed on 5 November 2024). [48]

KCGF (2023), *Annual Report 2022*, Kosovo Credit Guarantee Fund, https://fondikgk.org/wp-content/uploads/2023/08/ANNUAL-REPORT-2022-3.pdf. [15]

La Porta, R. and A. Shleifer (2014), "Informality and Development", *Journal of Economic Perspectives*, Vol. 28/3, pp. 109-26, https://doi.org/10.1257/jep.28.3.109. [33]

MAKSTAT (2025), *Labour Force Survey - Revision*, State Statistical Office, https://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__PazarNaTrud__PazarTrudRevizija/ (accessed on 7 March 2025). [31]

MAKSTAT (2024), *Basic Structural Business Indicators, by Activity Sector, by NKD REV 2*, State Statistical Office, https://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__StrukturniStat__TekovniPodatoci/450_StrDel_Mk_03novaosndej_ml.px/?rxid=46ee0f64-2992-4b45-a2d9-cb4e5f7ec5ef (accessed on 5 November 2024). [55]

MAKSTAT (2024), *Performance of enterprises by industrial activities and size class by number of persons employed by NKD REV2*, State Statistical Office, https://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__StrukturniStat__TekovniPodatoci/475_StrDel_Mk_09_13posizeklas_ml.px/?rxid=46ee0f64-2992-4b45-a2d9-cb4e5f7ec5ef (accessed on 5 November 2024). [54]

MONSTAT (2024), *Structural Business Statistics – Releases*, Statistical Office of Montenegro, https://monstat.org/eng/page.php?id=265&pageid=67 (accessed on 5 November 2024). [53]

National Bank of Serbia (2024), *Annual Financial Stability Report*, https://nbs.rs/en/drugi-nivo-navigacije/publikacije-i-istrazivanja/GISFS/. [2]

OECD (2024), *Breaking the Vicious Circles of Informal Employment and Low-Paying Work*, OECD Publishing, Paris, https://doi.org/10.1787/f95c5a74-en. [26]

OECD (2024), *FDI Restrictiveness Index*, OECD, Paris, https://www.oecd.org/en/data/indicators/fdi-restrictiveness.html?oecdcontrol-712178cb81-var3=2020 (accessed on 20 December 2024). [22]

OECD (2024), *Financing SMEs and Entrepreneurs 2024: An OECD Scoreboard*, OECD Publishing, Paris, https://doi.org/10.1787/fa521246-en. [11]

OECD (2024), *OECD Western Balkans Competitiveness Data Hub: Tourism Policy*, OECD, Paris, https://westernbalkans-competitiveness.oecd.org/dimensions/TOURISM/. [43]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Kosovo*, OECD Publishing, Paris, https://doi.org/10.1787/ff74ae0e-en. [35]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Regional Profile*, OECD Publishing, Paris, https://doi.org/10.1787/170b0e53-en. [14]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Serbia*, OECD Publishing, Paris, https://doi.org/10.1787/3699c0d5-en. [20]

OECD (2022), *SME Policy Index: Western Balkans and Turkey 2022: Assessing the Implementation of the Small Business Act for Europe*, OECD Publishing, Paris, https://doi.org/10.1787/b47d15f0-en. [13]

OECD (2019), *SME Policy Index: Western Balkans and Turkey 2019: Assessing the Implementation of the Small Business Act for Europe*, OECD Publishing, Paris, https://doi.org/10.1787/g2g9fa9a-en. [46]

OECD (2018), *Competitiveness in South East Europe: A Policy Outlook 2018*, OECD Publishing, Paris, https://doi.org/10.1787/9789264298576-en. [39]

RCC (2024), *Western Balkans The Investor's Next Hotspot Promotional Booklet*, Regional Cooperation Council, https://www.rcc.int/pubs/193/the-western-balkans-the-investors-next-hotspot-booklet. [23]

RCC (2023), *Unleashing the Potential for Competitiveness Trends in the Western Balkans*, Regional Cooperation Council, https://www.rcc.int/download/docs/Unleashing-the-Potential-for-Competitiveness-Trends-in-the-Western-Balkans-revised.pdf/ee83f1da7731009ba1db7fd812d030a4.pdf. [38]

RCC (2021), *Labour Markets in the Western Balkans 2019 and 2020*, Regional Cooperation Council, https://www.rcc.int/download/docs/Labour-Market-in-the-Western-Balkans.pdf/133ff213a0c4db81c247658192a9edc6.pdf. [34]

SORS (2025), *Decent Work and Economic Growth, Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*, Statistical Office of the Republic of Serbia, https://sdg.indikatori.rs/en-US/area/decent-work-and-economic-growth/?subarea=SDGUN080301&indicator=080301IND02 (accessed on 7 March 2025). [32]

SORS (2024), *Structural Business Statistics*, Statistical Office of the Republic of Serbia, https://www.stat.gov.rs/en-us/oblasti/strukturne-poslovne-statistike/ (accessed on 5 November 2024). [56]

Spolaore, E. and R. Wacziarg (2002), "Borders and Growth", *NBER Working Papers, National Bureau of Economic Research*, https://www.nber.org/papers/w9223. [59]

Statovci, B. et al. (2023), "The Impact of Corporate Governance Practices on Financial Performance in Western Balkan Countries", *International Journal of Sustainable Development and Planning*, https://doi.org/10.18280/ijsdp.180902. [12]

UNDP (2016), *National Human Development Report: "Informal Work: From Challenges to Solutions"*, United Nations Development Programme, https://www.undp.org/sites/g/files/zskgke326/files/migration/me/Montenegro_National-Human-Development-Report-2016_Informal-Work_Summary.pdf. [30]

United Nations (2025), *SDG Indicator Metadata*, https://unstats.un.org/sdgs/metadata/files/Metadata-08-03-01.pdf (accessed on 27 April 2025). [61]

WIIW (2024), *SEE Jobs Getaway Database, Western Balkans Labor Market Brief Publications*, Vienna Institute for International Economic Studies, https://wiiw.ac.at/see-jobs-gateway-database-ds-5.html (accessed on 7 March 2025). [27]

World Bank (2025), *Enterprise Surveys: Informality*, https://www.enterprisesurveys.org/en/data/exploretopics/informality (accessed on 9 January 2025). [19]

World Bank (2024), *Domestic Credit to the Private Sector (% of GDP)*, https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS (accessed on 5 November 2024). [6]

World Bank (2024), *Foreign Direct Investment, Net Inflows (% of GDP)*, https://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS (accessed on 5 November 2024). [21]

World Bank (2024), *GDP per capita, PPP (constant 2021 international $)*, https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD (accessed on 5 November 2024). [37]

World Bank (2024), *Gross Fixed Capital Formation, Private Sector (% of GDP)*, https://data.worldbank.org/indicator/NE.GDI.FPRV.ZS (accessed on 5 November 2024). [17]

World Bank (2024), *Trade (% of GDP)*, https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS (accessed on 5 November 2024). [36]

World Bank (2024), *World Development Indicators: Trade (% of GDP)*, https://databank.worldbank.org/source/world-development-indicators/Series/NE.TRD.GNFS.ZS (accessed on 20 December 2024). [60]

World Bank (2024), *Worldwide Governance Indicators*, https://databank.worldbank.org/source/worldwide-governance-indicators (accessed on 5 November 2024). [25]

Notes

[1] The European Bank Coordination "Vienna" Initiative is a framework for safeguarding the financial stability of emerging Europe. The initiative has provided a forum for decision making and co-ordination that helped prevent a systemic banking crisis in the region and ensured that credit kept flowing to the real economies during the crisis. For more, see: https://vienna-initiative.com/.

[2] It can also be added that SMEs accounted for only 39% of outstanding loans from commercial banks in 2022, compared to 49.5% in the EU (OECD, 2024[14]). This highlights the increased difficultly for SMEs in Western Balkan economies to access corporate credit.

[3] It could be noted that despite stringent collateral requirements, Albania, Montenegro and Serbia have implemented regulations that ease provisioning requirements for SME lending through decreased risk-weight coefficients to incentivise commercial banks to develop corporate credit for SMEs.

[4] Kosovo is the Western Balkan economy where SMEs account for the largest share of the economy. In 2020-23, Kosovar SMEs contributed 86.5% of gross value added, compared to a Western Balkan average of 70.1% and an EU average of 52.3%. Regarding key indicators such as employment and exports, Kosovo also outperforms the EU and is only surpassed by Albania for employment and Montenegro for exports in the region. See Table 4.1 for more details.

[5] KCGF's financial support is strengthened by the Central Bank of Kosovo, which offers capital relief for KCGF loan exposures to promote SME lending.

[6] The EU average does include data from Croatia, Finland, Hungry, Ireland, the Netherlands, Portugal, Slovenia and Spain.

[7] The OECD's top 15 economies are Norway, Latvia, Estonia, Hungary, France, Finland, Czechia, Slovak Republic, Italy, Sweden, Türkiye, Ireland, Iceland, Austria, and New Zealand.

[8] The 2023 OECD FDI Regulatory Restrictiveness Index covers 104 countries.

[9] For example, Serbia offers a CIT deduction of twice the value of qualifying investments into R&D, as well as a 30% tax credit on investments into new companies that perform qualifying innovative activities. Serbia also offers profit-based tax incentives, which include a ten-year tax holiday for investors who hire over 100 workers and invest over RSD 1 billion (Serbian dinar) (EUR 8 500 000). This tax holiday is proportional to the investment made, and the number of employees must be retained throughout the tax period. Corporate income from royalties that meet certain conditions can also benefit from an 80% tax deduction. Since 2018, Albania has introduced numerous profit-based tax incentives. For example, qualifying companies in the software production, agriculture, agrotourism or automotive industries are eligible for a reduced 5% CIT rate.

[10] Special economic zones in Albania, North Macedonia and Serbia also emphasise attracting more technology-intensive FDIs, such as in information and communication technologies (ICT), by providing more advanced assistance for administrative processes and higher-quality office spaces.

[11] The industrial sector encompasses manufacturing, electricity, gas, steam and air conditioning supply and water supply, sewerage, waste management and remediation sectors.

[12] There were public consultations on Kosovo's Anti-Corruption Strategy 2025-29 in December 2024, but no precise timeline for adoption has been communicated.

[13] North Macedonia stands out as the only Western Balkan economy with a framework continuously in place: the National Strategy for Prevention of Corruption and Conflict of Interest 2021-25. After the expiration of anti-corruption frameworks in 2023, Albania adopted the Inter-Sectoral Anti-Corruption Strategy (ISACS) 2024-30 in November 2024, and Serbia adopted the National Anticorruption Strategy 2024-28 in July 2024, and the related 2024-25 Action Plan in December 2024.

[14] No data available for Bosnia and Herzegovina and Serbia.

[15] The definition of informal employment follows (United Nations, 2025[61]). Informal employment comprises persons who, in their main or secondary jobs, were in one of the following categories:

- Own-account workers, employers and members of producers' cooperatives employed in their own informal sector enterprises (the characteristics of the enterprise determine the informal nature of their jobs).
- Own-account workers engaged in the production of goods exclusively for own final use by their household (e.g. subsistence farming), if covered in employment.
- Contributing family workers if they work in formal or informal sector enterprises (they usually do not have explicit, written contracts of employment and are not subject to labour legislation, social security regulations, or collective agreements, which determines the informal nature of their jobs).
- Employees holding informal jobs, whether employed by formal sector enterprises, informal sector enterprises, or as paid domestic workers by households (employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits).

Employment comprises all persons of working age who, during a short reference period (one week), were engaged in any activity to produce goods or provide services for pay or profit.

[16] Trade flows of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties and license fees, as well as other services such as communication, construction, financial, information, business, personal and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

[17] While trade openness is generally measured by the ratio of total exports and imports on GDP, this measure suffers from the "small economy bias". The larger the economy, the greater the degree to which it will be self-sufficient, reducing trade openness, whereas a smaller economy will normally be more dependent on foreign trade, resulting in greater trade openness – see theoretical work of (Spolaore and Wacziarg, 2002[59]). For instance, Kosovo exhibits a higher trade openness than Germany, with imports and exports standing for 110% of GDP in 2023 in Kosovo versus 83% in Germany (World Bank, 2024[60]). Using trade per capita corrects this bias, with Germany importing and exporting USD 52 643 per capita in 2023, compared to USD 15 000 in Kosovo.

[18] Exports of goods include 1) food, drinks and tobacco; 2) raw materials; 3) mineral fuels, lubricants and related materials; 4) chemicals and related products; 5) machinery and transport equipment; and 6) commodities.

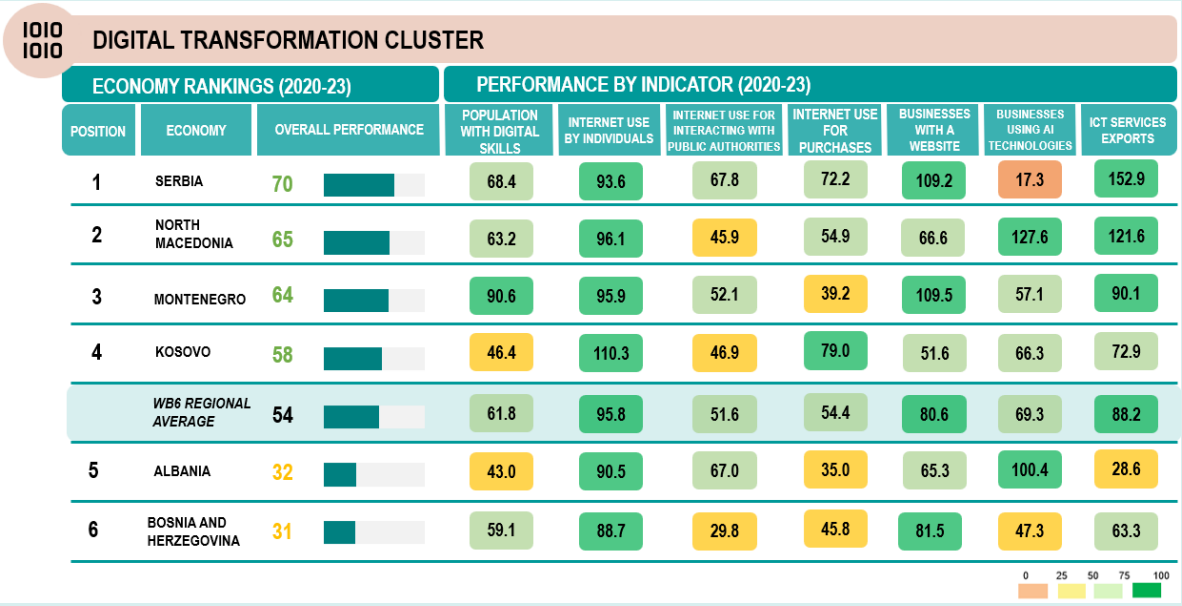
5 Digital transformation cluster

Digitalisation is reshaping economies, unlocking new pathways for growth, innovation and competitiveness regionally and globally. This chapter evaluates the Western Balkan economies' progress in advancing digital transformation, relative to the EU, identifying both advancements and remaining challenges. It explores digital adoption at every level – from individuals' digital skills and online interactions to how businesses and governments are harnessing digital technologies, revealing how these efforts drive the development of a dynamic digital economy.

Key findings

Despite the growing focus on digital transformation through dedicated policies and support mechanisms, the Western Balkans' progress in this cluster remains modest. With a score slightly over half the EU average, digital transformation ranks as the region's second highest scoring cluster of the five assessed. Among the economies, Serbia leads as the strongest performer, while Bosnia and Herzegovina has the lowest score. Figure 5.1 presents each economy's performance alongside the **seven key indicators** on digital transformation that were used to monitor progress and calculate scores. The average regional performance for each indicator is also shown.

Figure 5.1. Convergence of the Western Balkan economies with the EU: Digital transformation cluster



Note: The scores – both overall and for individual indicators – were calculated to reflect each economy's performance relative to the EU average, which is set at 100. The exact values for each indicator are presented in the graphs within the subsequent analysis section. For more information about the calculation of the scores, as well as the overall methodological approach, please consult the Methodology Annex.

Supported by infrastructure investments, the Western Balkan economies demonstrate growing digital connectivity, with internet usage across the region approaching parity with the EU at over 95% of the EU average. However, this connectivity is not fully leveraged to support digital engagement by the population. Internet use for online purchases and interactions with public authorities remains at roughly half of EU rates, driven by insufficient availability of digital public services, lack of awareness about existing services and security concerns. These challenges are further compounded by citizens' limited digital skills, which stand at approximately 60% of EU levels, underscoring the need for stronger efforts in digital literacy and upskilling initiatives.

While businesses across the region are beginning to embrace the digital transformation, progress remains uneven. Many have adopted basic technologies such as websites to strengthen their market presence; however, the adoption rates of such technologies in most economies still fall short of EU levels. The uptake of more advanced technologies such as artificial intelligence (AI) has been even slower, partly due to underdeveloped governance frameworks and policy instruments.

Meanwhile, the information and communication technology (ICT) sector has emerged as a key driver of economic growth across the Western Balkans, with ICT-sector exports reaching nearly 90% of EU levels. Several factors have contributed to this trend, including 1) tailored policies to attract investment; 2) expanded infrastructure for start-ups; and 3) a skilled youth workforce benefitting from competitive wages due to foreign firms outsourcing to the Western Balkans.

Analysis

Digital transformation is reshaping economies and societies, affecting citizens, businesses and governments alike. Its fast-paced, cross-sectoral nature presents a key opportunity for the Western Balkans. As the digital transformation becomes central to initiatives such as the EU's new Growth Plan for the Western Balkans,[1] accelerating adoption and effectively harnessing its potential are crucial to unlocking long-term benefits across the region.

DG.01

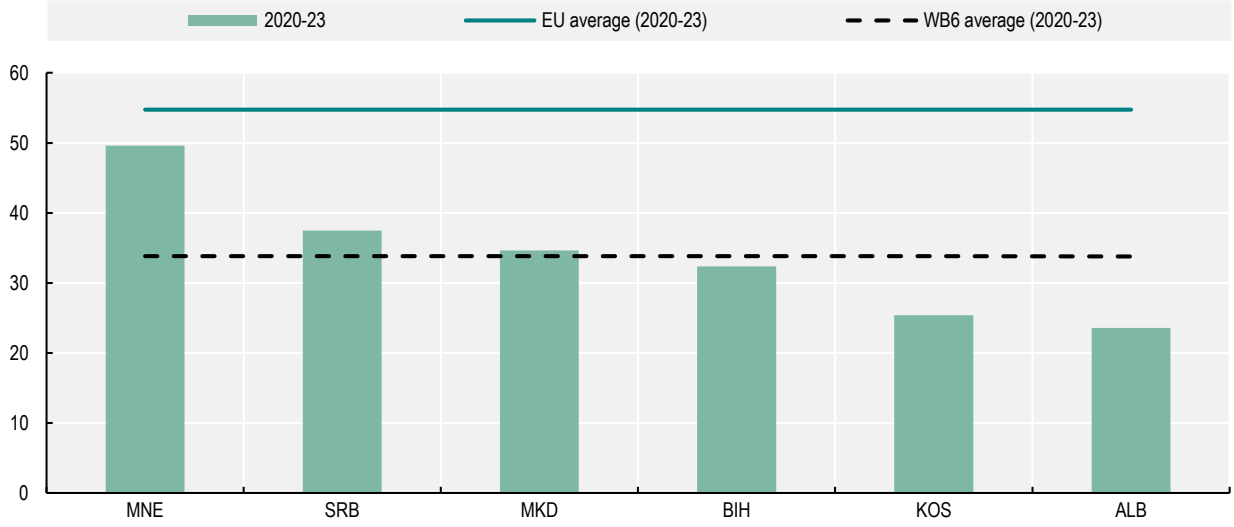
Population with digital skills

***Digital skills** are low, particularly among older age groups, with progress limited by insufficient opportunities for upskilling or training.*

Strong digital skills are a prerequisite for maximising the benefits of digital transformation. However, across the Western Balkans, most economies exhibit low proficiency levels, with only 33.8% of the population possessing at least basic digital skills[2] (Figure 5.2). Montenegro stands out as the regional frontrunner, with 49.6% of its population having basic or above-basic skills – just five percentage points below the EU average of 54.7%. In contrast, Kosovo and Albania show the lowest proficiency levels, with only 25.4% and 23.3% of their populations, respectively, meeting this threshold – less than half the EU level.

Figure 5.2. Population with basic or above-basic digital skills in the Western Balkans (2020-23)

Percentage (of 16-74 year-olds)



Notes: Data for this indicator were collected only in 2021 and 2023, meaning the economy and regional averages for the 2020-23 period are based solely on these two years. Data are unavailable for Kosovo and North Macedonia in 2023.
Sources: (Eurostat, 2024[1]). Additional data for Kosovo sent to the OECD from KAS. Additional data for North Macedonia sent to the OECD from MAKSTAT.

The digital skills gap in the Western Balkans primarily affects older people. Among younger individuals (16-24 year-olds), around 65% possess basic or above-basic skills – only six percentage points below the EU average – with certain economies, such as Bosnia and Herzegovina and Montenegro, surpassing EU levels. Increased focus on integrating digital literacy and skills into school curricula,[3] combined with enhanced and more affordable access to technology, have proved effective in narrowing the skills gap among younger cohorts. Conversely, among older age groups (55-64 and 65-74 year-olds), the gap with the EU average widens to more than 20 percentage points.[4] The

digital exclusion limits older populations' competitiveness in the labour market and their access to essential public services, ranging from healthcare to social benefits.

Efforts to address digital skills gaps have been uneven and often slow (see the *Skills* chapter for more details). National digital sector strategies in economies such as Albania, Montenegro, North Macedonia and Serbia include provisions for **digital literacy and upskilling** among disadvantaged groups (including women, older individuals and long-term unemployed), but progress is limited. For example, Montenegro's Digital Academy has yet to provide training for individuals from disadvantaged backgrounds, and in Serbia, subsidies to help these populations purchase computers and access training are still pending (OECD, 2024[2]).

Training provided by employers also remains insufficient. On average, 52% of businesses in the Western Balkans reported efforts to enhance employees' digital skills through on-the-job or internal training. However, in economies like North Macedonia and Montenegro, more than 60% of surveyed employers[5] indicated that they offered no digital skills training (RCC, 2023[3]). This lack of employer-led initiatives forces individuals to seek out their own upskilling opportunities, which continue to be limited across much of the region.

DG.02

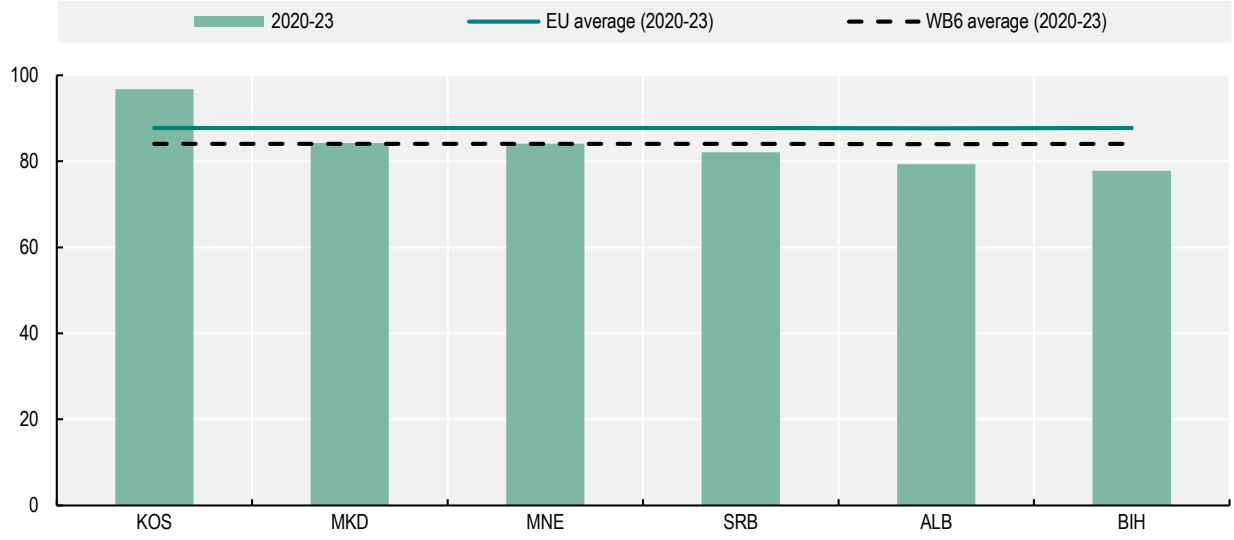
Internet use by individuals

*High rates of **internet use by individuals** are underpinned by wide-reaching initiatives to expand digital infrastructure.*

Despite challenges in strengthening digital skills among the population, internet use by individuals has achieved significant convergence with the EU average across the Western Balkans.[6] Between 2020 and 2023, the average usage rate in the region reached 84.1%, equivalent to over 95% of the EU rate (Figure 5.3). Kosovo stood out as the regional leader, surpassing the EU average with a usage rate of 96.8%.

