



Western Balkans Labor Market Brief 2021

Special Topic –
Employment in new greenfield FDI

(September 2023)



Western Balkans Labor Market Brief for 2021 highlights:

- This report uses data from national labor force surveys to examine key labor market indicators for the six Western Balkan economies – Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia – in 2021. At the time this report was prepared, that is the latest year for which official statistics were available for all six economies.
- Economic activity, measured through real GDP, exceeded the pre-pandemic levels in 2021 in most of the Western Balkan countries, with Montenegro and North Macedonia being the exceptions. Still, most labor market indicators remained weaker than before the pandemic.
- Labor activity rates improved in most countries but remained at below their pre-pandemic levels everywhere but in Serbia. There were no big differences between the dynamics in female and male labor activity rates, although female labor force participation rates in the region remained far lower than the male rates.
- The impact of the COVID-19 pandemic can be seen on employment, as well: at the end of 2021, both the number of employed persons and the employment rate remained at below their pre-pandemic levels everywhere in the Western Balkans, except Kosovo. Between 2019 and 2021, the employment dynamics generally favored women rather than men: the female employment rate declined by less than the male. On the other hand, young people (15-24) and individuals with a low level of education experienced the greatest declines in employment rates during this period.
- Similarly, despite the improvement over the previous year, unemployment rates in 2021 remained at above their pre-pandemic levels everywhere in the region, except in Kosovo and North Macedonia. In most countries of the Western Balkans, the unemployment rates continued to be higher for women than for men. Unemployment remains an issue especially for young people, with most of the unemployment in the region being long term in nature.
- Nominal gross wages saw an increase in 2021 across all the Western Balkans countries, driven mainly by market forces, since the minimum wage increased only modestly in most countries. Wages increased in net terms as well, even after accounting for inflation, which improved workers' purchasing power.
- The increase in nominal gross wages was followed by an increase in labor productivity; consequently, nominal unit labor costs did not increase substantially in any of the countries. In Albania, Bosnia and Herzegovina, and Montenegro, they even declined; meanwhile, they rose in the other three economies, but only mildly.

This report and the accompanying database are available on the website of the Vienna Institute for International Economic Studies (wiiw) at <https://data.wiiw.ac.at/seejobsgateway.html>.

This report and the SEE Jobs Gateway are financially supported by



 Federal Ministry
Republic of Austria
Finance

Western Balkans Labor Market Brief 2021

September 2023

Acknowledgements

This report is the result of collaboration between the World Bank and the Vienna Institute for International Economic Studies (wiiw). The team comprised Indhira Santos and Cornelius von Lenthe (co-task team leaders, World Bank); Branimir Jovanović (wiiw), who wrote most of the report; Monika Schwarzhappel and Galina Vasaros (wiiw), who compiled the regionally comparable database on labor market outcomes and the statistical annex; Beata Borosak (wiiw), who compiled the fDi Markets data used for the special topic; David Zenz (wiiw), who created and completely redesigned the online graphical user interface; Beate Muck (wiiw), who was responsible for the production of graphs; Michaela Bönisch (wiiw), who formatted the publication; and Clive Liddiard, who provided editorial support.

The team is grateful for the collaboration of the individual statistical offices of the Western Balkan countries. The team would also like to thank the peer reviewers Stefanie Brodmann (Senior Economist, World Bank), Richard Record (Lead Economist, World Bank) and Sanja Madzarevic-Sujster (Senior Economist, World Bank), Ruvejda Aliefendic (Senior Private Sector Specialist, World Bank) and Harald Jedlicka (Senior Private Sector Specialist, World Bank) for their valuable comments and Xiaoqing Yu (Country Director, Western Balkans, World Bank), Paolo Belli (Practice Manager, Social Protection and Jobs, World Bank), and Mario Guadamillas (Practice Manager, Finance, Competitiveness and Innovation, World Bank) for overall guidance.

The team is grateful to the Austrian Federal Ministry of Finance for its financial support of this report and of the [SEE Jobs Gateway](#).

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Abbreviations, country classification, and country codes

Abbreviations

CEDEFOP	European Centre for the Development of Vocational Training
CPI	Consumer price index
EU	European Union
EUR	Euro
FDI	Foreign direct investment
GDP	Gross domestic product
HICP	Harmonized index of consumer prices
ILO	International Labour Organization
IESS	Integrated European Social Statistics (Regulation)
ISCED	International Standard Classification of Education
LFS	Labour Force Survey
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne – statistical classification of economic activities in the European Community
NCU	National currency unit
NEET	Young people neither in employment nor in education and training
OECD	Organisation for Economic Co-operation and Development
pp	Percentage point
PPP	Purchasing power parity
SEE	South Eastern Europe
ULC	Unit labor costs
wiiw	The Vienna Institute for International Economic Studies

Country codes

AL	Albania
AT	Austria
BA	Bosnia and Herzegovina
BG	Bulgaria
HR	Croatia
HU	Hungary
ME	Montenegro
MK	North Macedonia
RS	Serbia
XK	Kosovo

Executive Summary

The Western Balkans Labor Market Brief presents highlights of the SEE Jobs Gateway labor market observatory. This brief describes the development of key labor market indicators for all those beyond the age of 15 between the second quarter of 2019 until 2021. The data have been harmonized across countries, although due to methodological changes in the Labor Force Survey (LFS), selected indicators are not entirely comparable (Box 1). At the time this report was prepared, the latest year for which official statistics were available for all six economies was 2021. The full database, which includes all key labor market indicators disaggregated across gender, age and education since 2010, is available at <https://data.wiiw.ac.at/seejobsgateway-q.html>.

The Western Balkan countries underwent an economic revival in 2021, rebounding from the previous year's pandemic-induced downturn. GDP bounced back strongly in all economies, ranging from 13% in Montenegro to 3.9% in North Macedonia, driven by pent-up demand as consumers and investors resumed spending after the restrictions of the previous year. Most countries surpassed their pre-pandemic GDP levels, with Montenegro and North Macedonia being notable exceptions.

Together with the economic recovery, labor market indicators showed signs of improvement, though many of them remained at below their pre-pandemic levels. The labor activity rate in 2021 improved in four of the countries, with the biggest improvement – of 1 percentage point (pp) – in Kosovo. Conversely, Montenegro experienced the biggest decline in activity, of 2.3 pp. Despite the improvements, activity levels across the region remained low (ranging from 34% in Kosovo to 60% in Albania), and lower than their pre-pandemic levels (except in Serbia, where the same level was maintained). Although there were no significant differences between the dynamics of male and female labor activity, the female labor force participation rate remained considerably lower – on average 20 pp lower across all the countries. Moreover, the activity of young people (aged 15-24) remained at below pre-pandemic levels in all countries, except Serbia.

The impact on employment of the COVID-19 pandemic was still evident in 2021, with the employment rate remaining at below its pre-pandemic level in most of the countries. The rate in 2021 was above the 2019 level only in Kosovo (1 pp higher); meanwhile in Montenegro, it was 6.1 pp below the 2019 level. The employment dynamics between 2019 and 2021 were generally more favorable to women than to men, as female employment declined less than male. On the other hand, young people (15-24) and individuals with a low level of education experienced the greatest decline in employment during this period.

Unemployment remained high everywhere in the region, despite the better figures in 2021. The greatest improvement was seen in Kosovo, where the rate of unemployment in 2021 declined by 5.1 pp; this was followed by Montenegro, which saw an improvement of 1.3 pp. Serbia, on the other hand, witnessed the biggest increase: in 2021, its unemployment rate rose by 2 pp. All the countries of the region continued to have double-digit unemployment rates, ranging from 11% in Albania and Serbia to 21% in Kosovo. Female unemployment rates in the Western Balkans remained higher than the male rates in most of the countries – in some of them substantially higher. Unemployment continued to be an issue especially for young people, with most of the unemployment in the region being long term in nature.

Nominal gross wages saw an increase in 2021 across all the Western Balkan countries, driven mainly by market forces, as the minimum wage increased only modestly in most countries. The largest increase was in Serbia (9.4%), followed by Albania (7.7%); meanwhile Montenegro saw the smallest wage increase (1.3%). Wages in 2021 also increased in net terms and after controlling for inflation, leading to an improvement in workers' purchasing power; that said, the rise was generally weaker than in previous years. The increases in nominal gross wages in 2021 were accompanied – or even occasionally surpassed – by growth in labor productivity. As a result, nominal unit labor costs declined in Albania, Bosnia and Herzegovina, and Montenegro; they increased in the other three economies, though even there only mildly. The increase in unit labor costs in 2021 was smaller than in previous years everywhere in the region, except Kosovo.

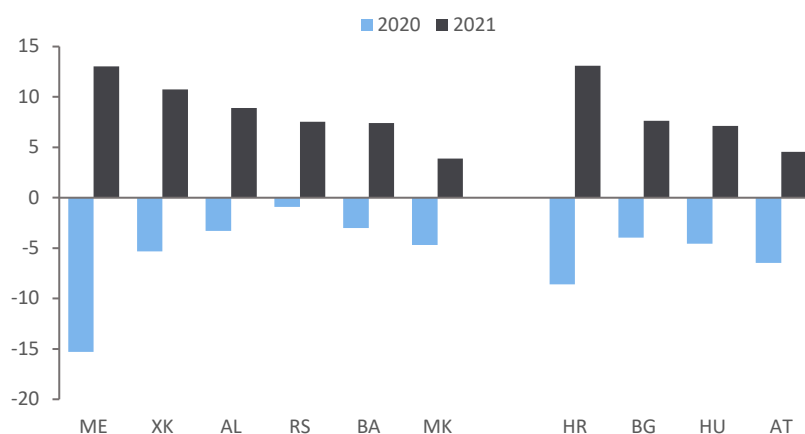
1. A year of economic recovery amid rising inflation

The year 2021 was one of economic recovery for the Western Balkans, after the pandemic-induced slump of the year before. GDP rebounded strongly in all the economies, driven by pent-up demand as consumers and investors resumed spending, following the restraints of the previous year. Montenegro witnessed the highest growth rate of 13%, driven by a successful tourist season. However, it had also experienced the largest decline in 2020 (15.3%). North Macedonia, on the other hand, had the weakest growth (3.9%), which came in the wake of a relatively strong contraction of 4.7% in 2020. The other countries experienced growth rates ranging from 7.5% to 10.7%, with better results in countries that had experienced steeper declines in 2020 (Figure 1).

The recovery in the Western Balkans was stronger than the recovery in the wider region. The report has selected four “regional peers” for the Western Balkans – Austria, Bulgaria, Croatia and Hungary – and throughout the text, compares developments in those countries to developments in the Western Balkans. Bulgaria, Croatia, and Hungary have been selected as they are neighboring countries, with a similar history, culture, and economic development. Austria has been added to this group because it is geographically close and its economic indicators often serve as a benchmark to which countries in the Western Balkans aspire. Compared to these regional peers, the Western Balkan economies saw slightly higher economic growth in 2021, as measured by growth in GDP (Figure 1).

GDP exceeded pre-pandemic levels in most (but not all) countries of the region. If one considers both the decline in 2020 and the recovery in 2021, Serbia saw the highest cumulative growth over the two years (6.6%). Albania, Bosnia and Herzegovina, and Kosovo ended 2021 with GDP higher than before the pandemic – by 5.3%, 4.2%, and 4.8%, respectively. However, at the end of 2021, GDP in Montenegro and North Macedonia remained at below the pre-pandemic level – 4.3% and 1% lower, respectively.

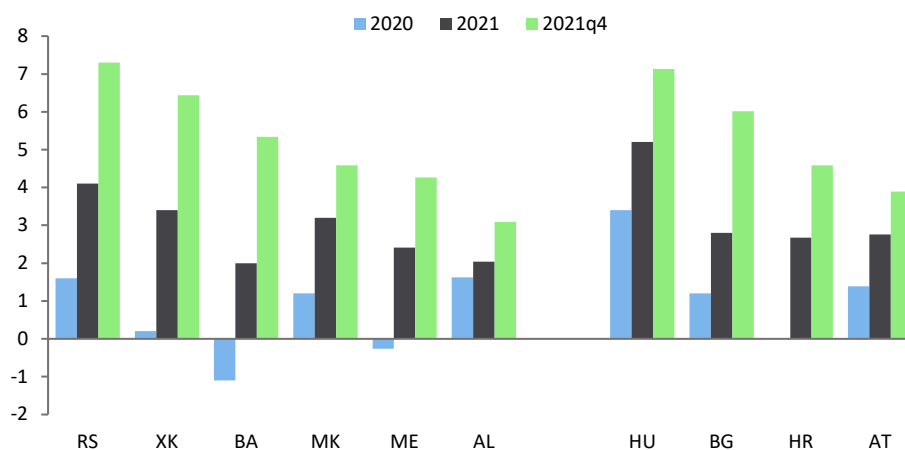
Figure 1 / Real GDP growth rates in 2020 and 2021 in the Western Balkans and the peer countries (% , year on year)



Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

After years of price stability, inflation in the Western Balkans began to accelerate in 2021. This was due to global supply-chain disruptions and strong domestic demand. Serbia had the highest inflation for the year at 4.1%, followed by Kosovo at 3.4%. Albania and Bosnia and Herzegovina had the lowest rate (2%). Inflation picked up significantly in the fourth quarter, reaching 7.3% in Serbia and 6.4% in Kosovo. Even in Albania, the country with the lowest inflation in the region, it rose to 3.1%. The inflationary trends in the Western Balkan countries were relatively similar to the trends found in their regional peers (Figure 2).

Figure 2 / Annual consumer price inflation in 2020 and 2021 in the Western Balkans and the peer countries (%)

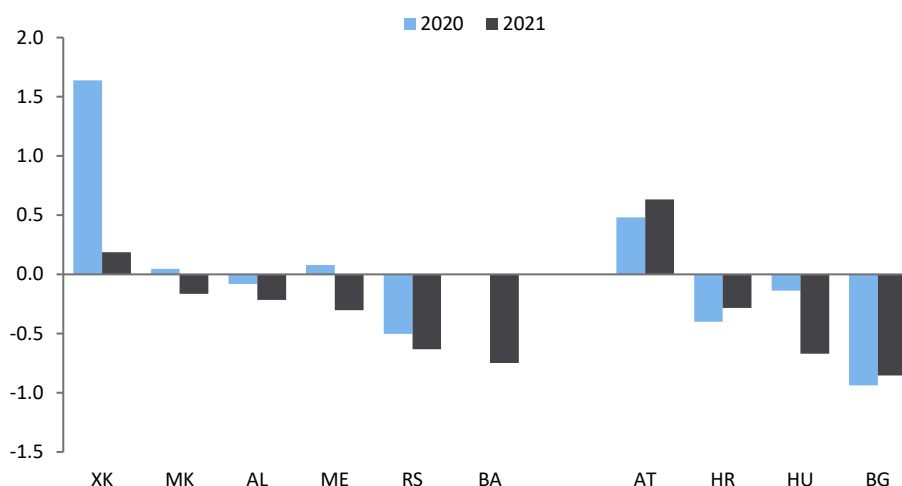


Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

2. Shrinking labor force, with activity still below pre-pandemic levels

The working-age population, defined as persons aged 15 years and over, decreased in 2021 in all Western Balkan economies (except Kosovo), due to declining fertility and high emigration. The decline in 2021 was bigger than that of 2020, perhaps because of the reopening of the borders. Kosovo, the only nation in the region with an expanding working-age population, also experienced a significant slowdown in its growth in 2021. Bosnia and Herzegovina and Serbia saw the largest decline in the working-age population (0.7%), while Albania, Montenegro, and North Macedonia contracted by less (around 0.2%). These trends are similar to those seen in Bulgaria, Croatia, and Hungary, which are also going through demographic decline. Austria, on the other hand, stands out for its growing working-age population (Figure 3).

Figure 3 / Annual change in the working-age population (15+) in 2020 and 2021 in the Western Balkans and the peer countries (%)



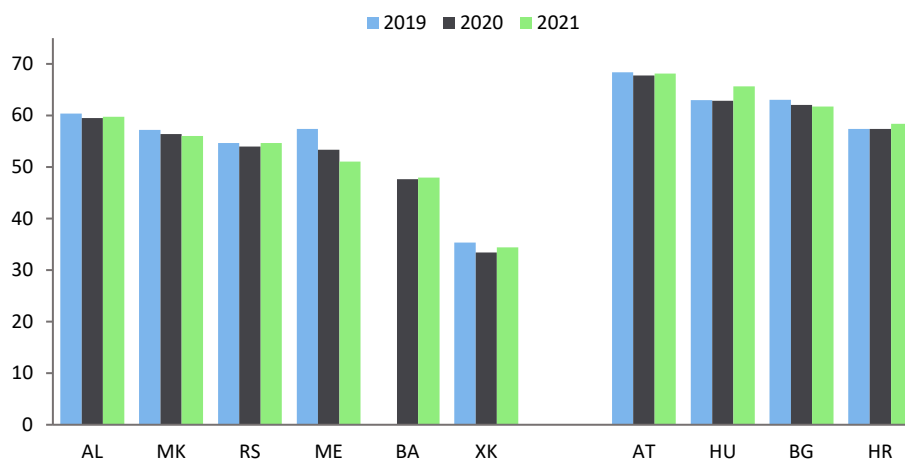
Note: No data for Bosnia and Herzegovina for 2020, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Activity rates improved in 2021 in most countries, after a significant decline in 2020 during the pandemic (Figure 4). This can be explained by the rebound in economic activity, as restrictions were lifted. The biggest improvement was seen in Kosovo, where the rate of activity increased by 1 pp. Serbia was next, with an increase of 0.7 pp, while in Albania and Bosnia and Herzegovina activity grew by 0.3 pp. In North Macedonia, activity declined by 0.4 pp, while Montenegro experienced a sizable contraction of 2.3 pp in its activity rate in 2021, despite the strong economic recovery. This may – at least to some extent – be due to the methodological changes to the Labor Force Survey that were introduced from 2021 in Montenegro, as well as in Bosnia and Herzegovina and Serbia (explained in Box 1).