Figure 5.3. Internet use by individuals in the Western Balkans (2020-23)

Percentage of total population



Sources: (World Bank, 2024[4]). Data for Kosovo from (Eurostat, 2024[5]).

This near convergence can be attributed to significant advancements in **digital infrastructure**, driven by economy-specific and regional initiatives. Most Western Balkan economies have either adopted national broadband strategies or incorporated broadband targets into broader policies, with four of the six[7] updating their broadband development plans to ensure high-capacity connectivity exceeding 100 megabits per second (OECD, 2024[2]).

Recent data suggest that further expanding internet access is now predominantly a rural challenge. Fixed internet penetration in the region reveals substantial rural-urban disparities, with gaps ranging from 14 percentage points in Montenegro to 25 in Albania,[8] pointing to ongoing issues with access and affordability of internet in rural areas. To address these challenges and support the development of digital infrastructure, increased financial resources have been made available through the Western Balkans Investment Framework.[9] Since 2008, nearly EUR 53 million in grants has been allocated to projects aimed at improving high-speed internet connectivity (see the *Infrastructure and Connectivity* chapter for more details).

DG.03

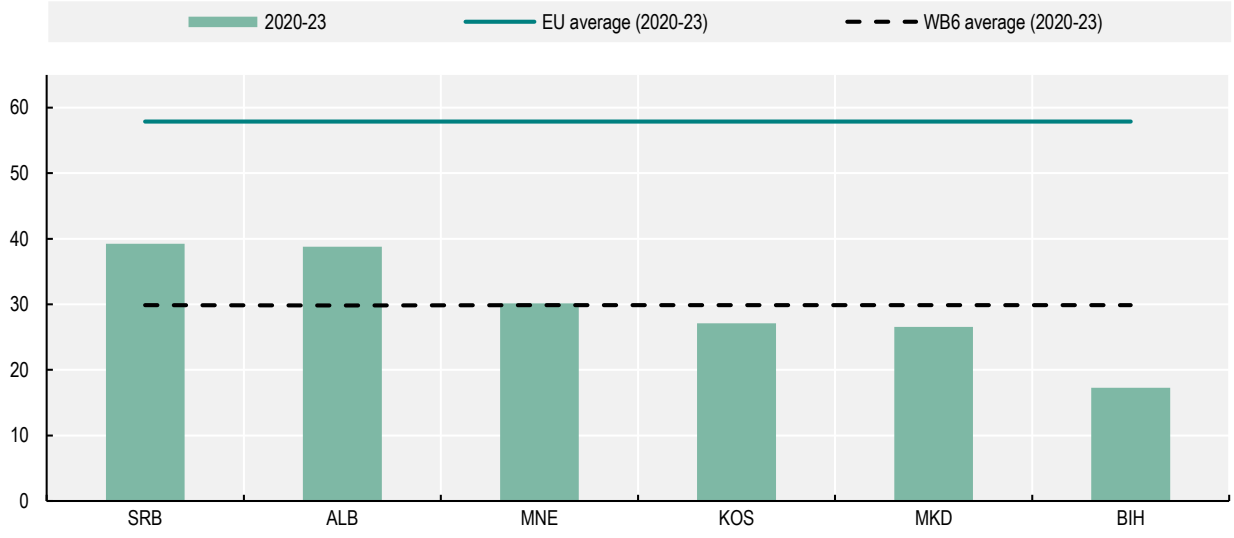
Internet use for interacting with public authorities

Internet use to interact with public authorities *remains low, constrained by the limited availability of e-government services and low awareness of service offerings.*

In the Western Balkans, the rate of internet use for interacting with public authorities remains far below the EU, with the regional average of 29.8% representing just over half the EU average (57.9%) (Figure 5.4). As the region's frontrunners, Serbia and Albania both have rates approaching 40%; conversely, Bosnia and Herzegovina trails behind its peers with a usage rate of 17.3% – only 30% of EU levels.

Figure 5.4. Population who used the internet to interact with public authorities within the last 12 months in the Western Balkans (2020-23)

Percentage (of 16-74 year-olds)



Note: Data are unavailable for Bosnia and Herzegovina (2022, 2023), Kosovo (2021, 2022, 2023), North Macedonia (2022, 2023) and the EU (2022, 2023).
Source: (Eurostat, 2024[6]). Additional data for Serbia sent to the OECD from SORS.

StatLink https://stat.link/geqxd8

Low rates of e-government usage can primarily be attributed to the limited availability of **high-quality and transactional services**. For instance, in Kosovo, only 10% of public services are digitalised, whereas in Bosnia and Herzegovina, there is no national e-service portal (OECD, 2024[2]).[10] Across the region, most digital public services offered are informational. In contrast, digital transactional services – which enable citizens to submit applications, pay taxes, renew licenses or obtain official documents remotely without visiting a government office – remain scarce in most economies, with North Macedonia providing only 24% of such services digitally and Montenegro 30%.[11]

Even in the economies with more developed e-government services, usage still falls below EU levels, suggesting that these low rates are not solely a result of limited availability. For instance, Albania offers more than 1 230 fully transactional online services for citizens, businesses and public administration – the highest number in the region – and in Serbia, 80% of the approximately 400 e-government services are transactional.

Engagement is hindered by **low levels of awareness**, with one-third of the region's population unaware of the available e-services (Đinđić, Mitrović and Škorić, 2023[7]). Although national strategies and external assessments emphasise the importance of increasing public awareness of e-government services,[12] outreach campaigns remain inadequate. Moreover, even among those who are aware of these services, satisfaction is generally low or declining in most economies,[13] suggesting usability and quality challenges.[14]

Another factor contributing to the low engagement with e-government services is the previously discussed issue of **low digital skills**, with 42% of individuals reporting that they prefer physical documents because they lack the skills necessary to use online services (RCC, 2023[8]). Most Western Balkan economies have not prioritised the establishment of local centres to help citizens use e-services. Where such centres exist, they are often limited and concentrated in urban areas: for instance, North Macedonia only has single point of service centres in five cities (OECD, 2024[2]). The notable exception is Serbia, which launched "e-counters" in more than 100 cities and municipalities to assist citizens in registering for and using online government services (NALED, 2021[9]).

DG.04

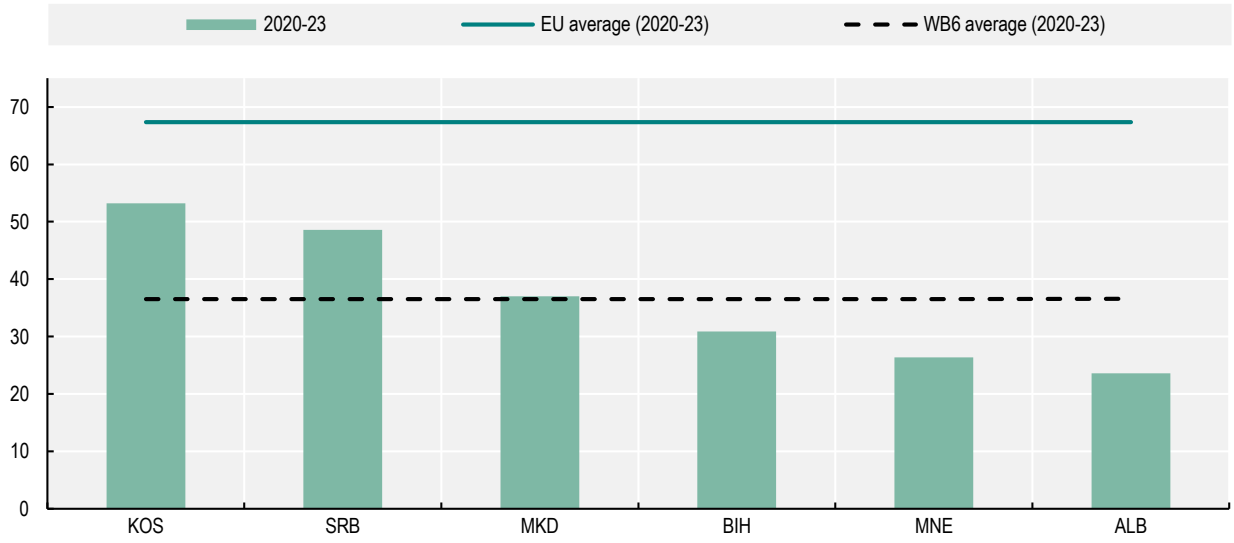
Internet use for purchases

*Citizens' mistrust in online security, as well as concerns over consumer rights and data protection, have limited **internet use for purchases** across the region.*

The prevalence of online purchases provides clues about the depth of digital technologies' penetration into society, encompassing infrastructure, skills and trust. In the Western Balkans, internet usage for online purchases remains relatively low, with an average of 36.6% of citizens (slightly above half of the EU average) indicating that they made online purchases in the past year (Figure 5.5). While more than 45% of citizens in Kosovo and Serbia make online purchases, only 26.4% of citizens in Montenegro and 23.6% in Albania reported using the internet for this purpose.

Figure 5.5. Internet use for purchases in the past 12 months in the Western Balkans (2020-23)

Percentage (of 16-74 year-olds)



Note: Data are unavailable for Bosnia and Herzegovina (2022), Kosovo (2022, 2023) and North Macedonia (2022, 2023).
Sources: (Eurostat, 2024[10]). Additional data for Albania sent to the OECD from INSTAT. Additional data for Kosovo sent to the OECD from KAS.

StatLink https://stat.link/8rdhab

A key barrier to higher rates of internet use for purchases in the Western Balkans, apart from the aforementioned challenges related to digital skills, is a **lack of trust** in the security of online transactions, with around 30% of citizens expressing concern about the safety of online payments (RCC, 2023[8]). The recent surge in cyberattacks, targeting both the public sector and individuals, has led to the leakage of sensitive information such as passwords, credit card numbers and income details, prompting consumers to be more cautious about sharing financial information online (Ispanovic et al., 2023[11]). Since 2022, approximately 1.2 million personal records have been compromised in data breaches across the region (Atlantic Council, 2024[12]). Notably, cyberattacks in Montenegro and Albania in 2022 disrupted government systems, with Albania facing temporary outages and Montenegro enduring ongoing challenges to online public services.

Concerns about cybersecurity are further compounded by gaps in **data protection and consumer rights** frameworks. Only Serbia and Kosovo have updated their personal data protection laws to align with the EU's General Data Protection Regulation (GDPR) standards, with the other economies having no similar safeguards to help consumers dispute unauthorised transactions or recover lost funds (OECD, 2024[2]). While some economies have recently modernised consumer protection rules to address digital trade, inspections and law enforcement in businesses conducting e-commerce remain weak. Additionally, the Western Balkan economies lack sufficient resources for public awareness campaigns on consumer rights in e-commerce as well as effective mechanisms to support consumers in effectively exercising these rights.

Low usage of debit and credit cards for payments in the region is another contributor to low online purchases. In fact, debit and credit card ownership across the Western Balkans is significantly below that of the EU, with debit card ownership roughly half of the EU average and credit card ownership at just 33% of EU levels.15 While low trust in data security and heightened awareness about cyber risks likely play a role, these factors are further compounded by the large informal economy and relatively low levels of digital literacy.

DG.05

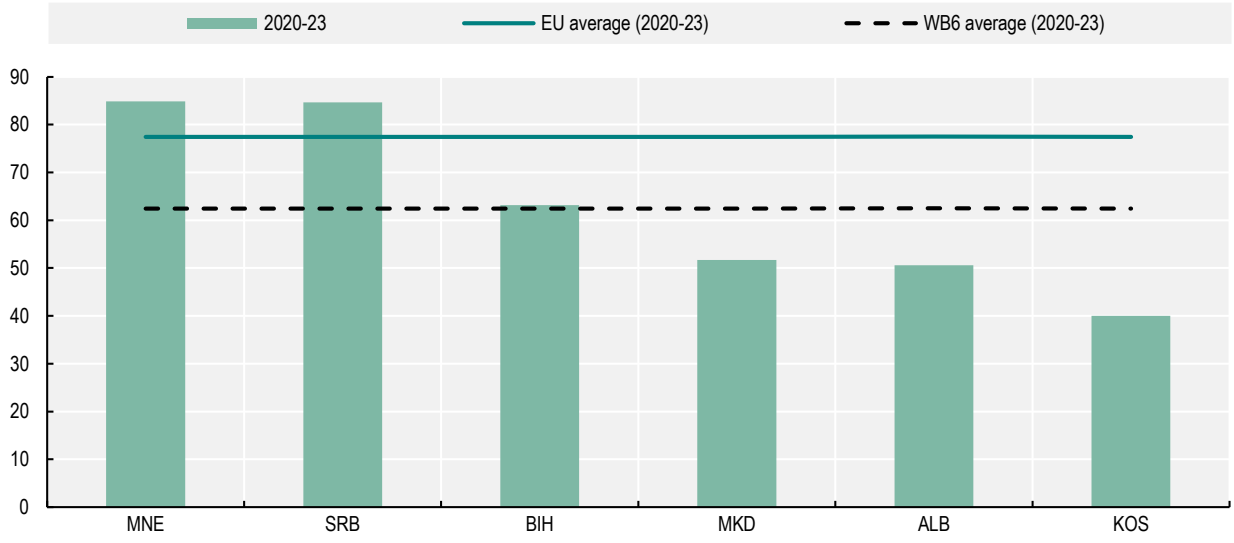
Businesses with a website

*In most economies, the share of **businesses with a website** is relatively low, reflecting in part the challenge posed by limited public support for businesses' ICT adoption.*

The low rates of internet use for purchases can also be attributed in part to the relatively low proportion of businesses with websites in some Western Balkan economies. While 62.5% of businesses in the region have websites – about 80% of the EU average – this figure is largely driven by Montenegro and Serbia, where adoption rates exceed EU levels (Figure 5.6). In contrast, other economies lag behind, with Kosovo having the lowest rate at just 40.0%, slightly over half the EU average.

Figure 5.6. Businesses with a website in the Western Balkans (2020-23)

Percentage of enterprises with 10+ employees



Note: Data are unavailable for Albania (2020), Bosnia and Herzegovina (2022), Kosovo (2020, 2021, 2023), North Macedonia (2022, 2023), Serbia (2022) and the EU (2022).

Sources: (Eurostat, 2024[13]). Additional data from (INSTAT, 2024[14]) for Albania, (KAS, 2023[15]) for Kosovo, (MAKSTAT, 2024[16]) for North Macedonia and (MONSTAT, 2024[17]) for Montenegro.

Businesses in the Western Balkans may view having a website as unnecessary due to the **limited digital engagement** of potential customers. When customers are either unable or unwilling to interact with businesses online, the perceived value of establishing a web presence diminishes. This is especially true given the higher costs associated with developing and maintaining a website, compared to free, ready-made social media platforms such as Facebook or Instagram. Indeed, while website adoption remains low, small and medium-sized enterprises (SMEs) in the region have a strong social media presence, with usage levels comparable to the EU average (OECD, 2024[2]). Additionally, some businesses prefer traditional marketing methods, a tendency particularly evident among start-ups, most of which consider word-of-mouth marketing crucial to their operations (Darova, 2023[18]).

While several initiatives have been introduced across the region to promote e-commerce adoption by businesses, their impact, particularly on SMEs, has been constrained by **inadequate public support**. Economies such as Albania, Kosovo and North Macedonia have a strong policy framework for supporting e-commerce development but have yet to allocate the concrete resources necessary for implementing corresponding activities. In other economies, there are also signs indicating a gap between the available funds and demand. For instance, in Serbia, only 60% of businesses that applied for funding through the Digital Transformation Support Programme for SMEs were successful (OECD, 2024[2]). Public efforts in most Western Balkan economies are largely driven by EU funding. While donor funding is beneficial in ensuring programme availability, this reliance raises concerns regarding the long-term sustainability of these initiatives and their ad hoc nature.

DG.06

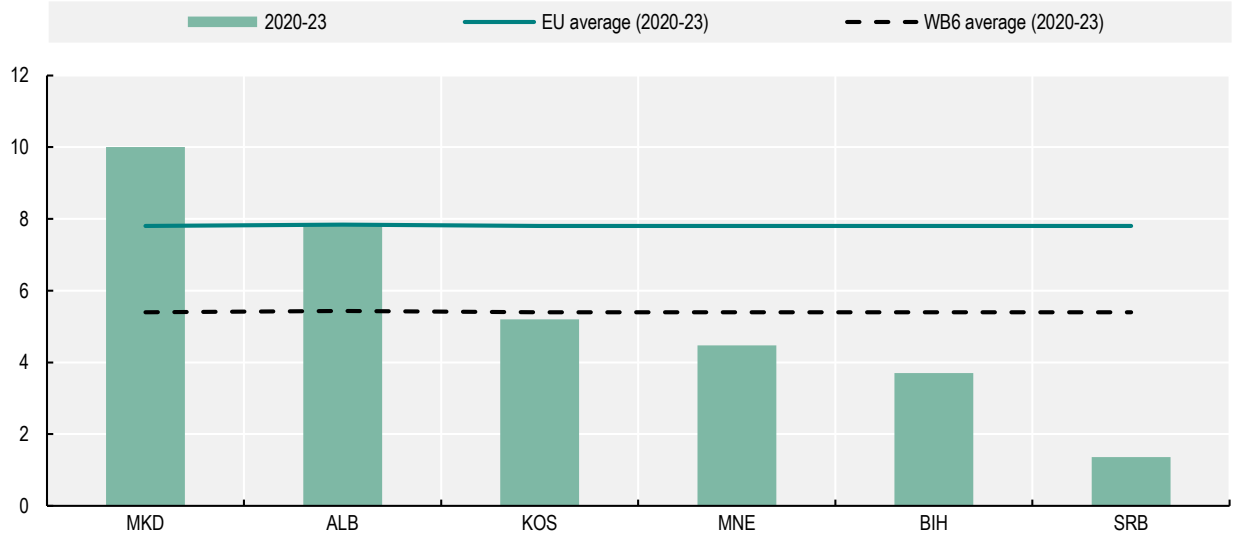
Businesses using AI technologies

*The low proportion of **businesses using AI technologies** calls for specialised support structures and enhanced AI governance frameworks.*

While developing a website is often the first step for businesses in embracing digital tools and expanding their reach, adopting the latest emerging technologies marks a shift towards transforming operations, creating opportunities for growth and competitive advantage. In the Western Balkans, the share of businesses using AI technologies averaged 5.4% between 2020 and 23 – around 70% of EU levels (which reported an average of nearly 8% of businesses) (Figure 5.7). Of note, both Albania and North Macedonia perform exceptionally well in this indicator, with Albania reaching and North Macedonia surpassing the EU average. In contrast, whereas Serbia had been a top performer in most of the other assessed indicators in this cluster, it is the weakest performer in the region in terms of AI technologies.

Figure 5.7. Proportion of enterprises using AI technologies in the Western Balkans (2020-23)

Percentage of all enterprises



Note: Data are unavailable for Albania (2020, 2022), Bosnia and Herzegovina (2020, 2022), Kosovo (2020, 2021, 2023), Montenegro (2020, 2022), North Macedonia (2021, 2022, 2023), Serbia (2020, 2022) and the EU (2020, 2022).
Sources: (Eurostat, 2024[19]). Additional data for Albania sent to the OECD from INSTAT. Additional data for Kosovo and North Macedonia from (RCC, 2022[20]).

StatLink https://stat.link/gnezcp

Support for the **development and adoption of AI** in the private sector is gaining traction across the Western Balkans. Innovation funds in Montenegro, North Macedonia and Serbia are providing financial support, such as subsidies and vouchers, alongside non-financial assistance such as mentoring to help businesses integrate and advance AI technologies (OECD, 2024[2]). Serbia has progressed further with the establishment of its Research and Development Institute for Artificial Intelligence, which fosters public-private collaboration, supports AI startups and raises awareness of AI's potential applications. However, in the economies without such institutions, weaker innovation ecosystems, combined with limited resources and infrastructure, can hinder businesses – particularly start-ups and small enterprises – from gaining the capacity to adopt AI effectively.

Underdeveloped governance and ethical frameworks for AI also discourage businesses from adopting these technologies. Key regulatory gaps in areas such as data privacy, liability, compliance and transparency create uncertainty regarding the boundaries of enterprises' acceptable use of AI. So far, only North Macedonia and Serbia

have introduced ethical guidelines for the use of AI technologies (OECD, 2024[2]). Moreover, while all economies in the region incorporate AI into their broader digital development strategies, Serbia is the only one to have adopted a dedicated national AI strategy, with Albania and North Macedonia still in the initial stages of formulating their own strategic frameworks.

DG.07

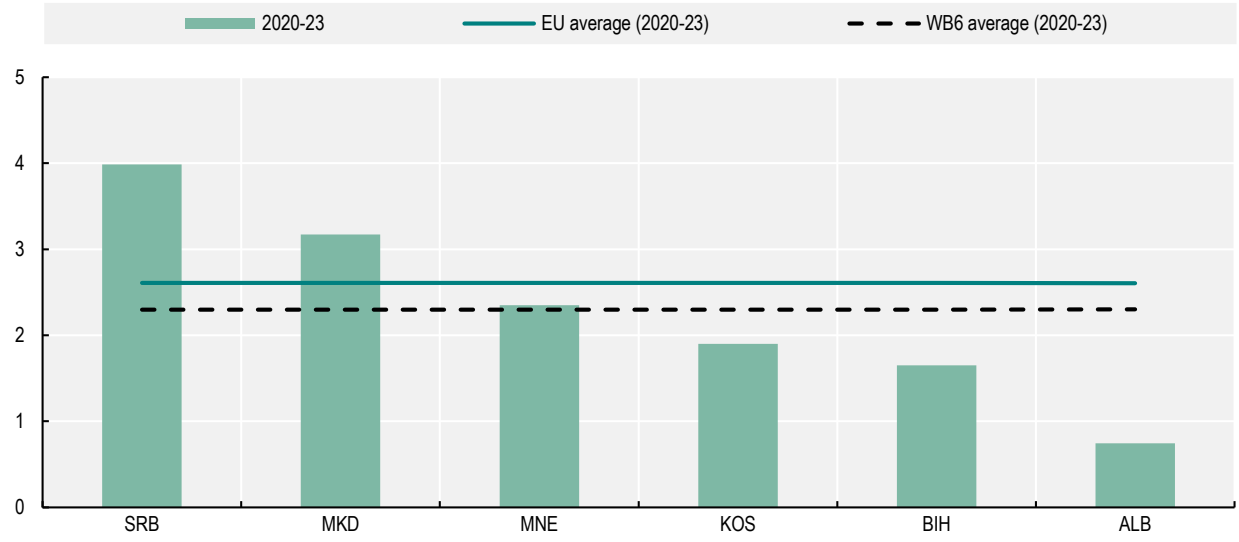
ICT services exports

Driven by targeted policies and enabling infrastructure, ***ICT services exports*** *are relatively high in most economies.*

While the adoption of digital technologies continues to be largely limited, the region's strong ICT sector highlights its potential to compete in the global digital economy. Across the Western Balkans, the ICT sector employs approximately 150 000 individuals (or 1.5% of the workforce)[16] and accounts for around 2% of GDP (RCC, 2024[21]). Moreover, the sector's export performance is notable, with ICT services exports averaging 2.3% of GDP between 2020 and 2023 – nearly 90% of the EU average – and totalling USD 13.9 billion (Figure 5.8). For regional frontrunners, Serbia and North Macedonia, this rate exceeds the EU average, reaching 4.0% and 3.2% of GDP, respectively. In contrast, Albania lags far behind, recording exports equivalent to only 0.7% of GDP – the lowest in the region.