Despite the improvement in most cases, activity rates remained at below their pre-pandemic levels in all the countries, except Serbia. Montenegro saw the biggest decline: its activity rate in 2021 was 6.4 pp lower than in 2019. Again, this decline may be due to the changes in the LFS that three of the countries introduced from 2021. When compared to their regional peers, it is striking how low economic activity is in the Western Balkan countries. Only Albania has an activity rate that comes close to that of the peer countries (around 60%). The activity levels in Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia are around 50-55%, while the activity level in Kosovo is significantly lower – just 34% (Figure 4).

Figure 4 / Activity rate in 2019-2021 in the Western Balkans and the peer countries (% of population aged 15+)



Note: No data for Bosnia and Herzegovina for 2019, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Box 1 / Methodological changes in the LFS data in 2021

Three Western Balkan economies started publishing LFS data according to a new methodology in 2021 – Bosnia and Herzegovina, Montenegro, and Serbia. The changes were implemented in accordance with the new Regulation (EU) 2019/1700 of the European Parliament and the Council, and followed new guidelines from the International Labour Organization.

The biggest change refers to the treatment of persons that produce agricultural goods and services for their own consumption, without bringing them to market. According to the new definition, those persons are no longer treated as employed. Some other changes relate to the treatment of workers who are on leave or absent from work for more than three months, though these changes should not have a big impact on the aggregate data.

The changes may lead to discrepancies in the data for years when the methodologies differ. Specifically, there may be changes in the activity, inactivity, employment, and unemployment indicators (only the working-age data will remain unchanged). **Therefore, one should exercise caution when interpreting changes between 2021 and previous years in LFS data for Bosnia and Herzegovina, Montenegro, and Serbia.**

Of those three countries, only Serbia has revised the data gathered prior to 2021 according to the new methodology. This, however, has only been done for the main aggregate indicators, such as total activity, employment, unemployment, and inactivity. Indicators for different sub-groups (such as age, gender, and education) have not been revised. Because the revision is incomplete, it was decided to present in this brief the old (unrevised) data for Serbia before 2021.

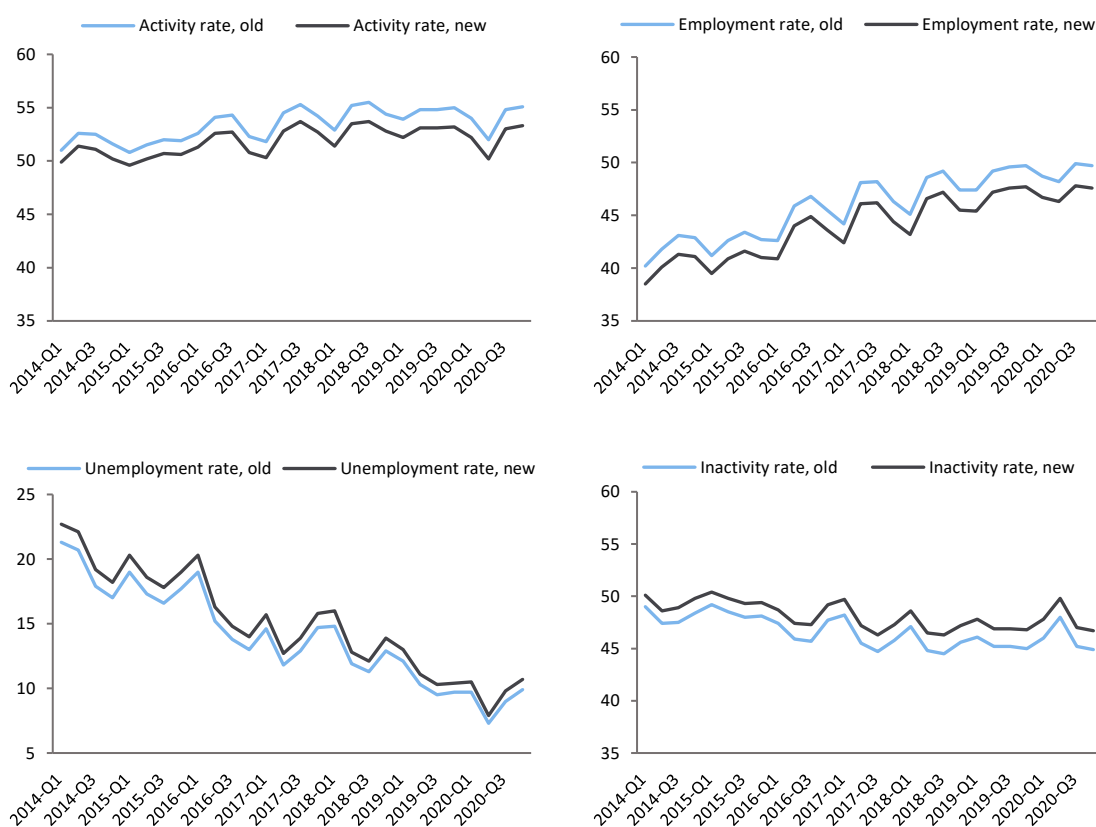
In order to understand the extent and direction of the changes, this box reports and discusses the main aggregate indicators for Serbia using both the old (unrevised) and new (revised) methodologies. Table 1 displays the main indicators for the last quarter of 2020. While the working-age population remains unchanged under the two methodologies, the active population is 105,000 smaller under the new methodology, while the inactive population is that amount larger. Similarly, the number of employed persons is lower under the new methodology, while the number of unemployed people is higher.

A similar pattern is observed if one looks at the rates, rather than the number of persons (bottom half of the table). The rate of activity is 1.8 pp lower according to the new methodology, while the rate of inactivity is that much higher. The rate of employment is 2.1 pp lower under the new methodology, while the unemployment rate is 0.8 pp higher.

Table 1 / Main LFS indicators for Q4 2020 for Serbia, according to old and new methodology

	Old methodology	New methodology	Change new - old
<i>(thousands of persons)</i>			
Population aged 15+	5882.8	5882.8	0
Active population	3241.9	3137	-104.9
Employed	2920.9	2801.8	-119.1
Unemployed	321	335.2	+14.2
Inactive population	2640.9	2745.8	+104.9
<i>(%)</i>			
			<i>(percentage points)</i>
Rate of activity	55.1	53.3	-1.8
Rate of employment	49.7	47.6	-2.1
Rate of unemployment	9.9	10.7	+0.8
Rate of inactivity	44.9	46.7	+1.8

Figure 5 displays the rates of activity, employment, unemployment, and inactivity under the old and new methodologies, for the period 2014-2020. One can see that the patterns from Table 1 are rather stable over time. The new LFS methodology produces consistently lower activity and employment rates in Serbia (some 1-2 pp lower). On the other hand, the rates of unemployment and inactivity are always higher under the new methodology (again by some 1-2 pp).

Figure 5 / Comparison between rates of activity, employment, unemployment, and inactivity in Serbia, under the old and new methodology, over time (%)

Source: Statistical Office of the Republic of Serbia.

In addition to these changes, there was a big methodological shift in the LFS in Bosnia and Herzegovina in 2020. This included altering the sampling methodology and frequency, and resulted in major changes to the data. **Hence, data on Bosnia and Herzegovina will not be reported for the years prior to 2020.**

Labor activity among women in the Western Balkans continues to be much lower than among men. In 2021, the difference was on average some 20 pp across all the countries. Albania stands out as the only country where more than half of the female working-age population formed part of the labor force. All other countries had female activity rates of below 50% – and in Kosovo, the rate was as low as 20%. The countries of the Western Balkans have an average female labor force participation rate that is 17 pp lower than the average activity in their regional peers. At the same time, the average male activity rate in the Western Balkans is just 8 pp lower than the average for the regional peers (Figure 6 and Figure 7).

Figure 6 / Female activity rate in 2021 in the Western Balkans and the peer countries (% of female population aged 15+)

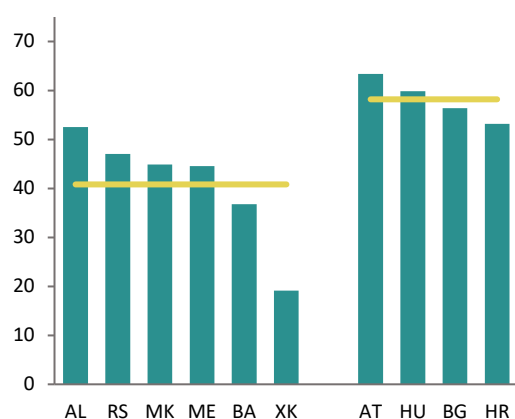
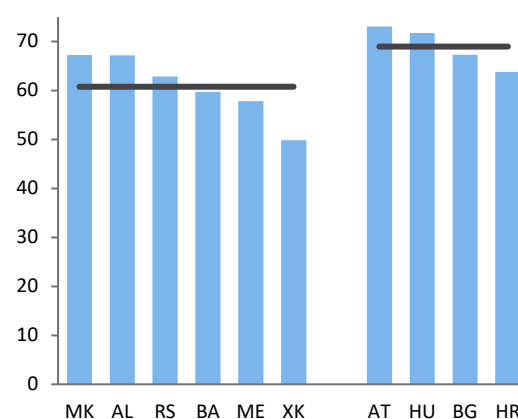


Figure 7 / Male activity rate in 2021 in the Western Balkans and the peer countries (% of male population aged 15+)



Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

As regards changes in activity levels between 2019 and 2021, one can see that among both men and women in the Western Balkans, almost everywhere the levels remained below those experienced before the pandemic. However, there were some variations across countries: in Albania, Kosovo, and Montenegro, women experienced a smaller decline in activity than men (in Kosovo, activity among women even increased). Conversely, the female activity level decreased by more than the male in North Macedonia and Serbia. By way of comparison, among the regional peers, female activity levels were impacted less than male in three of the four countries – Austria, Bulgaria, and Hungary (Table 2).

Table 2 / Changes in activity rates in 2021 vs. 2019 for men and women (pp)

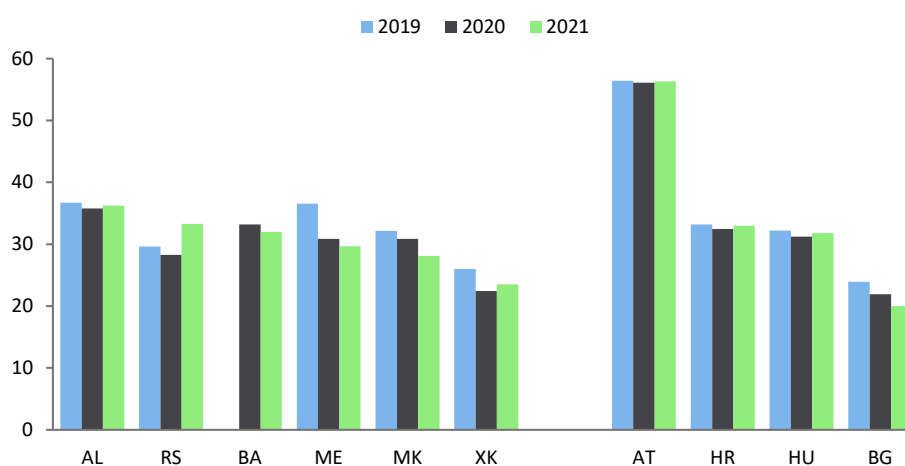
	Total	Male	Female
Albania	-0.6	-0.8	-0.4
Bosnia and Herzegovina	.	.	.
Kosovo	-0.9	-2.8	0.9
Montenegro	-6.4	-7.4	-5.4
North Macedonia	-1.2	-0.6	-1.8
Serbia	0.0	0.1	-0.1
Austria	-0.2	-0.3	-0.1
Bulgaria	-1.3	-1.4	-1.1
Croatia	1.0	1.1	0.9
Hungary	2.7	0.6	4.6

Note: Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

The impact of the pandemic on the labor market activity of young people (15-24) continued to be significant, as it improved in only half of the Western Balkan countries in 2021. This indicates that the post-pandemic recovery of the labor market outcomes is likely to be slower among young people than for the population at large. In most countries, youth activity rates remain at below their pre-pandemic levels. Serbia is an exception, as it recorded a significant improvement in youth activity rates in 2021, allowing it to surpass its pre-pandemic levels. Compared to their regional peers, the Western Balkan countries have a similar level of youth labor market activity as Bulgaria, Croatia, and Hungary, but much lower than in Austria (Figure 8).

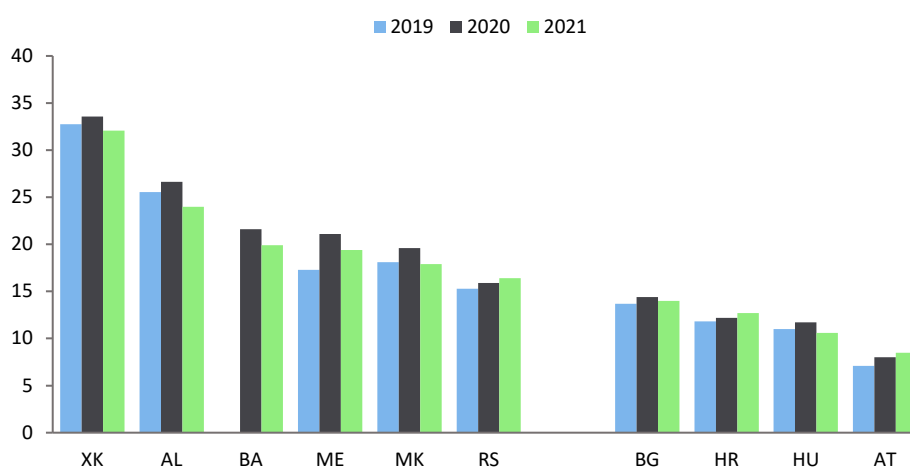
Figure 8 / Activity rate among persons aged 15-24, in 2019-2021 in the Western Balkans and the peer countries (% of population aged 15+)



Note: No data for Bosnia and Herzegovina for 2019, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Figure 9 / NEET rates (young people aged 15-24 neither in employment nor in education or training), in 2019-2021 in the Western Balkans and the peer countries (% of young population)



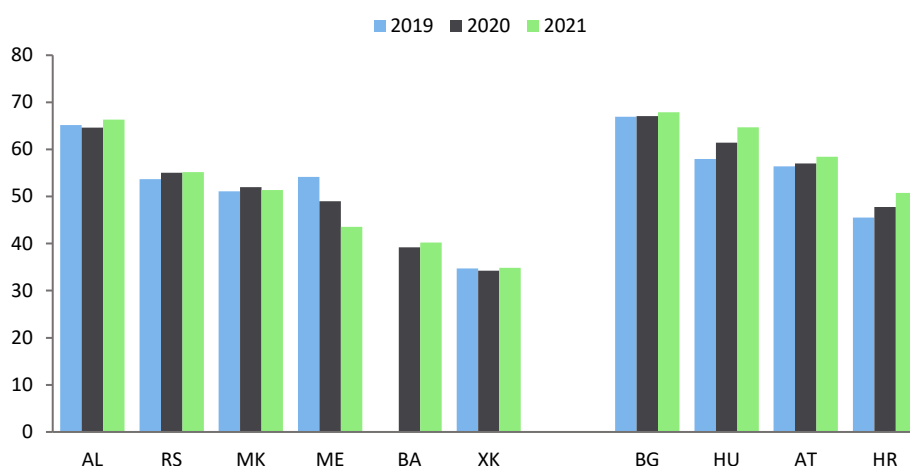
Note: No data for Bosnia and Herzegovina for 2019, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

On the other hand, the share of young people who are neither in employment nor in education or training (NEET) declined substantially almost everywhere in the region in 2021, offsetting the increase from 2020. The decline ranged from 1.5 pp in Kosovo to 2.7 pp in Albania. Serbia was the only exception: the NEET rate there rose by 0.5 pp in 2021, due to an increase in the number of unemployed young people and a decrease in the overall youth population. Despite the overall improvement, NEET rates among youth in the Western Balkans remained high, ranging from 16% in Serbia to 32% in Kosovo. These rates were far higher than the rates in the regional peers, where they ranged from 8.5% in Austria to 14% in Bulgaria (Figure 9).

Activity rates among older workers (aged 55-64) improved in most of the Western Balkan countries in 2021, though only marginally. In contrast to youth activity and overall activity, activity among persons aged 55-64 exceeded pre-pandemic levels everywhere (except in Montenegro, where the rate was still below its 2019 level), suggesting that this group was less affected by the pandemic. The same pattern of increasing activity among the elderly can be observed among the regional peers, the only difference being that the improvement there is far more pronounced (Figure 10). Additionally, compared to their regional peers, the Western Balkan countries still have far lower activity rates among their older population.

Figure 10 / Activity rate among persons aged 55-64, in 2019-2021 in the Western Balkans and the peer countries (% of population aged 15+)



Note: No data for Bosnia and Herzegovina for 2019, due to methodological changes.

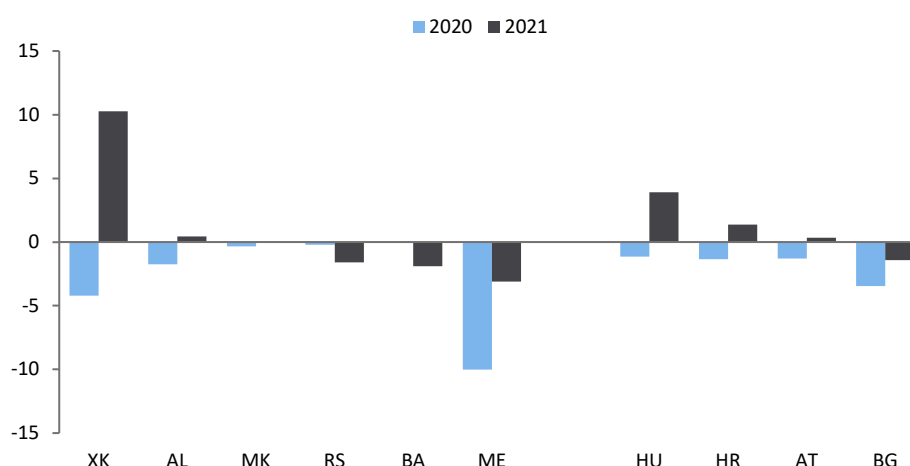
Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Labor markets in the Western Balkans, compared to the regional peers, exhibit a distinct pattern of missing 'end tails' and low female labor force participation. This is exemplified by relatively low activity levels among both the youth and the elderly. In addition, women continue to participate in the labor market at substantially lower levels than men. Addressing these issues requires implementing targeted policies aimed at activating the youth, facilitating smooth school-to-work transitions, promoting retraining, reskilling, and upskilling opportunities for the elderly, and unlocking female workforce potential through expansion of care services and flexible work arrangements.

3. Lasting impact of the pandemic on employment

The impact of the COVID-19 pandemic on employment in the Western Balkans continued to be felt in 2021, as employment remained at below pre-pandemic levels almost everywhere in the region. While the number of people employed did improve in 2021 in Albania, Kosovo, and North Macedonia, it declined further in Bosnia and Herzegovina, Montenegro, and Serbia. At the end of the year, only Kosovo had a higher level of employment than before the pandemic. In Montenegro, it was as much as 13% below the pre-COVID level. This was similar to the situation in the regional peers, as employment in 2021 in three of those countries – Austria, Bulgaria, and Croatia – was also below the 2019 levels (Figure 11).

Figure 11 / Change in number of employed persons in the Western Balkans and the peer countries in 2020 and 2021 (%)

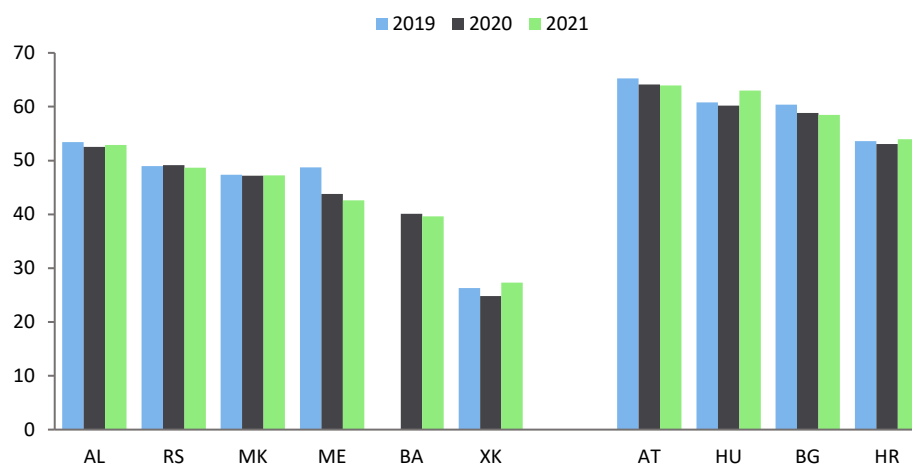


Note: No data for Bosnia and Herzegovina for 2020, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

While developments in overall employment are driven partly by demographic trends, they also reflect employment rates, which in 2021 remained at below the pre-COVID level almost everywhere in the Western Balkans. Kosovo was again the only exception: the rate of employment there was 1 pp higher in 2021 than in 2019. In Montenegro, on the other hand, the employment rate in 2021 was 6.1 pp below its 2019 level. Notably, the Western Balkan countries continued to have extremely low employment rates – far below those of their regional peers. Only Albania had more than half of its population aged 15+ in work. By contrast, employment rates in the regional peers ranged from 54% in Croatia to 64% in Austria (Figure 12).

Figure 12 / Employment rates in the Western Balkans and the peer countries in 2019-2021 (% of population aged 15+)



Note: No data for Bosnia and Herzegovina for 2019, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

While employment rates declined for both men and women in most of the countries between 2019 and 2021, the decrease was smaller for women. In Albania and Montenegro, the decline in employment rates among women was smaller than among men. In fact, in Kosovo, women experienced an improvement of 2.4 pp in their employment rate, whereas men suffered a deterioration of 0.4 pp. Similarly, in North Macedonia, the employment rate for women improved by 0.3 pp, whereas it fell by 0.4 pp for men. The only country in the region where employment rates declined more among women than among men during this period was Serbia (Table 3).

Table 3 / Change in employment rates in 2021 vs. 2019 for men and women (pp)

	Total	Male	Female
Albania	-0.6	-0.6	-0.5
Bosnia and Herzegovina	.	.	.
Kosovo	1.0	-0.4	2.4
Montenegro	-6.1	-7.7	-4.6
North Macedonia	-0.1	-0.4	0.3
Serbia	-0.3	-0.1	-0.5
Austria	-1.3	-1.5	-1.2
Bulgaria	-1.9	-2.0	-1.7
Croatia	0.4	0.3	0.4
Hungary	2.2	0.2	4.0

Note: Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

In terms of age groups, employment patterns differed across the countries of the region. In North Macedonia, young people (15-24) experienced the largest fall in the employment rate, whereas in Albania and Serbia it was the middle age group (25-54) that fared worst. In Kosovo and Montenegro, it was the older workers (55-64) who had the poorest employment prospects (Table 4).

Table 4 / Change in employment rates in 2021 vs. 2019 for different age groups (pp)

	15-24	25-54	55-64
Albania	-0.3	-1.3	-0.4
Bosnia and Herzegovina	.	.	.
Kosovo	0.2	1.1	-0.1
Montenegro	-8.7	-5.3	-9.0
North Macedonia	-2.8	1.0	-0.1
Serbia	3.0	0.9	1.2
Austria	-1.5	-1.5	1.0
Bulgaria	-5.0	-1.9	0.5
Croatia	-1.9	1.1	4.7
Hungary	-1.0	2.5	6.1

Note: Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Finally, in terms of education, individuals with lower levels of schooling saw a weaker recovery in employment rates between 2019 and 2021. In Albania, North Macedonia, and Serbia, people with a low level of education (lower secondary or below) saw the biggest fall in employment rates. In Kosovo and Montenegro, the strongest decline was among people with a medium level of education (upper secondary or post-secondary non-tertiary education). In all the countries, people with a high level of education (tertiary or above) did relatively better in terms of employment rates. Similar trends were present also in the four regional peers (Table 5).

Table 5 / Change in employment rates in 2021 vs. 2019 for people with different levels of education (pp)

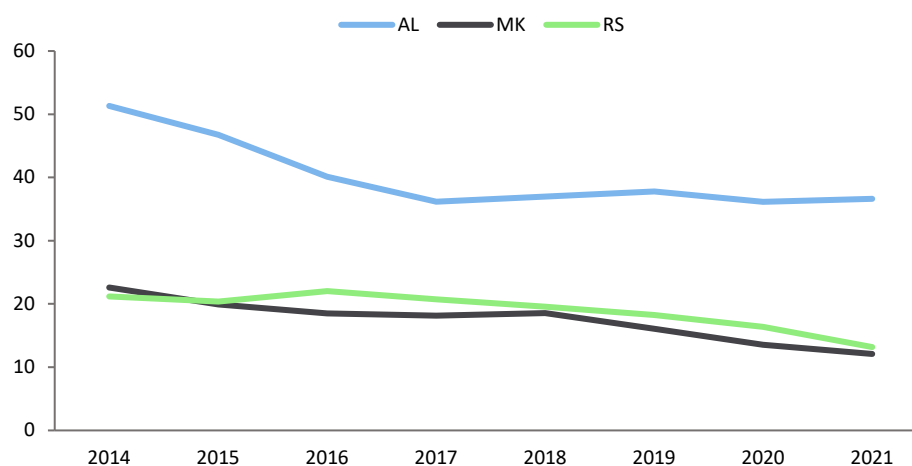
	Low	Medium	High
Albania	-2.7	1.2	1.6
Bosnia and Herzegovina	.	.	.
Kosovo	-0.7	-0.9	-0.2
Montenegro	-4.7	-8.3	-4.1
North Macedonia	-2.8	-0.7	1.4
Serbia	-3.8	0.5	1.0
Austria	-0.7	-2.6	-0.3
Bulgaria	-3.5	-3.2	0.1
Croatia	0.2	-0.5	0.2
Hungary	0.6	0.7	3.7

Note: A low level of education indicates attainment of lower secondary education or below; a medium level of education indicates upper secondary education or post-secondary non-tertiary education; a high level of education indicates short-cycle tertiary education, a bachelor's degree (or equivalent), a master's degree (or equivalent) and a doctorate (or equivalent).

Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

In terms of the quality of employment, informal employment continued to decline in some (though not all) Western Balkan countries in 2021. Only Albania, North Macedonia, and Serbia publish official data on informal employment, calculated from the LFS and including self-employed persons in unregistered businesses, wage workers without a written contract, and unpaid family workers. Over the past decade, informality has trended downwards in all three countries, but in recent years there have been diverging developments. In North Macedonia and Serbia, informal employment declined in both 2020 and 2021, whereas in Albania it mainly stagnated. North Macedonia and Serbia had a similar level of informal employment (around 12-13% of the total), while in Albania the share was significantly higher (37%) (Figure 13).

Figure 13 / Informal employment in Albania, North Macedonia, and Serbia (% of total employment)

Note: Informal employment is defined as self-employed persons in unregistered businesses, wage workers without a written contract, and unpaid family workers.

Source: SEE Jobs Gateway Database, based on data from national statistical offices.

There have been notable changes in the employment structure between 2019 and 2021, in terms of the proportion of part-time, temporary, and self-employed individuals. The percentage of part-time employed declined in three out of five Western Balkan economies: Montenegro, North Macedonia, and Serbia, but it increased in Albania and Kosovo. Conversely, the percentage of temporary employed increased in three economies: Kosovo, North Macedonia, and Serbia, while it decreased in Albania and Montenegro. It is quite possible that the decrease in part-time employment contributed to the rise in temporary employment. Additionally, self-employment declined across the entire region (Table 6). While it is difficult to assess the implications of these developments, they stand in clear contrast to the trends observed in the regional peers. Among them, part-time employment increased in most cases, temporary employment decreased almost everywhere, and self-employment rose.

Table 6 / Change in the share of part-time employed, temporary employed and self-employed persons, between 2021 and 2019 (pp)

Country	Part-time employed	Temporary employed	Self-employed
Albania	0.8	-0.7	-0.3
Bosnia and Herzegovina	.	.	.
Kosovo	0.3	0.1	-2.6
Montenegro	-2.2	-2.7	-1.2
North Macedonia	-0.8	1.1	-2.6
Serbia	-4.2	1.1	-6.0
Austria	1.5	0.1	-0.6
Bulgaria	-0.3	-0.9	0.2
Croatia	0.0	-4.6	0.4
Hungary	0.3	-0.7	1.5

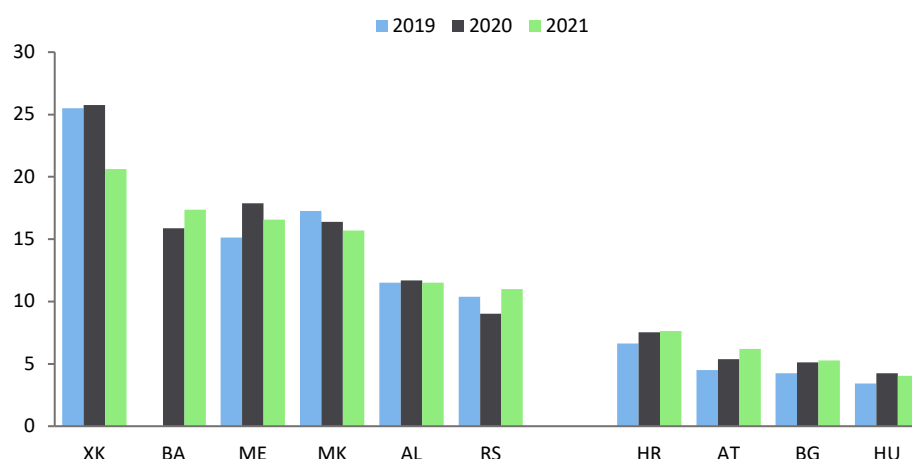
Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

4. Unemployment diverged across countries, but remained high

Unemployment did decline in most Western Balkan countries in 2021, but it remained high across the board. The biggest improvement was in Kosovo, where the rate of unemployment declined by 5.1 pp in 2021. Montenegro also saw a fall in unemployment of 1.3 pp, although – given the continued decline in employment and activity rates – this may be a result of an increase in retirement rates, or job seekers dropping out of the labor force. Serbia, on the other hand, had the biggest increase in its unemployment rate (2 pp), most likely reflecting both a decline in employment and the methodological change in the LFS discussed earlier. Compared to 2019, unemployment in 2021 was higher in Montenegro and Serbia; lower in Kosovo and North Macedonia; and at the same level in Albania. Despite the decline in 2021, all the countries of the region continued to have double-digit unemployment rates: Albania and Serbia had rates of around 11%; Bosnia and Herzegovina, Montenegro, and North Macedonia – around 16%; and Kosovo continued to have the highest unemployment in the region at 21%. Unemployment in 2021 was also above pre-COVID levels in the four regional peers, but their rates were significantly lower than those of the Western Balkans, ranging between 4% and 8% (Figure 14).

Figure 14 / Unemployment rates in 2019-2021 in the Western Balkans and the peer countries (% of labor force)



Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Women in the Western Balkans continued to have higher unemployment than men in most countries of the region. Only in North Macedonia and Montenegro was the rate among women marginally lower than among men. In all other countries, female unemployment rates were higher, with the difference as large as 8 pp in Bosnia and Herzegovina and 6 pp in Kosovo. By comparison, in the regional peers, the male and female unemployment rates were very similar, with a difference of no more than 1 pp (Figure 15).

Figure 15 / Male and female unemployment rates in 2021 in the Western Balkans and the peer countries (%)



Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Since the pandemic, trends in unemployment have (relatively speaking) favored women rather than men in most countries of the region. Notably, Kosovo and North Macedonia saw a significant reduction in the unemployment rate among women between 2019 and 2021 (much larger than the reduction among men). While Montenegro's female unemployment rate increased marginally during the same period, it was still significantly less than the increase observed among men. In Albania, there was a slight rise in unemployment among women, while men experienced a slight fall. In Serbia, both genders saw an increase in unemployment, but the rise was more pronounced among women (Table 7).