Figure 5.8. ICT services exports in the Western Balkans (2020-23)

Percentage of GDP



Sources: OECD calculations based on (World Bank, 2024[22]) and (World Bank, 2024[23]).

StatLink https://stat.link/7ydk2e

To attract investment and support the growth of its ICT sector, the region offers a range of **targeted incentives**. For instance, in Serbia, technology start-ups benefit from a reduced corporate income tax rate of 3%, which is half the standard rate, while in Albania, the corporate income tax rate for software development companies was reduced from 15% to 5% in 2018. Another notable incentive is the removal or reduction of customs duties, as seen in Kosovo, where all duties on ICT equipment have been eliminated since 2014.[17]

These incentives are complemented by ongoing investment and expansion of **innovation infrastructure**, which remains heavily concentrated in the ICT sector. This includes the development of digital innovation hubs, science and technology parks, accelerators and start-up centres (OECD, 2024[2]). A notable example is the Science and Technology Park Belgrade, which, since its establishment in 2015, has assisted more than 240 innovative tech

companies by providing office space, research facilities, and access to networking and mentoring resources (STP Belgrade, 2024[24]).

Finally, the region's **skilled youth with strong English proficiency and competitive wages** have made it an attractive destination for foreign companies to outsource and relocate ICT services. This outsourcing of European companies has led to the emergence of early-stage ICT "clusters" in economies such as Serbia (in Vojvodina) and Albania (Tirana) (Kacani and Shaqiri, 2023[25]). Nevertheless, rising labour costs may weaken the region's ability to maintain this competitive position in the ICT sector. In fact, the wage gap between the Western Balkans and the EU is narrowing: while the region's average wages in the ICT sector grew by 5-10% annually from 2012 to 2020, increases in the EU averaged below 1%, reducing the relative affordability of ICT talent in the region (EBRD, 2024[26]).

References

Atlantic Council (2024), *How do cyber-attacks threaten the Balkans? A Debrief with Dan Ilazi and Filip Stojanovski*, Atlantic Council, http://www.atlanticcouncil.org/content-series/balkans-debrief/how-do-cyber-attacks-threaten-the-balkans-a-debrief-with-dan-ilazi-and-filip-stojanovski/ (accessed on 1 April 2025). [12]

Darova, O. (2023), *Western Balkans - Unleashing the Potential of Innovative Start-Ups and SMES in the Western Balkans: Investment Readiness Program 2.0 - Focus Groups with Start-Ups in the Western Balkans*, World Bank, Washington DC, http://documents.worldbank.org/curated/en/099061623101038230/P16316804e6a110db09ece0422599cc3074. [18]

Đinđić, M., S. Mitrović and M. Škorić (2023), *Western Balkan PAR Monitor 2021/2022*, European Policy Centre, https://media.institut-alternativa.org/2023/07/Regional-PAR-Monitor.pdf. [7]

EBRD (2024), *Can the Western Balkans converge towards EU living standards?*, European Bank for Reconstruction and Development, https://www.ebrd.com/home/news-and-events/publications/can-the-western-balkans-converge-towards-eu-living-standards.html. [26]

Eurostat (2024), *Artificial Intelligence by Size Class of Enterprise*, https://doi.org/10.2908/ISOC_EB_AI (accessed on 8 January 2025). [19]

Eurostat (2024), *E-government Activities of Individuals via Websites*, https://doi.org/10.2908/ISOC_CIEGI_AC (accessed on 7 November 2024). [6]

Eurostat (2024), *Individuals - Internet Use*, https://doi.org/10.2908/ISOC_CI_IFP_IU (accessed on 7 November 2024). [5]

Eurostat (2024), *Individuals' Level of Digital Skills (from 2021 onwards)*, https://doi.org/10.2908/ISOC_SK_DSKL_I21 (accessed on 31 March 2025). [1]

Eurostat (2024), *Individuals' Level of Digital Skills by Sex and Age*, https://doi.org/10.2908/EQ_DSKL07 (accessed on 1 April 2025). [38]

Eurostat (2024), *Internet Purchases by Individuals (2020 onwards)*, https://doi.org/10.2908/ISOC_EC_IB20 (accessed on 7 November 2024). [10]

Eurostat (2024), *Websites and Functionalities by Size Class of Enterprise*, https://doi.org/10.2908/ISOC_CIWEB (accessed on 7 November 2024). [13]

FAO (2021), *EBRD and WBIF support Serbia to expand broadband to rural areas*, Food and Agriculture Organization of the United Nations, https://www.fao.org/in-action/territorios-inteligentes/noticias/detalle/en/c/1373515/. [28]

Government of Kosovo (2023), *e-Government Strategy Kosovo 2023-2027*, Ministry of Internal Affairs, https://mpb.rks-gov.net/Uploads/Documents/Pdf/EN/2700/e-Government%20Strategy%20Kosovo%202023-2027.pdf. [31]

Government of Montenegro (2021), *Montenegro Digital Transformation Strategy 2022-2026: With Action Plan 2022-2023*, Ministry of Public Administration, Digital Society and Media, https://wapi.gov.me/download/59dcab9b-b0e8-48b7-830b-6e4eab690521?version=1.0. [30]

INSTAT (2024), *Information and Communication Technologies*, Institute of Statistics, http://www.instat.gov.al/en/themes/science-technology-and-innovation/information-and-communication-technologies/ (accessed on 7 November 2024). [14]

Ispanovic, I. et al. (2023), *Battle for Balkan Cybersecurity: Threats and Implications of Biometrics and Digital Identity*, BalkanInsight, https://balkaninsight.com/2023/06/30/battle-for-balkan-cybersecurity-threats-and-implications-of-biometrics-and-digital-identity/. [11]

Kacani, J. and G. Shaqiri (2023), "Emerging ICT clusters in the Western Balkans: A convergence model based on financial statement analysis", *Regional Science Policy & Practice*, Vol. 16/4, pp. 1-16, https://doi.org/10.1111/rsp3.12687. [25]

KAS (2023), *Usage of Information and Communication Technology (ICT) in Enterprises, 2022*, Kosovo Agency of Statistics, https://ask.rks-gov.net/Releases/Details/7646 (accessed on 7 November 2024). [15]

Maksić, T. and T. Uzelac (n.d.), *Open Data and Digitalization in the Western Balkans: The State of Play*, BalkanInsight, https://balkaninsight.com/open-data-and-digitalization-in-the-western-balkans-the-state-of-play/. [29]

MAKSTAT (2024), *Annoucement: Use of Information and Communication Technologies in Business Entities [in Macedonian]*, State Statistical Office, http://www.stat.gov.mk/PrethodniSoopstenijaOblast.aspx?id=76&rbrObl=27 (accessed on 7 November 2024). [16]

Monitor (2024), *The Internet Gap Has 34% of the Population in Urban Areas, but only 9% in Rural Areas*, https://monitor.al/en/hendeku-i-internetit-e-ka-34-e-popullsise-ne-zonat-urbane-por-vetem-9-ne-ato-rurale/ (accessed on 1 April 2025). [27]

MONSTAT (2024), *ICT Usage in Enterprises – Releases*, Statistical Office of Montenegro, http://www.monstat.org/eng/page.php?id=1667&pageid=1663 (accessed on 7 November 2024). [17]

MONSTAT (2022), *ICT Usage in Households and by Individuals*, News Release, Statistical Office of Montenegro, https://monstat.org/uploads/files/ICT/2022/Release%202022%20Households.pdf. [36]

NALED (2021), *Supporting citizens to create accounts on eGovernment Portal at the counters of 106 cities and municipalities*, https://naled.rs/en/en/vest-podrska-gradjanima-u-otvaranju-naloga-na-portalu-euprava-na-salterima-106-gradova-i-opstina-4854?utm (accessed on 13 April 2025). [9]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Regional Profile*, Competitiveness and Private Sector Development, OECD Publishing, Paris, https://doi.org/10.1787/170b0e53-en. [2]

RCC (2024), *Invest in ICT in the Western Balkans*, Regional Cooperation Council, http://www.rcc.int/pubs/196/invest-in-ict-in-the-western-balkans-brochure (accessed on 11 December 2024). [21]

RCC (2023), *Balkan Barometer 2023: Business Opinion*, Regional Cooperation Council, https://www.rcc.int/balkanbarometer/publications. [3]

RCC (2023), *Balkan Barometer 2023: Public Opinion*, Regional Cooperation Council, http://www.rcc.int/balkanbarometer/publications. [8]

RCC (2022), *Western Balkans Digital Economy Society Index*, Regional Cooperation Council, http://www.rcc.int/files/user/docs/43a521a624cf08523a2268a67a7be2ff.pdf. [20]

SIGMA/OECD (2025), *Sigma Monitoring Reports*, https://www.sigmaweb.org/en/publications/serials/sigma-monitoring-reports_9d2c959a.html (accessed on 28 April 2025). [37]

Statista (2025), *Share of individuals who own a credit card in Europe in 2021, by country*, https://www.statista.com/statistics/968220/credit-card-ownership-rate-european-countries/ (accessed on 1 April 2025). [33]

Statista (2025), *Share of individuals who own a debit card in Europe in 2021, by country*, https://www.statista.com/statistics/968803/debit-card-ownership-rate-european-countries/#:~:text=In%202021%2C%20the%20share%20of,cards%20varies%20between%20the%20countries (accessed on 1 April 2025). [34]

STP Belgrade (2024), *About Us*, Science Technology Park Belgrade, https://ntpark.rs/en/about-us/#:~:text=With%20us%2C%20ideas%20are%20more,than%20240%20innovative%20tech%20companies! (accessed on 16 December 2024). [24]

UNDP (2023), *Digital Readiness Assessment: North Macedonia*, United Nations Development Programme, https://www.undp.org/sites/g/files/zskgke326/files/2024-01/dra_mk_06.pdf. [32]

World Bank (2024), *GDP (Current US$)*, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD (accessed on 7 November 2024). [23]

World Bank (2024), *ICT Service Exports (BoP, Current USD)*, https://data.worldbank.org/indicator/BX.GSR.CCIS.CD (accessed on 7 November 2024). [22]

World Bank (2024), *Individuals Using The Internet (% of Population)*, https://data.worldbank.org/indicator/IT.NET.USER.ZS (accessed on 7 November 2024). [4]

World Bank (2020), *FINTECH Innovation in the Western Balkans: Policy and Regulatory Implications & Potential Interventions*, International Bank for Reconstruction and Development/The World Bank Group, https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/2020-ccaf-fintech-innovation-western-balkans.pdf. [35]

Notes

[1] The Growth Plan for the Western Balkans was adopted by the European Commission in November 2023. It has four primary objectives: 1) better integrating the Western Balkan partners into the EU's Single Market; 2) advancing regional economic co-operation; 3) deepening EU-related reforms; and 4) increasing pre-accession funding in view of accelerating socio-economic convergence of the Western Balkans to the EU. For more, see: https://enlargement.ec.europa.eu/enlargement-policy/growth-plan-western-balkans_en.

[2] "Basic" digital skills refer to individuals who demonstrate at least a basic level (i.e. completion of at least one activity) in each of the five assessed areas: information and data literacy, communication and collaboration, digital content creation, safety, and problem solving. To be classified as having "above-basic" digital skills, an individual must achieve an above-basic level in all five areas, typically by completing multiple activities. For detailed methodology, see the indicator's metadata at (Eurostat, 2024[1]).

[3] The education sector across the Western Balkans places growing emphasis on digital skills, although approaches and frameworks differ between economies. Many economies have developed comprehensive strategies to prioritise digital competencies, incorporating ICT and digital skills into primary and secondary school curricula. In most instances, ICT-related courses are compulsory for students, covering subjects such as computer science in Serbia, coding in Albania, and informatics in Montenegro and North Macedonia. For more information, see (OECD, 2024[2]).

[4] Only 15.4% of 55-64 year-olds and 5.5% of 65-74 year-olds in the Western Balkans possess basic or above-basic digital skills, compared to 42.0% and 25.5% in the EU, respectively. To access this data, see (Eurostat, 2024[38]).

[5] These rates were as follows: 70% of respondents in North Macedonia and 63% in Montenegro.

[6] It is important to recognise that high levels of internet usage do not always translate into greater economic benefits or improved societal outcomes. In some instances, the effects can even be harmful, particularly when individuals use the internet to consume misinformation or disinformation. Lacking the digital literacy necessary to assess online content critically and detect misleading or false information – an issue exacerbated by the rise of generative AI – can undermine individual decision making as well as political stability and economic performance.

[7] Albania, Kosovo, North Macedonia and Serbia.

[8] Data on the rural-urban divide were only available for Albania, Montenegro and Serbia. In Albania, fixed internet penetration reached 34% in urban areas and only 9% in rural areas. For more, see (Monitor, 2024[27]). In Serbia, 85% of households in urban areas were connected to fixed broadband compared to 69% in rural areas (FAO, 2021[28]). Finally, in Montenegro, internet access from home ranged from 71.6% of rural households to 85.6% of urban households (MONSTAT, 2022[36]).

[9] As of December 2024, the Western Balkans Investment Framework (WBIF) has 12 projects supporting digital infrastructure in the Western Balkans, with an investment value of nearly EUR 580 million. The grant value of these projects is EUR 53 million, while the loan value exceeds EUR 122 million. For more information, see: www.wbif.eu/sectors/digital-infrastructure.

[10] Although Bosnia and Herzegovina does not have a national e-service portal, several e-services are provided through the Agency for Identification Documents, Registers, and Data Exchange (IDDEEA).

[11] The estimate for Montenegro comes from data published a report by the Balkan Investigative Reporting Network, which states that while Montenegro offers around 500 e-government services, 349 of them are instructions on how to use these services (Maksić and Uzelac, n.d.[29]).

[12] For example, Montenegro's Digital Transformation Strategy 2022-26 contains an objective to raise the awareness of citizens and the economy about the importance of digital development through a co-ordinated communication campaign at both the state and local level (Government of Montenegro, 2021[30]). Kosovo's e-Government Strategy 2023-27 contains a measure focused on awareness raising to address the strategic objective of ensuring public digital services are user-centric and actively used. The strategy can be found here (Government of Kosovo, 2023[31]). Additionally, the United Nations Development Programme (UNDP) conducted a digital readiness assessment of North Macedonia in 2023 that identified limited public awareness as one of the key challenges to digital transformation, particularly in terms of digital governance (UNDP, 2023[32]).

[13] SIGMA-OECD monitoring reports based on the Methodological Framework for the Principles of Public Administration, see (SIGMA/OECD, 2025[37]).

[14] Even in economies where transactional services are available, their usability may be limited in specific cases or exemptions. For instance, while renewing a driver's license might be possible online, individuals who wear glasses or contact lenses may need to submit a doctor's prescription, which can only be validated in person at a police station.

[15] Credit card ownership was calculated to be 14.8%, while debit card ownership was calculated to be 46.1%. For both averages, data for Albania, Bosnia and Herzegovina, North Macedonia and Serbia came from 2021 (Statista, 2025[33]; 2025[34]). Data points for both Montenegro and Kosovo were from 2020 (World Bank, 2020[35]). The reasons for low debit and credit card ownership in the Western Balkans are multi-faceted, and the explanation for this phenomenon requires further analyses that extends beyond the scope of this report. The cash-dominant nature of the region's economies – which stems from sundry factors, including the prevalent informal economy, distrust, inaccessibility or lack of inclusivity of digital options, or "store of value" purposes – can make online purchases less accessible and practical for many consumers. For more, see (World Bank, 2020[35]).

[16] The RCC source reports that the ICT sector accounts for 150 000 employees, equivalent to 3% of the "registered workforce". However, this denominator significantly underestimates the actual size of the labour force. To provide a more representative figure, the employment share was recalculated using the region's estimated total workforce. Based on an average population of approximately 17 million in 2020-23 and an average employment rate of 57.6% over the same period, the total workforce is estimated at 9.8 million. This yields an ICT employment share of roughly 1.53% (150 000/9.8 million).

[17] This information was provided through the qualitative questionnaires completed by government officials as part of the *Western Balkans Competitiveness Outlook 2024* assessment process.

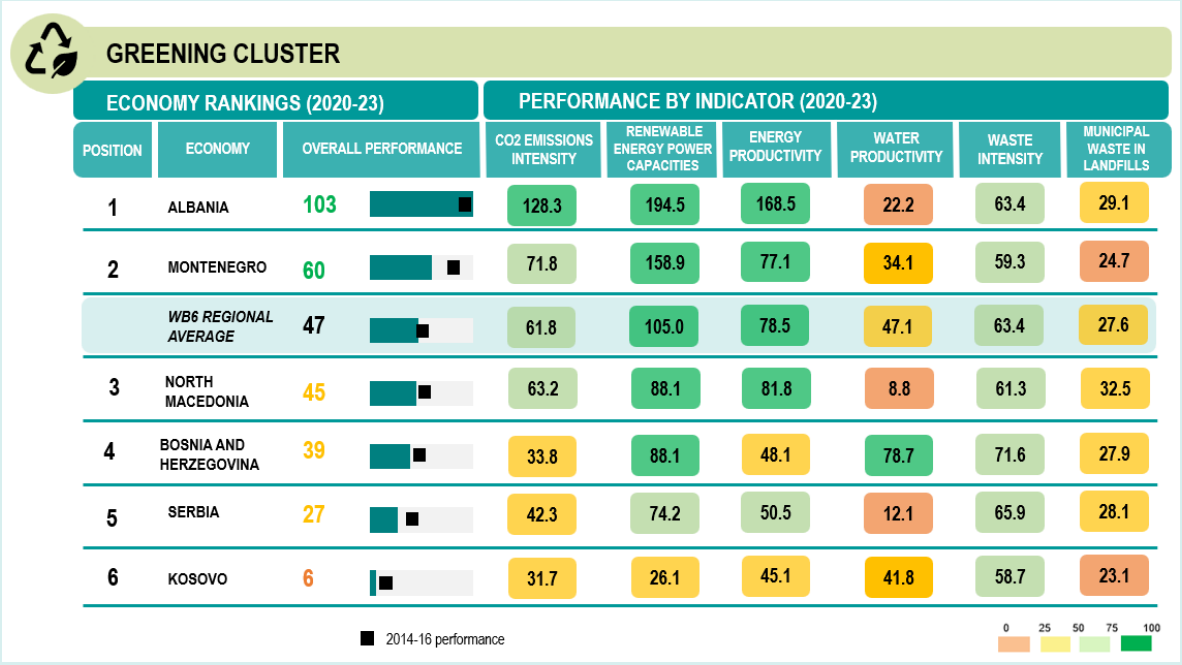
6 Greening cluster

Advancing the green transition is essential for reconciling robust economic growth with national and global sustainability objectives. This chapter explores the extent to which greening policies and initiatives in the Western Balkans have translated into convergence with the EU. Specifically, it examines efforts to accelerate decarbonisation, highlighting both achievements and ongoing challenges in reducing carbon emissions and increasing renewable energy capacity. In tandem, it assesses progress in enhancing resource efficiency and circularity, particularly in the management of key resources and waste, to foster the more sustainable use, consumption and production of resources across the region.

Key findings

Although the greening cluster was the third strongest area of performance in the Western Balkans during 2020-23, progress has decelerated over the last decade. Figure 6.1 depicts each economy's overall convergence in the greening cluster, with scores reflecting their relative distance from the EU average. It also breaks down the performance of the individual economies across **six key indicators** that measure progress in the green transition, along with the regional average for each indicator.

Figure 6.1. Convergence of the Western Balkan economies with the EU: Greening cluster



Note: The scores – both overall and for individual indicators – were calculated to reflect each economy's performance relative to the EU average, which is set at 100. The exact values for each indicator are presented in the graphs within the subsequent analysis section. For more information about the calculation of the scores, as well as the overall methodological approach, please consult the Methodology Annex.

Despite being the third highest scoring cluster, the region reached only 47% of EU levels between 2020 and 2023. Moreover, the overall trend has been one of divergence, as the gap with the EU has grown by 11 points since 2014-16. This growing disparity reflects instances where convergence has lagged despite improvement – owing to the EU's more rapid pace – and where performance has stagnated or even deteriorated. Of the five economies that experienced divergence rather than convergence, four recorded drops of more than 10 points in relation to the EU average. In contrast, Albania not only leads the region – surpassing the EU average in this cluster – but also stands as the sole economy to have gained ground in relation to the EU over the examined period.

The green transition across the Western Balkans is constrained by the slow pace of progress towards decarbonisation. The region's CO_2 emissions intensity is nearly double the EU average, and despite some advances, this gap with the EU continues to widen, driven mostly by the region's continued heavy reliance on fossil fuels. Additionally, low levels of energy productivity – approximately 80% of the EU average – contribute to elevated emissions, highlighting inefficiencies in the region's energy use. Nonetheless, efforts to transition towards renewable energy have intensified, with steady increases in installed capacity across the region, although certain sources, such as solar and wind, remain underutilised.

This sluggish progress on decarbonisation mirrors the limited advances in improving resource efficiency and circularity. Waste intensity in the Western Balkans substantially exceeds that of the EU, and the combination of rising municipal waste generation and insufficient prevention and treatment risks further widening this gap. Moreover, waste disposal in landfills continues to be a challenging issue, with rates more than 3.5 times the EU average due to limited capacity for separate waste collection and recycling. Similarly, water productivity rates remain at just 33% of EU levels, with inadequate infrastructure and high levels of pollution posing ongoing risks to the long-term sustainability of water resources.

Analysis

Accelerating the green transition is crucial to ensuring that the economic growth and convergence of the Western Balkans with the EU is not only robust but also sustainable. As global markets increasingly prioritise decarbonisation, advancing green policies will be essential for the region to maintain competitiveness while addressing pressing environmental challenges to improve the well-being of citizens.

GR.01

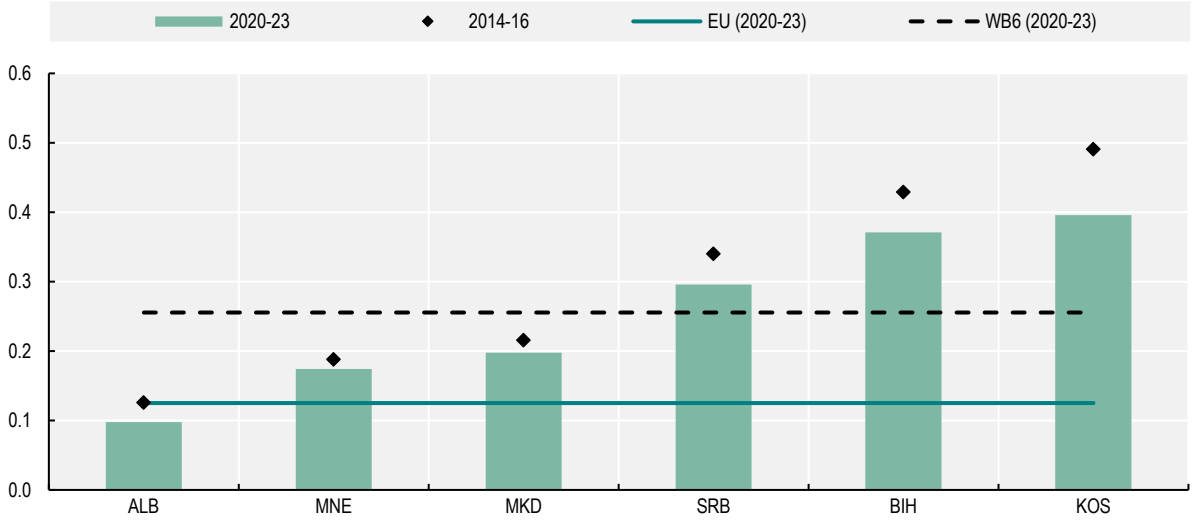
CO_2 emissions intensity

*Despite notable reductions in **CO_2 emissions intensity** across the region, the pace of progress is hindered by continued reliance on coal and limited carbon pricing mechanisms.*

Between 2020 and 2023, the Western Balkans recorded an average CO_2 emissions intensity of 0.26 kilogrammes (kg) per USD – more than twice the EU average (Figure 6.2). Albania is the top regional performer and the only economy to achieve emissions intensity levels below those of the EU. In contrast, Kosovo continues to exhibit the highest intensity in the region, although it has made considerable progress in lowering its levels since 2014-16. Yet, while all six economies succeeded in reducing their emissions intensity, these decreases fell short of the pace required to narrow the gap with the EU, resulting in further divergence.

Figure 6.2. CO2 emissions intensity in the Western Balkans (2014-16, 2020-23)

CO_2 emissions from fuel combustion (kg) per unit of GDP in 2021 USD in PPP



Notes: Data are unavailable for Bosnia and Herzegovina (2023), Kosovo (2014, 2023), Montenegro (2023), North Macedonia (2023), Serbia (2023) and the EU (2023). PPP = purchasing power parity.
Sources: (World Bank, 2025[1]). OECD calculations based on (IEA, 2024[2]) and (World Bank, 2024[3]) for Kosovo.

StatLink https://stat.link/hmcd5u

Given the role of emissions in driving climate change and the Western Balkans' vulnerability to its impacts, **climate change mitigation** policies have gained momentum, increasingly focusing on emissions reductions through 2030 targets (OECD, 2024[4]). However, the region has faced significant delays in adopting and implementing National Energy and Climate Plans (NECPs), which are essential for meeting these targets. As of February 2025, only Albania, North Macedonia and Serbia had successfully adopted NECPs.[1]

The region's high CO_2 emissions are largely attributable to its heavy reliance on fossil fuels in **energy** production, with coal accounting for more than 60% of power generation in Kosovo, Serbia and Bosnia and Herzegovina. Albania stands out as an exception, relying exclusively on renewable sources. Across most of the region, this dependence on fossil fuels is reinforced by substantial subsidies and support measures, distorting energy markets: between 2018 and 2023, financial support and induced transfers[2] allocated to fossil fuels totalled over EUR 15.5 billion, or approximately 2.2% of the region's GDP (OECD, 2025[5]). For context, this represents more than half of the public spending on education, which averaged 3.7% of GDP over the same timeframe.[3]

Transport is another major contributor to carbon emissions and remains the fastest-growing source of greenhouse gas emissions (World Bank, 2024[6]). In 2023, the region had an average of 304 passenger cars per thousand inhabitants, which although well below the EU average of 570 still represents a 45% increase on 2015, outpacing the EU's 11% growth over the same period (Eurostat, 2025[7]). Economies like Albania and Kosovo have established strategic frameworks that integrate sustainable transport considerations and set emission reduction targets across various modes of transportation. Many economies have also introduced measures to promote low- and zero-emission vehicles, including tax exemptions and subsidies for the purchase of electric cars in Serbia and the construction of charging infrastructure in Albania, North Macedonia and Serbia (OECD, 2024[4]). Additionally, several economies in the region have promoted more sustainable urban mobility by encouraging greater use of public transport, such as Serbia's introduction of free transport in Belgrade, or by modernising existing systems, as seen in Kosovo's introduction of electric buses and replacement of older buses in Pristina (Mullin, 2025[8]; OECD, 2024[9]). Yet, beyond these notable examples in urban centres, a pressing need remains for more investment and planning in sustainable public and rail transport (see the *Infrastructure* chapter for more details).

The slow progress on the **carbon pricing** across most of the region, reflected in the absence of carbon taxes for large industrial polluters, leaves businesses with little incentive to reduce emissions. While most economies have committed to aligning with the EU's Emissions Trading System (ETS) and introducing carbon pricing instruments as part of their climate strategies, only Montenegro has implemented an ETS. For any planned carbon pricing mechanisms to be effective, the Western Balkans must revisit fossil fuel subsides and improve the alignment of fuel excise taxes with the EU.[4]

Carbon pricing is crucial not only for meeting climate goals but also for mitigating the impact of the EU's Carbon Border Adjustment Mechanism (CBAM).[5] In the absence of domestic carbon pricing mechanisms, the CBAM is expected to heavily affect Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia, given their export structures and the large volume of CBAM-covered goods. However, these economies remain ill-prepared for CBAM's introduction, with limited efforts to equip the private sector for upcoming obligations.

GR.02

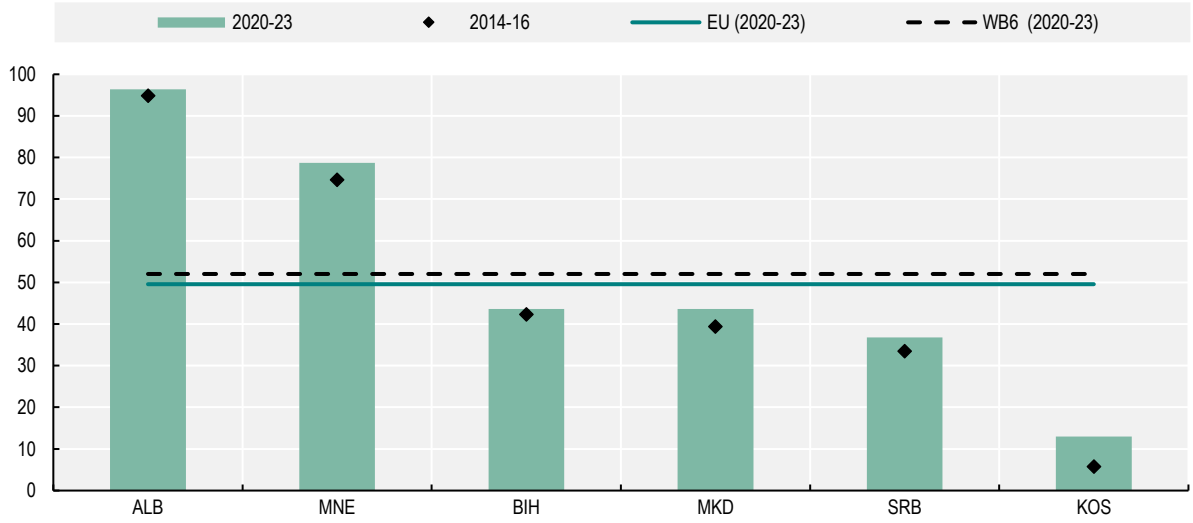
Renewable power installed capacities

*Despite efforts to expand **installed capacities for renewable power**, limited diversification and continued reliance on coal underscore the need for a more sustainable energy mix.*

Building on efforts to reduce emissions, the transition to renewable energy has become a pivotal focus for the Western Balkans. Between 2020 and 2023, the region's average installed renewable capacity stood at 52% of total power capacity, slightly surpassing the EU average of 49.5% (Figure 6.3). Although these averages may seem comparable, the Western Balkans' figure is predominantly driven by Albania (96.4%) and Montenegro (78.7%), with the other economies in the region falling behind. For example, only 12.9% of Kosovo's power capacity is from renewable sources. Moreover, while all economies have made some progress in recent years, the growth has been modest in comparison to the EU: the regional average increased by less than 5 percentage points in 2014-16, while the EU's installed renewable capacity grew by 13 percentage points, contributing to a widening gap.

Figure 6.3. Installed renewable power capacities in the Western Balkans (2014-16, 2020-23)

Percentage (of installed power capacities)



Source: (IRENA, 2024[10]).

Hydropower generation dominates the region's renewable energy capacity, representing 77.3% of total capacity in 2023, compared to just 16.9% in the EU (IRENA, 2024[10]). This disparity results in a significantly lower level of diversification in the Western Balkans than in the EU (Table 6.1). Growth in this installed capacity has largely been driven by preferential feed-in tariffs[6] that primarily target small hydropower plants, although these mechanisms are now being phased out or discontinued (CEE Bankwatch Network, 2022[11]).

Table 6.1. Installed renewable power capacities in the Western Balkans and the EU (2023)

In percentage of total installed renewable power capacities

	Hydropower	Wind	Solar	Bioenergy
Albania	91.2	0.0	8.8	0.0
Bosnia and Herzegovina	86.0	6.3	6.2	1.5
Kosovo	41.2	51.3	7.5	0.0
Montenegro	81.3	13.8	4.9	0.0
North Macedonia	50.0	7.9	38.4	0.0
Serbia	73.5	15.1	4.0	7.4
WB6	77.3	9.4	10.3	3.1
EU	16.9	28.2	33.4	21.5

Notes: "Hydropower" excludes pure pumped storage; "Wind" includes onshore and offshore wind energy; "Solar" includes solar photovoltaic, concentrated solar power; "Bioenergy" includes solid biofuels, renewable waste, liquid biofuels and biogas.
Source: (IRENA, 2024[10]).

While the region possesses considerable potential for non-hydro renewables, growth in their capacity has been slow. By 2023, onshore **wind** and **solar** power production reached only 2% and 4% of their respective technical potential – the estimated maximum capacity for deployment based on natural resources, topography and technological limitations (IRENA, 2024[12]). However, there has been a growing shift towards expanding these sources, as evidenced by competitive auctions designed to promote their uptake and diversification.[7] For example, in 2023, Serbia auctioned 400 megawatts (MW) of wind power and allocated 25.2 MW for four solar energy projects, while Albania held its first successful onshore wind auction (OECD, 2024[4]).

Further progress is hindered by the region's strong economic reliance on fossil fuels, chiefly **coal**. Coal is widely perceived to be a cheap domestically produced option. However, this perception can be misleading, as ageing plants require costly retrofitting to meet environmental standards, and energy losses further increase production costs.

The large economic footprint of coal-related activities poses challenges to the phase-out of coal, with an estimated 138 000 jobs linked to coal mining and coal-based power generation across the region (Ruiz Castello et al., 2021[13]). A transition away from coal could lead to job losses of up to 1.3% of total employment in Bosnia and Herzegovina and 1.4% in Kosovo (Bechev, 2023[14]). The challenge is further exacerbated by insufficient social protection and adjustment support, such as labour market programmes to reskill workers for the green transition, which could help allay public concerns by ensuring a just phase-out.[8]

GR.03

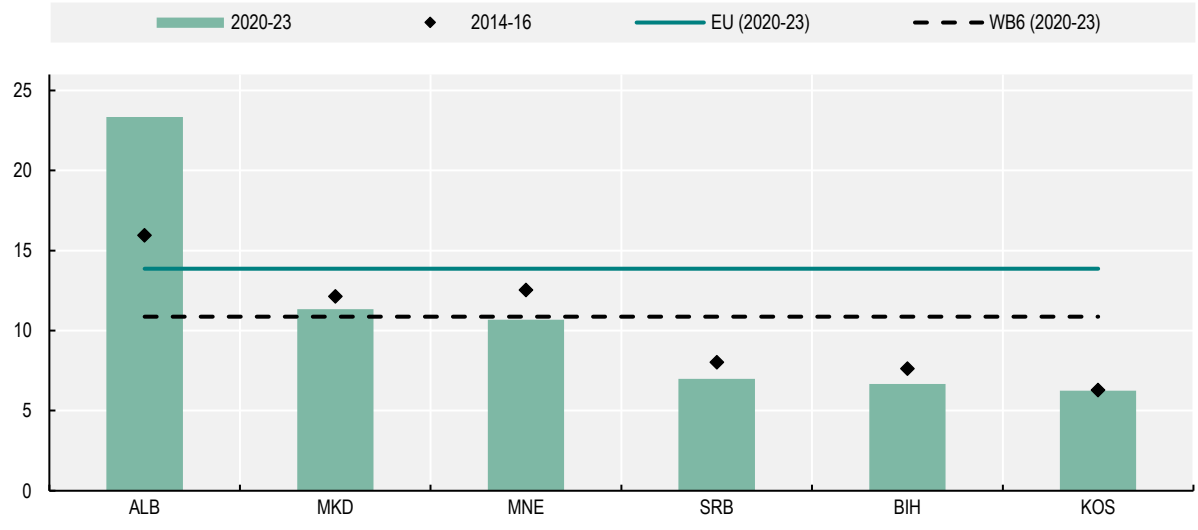
Energy productivity

*Relatively low **energy productivity** levels underscore the need for increased investment in energy efficiency.*

Decarbonisation and the increased generation of renewables can improve energy productivity, a key measure of how efficiently an economy utilises energy to produce goods and services. In the Western Balkans, energy productivity remained around 80% of EU levels for the period 2020-23 (Figure 6.4); however, it has either stagnated or declined – except in Albania – mirroring a similar trend within the EU. Economies with larger service sectors, on average, tend to perform better,[9] as services typically consume less energy relative to output than the industrial sector. Albania stands out as the only Western Balkan economy exceeding the EU average, while Serbia, Bosnia and Herzegovina and Kosovo trail significantly, reaching only about half of EU levels at less than USD 7 per kg.

Figure 6.4. Energy productivity in the Western Balkans (2014-16, 2020-23)

GDP per kg of oil equivalent consumption, in 2021 USD in PPP



Note: Data are unavailable for Bosnia and Herzegovina (2023), Kosovo (2023), Montenegro (2023), North Macedonia (2023), Serbia (2023) and the EU (2023).
Source: OECD estimates from (Eurostat, 2024[15]).

StatLink https://stat.link/upq8h7

The Western Balkan economies have intensified their efforts to increase **energy efficiency**, driven by the adoption and development of new policies and legislation; however, strengthening legal frameworks remains a priority. In particular, the adoption of additional secondary legislation is needed to fully align with the EU and Energy Community *acquis*[10] and ensure the effective implementation of commitments (OECD, 2024[4]).

A major challenge to improving energy efficiency is the inefficient **heating** of buildings, which accounts for over 40% of the region's total energy consumption (European Commission, 2022[16]). Many of these buildings rely on solid fuels (such as wood, lignite and coal) for heating and are poorly insulated. This is compounded by the fact that most were constructed before modern energy efficiency standards were established (OECD, 2022[17]). In response, the region is enhancing energy performance audits and certification systems for residential and commercial buildings, alongside developing long-term renovation strategies to improve energy efficiency. Serbia is the only economy in the region that has adopted a strategic framework to address this issue. Energy efficiency funds are emerging as key investment tools for improving the efficiency of both public and private buildings,[11] with such funds already implemented in Kosovo and Montenegro and a similar initiative being prepared in North Macedonia (OECD, 2024[4]). The EU, through the Western Balkan Investment Framework, is further supporting energy efficiency efforts in multi-apartment buildings and older blocks of flats through dedicated support schemes (European Commission, 2022[18]).

GR.04

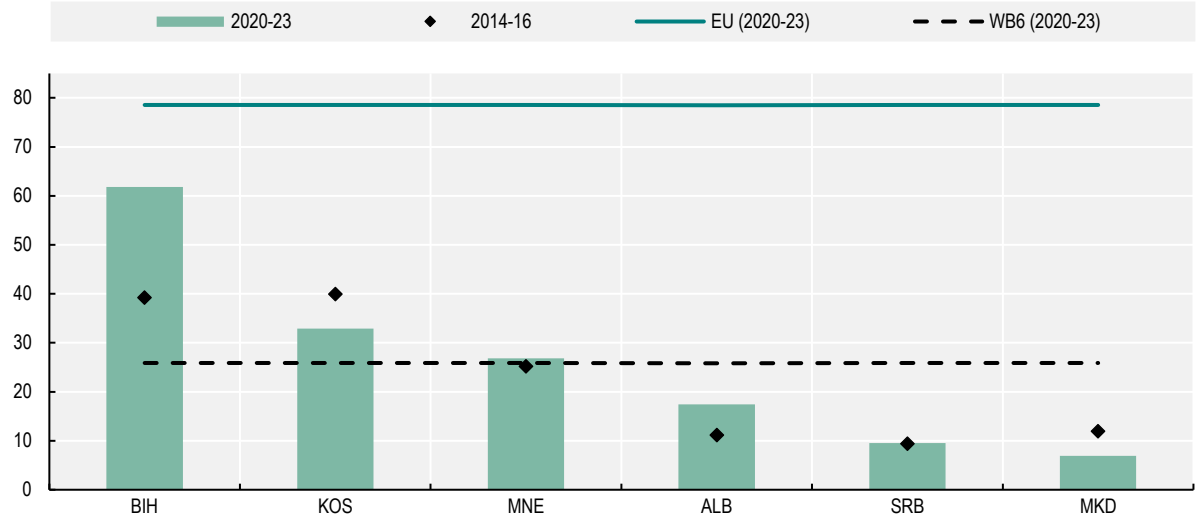
Water productivity

*Further progress in increasing **water productivity** levels is hindered by outdated irrigation systems and persistent pollution.*

Like energy productivity, water productivity – which measures the efficiency with which an economy utilises its water resources – in the Western Balkans has stagnated in relation to the EU, reflecting the region's limited efficiency in utilising water resources. Between 2020 and 2023, the Western Balkans achieved approximately one-third of the EU's water productivity, at a rate of USD 25.9 per cubic metre of total freshwater withdrawal (Figure 6.5). While this marks some improvement from the 2014-16 period (+USD 3.1 per cubic metre), convergence with the EU remains limited, as EU gains were significantly larger (+USD 9.0). Moreover, nearly all the improvement in the Western Balkan average is attributable to Bosnia and Herzegovina, which experienced a 58% increase in this indicator during the observed period. In contrast, North Macedonia, the region's weakest performer, saw a decline of more than 40%, with its water productivity now at just 27% of the regional average and less than 10% of the EU average.

Figure 6.5. Water productivity in the Western Balkans (2014-16, 2020-23)

GDP per cubic metre of total freshwater withdrawal, in 2015 USD in PPP



Note: Data are unavailable for Bosnia and Herzegovina (2022, 2023), Kosovo (2021, 2022, 2023), Montenegro (2022, 2023), North Macedonia (2022, 2023), Serbia (2022, 2023) and the EU (2022, 2023).

Sources: (World Bank, 2024[19]). OECD calculations based on additional data sent by KAS for Kosovo, (World Bank, 2024[3]) and (European Environment Agency, 2024[20]).

StatLink https://stat.link/2khaxm

One key driver of the notable differences between Western Balkan economies in water productivity is the varying degree of reliance on **irrigated agriculture**, a water-intensive sector that accounts for approximately 66% of freshwater withdrawals in upper-middle income countries such as those in the Western Balkans (Fujs and Kashiwase, 2023[21]). This dependence on irrigation is influenced by a range of factors, ranging from environmental conditions to infrastructural capacities. For instance, the region's underperforming economies face rainfall patterns that are either low, as in Serbia and North Macedonia,[12] or irregular, as in Albania (where only 20% of precipitation occurs during the summer months), which necessitates greater reliance on irrigation to maintain stable agricultural production (Sinha et al., 2022[22]). Together, these three economies account for 91% of the region's irrigated land, indicating a strong dependence on freshwater withdrawals. In contrast, the stronger performing economies, Kosovo and Bosnia and Herzegovina, irrigate only a small fraction of their potential land (7% and 5%, respectively[13]). The topography of these economies also plays a role: both are characterised by predominantly hilly-mountainous terrain, which is better suited for crops such as fruits, vegetables and nuts rather than water-intensive crops such as cereals, resulting in limited or no irrigation.

High levels of **water pollution** also pose a challenge to further increasing water productivity by reducing the availability and quality of water for economic activities, particularly in the agricultural sector. The increasing use of pesticides and insecticides has exacerbated water contamination, harming ecosystems and reducing agricultural yields by degrading soil quality and introducing toxicity (OECD, 2024[4]). Although revised legal and policy frameworks across the region emphasise reducing groundwater pollution, underdeveloped treatment infrastructure has resulted in only 20% of wastewater being treated (WAREG, 2021[23]).

The region's overall low water productivity is also linked to **deficiencies in infrastructure**. In agriculture, outdated and inefficient irrigation and drainage systems cause significant water losses through evaporation, runoff and seepage. These issues stem from factors such as the age of construction (given that many systems were built decades ago), lack of maintenance, and mismatches between farm structures and existing irrigation systems following land redistribution processes. This infrastructure problem extends beyond agriculture, also affecting public water supply and sanitation systems. Most Western Balkan economies face high water losses in distribution, with non-revenue water – which is water supplied into a distribution system but subsequently lost or unaccounted for – averaging between 55% and 67% of the total, which can lead to higher freshwater abstractions to compensate for these inefficiencies and meet demand (WAREG, 2021[23]).

GR.05

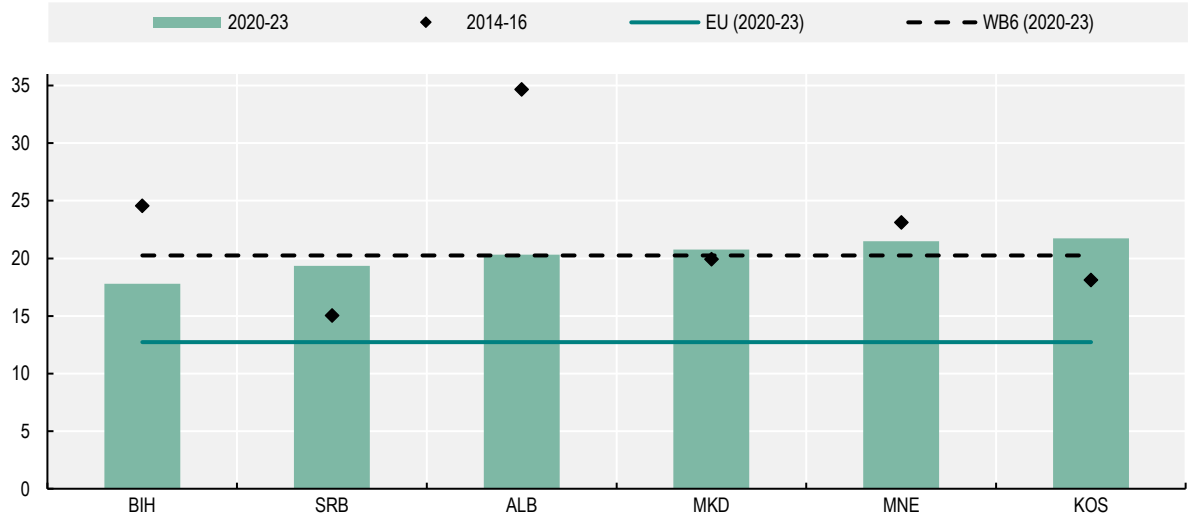
Waste intensity

*With **waste intensity** exceeding 1.5 times that of the EU, Western Balkan economies face rising waste levels, compounded by inadequate waste prevention policies and data gaps.*

Waste intensity, which measures the municipal waste generated per unit of GDP (in 2021 USD in PPP), reflects the interplay between economic growth, resource use and sustainability. In the period 2020-23, the Western Balkan economies exhibited relatively high waste intensity levels, with a regional average of 20.2 grams/USD, which was 1.5 times the EU's average of 12.7 grams/USD (Figure 6.6). Variation among economies is relatively limited, with Kosovo reporting the highest figure at 21.7 grams/USD and Bosnia and Herzegovina the lowest at 17.8 grams/USD. However, the region's average shows a slight decrease from 2014-16, driven by the significant reductions in waste intensity in both Albania and Bosnia and Herzegovina.

Figure 6.6. Waste intensity in the Western Balkans (2014-16, 2020-23)

Municipal waste generated per unit of GDP, in grams per 2021 USD in PPP



Note: Data are unavailable for Bosnia and Herzegovina (2020, 2021, 2023), Kosovo (2014, 2016), North Macedonia (2016, 2023), Serbia (2023) and the EU (2023).
Source: (Eurostat, 2024[24]).

Despite generating less municipal waste per capita than the EU (386 kg between 2020-23, or approximately 75% of EU levels[14]), rising GDP per capita across the region (see the *Context* chapter for more details) – driven by higher disposable incomes – is leading to increased waste generation. Overall, per capita waste levels continue to grow: since 2014-16, waste per capita in the Western Balkans has risen by 42 kg, slightly exceeding the 37 kg increase observed in the EU (Eurostat, 2024[24]).