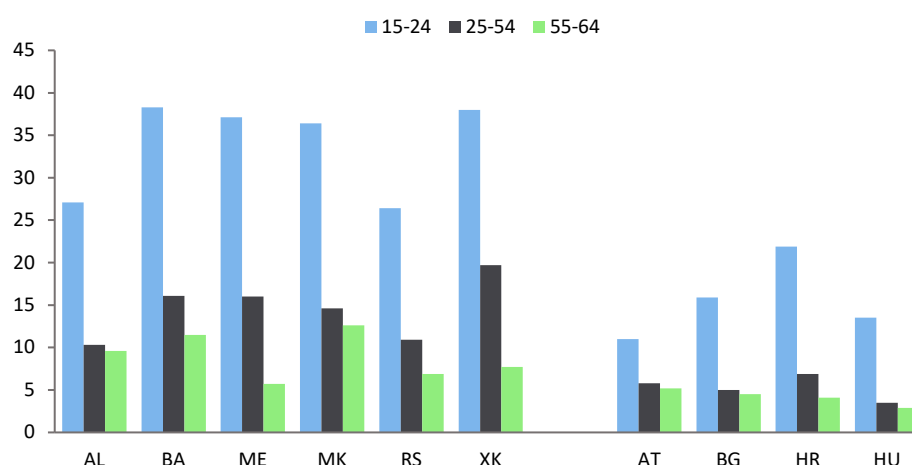
Table 7 / Change in the unemployment rates for men and women between 2019 and 2021 (pp)

	Total	Male	Female
Albania	0.0	-0.3	0.3
Bosnia and Herzegovina	.	.	.
Kosovo	-4.9	-3.5	-9.4
Montenegro	1.4	2.4	0.2
North Macedonia	-1.6	-0.1	-3.8
Serbia	0.6	0.3	1.0
Austria	1.7	1.6	1.8
Bulgaria	1.0	0.9	1.2
Croatia	1.0	1.1	0.9
Hungary	0.6	0.5	0.7

Note: Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Unemployment remains a big issue for young people in the region. In 2021, the youth unemployment rate (15-24) was above 25% everywhere in the region and was as high as 38% in Bosnia and Herzegovina and Kosovo. This was several times higher than the unemployment rate for the other age categories, and the gap was larger than in the regional peer countries (Table 8).

Figure 16 / Unemployment rates in 2021 for different age groups (%)

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Since the pandemic, the different age groups in the region have witnessed various trends in the unemployment dynamics. In Kosovo and Serbia, the unemployment rate dropped significantly among young people (15-24), with Kosovo experiencing an impressive 11.4 pp decrease. Conversely, in Albania and North Macedonia, the most significant improvement was observed in the middle age group (25-54). In Montenegro, the only group to experience a decline in unemployment were the elderly (55-64), whereas young people saw a 12 pp increase in their unemployment rate (Table 8).

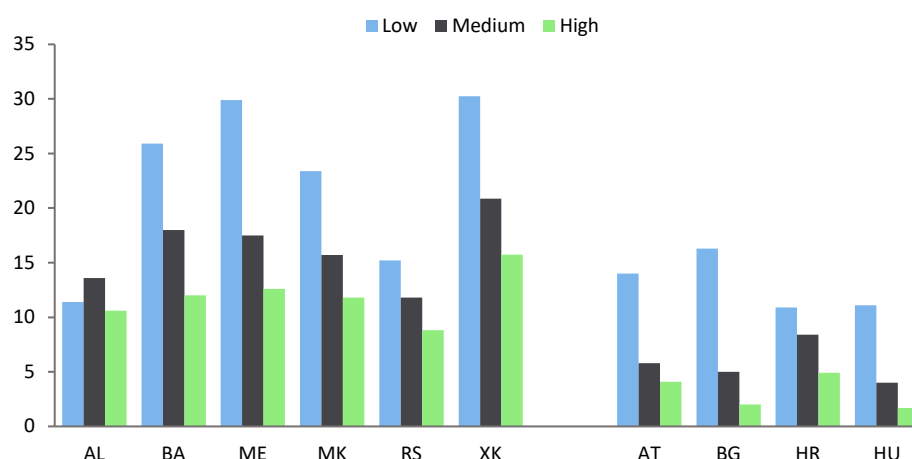
Table 8 / Change in the unemployment rates between 2019 and 2021 for different age groups (pp)

	15-24	25-54	55-64
Albania	-0.1	-0.3	2.2
Bosnia and Herzegovina	.	.	.
Kosovo	-11.4	-3.2	0.4
Montenegro	12.0	0.5	-1.8
North Macedonia	0.8	-1.9	0.8
Serbia	-1.1	0.5	0.4
Austria	2.4	1.6	1.8
Bulgaria	6.9	0.9	0.7
Croatia	5.3	0.6	0.7
Hungary	2.1	0.5	0.7

Note: Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Unemployment in the region declines with educational attainment. The one exception in 2021 was Albania, where people with medium levels of education had the highest unemployment rate. People with a high level of education had the lowest unemployment rate everywhere in the region. These patterns were the same as in the regional peers. However, in the Western Balkans, even among people with a high level of education, the unemployment rate is still very high – almost always in double digits and reaching 16% in Kosovo. By contrast, it is always below 5% among the regional peers (Figure 17).

Figure 17 / Unemployment rates in 2021 for different education levels (%)

Note: A low level of education indicates attainment of lower secondary education or below; a medium level of education indicates upper secondary education or post-secondary non-tertiary education; a high level of education indicates short-cycle tertiary education, a bachelor's degree (or equivalent), a master's degree (or equivalent) and a doctorate (or equivalent).

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Post-pandemic unemployment trends have been most favorable to people with a high level of education, and least favorable to those with a low level. Unemployment among people with a low level of education increased between 2019 and 2021 in three of the five Western Balkan countries for which data are available – Albania, Montenegro, and Serbia. In Kosovo and North Macedonia, it declined, but by less than among the other education groups. By contrast, unemployment fell among highly educated people in three of the five economies – Albania, Kosovo, and North Macedonia (in Kosovo by almost 7 pp). It did rise in Montenegro and Serbia, but by much less than for the other education groups (Table 9). Interestingly, in Kosovo, unemployment decreased across all education groups, coinciding with a decline in employment rates. This can be attributed to a decrease in overall activity for all levels of education.

Table 9 / Change in the unemployment rates between 2019 and 2021 for different education levels (pp)

	Low	Medium	High
Albania	1.8	-1.1	-1.7
Bosnia and Herzegovina	.	.	.
Kosovo	-2.0	-4.1	-6.7
Montenegro	2.6	2.0	1.0
North Macedonia	-0.5	-1.0	-2.5
Serbia	2.6	0.4	0.3
Austria	3.2	1.8	1.0
Bulgaria	2.9	1.5	0.1
Croatia	1.3	1.6	-0.4
Hungary	1.3	0.9	0.2

Note: A low level of education indicates attainment of lower secondary education or below; a medium level of education indicates upper secondary education or post-secondary non-tertiary education; a high level of education indicates short-cycle tertiary education, a bachelor's degree (or equivalent), a master's degree (or equivalent) and a doctorate (or equivalent).

Bosnia and Herzegovina omitted, due to methodological changes.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

Worryingly, most of the unemployment in the region remained long term in nature, with, on average, about 68% of the unemployed in 2021 having been out of work for more than a year – slightly down from the 2019 average of 69%. Given that long-term unemployment in the region stood at 77% in 2013, there has been a clear downward trend. The individual countries of the region have varying shares of long-term unemployment: Serbia's rate dropped to 50% in 2021, while North Macedonia's and Bosnia and Herzegovina's shares stayed at around 80%. Compared to the regional peers, the share of long-term unemployment is clearly much higher in the Western Balkans (Figure 18 and Figure 19).

Figure 18 / Share of long-term unemployment in total unemployment in the Western Balkans (%)

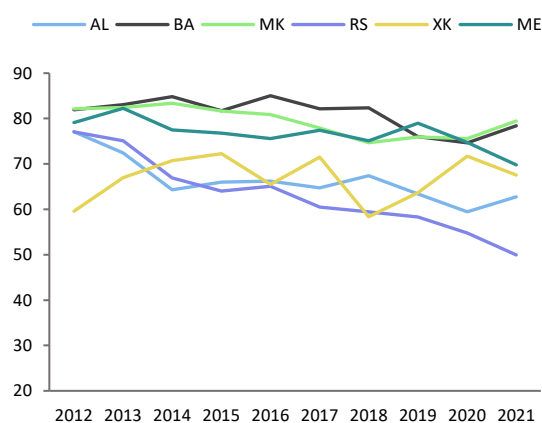
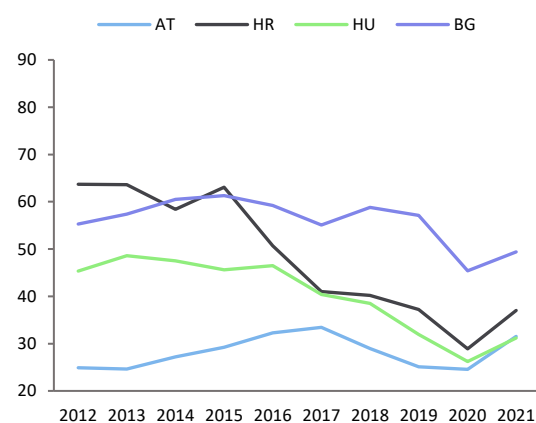


Figure 19 / Share of long-term unemployment in total unemployment in the regional peers (%)



Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

5. Growing wages, but declining unit labor costs

The average nominal gross wage increased in 2021 in all the countries of the Western Balkans. Official wage data from administrative sources show that the largest increase was in Serbia, where the average nominal gross wage rose by 9.4%; this was followed by Albania, where it grew by 7.7%. Meanwhile, Montenegro saw the smallest wage increase – 1.3% (Figure 20). Despite these increases, average gross wages in the countries of the Western Balkans remained low, compared to their regional peers. Montenegro, Bosnia, and Serbia, which have the highest wages in the Western Balkans, had average gross wages similar to those in Bulgaria, the regional peer with the lowest wages (around EUR 800 per month). The other Western Balkan countries had lower average monthly gross wages: North Macedonia (around EUR 700), and Albania and Kosovo (around EUR 500). By comparison, Hungary and Croatia had monthly wages of around EUR 1,200, and Austria had the highest wages – around EUR 3,500 (Figure 21). One has to bear in mind that these data are based on administrative sources, and hence do not cover the informal sector, which is sometimes sizeable in some of these countries.

Figure 20 / Annual growth in average nominal gross wages in the Western Balkans and the regional peers in 2021 (%)

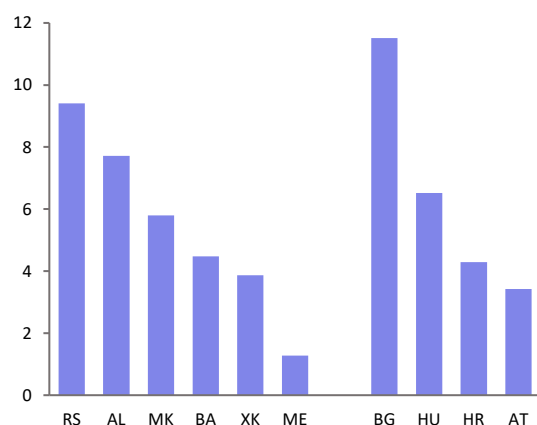


Figure 21 / Average nominal monthly gross wages in the Western Balkans and the regional peers in 2021 (EUR)



Note: Average wages per employee per month on a gross basis (before deduction of income tax and social security contributions). This figure includes the basic wage and all kinds of additional payments (bonuses, overtime, night work, payments for statutory, contractual or voluntarily granted leave, etc.). The data refer only to formally employed persons and are taken from register-based statistics (administrative sources). Data for Austria refer to the National Accounts concept (gross wages per employee, domestic concept, divided by 12 months). Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

The increase in wages was mainly driven by market forces and relied on strong economic growth and tightening of the labor market; in most of the countries, the minimum wage increased only modestly. Albania alone saw quite a big rise of 13.6% in the minimum wage (expressed in EUR) in 2021, while Serbia had a moderate increase of 6.3%. North Macedonia had just a minor adjustment of 0.2%, while Kosovo and Montenegro did not increase the minimum wage at all (Figure 22). Relative to the average wage, Albania had the highest minimum wage in the region in 2021, at 52% of the average. North Macedonia and Serbia were close behind, with 49% and 47%, respectively. Montenegro had a minimum wage equivalent to 42% of the average, while the figure for Kosovo was only 35%. The regional peers – Croatia, Bulgaria, and Hungary – generally had lower minimum wages, as a percentage of the average (Figure 23).

Figure 22 / Annual nominal change in the gross minimum wage expressed in EUR in 2021 (%)

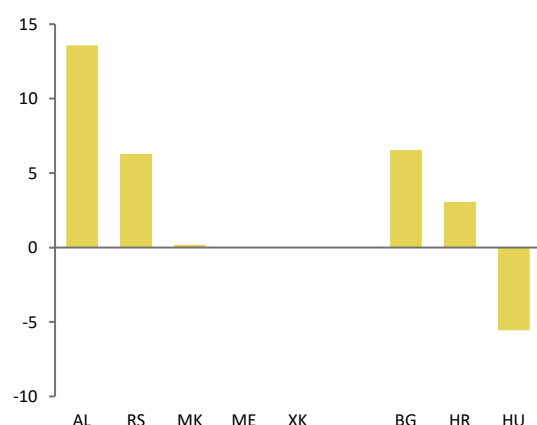
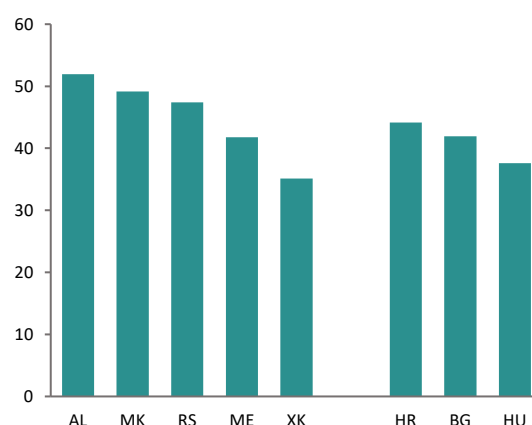


Figure 23 / Gross minimum wage in 2021 (% of gross average wage)

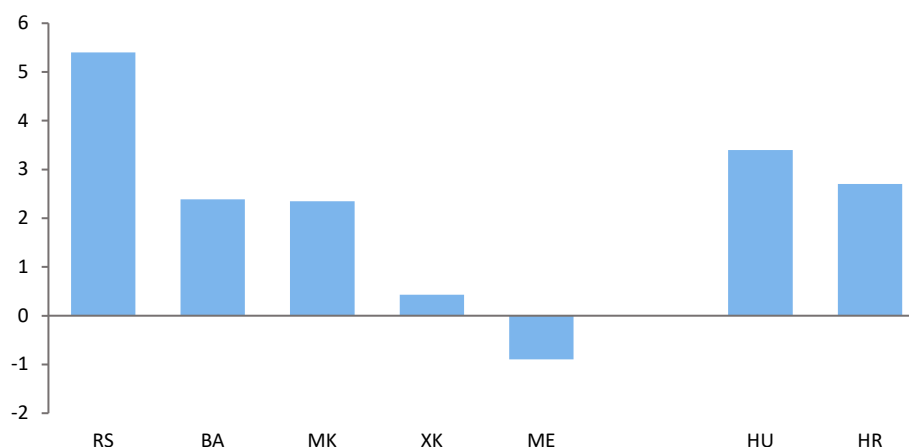


Note: Bosnia and Herzegovina and Austria omitted, as they do not have a statutory minimum wage. Hungary saw a decline in the minimum wage expressed in EUR, due to the depreciation of its national currency.

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

In most of the Western Balkan economies, wages also increased in net terms, even after adjusting for inflation; this led to a general improvement in workers' real purchasing power – though the improvement was generally smaller than in the regional peers. Serbia saw the biggest real growth in net wages (5.4%), followed by Bosnia and Herzegovina and North Macedonia (2.4%). Kosovo witnessed a slight increase of 0.4%, while Montenegro experienced a decline of 0.9%. Among the regional peers for which data are available, Hungary and Croatia both had growth in real net wages of around 3%, which was higher than all the Western Balkan economies, except Serbia (Figure 24).

Figure 24 / Real growth in average net wages in 2021 (%)



Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

The increase in real net wages in 2021 was smaller than in previous years. Bosnia and Herzegovina and Serbia both saw the smallest increase in three years, while North Macedonia's increase was the lowest for four years. After two years of growth, Montenegro experienced a decline in real wages, while Kosovo witnessed an increase in 2021, following a decline the previous year (though the growth was still lower than in 2018 and 2019). In none of the countries did the increase in real net wages in 2021 exceed the average for the previous five years. The increase in real net wages in the Western Balkans over the previous five years was generally weaker than in the regional peers (Table 10).