Actual waste generation in the Western Balkans may be higher than reported due to the lack of **reliable data**. In some cases, underreporting may result from inadequate monitoring and reporting mechanisms. Waste data may rely on estimates from municipalities or private companies or be derived from metrics such as population size. Several economies have taken steps to improve data quality, including the installation of weighing bridges in Albania to better track waste entering landfills and the introduction of electronic systems for waste data collection in Bosnia and Herzegovina and North Macedonia (OECD, 2024[4]; European Environment Agency, 2022[25]).

Despite rising waste levels, **waste prevention and treatment** practices remain insufficient. Incentives to reduce waste, such as "pay-as-you-throw" schemes, are either absent, as in Albania, Kosovo and North Macedonia, or largely ineffective (Koranče, Mahmutović and Midžić-Kurtagić, 2022[26]). Across most Western Balkan economies, awareness-raising initiatives aimed at educating citizens and businesses about waste prevention and sustainable consumption habits remain inconsistent. Serbia, however, has introduced measures to promote the sustainable use of resources from 2025 onwards.[15]

Meanwhile, there are positive signs pointing to the increased alignment of waste generation with **circular economy** principles to minimise waste and promote sustainable production and consumption practices. As of December 2024, five of the six Western Balkan economies have adopted circular economy roadmaps, reflecting growing regional commitment. Moreover, Montenegro and Serbia have launched dedicated policies and programmes to support businesses and local governments in transitioning to a circular economy.[16] Recognising the private sector's pivotal role in this transition, governments have provided targeted technical and financial support to help businesses adopt circular practices. Additionally, chambers of commerce in several economies, including Montenegro and Serbia, are establishing stakeholder platforms to raise awareness, build capacity and facilitate knowledge exchange (OECD, 2024[4]).

GR.06

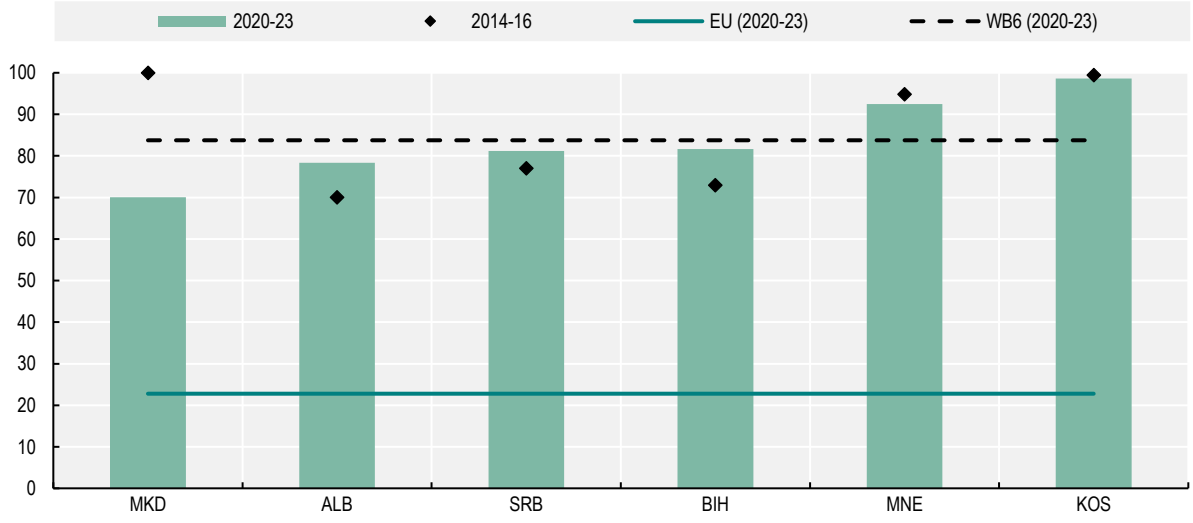
Municipal waste disposed in landfills

*High and growing rates of **municipal waste disposed in landfills** persist, pointing to the need for effective waste management.*

As municipal waste generation continues to rise, managing its disposal remains a pressing challenge. The share of municipal waste destined for landfills is more than 3.5 times that of the EU, making it the weakest area of performance within the greening cluster (Figure 6.7). Both the level and pace of convergence remain low, with landfill usage stagnating or increasing in five of the six economies between 2014-16 and 2020-23, in contrast to a nearly 4 percentage point decline observed in the EU. While North Macedonia appears to lead the region, this likely reflects its high percentage of waste with unknown treatment or storage (European Environment Agency, 2022[25]). Kosovo maintains the highest rate in the region at 99% of municipal waste disposed in landfills, showing minimal progress since 2014-16.

Figure 6.7. Municipal waste disposed in landfills across the Western Balkans (2014-16, 2020-23)

Percentage (of municipal waste)



Note: Data are unavailable for Bosnia and Herzegovina (2020, 2021, 2023), Kosovo (2014, 2016), North Macedonia (2016, 2023) and the EU (2023).
Source: (Eurostat, 2024[24]).

Inadequate **infrastructure for sorting, collecting and recycling waste** hampers efforts to reduce landfill disposal rates (OECD, 2024[4]). Despite legislation mandating waste separation at source in all six economies, the lack of infrastructure makes implementation inconsistent or impossible. In several economies, such as Albania, Kosovo, North Macedonia and Serbia, progress is limited to small-scale pilot programmes focused on collecting recyclable materials (e.g. paper, cardboard, plastics).

A chief obstacle to enhancing this infrastructure is the limited funding available, with municipal waste collection fees often failing to cover basic operational costs let alone the construction and maintenance of the necessary infrastructure. Furthermore, some waste collectors resort to illegal, "zero-cost" dumpsites, which remain widespread despite remediation efforts in economies such as Kosovo, North Macedonia and Serbia, further reducing funds for enhancing waste management systems (European Environment Agency, 2022[25]; OECD, 2024[4]).

As a result, the region continues to fall short of achieving the coverage and efficiency needed to achieve significant improvements in recycling rates. While all economies have outlined legal obligations and recycling targets within their relevant strategies, recycling rates remain low, dropping to as little as 2-3% in Bosnia and Herzegovina, Kosovo and Serbia.[17] In response to the lack of infrastructure for recycling, the **informal sector** has emerged as the primary actor responsible for collecting recyclable waste across the region (OECD, 2024[4]). While this informal system partially compensates for infrastructure gaps, it exacerbates challenges in data collection – making it difficult to monitor progress towards waste management targets – and it can lead to health and environmental hazards due to lack of equipment and training.

Extended producer responsibility (EPR) schemes have been proposed as an emerging solution to reduce landfill use and promote recycling by shifting the financial burden of waste management from the public sector to producers and consumers. EPR schemes are already in place in Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia, although further enforcement is needed to ensure their effectiveness.[18] Kosovo and Albania have outlined plans to introduce such schemes in revised waste legislation (OECD, 2024[4]).[19]

References

Bechev, D. (2023), *The Green Transition and the Western Balkans*, Carnegie Endowment for International Peace, https://carnegieendowment.org/research/2023/10/the-green-transition-and-the-western-balkans?lang=en. [14]

CEE Bankwatch Network (2022), *Cutting Hydropower Subsidies – How are the Western Balkans Doing?*, https://bankwatch.org/publication/cutting-hydropower-subsidies-how-are-the-western-balkans-doing. [11]

CENER (2023), *Improving waste management in Bosnia and Herzegovina and Serbia: The success of the Zero Waste Municipalities initiative*, Center for Energy, Environment and Resources, https://cener21.ba/2023/03/28/improving-waste-management-in-bosnia-and-herzegovina-and-serbia-the-success-of-the-zero-waste-municipalities-initiative/ (accessed on 1 April 2025). [29]

ETF (2024), *Key Policy Developments in Education, Training and Employment - Montenegro 2023*, European Training Foundation, https://www.etf.europa.eu/sites/default/files/2024-02/Country%20Fiche_Montenegro_2023_EN_web.pdf. [33]

European Commission (2022), *Energy Support Package for the Western Balkans*, https://neighbourhood-enlargement.ec.europa.eu/system/files/2022-12/WBIF%20Energy%20support%20pack%20221202.pdf (accessed on 24 January 2025). [16]

European Commission (2022), *Western Balkans: Focus on Energy*, https://neighbourhood-enlargement.ec.europa.eu/system/files/2022-12/Factsheet%20focus%20on%20energy.pdf. [18]

European Environment Agency (2024), *Water Abstraction by Source, 2000-2019*, https://www.eea.europa.eu/en/analysis/maps-and-charts/water-abstraction-by-source-2000?activeTab=8a280073-bf94-4717-b3e2-1374b57ca99d (accessed on 7 November 2024). [20]

European Environment Agency (2022), *Municipal Waste Management in the Western Balkan Countries*, Briefing, 26 April 2022, https://www.eea.europa.eu/publications/municipal-waste-management-in-western. [25]

Eurostat (2025), *Passenger Cars – Per Thousand Inhabitants*, https://doi.org/10.2908/ROAD_EQS_CARHAB (accessed on 1 April 2025). [7]

Eurostat (2024), *Energy Productivity*, https://doi.org/10.2908/SDG_07_30 (accessed on 7 November 2024). [15]

Eurostat (2024), *Municipal Waste by Waste Management Operations*, https://doi.org/10.2908/ENV_WASMUN (accessed on 5 November 2024). [24]

Fujs, T. and H. Kashiwase (2023), *Strains on freshwater resources: The impact of food production on water consumption*, World Bank Blogs, 23 August 2023, https://blogs.worldbank.org/en/opendata/strains-freshwater-resources-impact-food-production-water-consumption. [21]

IEA (2024), *Countries and Regions*, International Energy Agency, https://www.iea.org/countries (accessed on 7 November 2024). [2]

IRENA (2024), *Renewable Capacity Statistics 2024*, International Renewable Energy Agency, https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2024/Mar/IRENA_RE_Capacity_Statistics_2024.pdf. [12]

IRENA (2024), *Renewable Energy Statistics 2024*, International Renewable Energy Agency, https://www.irena.org/Publications/2024/Jul/Renewable-energy-statistics-2024. [10]

KOHA (2024), *Kosovo worst in Europe for waste recycling*, https://www.koha.net/en/arberi/kosova-me-se-keqi-ne-evrope-per-riciklimin-e-mbeturinave (accessed on 1 April 2025). [28]

Korançe, F., Š. Mahmutović and S. Midžić-Kurtagić (2022), *Underpinning Circular Economy Progress in the Western Balkan Countries: A Comprehensive Policy Implementation Analysis*, The Balkan Forum, https://thebalkanforum.org/wp-content/uploads/2023/11/Report_The_Balkan_Forum_FINAL_1_.pdf. [26]

Kosova Education Center (2021), *Action for Reducing Inequalities in Education Policy Brief: Kosovo 6.2*, https://www.kec-ks.org/wp-content/uploads/2021/03/Policy-brief-Kosovo-ENG-Final.pdf (accessed on 17 April 2025). [32]

Mullin, D. (2025), *Belgrade becomes the largest European city to offer free public transport*, News Article, 7 January 2025, European Commission, https://urban-mobility-observatory.transport.ec.europa.eu/news-events/news/belgrade-becomes-largest-european-city-offer-free-public-transport-2025-01-07_en#:~:text=1%20min%20read-%2cBelgrade%20becomes%20the%20largest%20European%20city%20to%20offer%20free%. [8]

OECD (2025), *Energy Prices and Subsidies in the Western Balkans: Reforms for a Fair and Green Future*, OECD Publishing, Paris, https://doi.org/10.1787/082ea26a-en. [5]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Kosovo*, OECD Publishing, Paris, https://doi.org/10.1787/ff74ae0e-en. [9]

OECD (2024), *Western Balkans Competitiveness Outlook 2024: Regional Profile*, OECD Publishing, Paris, https://doi.org/10.1787/170b0e53-en. [4]

OECD (2022), *Multi-dimensional Review of the Western Balkans: From Analysis to Action*, OECD Publishing, Paris, https://doi.org/10.1787/8824c5db-en. [17]

Our World in Data (2025), *Annual Precipitation*, https://ourworldindata.org/grapher/average-precipitation-per-year (accessed on 1 April 2025). [34]

Ruiz Castello, P. et al. (2021), *Recent Trends in Coal and Peat Regions in the Western Balkans and Ukraine*, Publications Office of the European Union, https://data.europa.eu/doi/10.2760/81752. [13]

Shapkova Kocevska, K. (2023), "Public Expenditure on Education and Economic Growth: Evidence from North Macedonia", *Journal of Liberty and International Affairs*, Vol. 9/1, https://doi.org/10.47305/JLIA2391022shk. [31]

Sinha, R. et al. (2022), *The Future of Water in Agriculture in the Western Balkans: The Irrigation and Drainage (Eco)system Approach*, World Bank, Global Water Security & Sanitation Partnership, https://documents1.worldbank.org/curated/en/099950002162218564/pdf/P1668280cfac100a40a802021cbf0f47422.pdf. [22]

WAREG (2021), *Water Sector Challenges in the Western Balkans – Editorial*, European Water Regulators, https://www.wareg.org/articles/water-sector-challenges-in-the-western-balkans/ (accessed on 18 December 2024). [23]

World Bank (2025), *Carbon Intensity of GDP (kg CO2e per 2021 PPP $ of GDP)*, https://data.worldbank.org/indicator/EN.GHG.CO2.RT.GDP.PP.KD (accessed on 31 January 2025). [1]

World Bank (2025), *Government expenditure on education, total (% of GDP) - Kosovo, Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia | Data*, https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?end=2022&locations=XK-AL-BA-ME-MK-RS&start=2018 (accessed on 17 April 2025). [30]

World Bank (2025), *Industry (including construction), value added (% of GDP) - Montenegro, North Macedonia*, https://data.worldbank.org/indicator/NV.IND.TOTL.ZS?end=2023&locations=ME-MK&start=2017 (accessed on 1 April 2025). [27]

World Bank (2024), *GDP, PPP (Constant 2021 International $)*, https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.KD (accessed on 7 November 2024). [3]

World Bank (2024), *Green and Clean Transport in the Western Balkans*, World Bank, Washington DC, https://www.worldbank.org/en/region/eca/publication/green-and-clean-transport-in-the-western-balkans. [6]

World Bank (2024), *Water productivity, total (constant 2015 US$ GDP per cubic meter of total freshwater withdrawal)*, https://databank.worldbank.org/source/world-development-indicators/Series/ER.GDP.FWTL.M3.KD (accessed on 31 January 2025). [19]

Notes

[1] Although Montenegro has not yet officially adopted its plan, the final draft has been submitted to the European Commission Secretariat for review.

[2] Induced transfers are estimated subsidies arising from regulatory interventions and price support policies that lower end-user prices compared to the actual cost of supply.

[3] This figure is based on available data from Western Balkan economies for the period 2018-2022. The regional average was calculated as the unweighted mean across economies with available data; those with missing years were excluded from the calculation. Data for Albania, Bosnia and Herzegovina and Serbia came from (World Bank, 2025[30]). Data for Kosovo are from (Kosova Education Center, 2021[32]). Data for Montenegro came from (ETF, 2024[33]). Data for North Macedonia are from (Shapkova Kocevska, 2023[31]).

[4] It is worth mentioning that Serbia established a monitoring, reporting and verification system for greenhouse gas emissions from stationary sources in 2021, which was a prerequisite for the implementation of an ETS. The issuance of emissions permits under this system is currently underway, and all submitted applications have been successfully processed, with 88 permits issued to date.

[5] The CBAM imposes financial charges on certain imported goods, encouraging non-EU producers to adopt greener production methods. Acting as an import duty, it affects economies that export significant volumes of CBAM-covered products such as electricity, aluminium, iron and steel, hydrogen, cement, and fertilisers. The CBAM aims to drive transformations in the industry and energy sectors of trading partners. Mitigating strategies include emission reduction efforts by exporting companies, government support through incentives or financial assistance, and the introduction of carbon pricing mechanisms (OECD, 2024[4]).

[6] Feed-in tariffs are policy mechanisms designed to encourage the adoption of renewable energy by providing guaranteed payments to renewable energy producers for the electricity that they generate and feed into the grid.

[7] This expansion of auctions aligns with the broader trend of the region moving towards greater conformity with the EU's Clean Energy Package, including the adoption of laws to promote renewable energy.

[8] Several of the region's economies have adopted just transition strategies, including Serbia's 2019 Roadmap for a Just Transition, North Macedonia's Roadmap for a Just Transition (adopted in 2023) and Bosnia and Herzegovina's draft Roadmap for the Transition of Coal-Rich Regions (developed in 2023).

[9] It is important to note that this trend is not universal, as other key factors, such as infrastructure quality and renewable energy consumption, can also play a role. For example, whereas North Macedonia and Montenegro have comparable levels of energy productivity, their economic structures differ. In the case of industry, the share (as a percentage of GDP) in North Macedonia in 2023 was 23.3%, while in Montenegro, this proportion was only 12.5% (World Bank, 2025[27]).

[10] For more information on the Energy Community's *acquis*, see: https://energy-community.org/legal/acquis.html.

[11] While these energy efficiency funds are not exclusively dedicated to improving the efficiency of buildings, this does constitute a sizeable proportion of their portfolios. For example, North Macedonia's fund has received financing of EUR 40.4 million to largely invest in public buildings, and Montenegro's Eco Fund supports initiatives that enable both citizens and businesses to use solar panels to generate electricity and thus boost energy efficiency.

[12] In 2024, North Macedonia and Serbia experienced the lowest levels of total annual precipitation in the region, registering 722 millimetres and 680 millimetres, respectively. This is far below the levels observed in other economies such as Montenegro (1 488 mm) and Bosnia and Herzegovina (1 133 mm) (Our World in Data, 2025[34]).

[13] In Bosnia and Herzegovina, only 15 000 hectares of a potential 285 000 hectares are irrigated, and in Kosovo, only 20 000 hectares of a potential 280 000 are irrigated. For more, see the respective economy profiles in (OECD, 2024[4]).

[14] For the period 2020-23, the region's municipal waste generation averaged 386 kgs, ranging from 267 kgs in Kosovo to 513 kgs in Montenegro. In contrast, the EU average reached 521 kgs in the same period (Eurostat, 2024[24]).

[15] On 20 February 2025, the Serbian government adopted the Waste Prevention Plan, which sets goals and priority areas for waste prevention, as well as measures for implementation for the period 2025-30.

[16] Specifically, Montenegro launched its National Circular Economy Strategy 2021-25. In the case of Serbia, the new Circular Economy Development Programme for 2025-30 is currently under preparation, following the expiration of the previous programme (2022-24) at the end of 2024. The new programme is expected to be adopted by the end of June 2025.

[17] Although recycling rates across the Western Balkans tend to be outdated and collected on an ad hoc basis, available figures place recycling rates in Kosovo, Bosnia and Herzegovina and Serbia between 2-3%. The specific estimates are as follows: 2.5% in Kosovo (KOHA, 2024[28]), 2.2% in Bosnia and Herzegovina and 3.0% in Serbia (CENER, 2023[29]).

[18] Also of note, Serbia has taken significant steps in 2023 to strengthen the enforcement of EPR schemes. These measures include the adoption of the Sludge Management Programme for the period 2023-2032, as well as amendments to the Law on Waste Management. Additionally, Serbia has implemented legislation for managing specific waste streams and the regulation on the management of sludge from municipal wastewater treatment plants. Looking ahead, Serbia has plans to introduce a deposit return system for packaging waste in 2027.

[19] In a related effort, Montenegro introduced a ban on single-use plastics and imposed new fees on plastic bags in October 2024 to reduce plastic waste generation.

Annex A. Regional Profile

This annex presents the Western Balkans' overall convergence across 35 indicators in the five assessed clusters.

Key highlights

Since 2014-16, the region's overall convergence score has stagnated, primarily due to weakening performance in the Greening cluster and the absence of progress in Business Environment, which have offset the progress achieved in Infrastructure and Connectivity, and Skills:

- **Infrastructure and Connectivity** is the cluster where the region has achieved the fastest convergence with the EU, mainly driven by improvements in digital and energy infrastructure. Notable advancements in areas such as mobile connectivity and electricity cost have contributed to this strong performance. However, continued weaknesses in transport infrastructure continue to constrain broader improvements across the cluster.
- **Skills**, while the region's weakest performing cluster overall, is the only other cluster to demonstrate convergence with the EU, with progress driven primarily by improvements in employment and education-related indicators. However, persistent gaps in labour productivity and low research and development expenditures continue to weigh on overall performance.
- **Business Environment** remains the strongest performing cluster, underpinned by robust foreign direct investment inflows and, to a lesser extent, SME export performance. However, convergence in this area has stalled, mainly due to enduring challenges in creating a level playing field and developing access to finance.
- **Digital Transformation** achieved the region's second-highest convergence score, supported by high levels of internet connectivity and the ongoing development of the information and communication technology sector. Still, overall potential is tempered by relatively low digital engagement among citizens and businesses.
- **Greening** is the only cluster where the region diverged from the EU. The relative performance of most indicators has deteriorated over time, with only marginal improvements observed in energy and water productivity. Overall, this worsening trend reflects continued difficulties in accelerating decarbonisation and improving resource use efficiency.

Table A A.1. Economic convergence by cluster and indicator in the Western Balkan region

0 25 50 75 100

Overall score				
2014-16	2017-19		2020-23	
48	47		49	
Indicators	Performance relative to the EU (EU=100)			Change
	2014-16	2017-19	2020-23	2014-16 to 2020-23
Infrastructure and connectivity	**33**	**31**	**39**	**+6**
IC.01: Road infrastructure density	26.0	22.4	22.5	-3.5
IC.02: Rail infrastructure density	47.1	46.1	43.8	-3.3
IC.03: Rail freight	4.9	4.5	4.2	-0.7
IC.04: Power losses	47.1	46.3	49.7	+2.6
IC.05: Electricity cost	60.1	55.9	77.2	+17.1
IC.06: Mobile cellular penetration	94.8	95.6	97.5	+2.7
IC.07: Broadband speed	46.3	37.5	46.7	+0.4
Skills	**34**	**37**	**38**	**+4**
SK.01: Labour productivity	39.5	38.5	39.2	-0.3
SK.02: Employment rate	71.6	74.4	76.5	+4.9
SK.03: PISA average score: mathematics	81.4	84.8	82.3	+0.9
SK.04: Youth NEET rate	50.7	46.3	47.1	-3.6
SK.05: Labour force with advanced education	96.7	99.0	99.4	+2.7
SK.06: Lifelong learning	30.5	25.0	37.6	+7.1
SK.07: R&D expenditures	16.9	16.2	16.6	-0.3
Business environment	**66**	**67**	**66**	**0**
BE.01: Bank non-performing loans	88.1	113.4	82.3	-5.8
BE.02: Domestic credit to the private sector	51.0	53.3	54.9	+3.9
BE.03: Private investment	104.0	101.2	102.9	-1.1
BE.04: FDI net inflows	119.1	208.9	422.2	+303.1
BE.05: Control of corruption	36.8	31.3	33.1	-3.7
BE.06: Estimated informal employment	14.5	14.2	17.8	+3.3
BE.07: Trade flows	37.1	40.9	44.7	+7.6
BE.08: SME export performance	119.0	110.0	105.3	-13.7
Digital Transformation	**-**	**-**	**53**	**-**
DG.01: Population with digital skills	-	-	61.8	
DG.02: Internet use by individuals	-	-	95.8	
DG.03: Internet use for interacting with public authorities	-	-	51.6	
DG.04: Internet use for purchases	-	-	54.4	
DG.05: Businesses with a website	-	-	80.6	
DG.06: Businesses using AI technologies			69.3	
DG.07: ICT services exports	-	-	88.2	
Greening	**58**	**53**	**47**	**-11**
GR.01: CO2 emissions intensity	68.5	64.4	61.8	-6.7
GR.02: Installed renewable power capacities	132.8	122.6	105.0	-27.8
GR.03: Energy productivity	77.2	75.1	78.5	+1.3
GR.04: Water productivity	32.8	31.5	33.0	+0.2
GR.05: Waste intensity	68.3	62.4	63.4	-4.9
GR.06: Municipal waste in landfills	32.0	29.6	27.6	-4.4

Annex B. Economy Profiles

This annex presents each Western Balkan economy's overall convergence across 35 indicators, along with its rankings (relative to other Western Balkan economies) in the five assessed clusters. The scores reflect the economies' performance compared to the EU average, which is set at 100. For further details on the score calculations and indicator selection, please refer to Annex B: Methodology.