Table 10 / Real growth in average net wages in 2017-2021 (%)

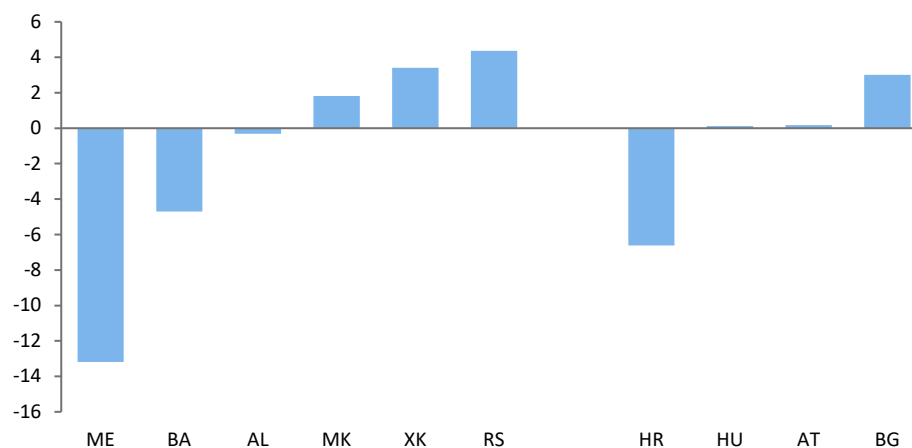
	2017	2018	2019	2020	2021	Annual average growth rate 2017-2021
Bosnia and Herzegovina	0.7	1.9	4.2	4.9	2.4	2.8
Kosovo	0.6	3.7	2.4	-3.4	0.4	0.7
Montenegro	-0.2	-2.3	0.4	2.1	-0.9	-0.2
North Macedonia	1.2	4.4	3.1	6.5	2.3	3.5
Serbia	0.9	4.4	8.5	7.7	5.4	5.4
Croatia	4.2	2.8	2.6	2.6	2.7	3.0
Hungary	10.3	8.3	7.7	6.2	3.4	7.2

Source: SEE Jobs Gateway Database, based on data from national statistical offices and Eurostat.

The increase in nominal gross wages was followed by a rise in labor productivity (output per worker); as a consequence, nominal unit labor costs increased in only half of the countries of the region – and even there only modestly. In three of the countries, nominal unit labor costs even declined, as the improvement in productivity exceeded the rise in the nominal gross wage –

sometimes quite substantially (around 13% in Montenegro; 5% in Bosnia and Herzegovina; and 0.3% in Albania). On the other hand, nominal unit labor costs increased by around 2% in North Macedonia, 3% in Kosovo, and 4% in Serbia, since the growth in nominal wages there exceeded the increase in real labor productivity. Among the regional peers, unit labor costs declined substantially in Croatia, stagnated in Austria and Hungary, and rose in Bulgaria (Figure 25).

Figure 25 / Annual change in nominal unit labor costs in 2021 (%)



Note: Nominal unit labor costs are defined as average nominal gross wages in EUR, divided by real GDP per employed person. They are calculated by wiiw, using data on average gross wages, NCU/EUR exchange rates, real GDP and number of persons employed.

Source: SEE Jobs Gateway Database, based on data from national statistical offices, Eurostat and central banks.

Almost everywhere in the region, the growth in nominal unit labor costs in 2021 was lower than in previous years. The one exception was Kosovo, where the growth in 2021 was higher than in 2020 and higher than the average for the previous five years. In the other five economies, the growth in 2021 was the lowest for five years and was also lower than the average for the previous five years. Similar patterns can be observed in the four regional peers. Furthermore, when comparing the dynamics of unit labor costs over the previous five years in the Western Balkans and the regional peers, it can be seen that the growth in labor costs in the Western Balkans was generally no greater than in the peer countries (Table 11).

Table 11 / Annual growth in nominal unit labor costs in 2017-2021 (%)

	2017	2018	2019	2020	2021	Average annual growth 2017-2021
Albania	5.0	7.6	8.2	3.6	-0.3	4.8
Bosnia and Herzegovina	0.3	0.2	-1.0	6.1	-4.7	0.2
Kosovo	5.0	-1.7	5.7	-1.1	3.4	2.3
Montenegro	-0.5	-1.3	-0.4	7.6	-13.2	-1.6
North Macedonia	4.0	5.5	6.3	13.0	1.8	6.1
Serbia	6.2	5.5	8.8	10.5	4.4	7.1
Austria	0.4	1.8	2.2	7.2	0.2	2.4
Bulgaria	11.1	7.7	9.0	10.3	3.0	8.2
Croatia	3.7	4.4	1.8	8.8	-6.6	2.4
Hungary	10.8	3.5	5.1	5.2	0.1	5.0

Note: Nominal unit labor costs are defined as average nominal gross wages in EUR, divided by real GDP per employed person. They are calculated by wiiw, using data on average gross wages, NCU/EUR exchange rates, real GDP and number of persons employed.

Source: SEE Jobs Gateway Database, based on data from national statistical offices, Eurostat and central banks.

6. Conclusion

In conclusion, the Western Balkan countries experienced an economic recovery in 2021, following a pandemic-induced slump the previous year. Most (though not all) of the countries exceeded their pre-pandemic GDP levels, thanks largely to pent-up demand as consumers and investors resumed spending after the restrictions of the previous year. However, inflation began to accelerate owing to global supply-chain disruptions and strong domestic demand.

The economic recovery meant that labor market indicators showed signs of improvement, though many remained at below their pre-pandemic levels. The labor force continued to shrink, except in Kosovo. Labor activity remained at below its pre-pandemic levels, with the activity rates of women continuing to lag far behind those of men. The impact of the pandemic on the labor market activity of young people continued to be significant in 2021, as it improved in only half of the Western Balkan countries.

In 2021, employment remained at below pre-pandemic levels almost everywhere in the region. Between 2019 and 2021, the employment dynamics experienced by women were less negative than those experienced by men; meanwhile, individuals with lower levels of education suffered a greater decline in employment between 2019 and 2021 than did those with higher levels.

Unemployment fell in most Western Balkan countries in 2021, but remained high. Women in the Western Balkans continued to suffer higher unemployment rates than men, though the trend since the pandemic has (relatively speaking) favored women. Unemployment remains a big issue for young people in the region, as well as for people with a low level of education. Most of the unemployment in the region remains long term in nature.

As some of the labor markets tightened, so the average nominal gross wage increased in 2021 in all countries of the region. The rise in wages was driven mainly by market forces and owed much to the strong economic growth. Despite the increases, average gross wages in the Western Balkans remain low compared to those in the countries' regional peers. The rise in nominal wages in 2021 was accompanied by – and on occasion was outstripped by – a growth in real productivity, and the rise in nominal unit labor costs was lower than in previous years almost everywhere in the region.

Special Topic: Employment in New Greenfield FDI - Insights from the fDi Markets Database

Executive summary

Following the decline of socialism, the Western Balkan economies embraced foreign direct investment (FDI) as a vital component of their economic models. They offered attractive benefit packages to entice foreign investors, with the aim of stimulating economic growth and alleviating unemployment. Despite the extensive attention given to FDI and the abundance of data on the financial aspects of such investment, there remains an absence of data on the employment generated by it. Moreover, studies on its employment effects in Eastern Europe have yielded mixed results.

For these reasons, this special topic of the Labor Market Brief estimates the number of jobs that were created through new greenfield FDI in the Western Balkans between 2010 and 2021, and discuss the nature of those jobs. To do this, the Financial Times fDi Markets database is used. The fDi Markets database is a comprehensive online database of cross-border greenfield investments covering all countries and sectors. It aggregates information from news articles, company press releases, and government agencies. However, it does not use official FDI data, which is a drawback. Additionally, it only covers greenfield investments, i.e. investments that involve establishing new businesses and constructing new facilities; it thus corresponds to the “equity capital” component of official FDI data, and it excludes FDI from reinvested earnings or intra-company loans. To tackle this shortcoming, these data are combined with official FDI statistics.

The estimates indicate that around 180,000 people were employed in the Western Balkans through new greenfield FDI made between 2010 and 2021. This amounts to 19% of the total increase in employment in the region during this time. At 87,000, Serbia had the most jobs created, followed by Albania with 49,000. North Macedonia had 13,000 jobs created, Kosovo 12,000, Montenegro 10,000, and Bosnia and Herzegovina 8,500. These greenfield FDI-related jobs accounted for 2.7% of total employment in the Western Balkans in 2021, with the share ranging from 0.7% in Bosnia and Herzegovina to 4.8% in Montenegro. In most of the countries, the numbers trended downward over time; Albania was the only country with a clear upward trend, while Montenegro and Serbia saw no particular trend.

Most of the employment in the new greenfield FDI was associated with FDI by firms from Germany, the US, and Italy: they accounted for 16%, 9%, and 8% of greenfield FDI-driven employment in the region, respectively. However, none of those three countries emerged as the top employer in Albania, Kosovo, or Montenegro. In Albania, most of the greenfield FDI-related employment was from South Korean companies; in Montenegro, it was from Azerbaijani companies; while in Kosovo, it was from Bulgarian companies.

In terms of economic activity, 53% of the FDI-related employment in the region in this period was in manufacturing. Construction came second, with 23% of the employment; while retail was third, with 12%. This pattern was largely unchanged across the six economies of the Western Balkans. The activities in which most of the FDI-related employment occurred were not very different from the activities that generated most of the new employment overall in the Western Balkan economies. Manufacturing was the activity that made the biggest contribution to overall employment growth in the region between 2010 and 2021, followed by wholesale and retail trade, and accommodation and food services.

About two thirds of employment in the new greenfield FDI in the region was medium-skilled, with the remaining jobs split evenly between low-skilled and high-skilled positions. The skills intensity of the FDI-related jobs appears to have been generally lower than in overall new employment in the region, where medium-skill jobs also dominated, though with a lower share than for FDI-related employment, and where the share of high-skill jobs was greater. Furthermore, there was no general improvement in the skill composition of FDI-related employment over time: the composition improved only in Bosnia and Herzegovina and Kosovo; stayed the same in Serbia; and deteriorated in Albania, Montenegro, and North Macedonia. This raises questions about the extent to which FDI-related jobs contribute to improving overall job quality in the region.

Overall, the findings on employment in new greenfield FDI in the Western Balkans reveal a somewhat mixed picture. Although FDI has indeed provided employment opportunities for some people, its contribution to improving the overall quality of employment seems to have been limited over the past decade or so. These findings are particularly concerning, given the significant amount of public funds invested by some regional governments to attract FDI. While there are no data on how much each of the countries spent on attracting FDI, the government of North Macedonia has stated that between 2007 and 2017, it subsidized each new FDI job in the country to the tune of EUR 17,750 – roughly equivalent to four years' worth of salaries for the respective jobs. In addition, the World Bank cites a number of 5 percent of the total tax revenues that North Macedonia collects, which is a lot. This suggests that careful attention needs to be paid not only to the amount of FDI, but also to the types of jobs that are created, and to calibrate incentives and benefits in a better way.



1. Introduction

Foreign direct investment (FDI) has been a crucial topic in economic literature and policy making over the last three decades, as the world has undergone an intensive process of globalization. FDI has also played a key role in the economic model adopted by Eastern European countries, including the Western Balkan economies, following the fall of socialism. Those countries have sought to attract foreign investors by offering various benefits and incentives, with the aim of promoting economic growth, reducing unemployment, and combating poverty.

Despite the considerable attention that FDI has received in the past decades, many uncertainties remain regarding its effect on employment. There is a lack of data on the employment created by FDI, despite the abundance of data on its financial aspects – such as the flow and stock of capital, the investment type, and the countries and industries involved. Furthermore, studies on the employment effects of FDI in Eastern Europe have resulted in mixed findings. Hunya and Geishecker (2005) analyzed the employment effects of FDI in the Central and Eastern European EU member states and found that FDI had reduced employment in domestically owned manufacturing companies, but had increased employment in foreign-owned enterprises. They also found that it had led to job losses due both to the restructuring of privatized state-owned companies and to foreign companies cutting domestic supplier linkages after taking over state-owned enterprises. Onaran (2008) found generally insignificant employment effects of FDI in Czechia, Hungary, Poland, Slovakia, Slovenia, Lithuania, Bulgaria, and Romania. Jude and Silaghi (2016) examined the role of FDI as a determinant of employment in 20 Central and Eastern European countries and found that FDI leads to a phenomenon of creative destruction, with initially negative effects on employment, following the introduction of labor-saving technologies, but then with positive long-term effects due to progressive vertical integration of foreign affiliates into the local economy. Jovanović and Hanzl-Weiss (2022) assessed the economic and social impacts of FDI in 17 economies of Central, East and Southeast Europe, finding that FDI inflows have reduced unemployment and increased wages. Onaran and Stockhammer (2008) estimated the effect of FDI on wages in Czechia, Hungary, Poland, Slovakia, and Slovenia, and found positive effects.

To shed some new light on these issues, the special topic of this Labor Market Brief estimates employment arising from new greenfield FDI in the Western Balkans between 2010 and 2021. It assesses how many people were employed in greenfield FDI in each of the six economies of the region, and compare this with the general employment trends in those economies over the same period. It also analyzes the new jobs by country of origin, sector, and activity. Likewise, it estimates the skill level of the new jobs and compare that with the skill level of the overall new employment in the countries. Finally, it evaluates whether the new employment is located in the capital cities or elsewhere.

2. The fDi Markets database

To estimate employment in new greenfield FDI, data from the Financial Times fDi Markets database are used, aligned with official FDI statistics. The fDi Markets database is an online resource that tracks cross-border investment into and out of countries and regions around the world. It provides detailed information on the investing (local) company, its parent (foreign) company, the origin country of the parent company, the location of the investment (region and city), the date of the announcement of the investment, and the value of the investment. It also includes information on the sector and activity of investment, where “sector” refers to the broad industry or area of the economy in which an investment project is taking place (such as the automotive industry, textiles, or real estate), while “activity” refers to the specific type of work or project being undertaken as part of the investment (such as construction, research and development, or retail).¹ In some cases, it also includes information on the motive behind the investment.

Most importantly, the fDi Markets database provides information on the number of jobs that the investment is expected to generate, and is the only available database with that type of information. In that way, it allows one to estimate the employment effects of the FDI, their dynamics over time, their structure in terms of sectors, activities and countries of origin, as well as their regional distribution.

The data are collected by a Financial Times team of researchers and analysts, on a daily basis, from company press releases, news articles, and reports from government agencies and investment promotion organizations. The team of researchers and analysts verifies and validates the data to ensure accuracy and reliability, including corroborating the information with other sources, checking for inconsistencies or errors, and weeding out duplication. This reduces the risk of inaccurate information, but does not eliminate it fully.

3. Caveats of the fDi Markets database

Despite being a unique source of data on foreign investment, the fDi Markets database does not rely on official information, which leads to a set of limitations.

The first caveat is that the data are based on announcements, which means that they may contain projects that are never completed. Furthermore, the announcements are about the *expected* (rather than actual) values, because of what information on the value of an investment and on the number of jobs may be imprecise.

The second limitation is that the database may still contain some double entries, despite all the efforts to clean the data. This has indeed been the case even in this research, as is discussed in the next section.

Furthermore, fDi Markets includes information only on greenfield investment. Thus, it corresponds only to the “equity capital” part of official FDI data, and excludes FDI that arises from reinvested

¹ For example, an investment project in the automotive sector could involve the construction of a new factory, while an investment project in the consumer electronics sector could involve research and development. In the first case, the sector is automotive and the activity is construction. In the second case, the sector is consumer electronics and the activity is research and development.

earnings or intra-company loans. The latter two can sometimes be rather sizeable, reaching almost half of total official FDI in the Western Balkans (see Table II. 1 below); this means that the coverage of fDi Markets is narrower than the coverage of the official FDI statistics.

However, this does not necessarily imply that the fDi Markets database underestimates the FDI numbers. As the database also features projects that were only announced but never completed and may contain double entries, the value of projects in the fDi Markets database can be bigger than that contained in the official FDI data. This is elaborated further in the next section.

Another significant limitation of the fDi Markets database is its reliance on estimates. Since companies may not always disclose specific information about investment amounts or job creation in their projects, the database employs a proprietary econometric model to estimate these values when they are not available. The model takes into account various variables, including the industry sector, project location, overall economic conditions etc., and draws insights from historical data on investment values and job creation from comparable projects. As a result, the reported job creation and investment figures in the database are derived estimations rather than definitive values.

The fDi Markets database is also much more volatile than official FDI statistics, as the projects are fully recorded on the date of announcement. For example, if a company announced in January 2018 that it would invest EUR 1 billion over the next 10 years, this would be recorded in the fDi Markets database in January 2018, whereas the actual investment would be spread out over a period of 10 years in the official FDI statistics (assuming the plan is followed through). Therefore, fDi Markets data provide a longer time frame than year-to-year data.

Moreover, the number of jobs reported by the fDi Markets database does not necessarily indicate a net increase in overall employment. The job figures presented in the database only account for the direct jobs associated with the FDI project, which might include individuals who are already employed. As a result, the number of jobs reported in the fDi Markets database could lead to an overestimation of the actual employment impact.

Because of all these considerations, one cannot take data from fDi Markets at face value, but should adjust it appropriately, to align it with official FDI statistics. How this is done is explained in detail in the next section. In general, in countries with good coverage of investment projects (Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia), the fDi Markets database will tend to overestimate the number of jobs. By contrast, in cases with rather weak coverage of projects (Albania and Kosovo), fDi Markets will tend to underestimate the number of jobs.