Albania

Key highlights

Albania ranks third among the Western Balkan economies in terms of overall convergence with the EU. Since 2014-16, its overall score has declined, mostly due to the weakening performance in the Business Environment cluster, reflecting slower progress relative to the EU.

- Albania's weakest performing area is the **Infrastructure and Connectivity** cluster, both in terms of scores and ranking. Transport infrastructure remains underdeveloped, with limited road and rail networks. Digital infrastructure also remains inadequate, as reflected in the economy's low broadband speeds.
- The **Skills** cluster represents Albania's second most advanced area of convergence with the EU. However, it still ranks second-to-last in the region. The economy has made progress in increasing employment rates – the highest among the Western Balkan economies – and in improving the educational attainment of its labour force. Nonetheless, performance remains weak in key areas such as lifelong learning and research and development (R&D) expenditure.
- Challenges persist in the **Business Environment** cluster, where Albania ranks the lowest in the region and has diverged from the EU. Private investment and access to finance for businesses have weakened over time, while persistently high levels of informal employment continue to undermine the overall business environment.
- **Digital Transformation** is a relatively weak area for Albania, with overall performance ranking second-to-last in the region. While internet usage is widespread and businesses' adoption of digital technologies is relatively high, the overall digital proficiency of Albania's population remains limited, and there is low engagement with digital public services. Additionally, the ICT sector is comparatively underdeveloped.
- Albania outperforms the EU average in the **Greening** cluster, driven by its low carbon emissions and high energy productivity. This performance is supported by the economy's advanced renewable energy capacity – primarily hydropower – and the service-oriented structure of its economy, which is less energy intensive. Unlike other regional economies, Albania has also improved its performance in this cluster since 2014-16, mainly due to continued gains in energy productivity and waste intensity.

Table A B.1. Albania's economic convergence by cluster and indicator

0 25 50 75 100

Overall score			Overall ranking
2014-16	2017-19	2020-23	2020-23
51	45	47	3/6

Indicators	Performance relative to the EU (EU=100)			Change	Ranking
	2014-16	2017-19	2020-23	2014-16 to 2020-23	2020-23
Infrastructure and connectivity	**12**	**5**	**12**	**0**	**6/6**
IC.01: Road infrastructure density	9.6	7.7	7.5	-2.1	
IC.02: Rail infrastructure density	24.3	20.7	15.2	-9.1	
IC.03: Rail freight	0.05	0.17	0.1	+0.08	
IC.04: Power losses	18.0	22.4	25.2	+7.2	
IC.05: Electricity cost	44.3	40.4	61.9	+17.6	
IC.06: Mobile cellular penetration	95.6	85.1	80.1	-15.5	
IC.07: Broadband speed	24.7	24.4	24.6	-0.1	
Skills	**27**	**27**	**33**	**+6**	**5/6**
SK.01: Labour productivity	29.1	25.5	25.7	-3.4	
SK.02: Employment rate	85.4	89.4	91.5	+6.1	
SK.03: PISA average score: Mathematics	84.8	89.6	77.6	-7.2	
SK.04: Youth NEET rate	39.7	37.5	39.5	-0.2	
SK.05: Labour force with advanced education	95.6	95.3	100.9	+5.3	
SK.06: Lifelong learning	10.9	8.2	6.5	-4.4	
SK.07: R&D expenditures	9.5	5.3	8.7	-0.8	
Business Environment	**67**	**54**	**56**	**-11**	**6/6**
BE.01: Bank non-performing loans	54.4	60.0	55.1	+0.7	
BE.02: Domestic credit to the private sector	42.0	39.2	40.8	-1.2	
BE.03: Private investment	131.1	110.3	102.6	-28.5	
BE.04: FDI net inflows	182.7	277.6	465.5	+282.2	
BE.05: Control of corruption	23.2	23.8	27.7	+4.5	
BE.06: Estimated informal employment	8.7	8.9	11.6	+2.9	
BE.07: Trade flows	24.0	24.6	25.8	+1.8	
BE.08: SME export performance	117.7	117.5	117.3	-0.4	
Digital Transformation	**-**	**-**	**32**	**-**	**5/6**
DG.01: Population with digital skills	-	-	43.0		
DG.02: Internet use by individuals	-	-	90.5		
DG.03: Internet use for interacting with public authorities	-	-	67.0		
DG.04: Internet use for purchases	-	-	35.0		
DG.05: Businesses with a website	-	-	65.3		
DG.06: Businesses using AI technologies	-	-	100.4		
DG.07: ICT services exports	-	-	28.6		
Greening	**97**	**94**	**103**	**+6**	**1/6**
GR.01: CO2 emissions intensity	129.9	120.1	128.3	-1.6	
GR.02: Installed renewable power capacities	260.2	235.5	194.5	-65.7	
GR.03: Energy productivity	118.1	122.8	168.5	+50.4	
GR.04: Water productivity	16.1	15.5	22.2	+6.1	
GR.05: Waste intensity	41.6	44.7	63.4	+22.3	
GR.06: Municipal waste in landfills	38.4	31.7	29.1	-9.3	

Bosnia and Herzegovina

Key highlights

Bosnia and Herzegovina ranks fifth among the Western Balkan economies in terms of overall convergence with the EU. Since 2014-16, its convergence score has declined, indicating slower overall progress on the indicators compared to the EU. Performance remains weak in most clusters, although progress has been noted in the Infrastructure and Connectivity and Skills cluster.

- Bosnia and Herzegovina's fastest area of convergence is the **Infrastructure and Connectivity** cluster. The economy has made progress in improving its energy infrastructure and digital connectivity for citizens. However, weaknesses persist in transport infrastructure, with underdeveloped road and rail networks and limited activity in freight transport by rail.
- In the **Skills** cluster, Bosnia and Herzegovina has made modest progress in converging with the EU. In addition to increasing employment levels, the economy has managed to boost labour force productivity and improve the educational attainment of its workforce. However, lifelong learning remains limited, and challenges persist in leveraging skills for innovation, as evidenced by the low and stagnating levels of R&D expenditures.
- Bosnia and Herzegovina's performance in the **Business Environment** cluster has also diverged from the EU, placing the economy second-to-last in the region. Ensuring a level playing field remains a main challenge due to significant levels of informality and persistent weaknesses in addressing corruption. Additionally, private investment remains low, constrained by limited access to credit for the private sector.
- For the **Digital Transformation** cluster, Bosnia and Herzegovina lags behind other economies in the region. While a flourishing ICT sector and relatively high levels of internet usage serve as positive developments, the lack of digital proficiency among citizens limits the potential for online interactions in both public services and economic activities.
- Bosnia and Herzegovina has seen a widening gap with the EU in the **Greening** cluster, ranking fourth in the region. This negative trend stems from a decline in decarbonisation performance, driven by limited development of renewable power capacities. However, advances in more efficient resource use, such as improved water productivity and reduced waste intensity, have somewhat offset these challenges.

Table A B.2. Bosnia and Herzegovina's economic convergence by cluster and indicator

0 25 50 75 100

Overall score			Overall ranking				
2014-16	2017-19	2020-23	2020-23				
45	40	41	5/6				
Indicators			Performance relative to the EU (EU=100)			Change	Ranking
			2014-16	2017-19	2020-23	2014-16 to 2020-23	2020-23
Infrastructure and Connectivity			**31**	**31**	**42**	**+11**	**3/6**
IC.01: Road infrastructure density			13.2	11.2	10.7	-2.5	
IC.02: Rail infrastructure density			39.6	39.2	39.3	-0.3	
IC.03: Rail freight			7.6	6.7	7.0	-0.6	
IC.04: Power losses			77.0	76.8	83.2	+6.2	
IC.05: Electricity cost			67.6	64.7	84.5	+18.6	
IC.06: Mobile cellular penetration			79.8	85.6	91.0	+11.2	
IC.07: Broadband speed			41.9	29.9	35.7	-6.2	
Skills			**35**	**31**	**37**	**+2**	**4/6**
SK.01: Labour productivity			34.8	34.7	35.4	+0.6	
SK.02: Employment rate			62.7	66.5	71.3	+13.3	
SK.03: PISA average score: Mathematics			78.9	83.2	80.9	+2	
SK.04: Youth NEET rate			55.0	44.2	49.5	-5.4	
SK.05: Labour force with advanced education			103.1	98.7	104.3	+1.3	
SK.06: Lifelong learning			20.7	19.7	17.5	-3.2	
SK.07: R&D expenditures			11.0	9.0	8.5	-2.5	
Business Environment			**66**	**59**	**58**	**-8**	**5/6**
BE.01: Bank non-performing loans			74.7	68.6	60.6	-14.1	
BE.02: Domestic credit to the private sector			65.2	66.6	60.0	-5.2	
BE.03: Private investment			96.2	91.6	89.2	-7.0	
BE.04: FDI net inflows			49.5	93.8	212.1	+162.6	
BE.05: Control of corruption			33.1	18.0	14.3	-18.8	
BE.06: Estimated informal employment			13.3	13.7	16.7	+3.4	
BE.07: Trade flows			31.1	34.7	37.2	+6.1	
BE.08: SME export performance			151.3	126.2	112.1	-39.2	
Digital Transformation			**-**	**-**	**31**	**-**	**6/6**
DG.01: Population with digital skills			-	-	59.1		
DG.02: Internet use by individuals			71.5	84.3	88.7		
DG.03: Internet use for interacting with public authorities			-	-	29.8		
DG.04: Internet use for purchases			-	-	45.8		
DG.05: Businesses with a website			-	83.7	81.5		
DG.06: Businesses using AI technologies			-	-	47.3		
DG.07: ICT services exports			51.8	53.7	63.3		
Greening			**47**	**40**	**39**	**-8**	**4/6**
GR.01: CO2 emissions intensity			38.0	34.9	33.8	-4.2	
GR.02: Installed renewable power capacities			116.1	102.2	88.1	-28	
GR.03: Energy productivity			56.4	51.4	48.1	-8.3	
GR.04: Water productivity			56.4	70.2	78.7	+22.3	
GR.05: Waste intensity			58.6	59.6	71.6	+13.0	
GR.06: Municipal waste in landfills			36.8	31.2	27.9	-8.9	

Kosovo

Key highlights

Despite experiencing the fastest convergence in the region, Kosovo remains the lowest-ranked Western Balkan economy in terms of overall convergence with the EU. The most significant progress has been made in the Business Environment cluster, while *Greening* is the poorest performing cluster.

- Although ranking fourth in the region, Kosovo has experienced rapid convergence in the **Infrastructure and Connectivity** cluster. The economy has improved digital connectivity for its population and kept energy costs low for businesses. However, limited development in transport infrastructure continues to hamper overall performance, with underdeveloped road and rail networks and marginal freight transport activity on rail.
- Despite ranking last in the region, Kosovo has achieved some convergence in the *Skills* cluster with the EU, primarily driven by increases in educational attainment and higher participation of the adult population in education and training activities. However, Kosovo struggles to fully leverage the skills of its population, particularly among the youth, and continues to face persistently low productivity.
- Kosovo ranks second in the region in the *Business Environment* cluster, demonstrating particularly strong performance in indicators related to access to finance and investment. While progress has been modest, the economy has made some strides in strengthening the level playing field, as evidenced by declines in corruption perception and informal employment.
- The **Greening** cluster is Kosovo's most challenging area, with the economy ranking last in the region and diverging from the EU since 2014-16. Despite improvements in renewable energy capacities, Kosovo has struggled to make significant progress in reducing its carbon emissions. Additionally, the economy has faced difficulties in enhancing resource use, as evidenced by declining water and energy productivity, alongside overall poor waste management.
- Kosovo ranks fourth in the region for the **Digital Transformation** cluster. Its businesses exhibit relatively high levels of digital technology adoption, supported by comparably high levels of online economic activity. However, the population's digital skills remain inadequate, while the digitalisation of public services is underdeveloped.

Table A B.3. Kosovo's economic convergence by cluster and indicator

0 25 50 75 100

Overall score			Overall ranking				
2014-16	2017-19	2020-23	2020-23				
27	32	39	6/6				
Indicators			Performance relative to the EU (EU=100)			Change	Ranking
			2014-16	2017-19	2020-23	2014-16 to 2020-23	2020-23
Infrastructure and connectivity			**21**	**22**	**34**	**+13**	**4/6**
IC.01: Road infrastructure density			12.9	11.9	13.3	+0.4	
IC.02: Rail infrastructure density			44.8	44.7	44.7	-0.1	
IC.03: Rail freight			0.09	0.1	0.1	-0.02	
IC.04: Power losses			21.5	20.4	21.8	+0.3	
IC.05: Electricity cost			65.4	61.6	101.2	+35.8	
IC.06: Mobile cellular penetration			74.0	83.0	89.0	+15.0	
IC.07: Broadband speed			68.1	47.7	49.7	-18.4	
Skills			**9**	**19**	**18**	**+9**	**6/6**
SK.01: Labour productivity			43.6	41.4	41.8	-1.8	
SK.02: Employment rate			44.5	45.9	46.6	+2.1	
SK.03: PISA average score: Mathematics			74.3	75.0	74.9	+0.6	
SK.04: Youth NEET rate			38.3	32.8	28.8	-9.5	
SK.05: Labour force with advanced education			85.6	98.6	91.2	+5.6	
SK.06: Lifelong learning			45.8	31.6	103.4	+57.6	
SK.07: R&D expenditures			7.2	8.3	3.9	-3.3	
Business Environment			**59**	**73**	**76**	**+17**	**2/6**
BE.01: Bank non-performing loans			167.3	245.7	141.2	-16.6	
BE.02: Domestic credit to the private sector			42.1	51.6	61.2	+19.1	
BE.03: Private investment			111.2	108.4	134.1	+22.9	
BE.04: FDI net inflows			83.2	138.2	449.7	+366.5	
BE.05: Control of corruption			26.3	23.7	39.0	+12.7	
BE.06: Estimated informal employment			8.7	9.6	10.2	+1.5	
BE.07: Trade flows			18.0	20.6	25.3	+7.3	
BE.08: SME export performance			118.8	122.2	114.9	-3.9	
Digital Transformation			**-**	**-**	**58**	**-**	**4/6**
DG.01: Population with digital skills			-	-	46.4		
DG.02: Internet use by individuals			-	108.6	110.3		
DG.03: Internet use for interacting with public authorities			-	-	46.9		
DG.04: Internet use for purchases			-	-	79.0		
DG.05: Businesses with a website			-	-	51.6		
DG.06: Businesses using AI technologies			-	-	66.3		
DG.07: ICT services exports			74.7	45.3	72.9		
Greening			**20**	**15**	**6**	**-14**	**6/6**
GR.01: CO2 emissions intensity			33.1	35.5	31.7	-1.4	
GR.02: Installed renewable power capacities			15.9	22.1	26.1	+10.2	
GR.03: Energy productivity			46.6	48.9	45.1	-1.5	
GR.04: Water productivity			57.4	47.8	41.8	-15.6	
GR.05: Waste intensity			79.3	61.9	58.7	-20.6	
GR.06: Municipal waste in landfills			26.9	25.0	23.1	-3.8	

Montenegro

Key highlights

Montenegro is the top-performing economy in the region in terms of overall convergence with the EU, leading in three out of the five policy clusters. However, it recorded the sharpest decrease in the *Greening* cluster across the region.

- Montenegro stands out as the regional leader in the **Infrastructure and Connectivity** cluster. This cluster also represents the economy's fastest area of convergence, especially in terms of energy and digital infrastructure. However, transport infrastructure remains a bottleneck, with low road and rail network densities and underdeveloped freight transport.
- **Skills** is the third cluster in which Montenegro leads the region. The economy has made good progress in improving educational outcomes and overall labour productivity, particularly against the backdrop of rising employment rates. However, expanding the skills pool by integrating youth into the labour force and providing continuous skill development opportunities for the adult population remain ongoing challenges.
- Despite a slight decline in its score over time, Montenegro remains the regional leader in the **Business Environment** cluster. The economy outperforms the EU average in both attracting foreign and domestic private investment. However, despite moderate progress in creating a level playing field, it continues to struggle with a relatively high level of informal employment and perceived corruption.
- Montenegro's lowest regional ranking is the **Digital Transformation** cluster, where it ranks third. While the population has widespread internet usage, and digital skill levels close to the EU average, interactions with public authorities and online purchases are significantly below the EU average.
- Despite deteriorating outcomes since 2014-16, Montenegro remains the second-best performer in the region for the **Greening** cluster. However, all indicators have diverged from the EU, reflecting relatively slow progress. The lack of efficient resource use – highlighted by low water productivity and high levels of waste intensity – poses a risk to the sustainability of economic growth.

Table A B.4. Montenegro's economic convergence by cluster and indicator

0 25 50 75 100

Overall score			Overall ranking				
2014-16	2017-19	2020-23	2020-23				
67	71	67	1/6				
Indicators			Performance relative to the EU (EU=100)			Change	Ranking
			2014-16	2017-19	2020-23	2014-16 to 2020-23	2020-23
Infrastructure and connectivity			**52**	**62**	**80**	**+28**	**1/6**
IC.01: Road infrastructure density			44.4	38.3	37.8	-6.6	
IC.02: Rail infrastructure density			35.8	35.7	35.8	+0.0	
IC.03: Rail freight			0.65	0.77	0.9	+0.3	
IC.04: Power losses			63.3	61.4	67.7	+4.4	
IC.05: Electricity cost			51.6	53.4	92.8	+41.2	
IC.06: Mobile cellular penetration			131.4	144.0	150.2	+18.8	
IC.07: Broadband speed			32.0	29.6	55.0	+23	
Skills			**49**	**55**	**51**	**+2**	**1/6**
SK.01: Labour productivity			45.1	46.7	48.6	+3.5	
SK.02: Employment rate			81.3	81.3	79.2	-1.9	
SK.03: PISA average score: mathematics			85.8	88.2	85.6	-0.2	
SK.04: Youth NEET rate			63.6	58.6	48.6	-15.0	
SK.05: Labour force with advanced education			101.7	102.6	104.6	+2.9	
SK.06: Lifelong learning			30.2	26.6	31.2	+1.0	
SK.07: R&D expenditures			16.7	18.6	21.9	+5.2	
Business Environment			**86**	**91**	**80**	**-6**	**1/6**
BE.01: Bank non-performing loans			68.8	89.2	48.0	-20.8	
BE.02: Domestic credit to the private sector			56.4	57.3	58.9	+2.5	
BE.03: Private investment			95.3	114.6	102.4	+7.1	
BE.04: FDI net inflows			232.0	331.1	724.5	+492.5	
BE.05: Control of corruption			52.9	56.3	54.1	+1.2	
BE.06: Estimated informal employment			17.9	16.3	20.9	+3.0	
BE.07: Trade flows			53.7	57.4	56.0	+2.3	
BE.08: SME export performance			145.4	146.5	138.4	-16.0	
Digital Transformation			**-**	**-**	**64**	**-**	**3/6**
DG.01: Population with digital skills			-	-	90.6		
DG.02: Internet use by individuals			88.6	88.9	95.9		
DG.03: Internet use for interacting with public authorities			-	-	52.1		
DG.04: Internet use for purchases			-	-	39.2		
DG.05: Businesses with a website			-	97.7	109.5		
DG.06: Businesses using AI technologies			-	-	57.1		
DG.07: ICT services exports			94.2	69.5	90.1		
Greening			**81**	**77**	**60**	**-21**	**2/6**
GR.01: CO2 emissions intensity			86.5	79.0	71.8	-14.7	
GR.02: Installed renewable power capacities			204.6	190.3	158.9	-45.7	
GR.03: Energy productivity			92.8	86.2	77.1	-15.7	
GR.04: Water productivity			36.2	36.8	34.1	-2.1	
GR.05: Waste intensity			62.1	59.9	59.3	-2.8	
GR.06: Municipal waste in landfills			28.2	28.4	24.7	-3.5	

North Macedonia

Key highlights

North Macedonia ranks fourth in the region, with limited progress in closing the gap with the EU since 2014-16. While the economy has shown moderate convergence in the Business Environment cluster, worsening outcomes in Infrastructure and Connectivity and Greening have hindered its overall convergence.

- **Infrastructure and Connectivity** is the most challenging policy area for North Macedonia, where it ranks second-to-last in the region. The economy has experienced a decline across most indicators, particularly those related to transport infrastructure. Energy infrastructure is also an area of concern, with significant levels of power losses coupled with high electricity prices for businesses.
- North Macedonia ranks third in the region in the **Skills** cluster, with stagnant performance over time. While educational outcomes and employment rates have improved, limited educational and training opportunities for adults, along with persistently low R&D expenditure, continue to weigh down the economy's performance.
- The **Business Environment** cluster represents North Macedonia's fastest area of convergence. The economy has made good strides in attracting greater volume of foreign direct investment (FDI) and in recording increased levels of private investment and trade. By contrast, challenges persist in ensuring a level playing field, with worsening outcomes concerning corruption.
- **Digital Transformation** is North Macedonia's best-performing area, ranking second in the region. The economy's developed ICT sector and relatively high adoption of digital technologies by its businesses contribute to this strong performance. However, the low level of interaction with public authorities highlights deficiencies in the digitalisation of public services.
- North Macedonia ranks third in the **Greening** cluster; however, like many economies in the region, it has experienced a diverging trend. The relative performance of all indicators has worsened, with particularly slow progress towards decarbonisation. The only area of convergence is waste management, with an increasing share of waste being recycled.

Table A B.5. North Macedonia's economic convergence by cluster and indicator

0 25 50 75 100

Overall score			Overall ranking				
2014-16	2017-19	2020-23	2020-23				
46	46	46	4/6				
Indicators			Performance relative to the EU (EU=100)			Change	Ranking
			2014-16	2017-19	2020-23	2014-16 to 2020-23	2020-23
Infrastructure and connectivity			**28**	**21**	**18**	**-10**	**5/6**
IC.01: Road infrastructure density			39.6	34.8	34.9	-4.7	
IC.02: Rail infrastructure density			53.4	52.4	52.5	-0.9	
IC.03: Rail freight			1.9	1.8	1.7	-0.2	
IC.04: Power losses			57.6	50.4	51.5	-6.1	
IC.05: Electricity cost			59.8	56.0	46.7	-13.1	
IC.06: Mobile cellular penetration			82.1	76.2	75.5	-6.6	
IC.07: Broadband speed			38.4	33.0	52.5	+14.1	
Skills			**40**	**50**	**41**	**+1**	**3/6**
SK.01: Labour productivity			44.7	44.9	46.1	+1.4	
SK.02: Employment rate			75.1	77.4	80.4	+5.3	
SK.03: PISA average score: Mathematics			76.2	80.8	82.1	+5.9	
SK.04: Youth NEET rate			47.3	44.7	50.7	+3.4	
SK.05: Labour force with advanced education			103.9	105.3	100.7	-3.2	
SK.06: Lifelong learning			28.5	23.5	23.1	-5.4	
SK.07: R&D expenditures			21.0	16.6	16.5	-4.5	
Business Environment			**57**	**60**	**61**	**+4**	**4/6**
BE.01: Bank non-performing loans			114.0	114.0	106.8	-13.3	
BE.02: Domestic credit to the private sector			56.3	58.8	63.3	+7.0	
BE.03: Private investment			106.4	92.2	98.6	-7.8	
BE.04: FDI net inflows			60.2	152.4	251.1	+190.9	
BE.05: Control of corruption			46.3	34.1	34.2	-12.1	
BE.06: Estimated informal employment			19.7	19.9	25.0	+5.3	
BE.07: Trade flows			53.8	60.7	67.6	+13.3	
BE.08: SME export performance			65.9	46.3	53.1	-12.8	
Digital Transformation			**-**	**-**	**65**	**-**	**2/6**
DG.01: Population with digital skills			-	-	63.2		
DG.02: Internet use by individuals			92.4	96.7	96.1		
DG.03: Internet use for interacting with public authorities			-	-	45.9		
DG.04: Internet use for purchases			-	-	54.9		
DG.05: Businesses with a website			70.7	-	66.6		
DG.06: Businesses using AI technologies			-	-	127.6		
DG.07: ICT services exports			102.4	91.7	121.6		
Greening			**57**	**54**	**45**	**-12**	**3/6**
GR.01: CO2 emissions intensity			75.7	72.5	63.2	-12.5	
GR.02: Installed renewable power capacities			108.1	98.6	88.1	-20	
GR.03: Energy productivity			89.7	86.0	81.8	-7.9	
GR.04: Water productivity			17.2	8.0	8.8	-8.4	
GR.05: Waste intensity			72.1	65.8	61.3	-8.8	
GR.06: Municipal waste in landfills			26.7	31.8	32.5	+5.8	

Serbia

Key highlights

Serbia shows the second-highest overall convergence in the region, with a slight improvement since 2014-16. The economy performs strongest in the Digital Transformation cluster, while the Greening cluster remains its most pressing challenge.

- Despite a decline since 2014-16, Serbia ranks second in the **Infrastructure and Connectivity** cluster. The economy has diverged from the EU average across all indicators related to transport infrastructure, with notable declines in rail and road network densities. While Serbia leads the region in digital infrastructure, the economy has also seen declines in both mobile cellular penetration and broadband speed.
- Serbia ranks second in the region in the **Skills** cluster, showing positive convergence since 2014-16. The economy demonstrates higher employment levels, including among youth, and has made overall progress in improving educational outcomes, as reflected in its results from the Programme for International Student Assessment (PISA). However, it continues to face obstacles in boosting labour productivity, highlighting, among others, the need for greater policy focus on upskilling and reskilling the adult population.
- Serbia has shown convergence with the EU in the area of **Business Environment**, where it ranks third in the region. The economy has made notable progress in attracting higher levels of investment, both from foreign investors and domestic sources. However, challenges remain in ensuring a level playing field, with high levels of informal employment and rising concerns about corruption. Additionally, trade performance has diverged from the EU average, reflected in the relative decreases in both trade flows and the export activity of small and medium-sized enterprises (SMEs).
- Serbia stands out as the regional leader in the **Digital Transformation** cluster. High levels of digital skills, strong engagement of the population with public services and economic activities online, and a robust ICT sector position Serbia ahead of its peers. However, businesses appear slow in adopting AI technologies, pointing to a lack of readiness or supportive ecosystems for advanced digital integration.
- **Greening** is Serbia's most challenging area, with the economy ranking second-to-last in the region and experiencing substantial deterioration since 2014-16. All the indicators have worsened, reflecting particularly slow progress in decarbonisation – evidenced by the sluggish growth of renewable energy capacity – and in promoting sustainable resource use.

Table A B.6. Serbia's economic convergence by cluster and indicator

0 25 50 75 100

Overall score			Overall ranking				
2014-16	2017-19	2020-23	2020-23				
51	48	52	2/6				
Indicators			Performance relative to the EU (EU=100)			Change	Ranking
			2014-16	2017-19	2020-23	2014-16 to 2020-23	2020-23
Infrastructure and connectivity			**55**	**46**	**49**	**-6**	**2/6**
IC.01: Road infrastructure density			36.1	30.5	30.8	-5.3	
IC.02: Rail infrastructure density			84.7	83.6	75.3	-9.4	
IC.03: Rail freight			18.9	17.5	15.5	-3.4	
IC.04: Power losses			45.3	46.1	48.6	+3.3	
IC.05: Electricity cost			72.1	59.4	76.2	+4.1	
IC.06: Mobile cellular penetration			106.1	100.0	99.3	-6.8	
IC.07: Broadband speed			72.7	60.7	62.4	-9.8	
Skills			**42**	**42**	**50**	**+8**	**2/6**
SK.01: Labour productivity			39.4	37.7	37.5	-1.9	
SK.02: Employment rate			80.7	86.0	89.8	+9.1	
SK.03: PISA average score: mathematics			88.4	91.8	92.8	+4.4	
SK.04: Youth NEET rate			60.3	60.1	65.9	+5.6	
SK.05: Labour force with advanced education			90.1	93.3	95.0	+4.9	
SK.06: Lifelong learning			46.9	40.1	44.2	-2.7	
SK.07: R&D expenditures			36.2	39.4	40.3	+4.1	
Business Environment			**60**	**67**	**64**	**+4**	**3/6**
BE.01: Bank non-performing loans			49.5	102.8	88.4	+47.6	
BE.02: Domestic credit to the private sector			43.7	46.1	45.4	+1.7	
BE.03: Private investment			84.0	90.5	90.4	+6.4	
BE.04: FDI net inflows			106.9	260.3	430.4	+323.5	
BE.05: Control of corruption			39.0	31.6	29.4	-9.6	
BE.06: Estimated informal employment			18.8	16.5	22.5	+3.7	
BE.07: Trade flows			42.1	47.4	56.3	-6.8	
BE.08: SME export performance			120.8	101.6	96.1	-24.7	
Digital Transformation			**-**	**-**	**70**	**-**	**1/6**
DG.01: Population with digital skills			-	-	68.4		
DG.02: Internet use by individuals			85.4	90.9	93.6		
DG.03: Internet use for interacting with public authorities			-	-	67.8		
DG.04: Internet use for purchases			-	-	72.2		
DG.05: Businesses with a website			99.0	107.2	109.2		
DG.06: Businesses using AI technologies			-	-	17.3		
DG.07: ICT services exports			118.1	144.1	152.9		
Greening			**45**	**37**	**27**	**-18**	**5/6**
GR.01: CO2 emissions intensity			48.0	44.4	42.3	-5.7	
GR.02: Installed renewable power capacities			91.9	86.8	74.2	-17.7	
GR.03: Energy productivity			59.3	55.4	50.5	-8.8	
GR.04: Water productivity			13.5	10.7	12.1	-1.4	
GR.05: Waste intensity			96.2	82.4	65.9	-30.3	
GR.06: Municipal waste in landfills			34.7	29.5	28.1	-6.6	

Annex C. Methodology

Background and rationale

The *Economic Convergence Scoreboard for the Western Balkans* (referred to hereafter as the Scoreboard) provides a comparative assessment of the convergence of the six Western Balkan economies (WB6) relative to the European Union (EU). It aims to assist the WB6 in identifying the main policy areas requiring focused attention to accelerate economic convergence with the OECD and the EU. Building on the pilot Scoreboard, first published in 2023, this second edition further expands the scope and refines the methodology.

GDP per capita is the main indicator used to assess the level of economic convergence, as it provides a snapshot of relative prosperity across regions and countries. However, on its own, it offers limited insights into the underlying factors driving economic growth. The Scoreboard bridges this gap by combining policy-relevant analysis and data to better understand and monitor the key drivers of economic performance.

Drawing primarily on the OECD's *Western Balkans Competitiveness Outlook 2024*, the Scoreboard covers five main policy clusters that are key to long-term economic growth:

1. **Infrastructure and Connectivity**: Infrastructure and connectivity enable the efficient movement of goods, services and people, improving access to markets and boosting economic activities.
2. **Skills**: As a key component of human capital, skills contribute to workforce productivity and adaptability, enabling economies to adopt and innovate with new technologies.
3. **Business Environment**: A competitive business environment promotes investment, fosters entrepreneurship and cultivates an ecosystem where businesses can operate efficiently.
4. **Digital Transformation**: Digital transformation enhances productivity, innovation and access to information, enabling economies to modernise and compete effectively.
5. **Greening**: Greening economies ensures the sustainability of economic growth, reducing environmental risks and fostering resource efficiency.

The Scoreboard assesses the level of convergence of the Western Balkan economies across these five clusters, utilising a total of 35 indicators. The indicators were selected based on relevance, reliability and availability:

- **Relevance**: While the Scoreboard does not exhaustively cover all areas relevant to economic growth, it prioritises indicators identified in the OECD's work and academic literature as having an impact on economic performance. Statistical tests have then been undertaken to explore the causal relationship between the indicators and GDP per capita, informing the final selection of indicators in the Scoreboard.
- **Reliability**: The Scoreboard mainly draws on comparable data from national statistical offices, leveraging their extensive co-operation with the OECD within the framework of the *Western Balkans Competitiveness Outlook* and the *SME Policy Index for the Western Balkans and Türkiye*. It also draws on data from reputable international sources, such as the OECD, Eurostat and the World Bank.
- **Availability**: The limited statistical coverage in the Western Balkans, compared to OECD and EU members, influenced the selection of indicators. Indicators that lacked data for any economy across all periods, and for which no viable alternatives were available to allow for imputation, were excluded. For indicators with partial time-series coverage, missing data were addressed through imputations. The list of the 35 imputations, estimating a total of 86 data points (out of 9 708 points employed in the Scoreboard, or 0.9%), can be found in the technical note associated with the report.

The entire list of indicators considered for the Scoreboard is shown in Table A C.1.

Table A C.1. List of indicators of the measurement framework

Cluster name	Sub-group	No.	Indicator
Infrastructure and Connectivity	Transport infrastructure	IC.01	Road infrastructure density (km by area of 100 km^2)
		IC.02	Rail infrastructure density (km by area of 100 km^2)
		IC.03	Rail freight (millions of tonnes of goods transported per km of railway)
	Energy infrastructure	IC.04	Power losses (% of total energy injected into distribution and transmission grids)
		IC.05	Electricity cost (2021 USD in purchase power parity (PPP) per kilowatt-hour)
	Digital infrastructure	IC.06	Mobile cellular penetration (number of subscriptions per capita)
		IC.07	Broadband speed (megabytes per second)
Skills	Putting skills to effective use	SK.01	Labour productivity (2021 USD in PPP)
		SK.02	Employment rate (% of population aged 20-64 years)
	Skills development	SK.03	PISA average score: Mathematics
		SK.04	Youth NEET rate (% of 15-24 years old population)
		SK.05	Labour force with advanced education (% of total working-age population)
		SK.06	Lifelong learning (% of population aged 25-64 years)
	Leveraging skills for innovation	SK.07	R&D expenditures (% of GDP)
Business Environment	Enhancing access to finance and investment	BE.01	Bank non-performing loans (% of total gross loans)
		BE.02	Domestic credit to the private sector (% of GDP)
		BE.03	Private investment (% of GDP)
		BE.04	FDI net inflows (% of GDP)
	Strengthening the level-playing field	BE.05	Control of corruption (composite score)
		BE.06	Estimated informal employment (% of total employment)
	Promoting trade	BE.07	Trade flows (2021 USD per capita)
		BE.08	SME export performance (composite score)
Digital Transformation	Digital society	DG.01	Population with digital skills (% of population aged 16-74 years)
		DG.02	Internet use by individuals (% of total population)
		DG.03	Internet use for interacting with public authorities (% of population aged 16-74 years)
		DG.04	Internet use for purchases (% of population aged 16-74 years)
	Digital businesses	DG.05	Businesses with a website (% of enterprises with 10 employees or more)
		DG.06	Businesses using AI technologies (% of enterprises with 10 employees or more)
	Digital economy	DG.07	ICT services exports (% of GDP)
Greening	Accelerating decarbonisation	GR.01	CO2 emissions intensity (kg per unit of GDP in 2021 USD PPP)
		GR.02	Installed renewable power capacities (% of total power installed capacities)
	Enhancing resource use	GR.03	Energy productivity (GDP in 2021 USD PPP per kg of oil equivalent consumption)
		GR.04	Water productivity (GDP in 2015 USD PPP per cubic meter of total freshwater withdrawal)
		GR.05	Waste intensity (generated municipal waste per unit of GDP in 2021 USD PPP)
		GR.06	Municipal waste in landfills (% of municipal waste)

During the selection process for the Scoreboard indicators, a number of additional indicators were initially considered for inclusion due to their relevance for economic growth. However, many were ultimately excluded for consideration primarily due to limited data availability. Consequently, alternative indicators were selected that could capture comparable aspects of growth dynamics and best explain variations in economic performance. A list of excluded indicators is provided in the technical note associated with this report.

Convergence with the EU for each of the indicators was measured over three sub-periods, 2014-16, 2017-19 and 2020-23, rather than on an annual basis. Each data point represents the average value of the available years within each sub-period. This approach allowed for 1) integrating the inclusion of indicators not updated annually; 2) smoothing out cyclical variations or shocks; and 3) overcoming data inconsistencies or gaps.

Scoring

The Scoreboard leveraged two methods to calculate scores and rankings:

1. Each **individual indicator score** represents the ratio of a specific Western Balkan economy's value to the EU average. The sample used to calculate the EU average includes the 27 EU member states (EU 27).
2. Each **cluster score** was derived from a dedicated composite indicator using a three-step method:
   - **Outlier treatment**: The individual values of the WB6 and EU 27 were considered, leading to a total sample size of 33 individual economies. Outliers were then detected using a skew/kurtosis rule and treated with the Winsorisation method, allowing the adjustment of extreme values to reduce their impact without removing them from the dataset. This step is crucial for ensuring that the aggregation results are not distorted by the extreme values. The list of imputations is provided in the technical note associated with the report.
   - **Normalisation:** This process standardised all data points to a comparable scale, regardless of their original units or ranges. The distance-to-target (DTT) scales data based on the proximity of each value to a predefined target, ensuring that the resulting values reflect how close each observation is to the desired goal. The target values were the EU average values. The DTT score for the indicator x, $DTTscore_{x,i}$, was calculated as follows:

$$DTTscore_{x,i} = \frac{x_i - MIN_{x_i}}{TARGET\_EU_x - MIN_{x_i}}$$

     where x_i denotes the indicator value for economy i among Western Balkan and EU economies, MIN_{x_i} denotes the minimum value for indicators among Western Balkan and EU economies, and $TARGET\_EU_x$ denotes the EU average's value. It should be noted that for indicators where higher values are desirable, such as IC.04 (power losses), SK.04 (youth NEET), BE.01 (non-performing loans), BE.06 (estimated informal employment), GR.01 (CO2 emissions intensity), GR.05 (waste intensity) and GR.06 (municipal waste in landfills), the inverse value of x_i, $\frac{1}{x_i}$ has been considered.
   - **Weighting and aggregation:** Indicators were then aggregated into dimension scores. The average score for each cluster was derived from simple averages, giving each indicator an equal weight. Each DTT score $DTTscore_{x,i}$ was assigned to cluster c, leading to $DTTscore_{x,c,i}$.The cluster c average score for economy i was calculated as the following:

$$CLUSTERscore_{c,i} = \frac{\sum_i^{X_c} DTTscore_{x,c,i}}{X_c}$$

   - where X_c denotes the total number of indicators x in cluster c.

Limitations

The Scoreboard is a valuable tool for Western Balkan policy makers, helping them identify the bottlenecks that hinder faster economic convergence. Yet, the method has certain limitations, as outlined in Table A C.2.

Table A C.2. Limitations of the Economic Convergence Scoreboard for the Western Balkans 2025

Analytical framework	While the Scoreboard focuses on areas crucial for accelerating the economic convergence of the Western Balkans, it does not cover all relevant areas exhaustively.
	Constraints in data availability and comparability limited the choice of indicators.
	The Scoreboard data cover around a decade, preventing analysis over a longer time frame.
Methodology	Despite the benefits of measuring convergence in three time periods, the Scoreboard does not fully capture the most recent developments and state-of-play.
	The DTT method measures how close an economy is to the target but does not provide insights into the underlying causes of the disparities.
	The DTT method assumes a linear relationship between the distance to the target and the degree of convergence. This assumption fails to account for the possibility of non-linear relationships, where the impact of improvements could vary at different stages.
	Assigning equal weight to indicators in the calculation of cluster scores may not adequately reflect their varying levels of importance in driving economic growth.
	Assigning equal weight to the EU's 27 economies to calculate EU averages may have introduced a bias in the EU's actual performance, over-weighting smaller economies.

Data

The complete list of indicators, including their definitions and sources, is detailed in Table A C.3. The detailed imputation procedures are provided in the technical note associated with the report.

Table A C.3. Scoreboard indicators: Information and data sources

Indicator	Definition numerator	Definition denominator (if applicable)	Source(s)	Imputation(s)
Connectivity and infrastructure				
Road infrastructure density (IC.01)	Road infrastructure km.	Area of 100 km2	(OECD, 2024[1]). Data for Albania sent by INSTAT to the OECD. Data for Kosovo sent by KAS to the OECD. Data for Montenegro sent by MONSTAT to the OECD.	Malta 2016, Finland 2020
Rail infrastructure density (IC.02)	Rail infrastructure km.	Area of 100 km2	(Eurostat, 2024[2]).	
Rail freight (IC.03)	Rail freight refers to the total movement of goods using inland transport on the railway infrastructure (millions of tonnes).	Km of railway	(Eurostat, 2024[3]). Data for Albania from (INSTAT, 2025[4]). Data for Kosovo from (KAS, 2024[5]). Data for Montenegro from (MONSTAT, 2024[6]). Data for Serbia from (SORS, 2024[7]).	
Power losses (IC.04)	Total energy losses.	Total energy injected into distribution and transmission grids	(CEER, 2017[8]; 2020[9]). Additional data for Albania from (Energy Regulatory Authority, 2023[10]). Data for Kosovo sent by KAS to the OECD.	Bosnia and Herzegovina 2020, Montenegro 2020, North Macedonia 2020, Serbia 2020, Finland 2017 and 2020, Greece 2020, Italy 2020
Electricity cost (IC.05)	Average electricity price (excluding all taxes and levies) for non-household consumers for consumption between 500 MWh and 19999 MWh. 2021 USD per kWh in PPP.		OECD calculations based on (Eurostat, 2024[11]).	Albania 2016
Mobile cellular penetration (IC.06)	Number of mobile cellular subscriptions.	Population	(World Bank, 2025[12]). Additional data for Albania from (ARKEP, 2018[13]; 2021[14]). Additional data for Bosnia and Herzegovina sent by the Agency for Statistics of Bosnia and Herzegovina to the OECD. Additional data for Kosovo sent by KAS to the OECD.	
Broadband speed (IC.07)	Megabytes.	Second	(Cable.co.uk, 2024[15]).	All economies 2016

Indicator	Definition numerator	Definition denominator (if applicable)	Source(s)	Imputation(s)
Skills				
Labour Productivity (SK.01)	GDP in 2021 USD in PPP.	Number of hours worked	(ILO, 2024[16]). OECD calculations for Kosovo from (European Commission, 2019[17]), (European Commission, 2020[18]), (European Commission, 2022[19]) and (European Commission, 2023[20]).	
Employment rate (SK.02)	Population aged 20 to 64 in employment.	Total population aged 20 to 64	(Eurostat, 2025[21]). Data for Albania from (European Commission, 2024[22]), (INSTAT, 2025[23]) and (European Commission, 2020[24]). Data for Bosnia and Herzegovina from (European Commission, 2020[25]) and (European Commission, 2024[26]). Data for Kosovo from (European Commission, 2020[27]) and (European Commission, 2024[28]). Additional data for Montenegro from (MONSTAT, 2024[29]). Additional data for North Macedonia from (MAKSTAT, 2023[30]) and (MAKSTAT, 2024[31]).	
PISA average score: Mathematics (SK.03)	PISA performance score in mathematics.		(OECD, 2024[32]).	Bosnia and Herzegovina 2015 and 2022, Serbia 2015
Youth NEET rate (SK.04)	Population aged 15 to 24 not in employment, education or training.	Total population aged 15 to 24	(Eurostat, 2025[33]) and (ILO, 2024[34]). Additional data for Albania sent by INSTAT to the OECD. Additional data for Montenegro from (MONSTAT, 2024[29]). Additional data for North Macedonia from (MAKSTAT, 2025[35]). Data for Kosovo from (KAS, 2025[36]).	
Labour force with advanced education (SK.05)	Population with advanced education (short-cycle tertiary education, a bachelor's degree or equivalent education level, a master's degree or equivalent education level, or doctoral degree or equivalent education level according to the International Standard Classification of Education 2011.)	Working-age population	(ILO, 2024[37]). Additional data for Albania sent by INSTAT to the OECD. Additional data for Montenegro sent by MONSTAT to the OECD.	
Lifelong learning (SK.06)	Population aged 25-64 who have taken education or training.	Population aged 25 to 64	(Eurostat, 2024[38]). Data for Albania and Bosnia and Herzegovina from (European Commission, 2024[39]). Additional data for Albania sent by INSTAT to the OECD. Data for Kosovo sent by KAS to the OECD.	
R&D expenditure (SK.07)	Gross domestic expenditures on R&D.	GDP	(Eurostat, 2024[40]) and (World Bank, 2024[41]). Additional data for Albania from (Hach and Trenkmann, 2019[42]) and sent by INSTAT to the OECD. Additional data for Bosnia and Herzegovina sent by the Agency for Statistics of Bosnia and Herzegovina to the OECD. Data for Kosovo from (Bertelsmann Stiftung, 2020[43]; 2022[44]). Data for Montenegro from (European Commission, 2024[39]). Additional data for North Macedonia and Serbia sent by MAKSTAT and SORS to the OECD.	

Indicator	Definition numerator	Definition denominator (if applicable)	Source(s)	Imputation(s)
Business Environment				
Bank non-performing loans (BE.01)	Value of non-performing loans.	Value of the loan portfolio	(IMF, 2025[45]). Data for Serbia from (National Bank of Serbia, 2024[46]).	
Domestic credit to the private sector (BE.02)	Financial resources provided to the private sector by financial corporations that establish a claim for repayment.	GDP	(World Bank, 2024[47]). Data for the European Union from (Eurostat, 2024[48]).	
Private investment (BE.03)	Land improvements, plant and machinery equipment purchases by businesses, augmented by purchase and renovation of dwellings made by households.	GDP	(Eurostat, 2024[48]) and (World Bank, 2024[49]). Additional data for Albania sent by INSTAT to the OECD.	Bosnia and Herzegovina (all years), Montenegro (all years), Bulgaria 2020
FDI net inflows (BE.04)	New FDI (foreign direct investment) flows adjusted from disinvestment.	GDP	(World Bank, 2024[50]).	
Control of Corruption (BE.05)	The extent to which public power is exercised for private gain, including petty and grand forms of corruption, and "capture" of the state by elites and private interests. The strength and effectiveness of an economy's policy and institutional framework to prevent and combat corruption.		(World Bank, 2024[51]).	
Estimated informal employment (BE.06)	Estimated population in informal employment.	Population in employment	Data for Albania from (WIIW, 2025[52]) and additional data sent by INSTAT. Data for Bosnia and Herzegovina from (ILO, 2024[53]). Data for Kosovo from (ETF, 2024[54]) and additional data sent by KAS. Montenegro data from (UNDP, 2016[55]). Data for North Macedonia from (MAKSTAT, 2025[35]). Data for Serbia from (SORS, 2025[56]).	Kosovo 2014, 2015, 2016, 2019, 2023. Montenegro 2017, 2023. Denmark 2020. Germany 2016, 2019. Romania 2016, 2019, 2022.
Trade flows (BE.07)	Exports and imports of goods and services in 2021 USD in PPP.	Population	OECD calculations are based on (World Bank, 2024[57]) and (World Bank, 2024[58]).	