Despite all these caveats, the fDi Markets data are still used by researchers, especially when they need more detailed or granular FDI information. For instance, Hornberger et al. (2011) used the data to evaluate the importance of the investment climate for individual firms' investment decisions, looking at the motives that the companies cited for their investment. Amighini et al. (2013) employed the database to explore the host-country determinants of China's outward FDI, for different industries. Antonietti et al. (2015) used the data to analyze the relationship between greenfield FDI and innovation in Italy at the sectoral and regional level. Castellani and Pieri (2016) used the data to investigate the link between outward FDI and productivity in 262 European regions. And finally, Serwicka and Tamperi (2018) used the data to examine trends in inward FDI to Britain after Brexit, for different sectors and countries of origin.

4. Aligning the fDi Markets data with official FDI statistics

The fDi Markets database lists in total 1,872 projects for the six Western Balkan economies for the period 2010-2021. After a careful examination of the projects listed, 36 double entries were identified, and removed. One big and well-known project that was cancelled (the investment of the Chinese Weibo in North Macedonia, listed in 2014, which was supposed to employ 4,500 workers) was also removed. After this cleaning, 1,835 projects remained in the database. The number of projects after cleaning, for each of the countries for each of the years, is shown in Table II. 1. One can see that most of the projects were in Serbia (62%), followed by Bosnia and Herzegovina, and North Macedonia. The number of projects was lowest for Albania and Kosovo.

Table II. 1 / Number of projects in the fDi Markets database for each of the countries (after cleaning)

	AL	BA	ME	MK	RS	XK
2010	6	23	10	15	79	6
2011	8	30	6	26	111	4
2012	12	29	7	31	115	4
2013	4	28	9	27	121	7
2014	6	21	8	31	80	0
2015	5	25	3	18	72	1
2016	2	16	3	21	85	3
2017	3	26	2	11	112	3
2018	8	32	18	14	167	4
2019	3	30	10	13	110	2
2020	5	13	5	3	42	1
2021	3	11	3	19	40	4
Total	65	284	84	229	1134	39

Source: Authors' calculations using data from fDi Markets.

The value of projects in the fDi Markets database is generally higher than the official FDI data. Table II. 2 shows this. One can see that this refers not only to the "equity capital" part of the official FDI figures (which is the part analogous to the fDi Markets data), but sometimes also to total FDI. This is the case in four of the six Western Balkan economies – Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia, where fDi Markets data are 2-4 times higher than the official equity capital data. Albania and Kosovo are the exceptions. Since they have a rather low number of projects recorded in the fDi Markets database, the official FDI data are significantly higher than the fDi Markets data for them, for both equity capital and total FDI.

Table II. 2 / Comparison of the value of projects in fDi Markets with official FDI data

	AL	BA	ME	MK	XK	RS	Total
Value of projects in fDi Markets (EUR million)	1,658	10,419	6,917	5,699	745	38,894	64,331
Official FDI - equity capital (EUR million)	8,241	2,671	3,553	1,452	2,370	12,839	31,125
Official FDI - reinvested earnings and intra-company loans (EUR million)	2,758	1,776	1,789	2,043	1,127	17,027	26,521
Official FDI - total (EUR million)	10,999	4,447	5,342	3,495	3,497	29,866	57,646

Source: Authors' calculations using data from fDi Markets and wiiw FDI database.

The reason why the fDi Markets data are higher than official FDI statistics is that the fDi Markets database tends to overestimate the value of investment of the projects it records. The research team took some of the biggest investment projects recorded in the database, found their official company financial statements in the Orbis database, and compared the announced data on the value of the investment (from fDi Markets) and the data on total firm assets from the financial statements (from Orbis). The results are shown in Table II. 3 (total assets from financial statements include both tangible assets, such as buildings and machines, and intangible assets, such as goodwill, intellectual property, and brand value).² One can see that there is a clear tendency for the fDi Markets data to overestimate the value of the projects. Taking Comsar Energy – one of the biggest announcements in Bosnia and Herzegovina – its investment was supposed to be EUR 521 million, but the value of its assets in 2021 turned out to be only EUR 13 million. In Montenegro, Azmont Investments was supposed to invest EUR 755 million, but in 2021 its assets were EUR 478 million. In North Macedonia, Cevahir Holding was due to invest EUR 337 million, but its assets in 2021 were just EUR 9.7 million. Eagle Hills in Serbia (registered in Serbia as Beograd na vodi), by far the biggest announcement there at EUR 2.7 billion, had assets worth EUR 286 million in 2021. This is the case not only for construction or energy projects (such as the four mentioned so far): even manufacturing projects tend to be overvalued, like Boxmark Leather in Bosnia and Herzegovina or Johnson Controls in North Macedonia. Of the 13 big projects that the team managed to find in the Orbis database, just four had investment that exceeded the value announced (Dräxlmaier and Gentherm in North Macedonia, and Leoni and Kromberg & Schubert in Serbia).

Table II. 3 / Comparison between the value of the investment projects in the fDi Markets database and official company financial statements from Orbis: Selected investments

Country	Name	Announcement of value of investment in fDi Markets (EUR million)	Firm assets in 2021 from Orbis (EUR million)	Difference announced – realized (EUR million)
BA	Comsar Energy	521.0	13.0	508.0
BA	Importanne	61.0	0.6	60.4
BA	Boxmark Leather	42.0	34.0	8.0
ME	Azmont Investments	755.0	478.0	277.0
ME	Zain Property Development	98.0	7.0	91.0
MK	Cevahir Holding	337.0	9.7	327.3
MK	Johnson Controls International	176.0	28.0	148.0
MK	Skopje East Gate Real Estate Development	151.0	71.0	80.0
MK	Dräxlmaier	36.0	41.0	-5.0
MK	Gentherm	19.0	58.0	-39.0
RS	Eagle Hills	2,763.0	286.0	2,477.0
RS	Leoni	54.0	245.0	-191.0
RS	Kromberg & Schubert	29.0	53.0	-24.0
	Total	4,944.0	1,317.3	3,626.7

Source: Authors' calculations using data from fDi Markets database and Orbis database

² This could be done only for a small number of investment projects, so the focus was on the biggest announcements. The two databases are separate and do not have a consistent firm-level identifier. Furthermore, the names of the companies in the fDi Markets database and the Orbis database are often different.

The same holds true for employment numbers. Comsar Energy, one of the biggest announcements in Bosnia and Herzegovina, was supposed to employ 700 people, yet in 2021 it had only five employees. It was announced that Azmont Investments would employ 3,000 workers, but in 2021 it had just 31 people on its payroll. Cevahir Holding in North Macedonia was supposed to employ 3,000 people, but in 2021 it employed only 118. Eagle Hills in Serbia announced that it would generate 3,000 jobs, but in 2021 it had just 71 employees. As three of these projects were in construction, the difference may be due to the use of subcontractors, which is a common practice in that sector. But these jobs are not always new: many of the workers are already engaged on some other construction project, meaning that fDi Markets is indeed overestimating the number of new jobs. Furthermore, even in some manufacturing projects, the number of jobs is overestimated, such as Kromberg & Schubert in Serbia. In manufacturing, though, most of the companies did employ more people than was initially announced – Leoni in Serbia, Dräxlmaier and Johnson Controls in North Macedonia, and Boxmark Leather in Bosnia and Herzegovina. Even then, it is questionable whether these jobs were new, or whether people had already been working for other companies.

Table II. 4 / Comparison between employment announced in the fDi Markets database and official company employment records from Orbis: Selected investments

Country	Name	fDi Markets announcement jobs	Orbis 2021 employees	Difference realized - announced
BA	Comsar Energy	700	5	-695
BA	Boxmark Leather	660	728	68
BA	Importanne	636	13	-623
ME	Azmont Investments	3,000	31	-2,969
ME	Zain Property Development	794	1	-793
MK	Dräxlmaier	4,000	5,626	1,626
MK	Cevahir Holding	3,000	118	-2,882
MK	Gentherm	2,000	1,996	-4
MK	Skopje East Gate Real Estate Development	1,568	23	-1,545
MK	Johnson Controls International	1,500	2,058	558
RS	Leoni	4,000	13,077	9,077
RS	Eagle Hills	3,000	71	-2,929
RS	Kromberg & Schubert	2,500	1,901	-599
Total		27,358	25,648	-1,710

Source: Authors' calculations using data from fDi Markets database and Orbis database.

For these reasons, the fDi Markets data have to be adjusted. This is done by multiplying the fDi Markets data by a factor equivalent to the ratio of the value of official equity capital FDI inflows to the value of the projects in the fDi Markets database, for each of the countries, as shown in Table II. 5. Specifically, for Albania, this ratio is 4.97; for Bosnia and Herzegovina it is 0.26; for Montenegro – 0.51; for North Macedonia – 0.25; for Kosovo – 3.18; and for Serbia – 0.33. This means that for Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia, which have good coverage in the fDi Markets database in terms of the number of projects, the value of investment and the number of jobs in the fDi Markets database are reduced, because the announcements overestimate them (as explained previously). By contrast, for Albania and Kosovo, the fDi Markets data are increased, as the number of projects in the database for those two countries is rather low. This adjustment means that it is assumed that the job creation of the FDI projects that were realized is similar to the job creation of the announcements from the fDi Markets database.

Table II. 5 / Adjustment factors for the fDi Markets data

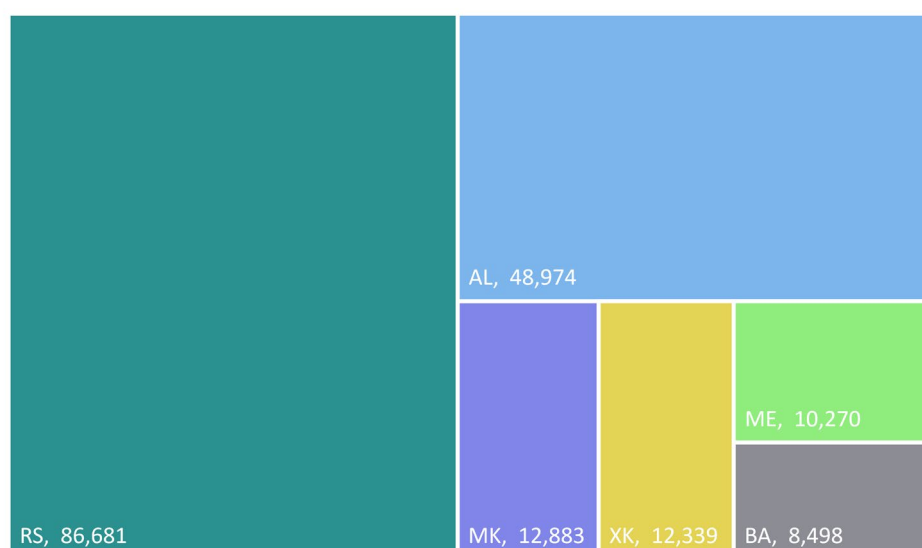
	AL	BA	ME	MK	XK	RS
Official equity capital FDI data (EUR million)	8,241	2,671	3,553	1,452	2,370	12,839
Value of projects in fDi Markets (EUR million)	1,658	10,419	6,917	5,699	745	38,894
Adjustment factor = official equity capital FDI / value of projects fDi Markets	4.97	0.26	0.51	0.25	3.18	0.33

Source: Authors' calculations using data from fDi Markets and wiiw FDI database.

5. Employment in new greenfield FDI

According to the adjusted fDi Markets data, new greenfield FDI in the Western Balkans between 2010 and 2021 employed approximately 180,000 people. Almost half of the employment was in Serbia (87,000), while roughly a quarter was in Albania (49,000). North Macedonia came third, with around 13,000 people employed, followed by Kosovo with 12,000, and Montenegro with 10,000. Bosnia and Herzegovina had the fewest new jobs at 8,500 (Figure II. 1).

Figure II. 1 / Estimated employment in the new greenfield FDI in the Western Balkans between 2010 and 2021



Source: Authors' calculations using data from fDi Markets and wiiw FDI database.

These 180,000 jobs in new greenfield FDI correspond to about 19% of the total increase in employment in the region between 2010 and 2021. According to Labour Force Survey (LFS) data, total employment in the six economies between 2010 and 2021 increased by approximately 960,000 people.³

The employment dynamics during this period differed significantly across the six economies, which goes some way toward explaining the differential role that new greenfield FDI played in job creation. In Montenegro, the 10,000 new greenfield jobs exceeded the total increase in employment (which was only 3,000), due largely to the pandemic-induced decline of roughly 30,000 jobs in 2020

³ One has to bear in mind, though, that the two sets of data are not wholly compatible: the fDi Markets employment data refer to gross employment (i.e. they do not take into account job losses in the company in question or in other companies), whereas the LFS data measure net employment (i.e. they do take account of job losses).

and 2021. In Albania, the new greenfield jobs amounted to 60% of the total increase in employment during this period (81,000). In Serbia, the 87,000 new greenfield jobs corresponded to 28% of the total increase in employment. Meanwhile, the share was much smaller in the other three economies: 12% in Kosovo, 8% in North Macedonia, and just 3% in Bosnia and Herzegovina (Table II. 6).

The share of new greenfield FDI-related employment was much more stable when compared to total employment in the countries in 2021, averaging 2.7% for the whole region. The differences between individual countries are much smaller when observed in this way: the share ranges from 0.7% of total employment in 2021 in Bosnia and Herzegovina to 4.8% in Montenegro (Table II. 6).

Table II. 6 / Estimated employment in the new greenfield FDI 2010-2021, as share of total new employment over the same period, and as share of total employment in 2021

	AL	BA	ME	MK	RS	XK	Total
Employment in new greenfield FDI in 2010-2021 (number of persons)	48,974	8,498	10,270	12,883	86,681	12,339	179,644
Change in total employment in the countries between 2010 and 2021 (number of persons)	81,373	307,895	3,169	157,232	310,900	100,842	961,411
New greenfield FDI employment as % of total new employment in 2020-2021	60.2%	2.8%	324.1%	8.2%	27.9%	12.2%	18.7%
Total employment in the countries in 2021 (number of persons)	1,248,749	1,150,726	212,586	795,087	2,848,800	386,842	6,642,790
New greenfield FDI employment as % of total employment in 2021	3.9%	0.7%	4.8%	1.6%	3.0%	3.2%	2.7%

Source: Authors' calculations using data from fDi Markets, wiiw Annual Database, wiiw FDI database and SEE Jobs Gateway database. Data for Kosovo for 2010 are from the wiiw Annual Database.

The estimates of employment in new greenfield FDI from this brief align with similar estimates available from other sources. One of those estimates is available in the World Bank Enterprise Survey, which is conducted every six years in the Western Balkans, most recently in 2019. The survey provides estimates of job creation attributable to foreign companies, defined as companies with at least 10% foreign ownership (Table II. 7). According to it, foreign companies contributed approximately 22% of total job creation in the Western Balkans in 2019, whereas estimates from this brief suggest that new greenfield FDI accounted for around 16% of employment growth in the region that year.⁴

Table II. 7 / Comparison of estimates of employment in new greenfield FDI with estimates from the World Bank Enterprise Survey

Country	Employment in new greenfield FDI in 2019	Change in employment in 2019 vs. 2018 in LFS	Employment in new greenfield FDI as % of new employment in 2019	Net job creation in foreign companies in 2019, as % of total job creation in the country
Albania	12,294	34,731	35.4%	5.2%
Bosnia and Herzegovina	614	-19,590	-3.1%	34.8%
Kosovo	789	18,094	4.4%	12.2%
Montenegro	603	6,404	9.4%	46.1%
North Macedonia	378	38,597	1.0%	5.3%
Serbia	8,829	68,081	13.0%	29.5%
Total Western Balkans	23,508	146,317	16.1%	22.2%

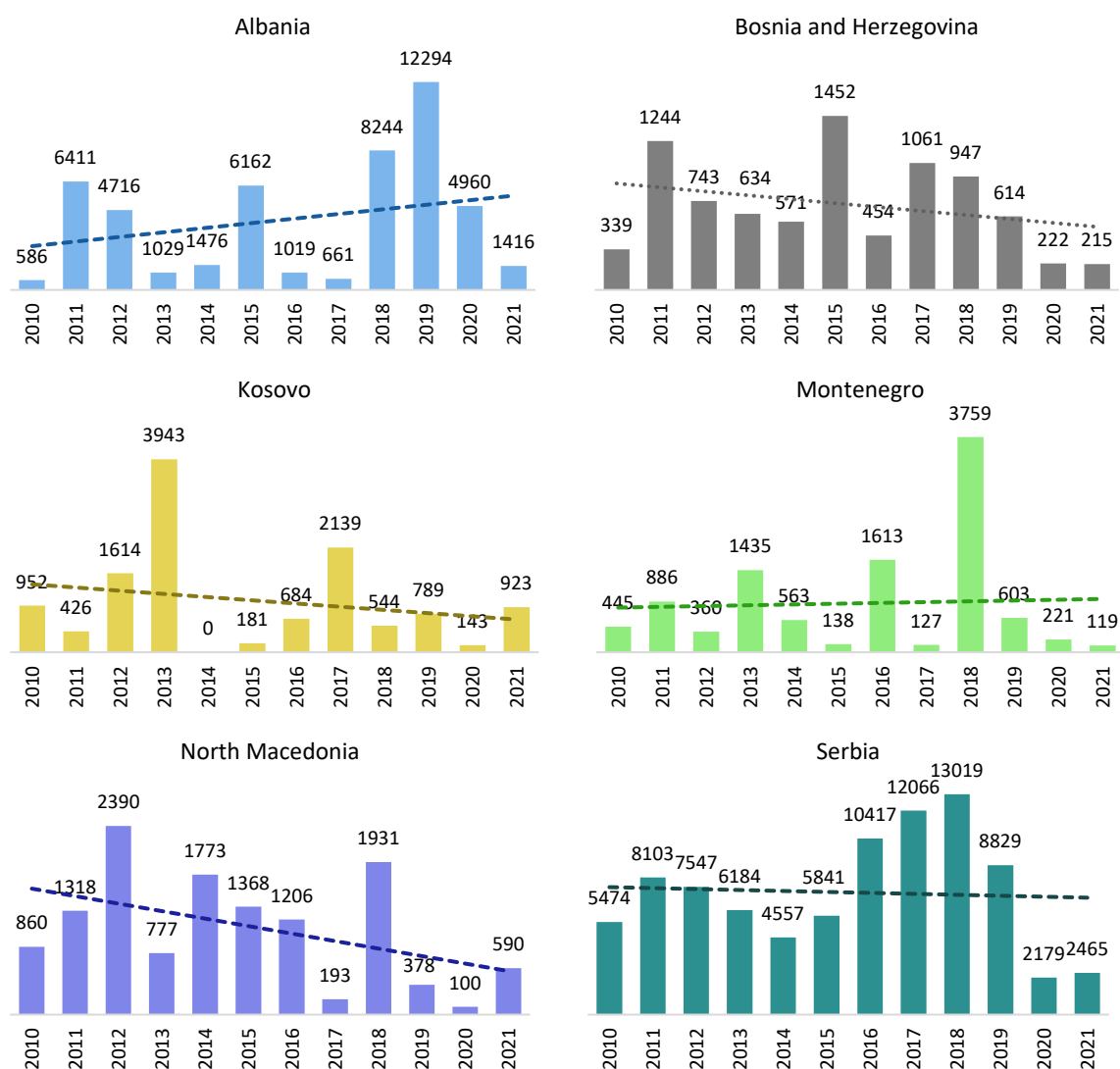
Source: Authors' calculations using data from fDi Markets, wiiw FDI database, SEE Jobs Gateway database and World Bank Enterprise Survey.

⁴ The methodology of the Enterprise Survey differs from the one employed here. It uses a sample of around 360 companies in each of the Western Balkan countries, it includes all foreign-owned companies, not just new greenfield FDI, and also accounts for job losses in addition to new job creation.

Other available estimates deal with North Macedonia and are also broadly consistent with the estimates here. The study by Jovanović (2017) estimates, among other things, the number of individuals employed on new greenfield FDI projects in North Macedonia that were in receipt of government assistance between 2007 and 2015. It finds that the companies concerned employed around 1,400 workers per year, which is close to the estimate for North Macedonia here (1,100 workers per year).

Looking at employment in new greenfield FDI projects over time, one can see different trends in the various countries – although in most, the numbers seem to be trending down. Albania is the only country that has a clear upward trend, while in Montenegro and Serbia there doesn't seem to be any trend over time. In Bosnia and Herzegovina, Kosovo, and North Macedonia, on the other hand, there is a clear downward trend (Figure II. 2). It is also noticeable that in 2020 and 2021, after the worst of the COVID-19 pandemic, employment numbers were significantly lower than in the years prior to the pandemic.

Figure II. 2 / Trends in employment in new greenfield FDI in the Western Balkans between 2010 and 2021



Source: Authors' calculations using data from fDi Markets and wiw FDI database.

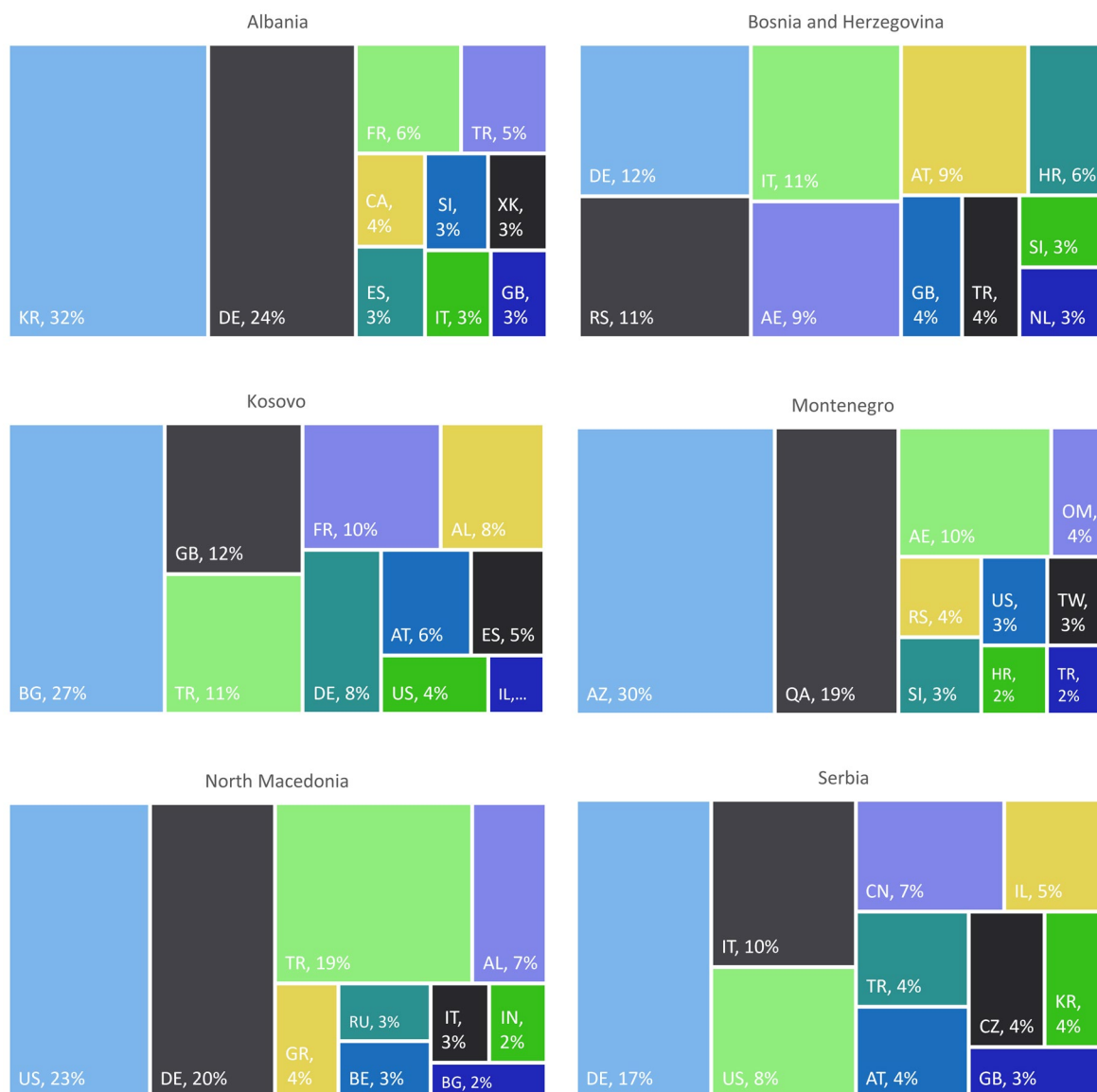


6. Employment by country of origin, sector and activity

Across the whole of the Western Balkans, in terms of the number of people in employment created by FDI, the main source countries are Germany, the US, and Italy – with 16%, 9%, and 8% of jobs, respectively. However, there is significant variation among individual countries in the region (The sectors where most of the employment has taken place in the region as a whole are automotive components and real estate, each accounting for 18% of employment. Textiles come third, with 12% of employment. Again, there are significant differences among the individual countries (Figure II. 4). In Albania, the top sectors are automotive components, and food and beverages. In Bosnia and Herzegovina, most of the employment is in textiles and real estate. In Montenegro, the majority of the new jobs are in the hotels and tourism sector. In North Macedonia, the top sectors for FDI-generated employment are automotive components and real estate. In Kosovo, the sectors with the most employment created by new greenfield FDI are consumer electronics and metals. And in Serbia, the top sectors for FDI employment are real estate and automotive components (Figure II. 3). In Albania, most of the employment is with South Korean companies (32%), followed by German companies (24%). In Bosnia and Herzegovina, most of the employment is with German investments (12%), while Serbian companies come second (11%). In Montenegro, most is with Azerbaijani (30%) and Qatari (19%) investments. In North Macedonia, the bulk of FDI-generated employment comes from US firms (23%), followed by German businesses (20%). In Kosovo, most of the new employment generated by FDI comes from Bulgarian companies (27%), followed by UK firms (12%). And in Serbia, most of the jobs are with German investments (17%), followed by Italian (10%).

The sectors where most of the employment has taken place in the region as a whole are automotive components and real estate, each accounting for 18% of employment. Textiles come third, with 12% of employment. Again, there are significant differences among the individual countries (Figure II. 4). In Albania, the top sectors are automotive components, and food and beverages. In Bosnia and Herzegovina, most of the employment is in textiles and real estate. In Montenegro, the majority of the new jobs are in the hotels and tourism sector. In North Macedonia, the top sectors for FDI-generated employment are automotive components and real estate. In Kosovo, the sectors with the most employment created by new greenfield FDI are consumer electronics and metals. And in Serbia, the top sectors for FDI employment are real estate and automotive components.

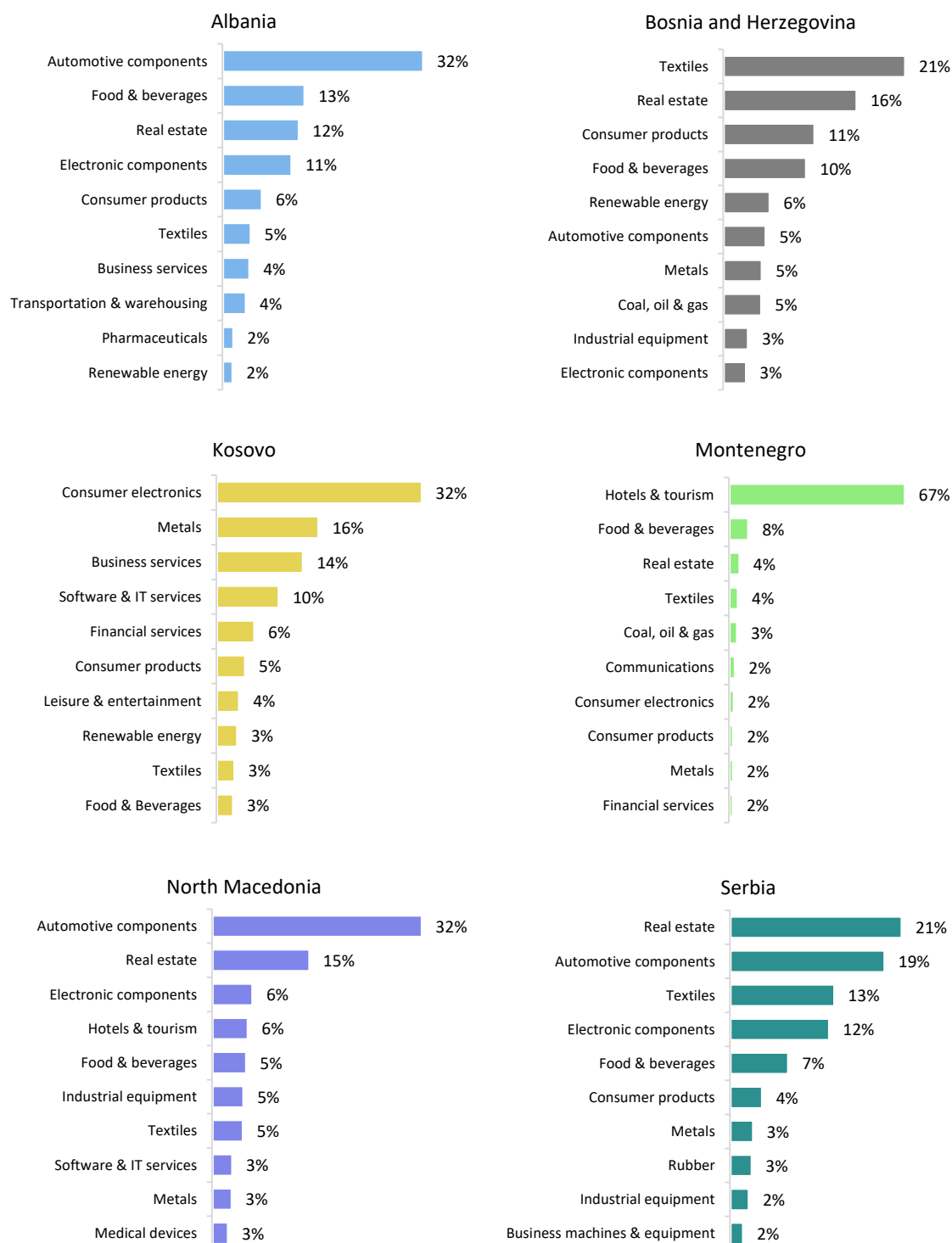
Figure II. 3 / Employment in new greenfield FDI in the Western Balkans in 2010-2021, by country of origin of companies (in %)



Notes: AE = United Arab Emirates, AL = Albania, AT = Austria, AZ = Azerbaijan, BE = Belgium, BG = Bulgaria, CA = Canada, CN = China, CZ = Czechia, DE = Germany, ES = Spain, FR = France, GB = United Kingdom, GR = Greece, HR = Croatia, IL = Israel, IN = India, IT = Italy, KR = South Korea, NL = Netherlands, OM = Oman, QA = Qatar, RS = Serbia, RU = Russia, SI = Slovenia, TR = Turkey, TW = Taiwan, US = United States, XK = Kosovo.

Source: Authors' calculations using data from fDi Markets and wiiw FDI database.

Figure II. 4 / Employment in new greenfield FDI in the Western Balkans in 2010-2021, by sector

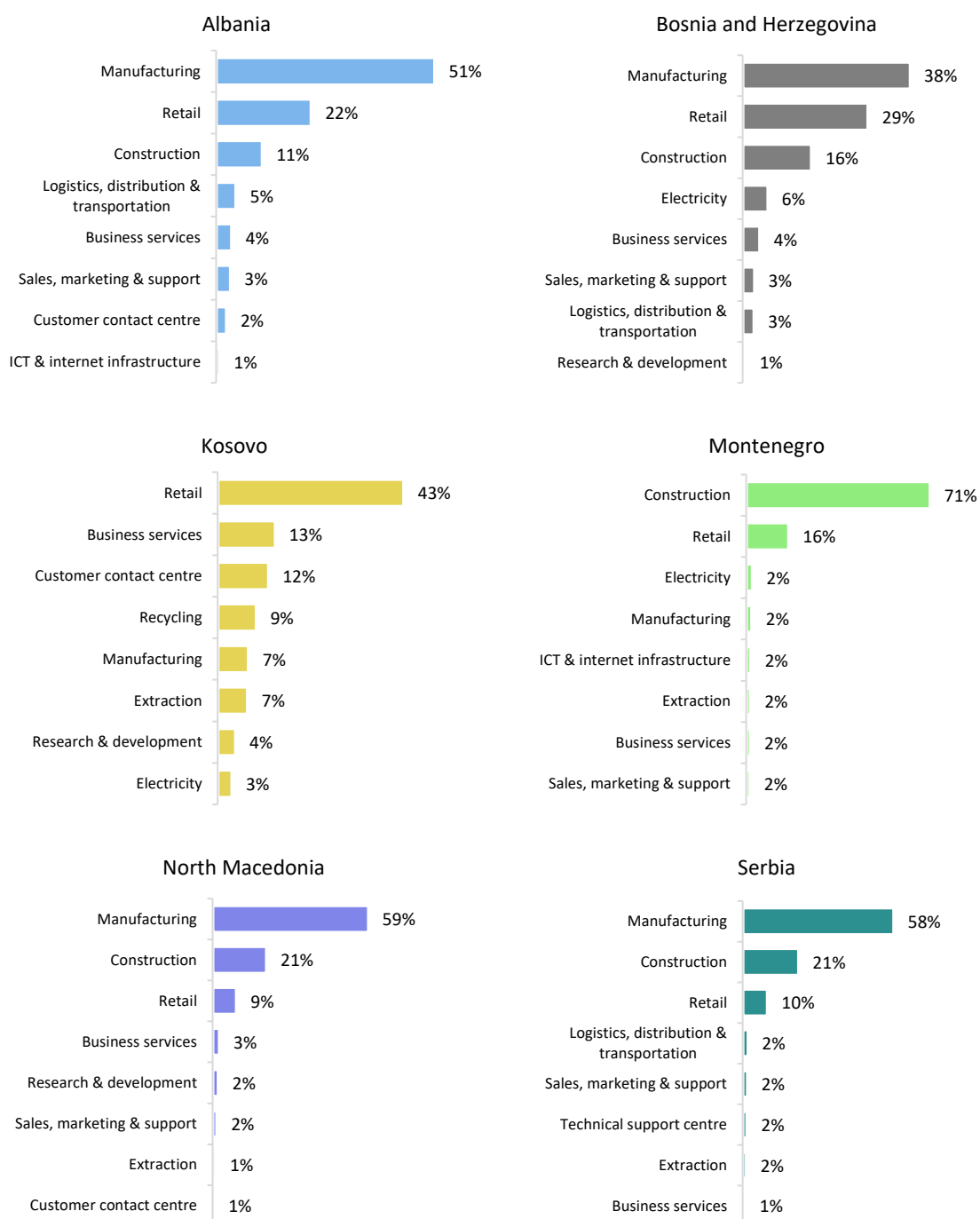


Source: Authors' calculations using data from fDi Markets and wiiw FDI database.