Indicator	Definition numerator	Definition denominator (if applicable)	Source(s)	Imputation(s)
SME export performance (BE.08)	Share of exports realised by firms with fewer than 250 employees (small and medium-sized enterprises, SMEs) in total exports.	Share of gross value added (GVA) in total GVA	Numerator: (Eurostat, 2025[59]) (OECD, 2022[60]) and (OECD, 2019[61]). Additional data for Albania sent to the OECD by INSTAT. Additional data for Kosovo sent by KAS to the OECD. Additional data for Serbia sent by SORS to the OECD.	Kosovo 2016, Montenegro 2019, 2020.
			Denominator: (Eurostat, 2024[62]). (OECD, 2022[60]) and (OECD, 2019[61]). Additional data for Albania from (INSTAT, 2024[63]). Additional data for Bosnia and Herzegovina from (Agency for Statistics of Bosnia and Herzegovina, 2020[64]; 2023[65]; 2024[66]) and (European Commission, 2024[67]). Additional data for Kosovo from (European Commission, 2024[67]). Additional data for Montenegro from (MONSTAT, 2024[68]), for North Macedonia from (MAKSTAT, 2024[69]). Additional data for Serbia from (SORS, 2024[70]).	Kosovo 2017, 2020.
Digital Transformation				
Population with digital skills (DG.01)	Number of individuals with above basic overall digital skills, aged 16 to 74.	Total number of individuals aged 16 to 74	(Eurostat, 2024[71]) and (Eurostat, 2024[72]). Additional data sent to the OECD by KAS for Kosovo and MAKSTAT for North Macedonia.	
Internet use by individuals (DG.02)	Population that used the internet. Internet users are individuals who have used the internet (from any location) in the last 3 months.	Total population	(World Bank, 2024[73]). Additional data from (Eurostat, 2024[74]) for Kosovo.	
Internet use for interacting with public authorities (DG.03)	Population who interacted with public authorities within the last 12 months before the survey, aged 16 to 74.	Total number of individuals aged 16 to 74	(Eurostat, 2024[75]). Additional data for Serbia sent by SORS to the OECD.	
Internet use for purchases (DG.04)	Population who bought or ordered using the internet for private use within the last 12 months before the survey. Manually typed emails excluded.	Total number of individuals aged 16 to 74	(Eurostat, 2024[76]). Additional data for Albania sent by INSTAT to the OECD. Additional data for Kosovo sent from KAS to the OECD.	
Businesses with a website (DG.05)	Enterprises with at least 10 persons employed and that have a website.	Enterprises with at least 10 persons	(Eurostat, 2024[77]). Additional data from (INSTAT, 2024[78]) for Albania. Additional data from (KAS, 2023[79]) for Kosovo. Additional data from (MAKSTAT, 2024[80]) for North Macedonia. Additional data from (MONSTAT, 2024[81]) for Montenegro.	
Businesses using AI technologies (DG.06)	Enterprises with at least 10 persons employed and that use artificial intelligence (AI) technologies, text mining, speech recognition, natural language generation, image recognition and processing,	Enterprises with at least 10 persons	(Eurostat, 2025[82]). Additional data for Albania sent by INSTAT to the OECD. Additional data from (RCC, 2022[83]) for Kosovo and North Macedonia.	

Indicator	Definition numerator	Definition denominator (if applicable)	Source(s)	Imputation(s)
	machine learning, technologies automating different workflows or assisting in decision making, or technologies enabling machines to physically move by observing their surroundings and taking autonomous decision.			
ICT services exports (DG.07)	ICT service exports. These include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions) in current USD.	GDP in current USD	Numerator: (World Bank, 2024[84]). Denominator: (World Bank, 2024[85]).	
Greening				
CO2 emissions intensity (GR.01)	CO2 emissions from fuel combustion in kilogram.	GDP in 2021 USD in PPP	(World Bank, 2025[86]). For Kosovo: OECD calculations based on (IEA, 2024[87]) and (World Bank, 2024[58]).	
Installed renewable power capacities (GR.02)	Total renewable power installed capacities.	Total power installed capacities	(IRENA, 2024[88]).	
Energy productivity (GR.03)	GDP in 2021 USD in PPP.	Kilogram of oil equivalent consumption	OECD estimates from (Eurostat, 2024[89]).	
Water productivity (GR.04)	Cubic metre of abstracted water.	GDP in 2015 USD in PPP	(World Bank, 2025[90]). For Kosovo: OECD calculations based on additional data sent by KAS for Kosovo, (World Bank, 2024[58]) and (EEA, 2024[91]).	
Waste intensity (GR.05)	Waste excluding major mineral waste in kilograms.	GDP in 2021 USD in PPP	Numerator: (Eurostat, 2024[92]). Additional data from INSTAT for Albania. Denominator: (World Bank, 2024[58]).	
Municipal waste in landfills (GR.06)	Municipal waste disposed on landfills.	Total municipal waste	(Eurostat, 2024[92]).	

This annex is further complemented by a technical note that offers further information on the scoring, the selection of indicators and the data imputation procedures. It also provides an assessment of the statistical robustness and relevance of the general analysis. The technical note can be accessed on https://www.oecd.org/content/dam/oecd/en/about/programmes/grc/grc-see/scoreboard-2025/Methodology-Chapter-technical-note-final.pdf.

References

Agency for Statistics for Bosnia and Herzegovina (2023), *Structural Business Statistics 2021*, https://bhas.gov.ba/data/Publikacije/Bilteni/2023/SBS_00_2021_TB_1_EN.pdf. [65]

Agency for Statistics of Bosnia and Herzegovina (2024), *Structural Business Statistics 2022*, https://bhas.gov.ba/data/Publikacije/Bilteni/2024/SBS_00_2022_TB_1_EN.pdf. [66]

Agency for Statistics of Bosnia and Herzegovina (2020), *Business Statistics*, https://bhas.gov.ba/data/Publikacije/Saopstenja/2020/SBS_00_2019_Y1_0_BS.pdf. [64]

ARKEP (2021), *Annual Work Report 2021 [in Albanian]*, Regulatory Authority of Electronic and Postal Communications, https://www.arkep-rks.org/desk/inc/media/3753DC00-E80D-4297-A425-F5779F9933D6.pdf. [14]

ARKEP (2018), *Annual Work Report 2018 [in Albanian]*, Regulatory Authority of Electronic and Postal Communications, https://www.arkep-rks.org/desk/inc/media/A6F11C95-9ACD-4DB8-A02D-C45625CFC66E.pdf. [13]

Bertelsmann Stiftung (2022), *BTI 2022 Country Report – Kosovo*, Bertelsmann Stiftung, https://bti-project.org/fileadmin/api/content/en/downloads/reports/country_report_2022_RKS.pdf. [44]

Bertelsmann Stiftung (2020), *BTI 2020 Country Report – Kosovo*, Bertelsmann Stiftung, https://bti-project.org/fileadmin/api/content/en/downloads/reports/country_report_2020_RKS.pdf. [43]

Cable.co.uk (2024), *Worldwide Broadband Speed League 2024*, https://www.cable.co.uk/broadband/speed/worldwide-speed-league/ (accessed on 5 November 2024). [15]

CEER (2020), *2nd CEER Report on Power Losses*, Council of European Energy Regulators, https://www.ceer.eu/wp-content/uploads/2024/04/C19-EQS-101-03_Report_on_Power_Losses_3.pdf. [9]

CEER (2017), *CEER Report on Power Losses*, Council of European Energy Regulators, https://www.ceer.eu/publication/ceer-report-on-power-losses/. [8]

EEA (2024), *Water Abstraction by Source, 2000-2019*, European Environment Agency, https://www.eea.europa.eu/en/analysis/maps-and-charts/water-abstraction-by-source-2000?activeTab=8a280073-bf94-4717-b3e2-1374b57ca99d (accessed on 7 November 2024). [91]

Energy Regulatory Authority (2023), *Annual Report: The Situation of the Power Sector and ERE Activity during 2022*, https://ere.gov.al/images/files/2023/07/26/Annual_Report_2022.pdf. [10]

ETF (2024), *Key Policy Developments in Education, Training and Employment - Kosovo*, European Training Foundation, https://www.etf.europa.eu/sites/default/files/2025-02/Country%20Fiche_Kosovo_2024_EN_web.pdf. [54]

European Commission (2024), *Albania Report 2024*, https://enlargement.ec.europa.eu/albania-report-2024_en. [22]

European Commission (2024), *Bosnia and Herzegovina 2024 Report*, https://enlargement.ec.europa.eu/bosnia-and-herzegovina-report-2024_en. [26]

European Commission (2024), *European Innovation Scoreboard – Neighbouring Countries Database*, https://research-and-innovation.ec.europa.eu/document/download/e0f6f806-6f34-4574-a06f-32be59b47a70_en?filename=ec_rtd_eis-2024-neighborhood-database.xlsx (accessed on 5 November 2024). [39]

European Commission (2024), *Kosovo 2024 Report*, https://enlargement.ec.europa.eu/kosovo-report-2024_en. [28]

European Commission (2024), *SME Fact Sheets*, https://enlargement.ec.europa.eu/enlargement-policy/policy-highlights/sme-performance-review_en (accessed on 10 November 2024). [67]

European Commission (2023), *Economic Reform Programme (ERP) 2023-2025*, https://mfpt.rks-gov.net/desk/content/media/131FBDC9-AD9B-48D9-9714-29A7F2F1C5F4.pdf. [20]

European Commission (2022), *Economic Reform Programme (ERP) 2022-2024*, https://kryeministri.rks-gov.net/wp-content/uploads/2022/08/Economic-Reform-Programme-2022-24.pdf. [19]

European Commission (2020), *Albania Report 2020*, https://enlargement.ec.europa.eu/albania-report-2020_en. [24]

European Commission (2020), *Bosnia and Herzegovina 2020 Report*, https://enlargement.ec.europa.eu/bosnia-and-herzegovina-report-2020_en. [25]

European Commission (2020), *Economic Reform Programme 2020-2022*, https://mfpt.rks-gov.net/desk/content/media/8578F7DC-479A-4C30-BE55-69D44F7988C7.pdf. [18]

European Commission (2020), *Kosovo 2020 Report*, https://enlargement.ec.europa.eu/kosovo-report-2020_en. [27]

European Commission (2019), *Economic Reform Programme (ERP) 2019-2021*, https://neighbourhood-enlargement.ec.europa.eu/system/files/2019-04/kosovo_erp_2019-2021.pdf. [17]

Eurostat (2025), *Artificial Intelligence by Size Class of Enterprise*, https://doi.org/10.2908/ISOC_EB_AI (accessed on 8 January 2025). [82]

Eurostat (2025), *Employment and Activity by Sex and Age – Annual Data*, https://ec.europa.eu/eurostat/databrowser/product/page/LFSI_EMP_A (accessed on 6 March 2025). [21]

Eurostat (2025), *Trade by NACE Rev 2 Activity and Enterprise Size Class*, https://ec.europa.eu/eurostat/databrowser/product/page/ext_tec01__custom_14777946 (accessed on 11 January 2025). [59]

Eurostat (2025), *Young People Neither in Employment nor in Education and Training by Sex, Age and Labour Status*, https://ec.europa.eu/eurostat/databrowser/product/page/EDAT_LFSE_20 (accessed on Day March 2025). [33]

Eurostat (2024), *E-government Activities of Individuals via Websites*, https://doi.org/10.2908/ISOC_CIEGI_AC (accessed on 7 November 2024). [75]

Eurostat (2024), *Electricity Prices for Non-household Consumers – Bi-annual Data (from 2007 onwards)*, https://ec.europa.eu/eurostat/databrowser/product/page/NRG_PC_205 (accessed on 5 November 2024). [11]

Eurostat (2024), *Energy Productivity*, https://doi.org/10.2908/SDG_07_30 (accessed on 7 November 2024). [89]

Eurostat (2024), *Enterprise Statistics by Size Class and NACE Rev. 2 Activity (from 2021 onwards)*, https://doi.org/10.2908/SBS_SC_OVW (accessed on 10 November 2024). [62]

Eurostat (2024), *GERD by Sector of Performance*, https://doi.org/10.2908/RD_E_GERDTOT (accessed on 5 November 2024). [40]

Eurostat (2024), *Goods Transported*, https://doi.org/10.2908/RAIL_GO_TOTAL (accessed on 5 November 2024). [3]

Eurostat (2024), *Individuals – Internet Use*, https://doi.org/10.2908/ISOC_CI_IFP_IU (accessed on 7 November 2024). [74]

Eurostat (2024), *Individuals' Level of Digital Skills (from 2021 Onwards)*, https://doi.org/10.2908/ISOC_SK_DSKL_I21 (accessed on 7 November 2024). [72]

Eurostat (2024), *Individuals' Level of Digital Skills (until 2019)*, https://doi.org/10.2908/ISOC_SK_DSKL_I (accessed on 7 November 2024). [71]

Eurostat (2024), *Internet Purchases by Individuals (2020 onwards)*, https://doi.org/10.2908/ISOC_EC_IB20 (accessed on 7 November 2024). [76]

Eurostat (2024), *Investment Share of GDP by Institutional Sectors (Business Investment and Households Investment)*, https://doi.org/10.2908/NASA_10_KI (accessed on 18 November 2024). [48]

Eurostat (2024), *Municipal Waste by Waste Management Operations*, https://ec.europa.eu/eurostat/databrowser/view/SDG_12_50/default/table (accessed on 5 November 2024). [92]

Eurostat (2024), *Participation Rate in Education and Training (last 4 weeks) by Sex and Age*, https://doi.org/10.2908/TRNG_LFSE_01 (accessed on 5 November 2024). [38]

Eurostat (2024), *Total Length of Railway Lines*, https://doi.org/10.2908/RAIL_IF_LINE_TR (accessed on 5 November 2024). [2]

Eurostat (2024), *Websites and Functionalities by Size Class of Enterprise*, https://doi.org/10.2908/ISOC_CIWEB (accessed on 7 November 2024). [77]

Hach, K. and E. Trenkmann (2019), *Entrepreneurial Ecosystem in Albania with Focus on Tirana*, Challenge Fund, https://challengefund.euforinnovation.al/entrepreneurial-ecosystem-in-albania-with-focus-on-tirana/. [42]

IEA (2024), *Countries*, International Energy Agency, https://www.iea.org/countries (accessed on 7 November 2024). [87]

ILO (2024), *Labor Force with Advanced Education (% of Total Working-Age Population with Advanced Education)*, International Labour Organization/World Bank, https://data.worldbank.org/indicator/SL.TLF.ADVN.ZS (accessed on 5 November 2024). [37]

ILO (2024), *SDG indicator 8.2.1 - Annual Growth Rate of Output per Worker (GDP Constant 2017 international $ at PPP) (%)*, International Labour Organization, https://ilostat.ilo.org/data/# (accessed on 5 November 2024). [16]

ILO (2024), *SDG indicator 8.6.1 - Proportion of Youth (aged 15-24 years) not in Education, Employment or Training*, International Labour Organization, https://ilostat.ilo.org/data/# (accessed on 5 November 2024). [34]

ILO (2024), *Statistics on the Informal Economy*, International Labour Organization, https://ilostat.ilo.org/topics/informality/ (accessed on 5 November 2024). [53]

IMF (2025), *Financial Soundness Indicators*, International Monetary Fund, https://data.imf.org/?sk=51B096FA-2CD2-40C2-8D09-0699CC1764DA (accessed on 10 March 2025). [45]

INSTAT (2025), *Publications: Labour Market Books*, Institute of Statistics, https://www.instat.gov.al/en/publications/books/ (accessed on 6 March 2025). [23]

INSTAT (2025), *Transport, Accidents and Characteristics of Road Vehicles*, Institute of Statistics, https://www.instat.gov.al/en/themes/industry-trade-and-services/transport-accidents-and-characteristics-of-road-vehicles/#tab3 (accessed on 27 April 2025). [4]

INSTAT (2024), *Information and Communication Technologies*, Institute of Statistics, https://www.instat.gov.al/en/themes/science-technology-and-innovation/information-and-communication-technologies/ (accessed on 7 November 2024). [78]

INSTAT (2024), *Structural Business Statistics*, Institute of Statistics, https://www.instat.gov.al/en/themes/industry-trade-and-services/structural-business-statistics/#tab3 (accessed on 5 November 2024). [63]

IRENA (2024), *Renewable Energy Statistics 2024*, International Renewable Energy Agency, https://www.irena.org/Publications/2024/Jul/Renewable-energy-statistics-2024. [88]

KAS (2025), *Labour Force Survey*, Kosovo Agency of Statistics, https://askdata.rks-gov.net/pxweb/en/ASKdata/ASKdata__Labour%20market__Anketa%20e%20Fuqis%C3%AB%20Pun%C3%ABtore__Annual%20labour%20market/ (accessed on 7 March 2025). [36]

KAS (2024), *Transportation Statistics 2023*, Kosovo Agency of Statistics, https://askapi.rks-gov.net/Custom/793bd5c5-fa63-4f00-a914-2a234bfb4885.pdf. [5]

KAS (2023), *Usage of Information and Communication Technology (ICT) in Enterprises, 2022*, Kosovo Agency of Statistics, https://ask.rks-gov.net/Releases/Details/7646 (accessed on 7 November 2024). [79]

MAKSTAT (2025), *Labour Market Survey - Revision*, State Statistical Office, https://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__PazarNaTrud__PazarTrudRevizija/ (accessed on 7 March 2025). [35]

MAKSTAT (2024), *Anoucement: Use of Information and Communication Technologies in Business Entities [in Macedonian]*, State Statistical Office, https://www.stat.gov.mk/PrethodniSoopstenijaOblast.aspx?id=76&rbrObl=27 (accessed on 7 November 2024). [80]

MAKSTAT (2024), *Basic Structural Business Indicators, by Activity Sector, by NKD REV 2*, State Statistical Office, https://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__StrukturniStat__TekovniPodatoci/450_StrDel_Mk_03novaosndej_ml.px/?rxid=46ee0f64-2992-4b45-a2d9-cb4e5f7ec5ef (accessed on 5 November 2024). [69]

MAKSTAT (2024), *Working Age Population by Economic Activity, Age groups and Gender*, State Statistical Office, https://www.stat.gov.mk/pdf/2024/2.1.24.05_mk.pdf. [31]

MAKSTAT (2023), *Active Population in the Republic of North Macedonia: Results from the Labour Force Survey*, State Statistical Office, https://www.stat.gov.mk/pdf/2023/2.1.23.05_mk.pdf. [30]

MONSTAT (2024), *Annual Statistics of Transport, Storage and Communications*, Statistical Office of Montenegro, https://www.monstat.org/eng/page.php?id=1856&pageid=36 (accessed on 5 November 2024). [6]

MONSTAT (2024), *ICT Usage in Enterprises - Releases*, Statistical Office of Montenegro, https://www.monstat.org/eng/page.php?id=1667&pageid=1663 (accessed on 7 November 2024). [81]

MONSTAT (2024), *Statistical Yearbook 2024*, Statistical Office of Montenegro, https://monstat.org/eng/novosti.php?id=4064. [29]

MONSTAT (2024), *Structural Business Statistics - Releases*, Statistical Office of Montenegro, https://monstat.org/eng/page.php?id=265&pageid=67 (accessed on 5 November 2024). [68]

National Bank of Serbia (2024), *Annual Financial Stability Report*, https://nbs.rs/en/drugi-nivo-navigacije/publikacije-i-istrazivanja/GISFS/ (accessed on 5 November 2024). [46]

OECD (2024), *Annual Length of Inland Transport Infrastructure*, OECD, Paris, https://data-explorer.oecd.org/?pg=0&fc=Topic (accessed on 2025 April 26). [1]

OECD (2024), *PISA PUF Users Data Collection*, OECD, Paris, https://survey.oecd.org/index.php?r=survey/index&sid=197663&lang=en (accessed on 5 November 2024). [32]

OECD (2022), *SME Policy Index: Western Balkans and Turkey 2022: Assessing the Implementation of the Small Business Act for Europe*, OECD Publishing, Paris, https://doi.org/10.1787/b47d15f0-en. [60]

OECD (2019), *SME Policy Index: Western Balkans and Turkey 2019: Assessing the Implementation of the Small Business Act for Europe*, OECD Publishing, Paris, https://doi.org/10.1787/g2g9fa9a-en. [61]

RCC (2022), *Western Balkans Digital Economy Society Index*, Regional Cooperation Council, https://www.rcc.int/files/user/docs/43a521a624cf08523a2268a67a7be2ff.pdf. [83]

SORS (2025), *Decent Work and Economic Growth, Goal 8*, Statistical Office of the Republic of Serbia, https://sdg.indikatori.rs/en-US/area/decent-work-and-economic-growth/?subarea=SDGUN080301&indicator=080301IND02 (accessed on 7 March 2025). [56]

SORS (2024), *Structural Business Statistics*, Statistical Office of the Republic of Serbia, https://www.stat.gov.rs/en-us/oblasti/strukturne-poslovne-statistike/ (accessed on 5 November 2024). [70]

SORS (2024), *Transport of Passengers and Goods*, Statistical Office of the Republic of Serbia, https://www.stat.gov.rs/en-us/oblasti/saobracaj-i-telekomunikacije/prevoz-putnika-i-robe/ (accessed on 5 November 2024). [7]

UNDP (2016), *National Human Development Report "Informal Work: From Challenges to Solutions"*, United Nations Development Programme, https://www.undp.org/sites/g/files/zskgke326/files/migration/me/Montenegro_National-Human-Development-Report-2016_Informal-Work_Summary.pdf. [55]

WIIW (2025), *SEE Jobs Getaway Database, Western Balkans Labor Market Brief Publications*, Vienna Institute for International Economic Studies, https://wiiw.ac.at/see-jobs-gateway-database-ds-5.html (accessed on 7 March 2025). [52]

World Bank (2025), *Carbon Intensity of GDP*, https://donnees.banquemondiale.org/indicateur/EN.GHG.CO2.RT.GDP.PP.KD (accessed on 31 January 2025). [86]

World Bank (2025), *Mobile Cellular Subscriptions (per 100 people)*, https://data.worldbank.org/indicator/IT.CEL.SETS.P2 (accessed on 8 January 2025). [12]

World Bank (2025), *Water Productivity*, https://databank.worldbank.org/source/world-development-indicators/Series/ER.GDP.FWTL.M3.KD (accessed on 31 January 2025). [90]

World Bank (2024), *Domestic Credit to the Private Sector*, https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS (accessed on 5 November 2024). [47]

World Bank (2024), *Foreign Direct Investment, Net Inflows (% of GDP)*, https://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS (accessed on 5 November 2024). [50]

World Bank (2024), *GDP (Current USD)*, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD (accessed on 7 November 2024). [85]

World Bank (2024), *GDP per capita, PPP (constant 2021 international $)*, https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD (accessed on 5 November 2024). [58]

World Bank (2024), *Gross Fixed Capital Formation, Private Sector (% of GDP)*, https://data.worldbank.org/indicator/NE.GDI.FPRV.ZS (accessed on 5 November 2024). [49]

World Bank (2024), *ICT Service Exports (BoP, Current USD)*, https://data.worldbank.org/indicator/BX.GSR.CCIS.CD (accessed on 7 November 2024). [84]

World Bank (2024), *Individuals Using The Internet (% of Population)*, https://data.worldbank.org/indicator/IT.NET.USER.ZS (accessed on 7 November 2024). [73]

World Bank (2024), *Research and Development Expenditure (% of GDP)*, https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS (accessed on 5 November 2024). [41]

World Bank (2024), *Trade (% of GDP)*, https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS (accessed on 5 November 2024). [57]

World Bank (2024), *Worldwide Governance Indicators*, https://databank.worldbank.org/source/worldwide-governance-indicators (accessed on 5 November 2024). [51]

Economic Convergence Scoreboard for the Western Balkans 2025

The Scoreboard, whose pilot version was first released in 2023, is a tool to monitor and assess the Western Balkans' progress towards economic convergence with the European Union (EU). It supports policy-makers in pinpointing priority areas for narrowing the gap between the region and the EU, drawing on over 35 indicators across five policy clusters essential for sustainable and inclusive growth. These clusters are infrastructure and connectivity, skills, business environment, digital transformation and greening. The Scoreboard primarily draws on the data and input collected as part of decade-long policy assessments conducted by the OECD, most notably the Western Balkans Competitiveness Outlook and SME Policy Index for the Western Balkans and Türkiye.

Ministry of Foreign Affairs
Republic of Poland

POLAND25.EU

PRINT ISBN 978-92-64-82998-5
PDF ISBN 978-92-64-98696-1