Turning to the activities in which employment in new greenfield FDI took place, manufacturing was far and away number one for the whole region, with 53% of employment. Construction was second, with 23% of employment; and retail was third, with 12%. Those three activities also dominated in individual countries within the region. Manufacturing was the top activity for FDI-related employment

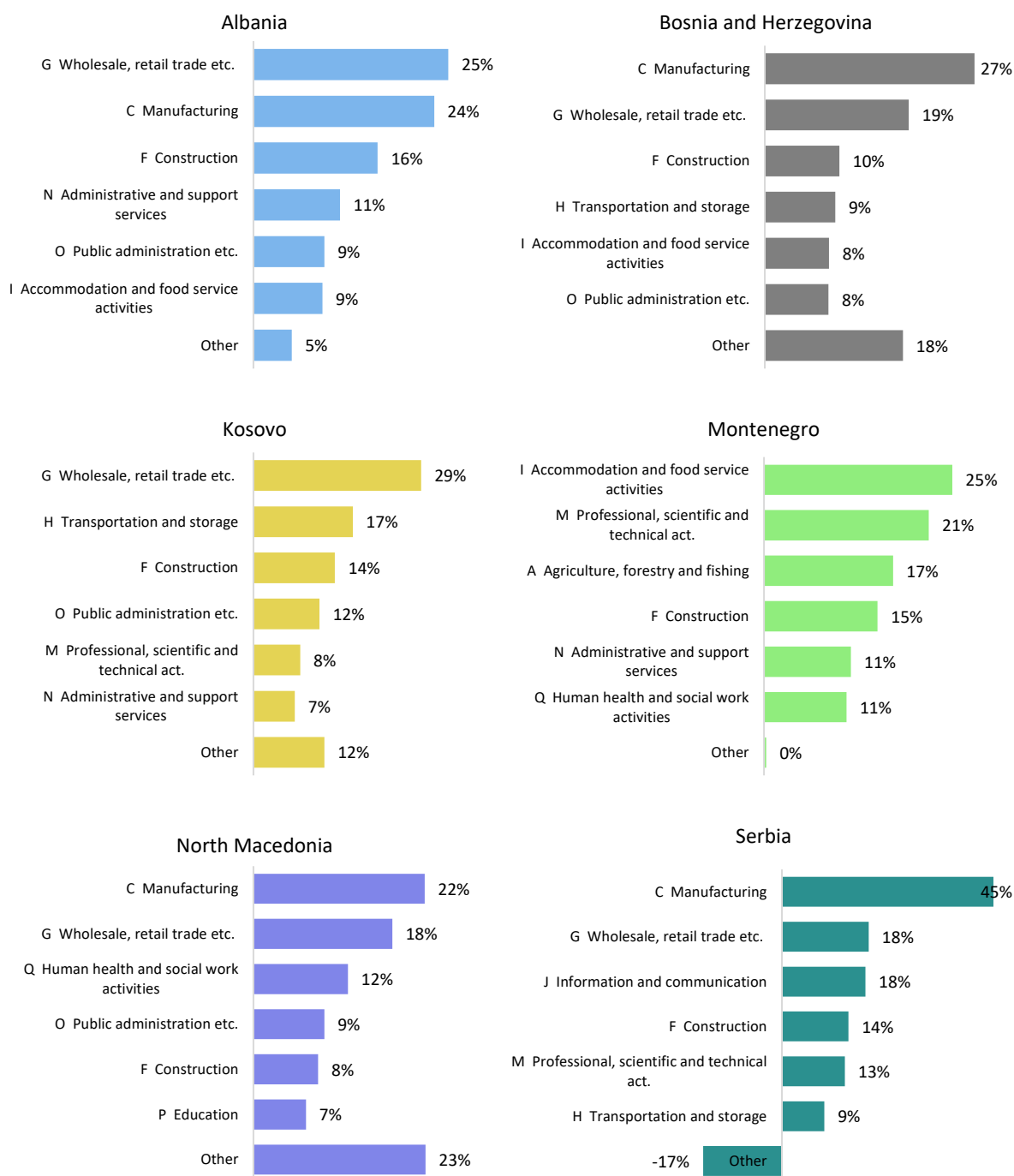
in Albania, Bosnia and Herzegovina, North Macedonia, and Serbia. In Montenegro, construction was the top activity, while in Kosovo it was retail (Figure II. 5).

Figure II. 5 / Employment in new greenfield FDI in the Western Balkans in 2010-2021, by activity



Source: Authors' calculations using data from fDi Markets and wiiw FDI database.

Figure II. 6 / Change in overall employment in the Western Balkans between 2010 and 2021, by NACE activity



Notes: Activities are based on NACE Rev. 2 and are slightly different from the activities in the fDi Markets database.

Data on Albania start from 2014; data on Bosnia and Herzegovina and Kosovo start from 2012; data on Montenegro start from 2011.

Source: SEE Jobs Gateway Database, based on data from National Statistical Offices.

The activities in which most of the FDI-related employment took place are not very different from the activities that generated most of the new employment overall in the Western Balkan economies. In Bosnia and Herzegovina, North Macedonia, and Serbia, manufacturing was the activity that made the biggest contribution to overall employment growth between 2010 and 2021 – the same as if one considers FDI-related employment (Figure II. 6). Similarly, in Kosovo the biggest contribution to overall

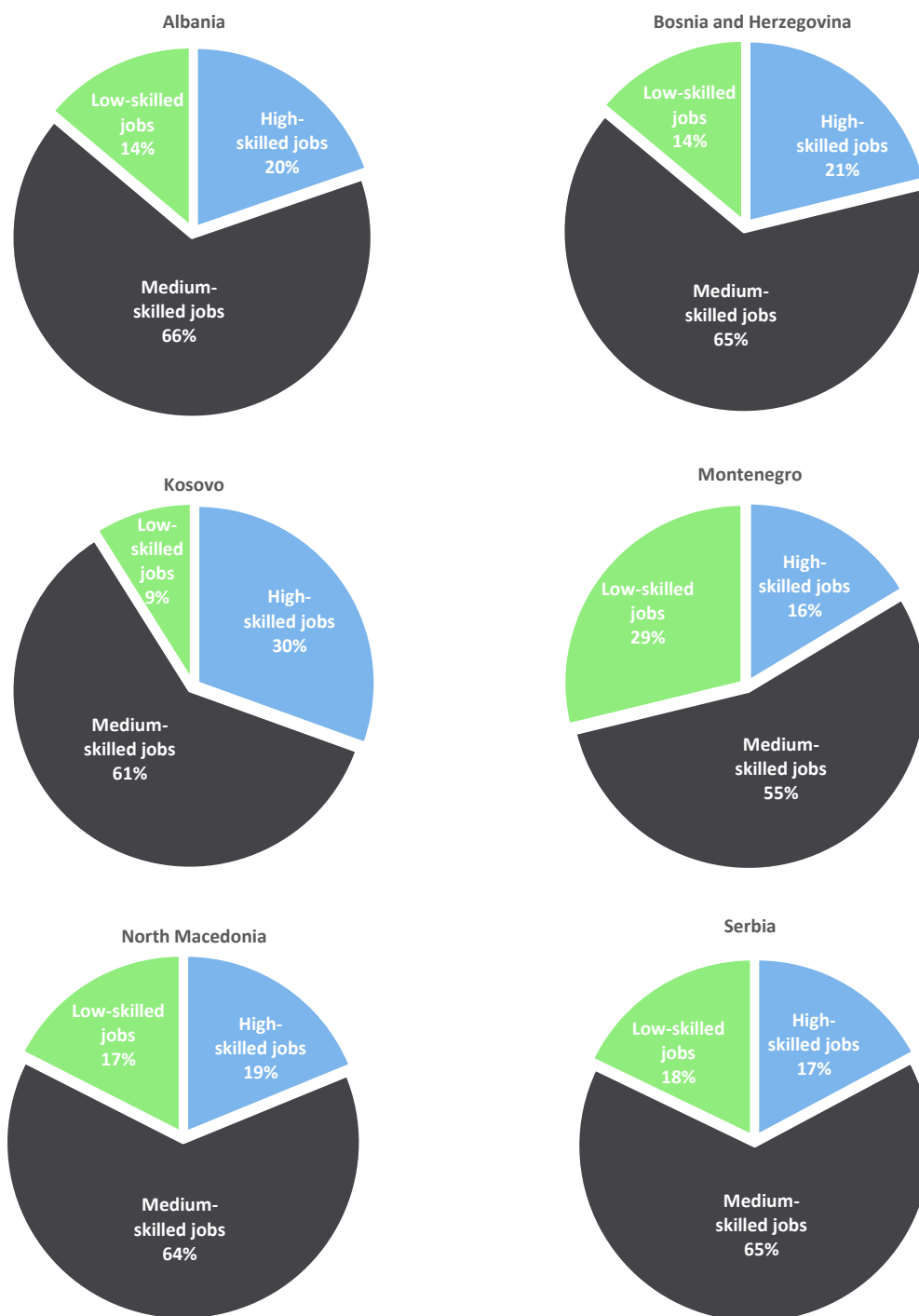
employment growth during this period came from wholesale and retail trade – the same as for FDI employment. In Montenegro, the biggest contribution to overall employment growth came from accommodation and food services: at first sight, this would appear to differ from the FDI-related employment (where most employment was in construction). However, this may have to do with differences in classifications: the construction work was in the hotels and tourism sector, which corresponds to the accommodation and food services activity. Only in Albania was there a real difference in terms of the number one activity for overall employment and FDI-related employment: for overall employment, the number one activity was wholesale and retail trade, while for FDI-related employment, it was manufacturing. But even here, the number two activity for overall employment was manufacturing, while the number two activity for FDI-related employment was retail trade.

7. Employment by level of skills and location

Next, the skill composition of jobs in the new greenfield FDI is estimated, and compared with the skill composition of overall employment in the Western Balkans. This information is not readily available from fDi Markets, but it can be approximated by combining data from fDi Markets with data from the European Centre for the Development of Vocational Training (CEDEFOP) and the International Labour Organization (ILO). This is done in three steps. First, the occupational structure of employment in different sectors is determined. Because there are no readily available data on this for the Western Balkan countries, but there are for EU member states, data for Bulgaria are used, since it is likely to be the most similar EU country, due to its similar income levels. These data are published by CEDEFOP and are calculated from the European Union Labour Force Survey. In the second step, the occupational structure of the FDI-related employment in the Western Balkans is approximated, by linking the data on the occupational structure of employment in Bulgaria with the estimates of employment in the new greenfield FDI in the Western Balkans. The correspondence between the CEDEFOP sectors and the fDi Markets activities is shown in Table II. 10 in the Annex. In the third step, the ILO skill-level classification of different occupations is used to calculate the number of low-skilled, medium-skilled, and high-skilled jobs in the new greenfield FDI in the Western Balkans. The ILO skill-level classification of occupations is shown in Table II. 11 in the Annex.

It is important to note that these skill-composition estimates have certain limitations. First, they are based on occupational structures of sectoral employment in Bulgaria, which may differ significantly from the occupational structure of employment in the Western Balkans. Additionally, they assume that the occupational structure of new greenfield FDI is the same as that of existing companies in the same sectors – an assumption that may not always be valid. Nevertheless, despite these limitations, the estimates are of value, particularly when comparing FDI-related employment to overall employment in the countries, and when observing changes over time.

Figure II. 7 / Structure of employment in the new greenfield FDI in the Western Balkans between 2010 and 2021, by level of skills



Source: Authors' calculations using data from fDi Markets, wiiw FDI database, CEDEFOP and ILO.

Most of the medium-skill jobs are concentrated in three occupations – service and sales workers, operators and assemblers, and trades workers. Service and sales workers are in the retail sector, while operators and assemblers and trades workers are in manufacturing and construction (Table II. 8).

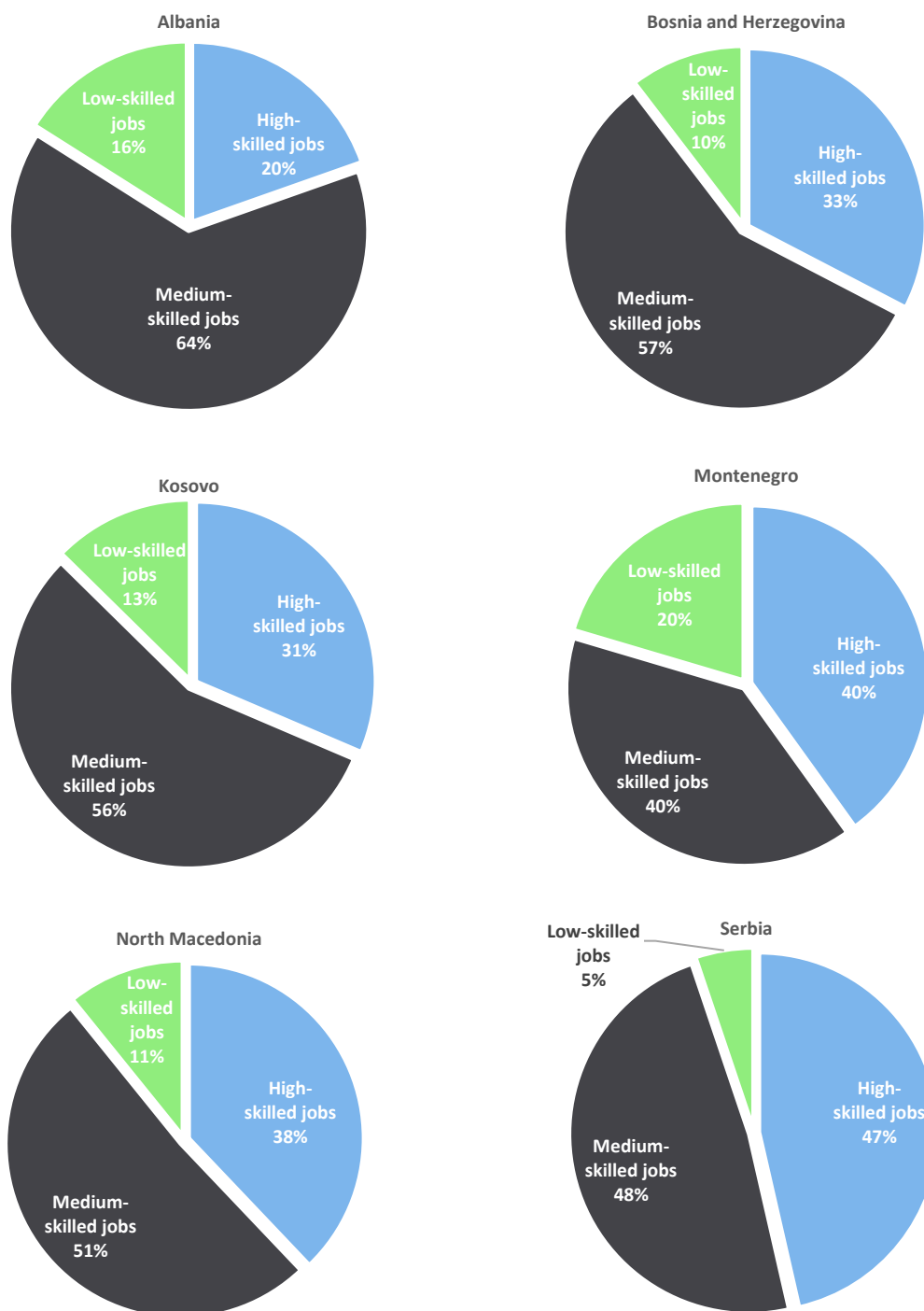
Table II. 8 / Activities and occupations with most medium-skill jobs in the Western Balkans between 2010 and 2021

Country	fDi Markets activity	Occupation
Albania	Retail	Service and sales workers
Albania	Manufacturing	Operators and assemblers
Albania	Manufacturing	Trades workers
Bosnia and Herzegovina	Retail	Service and sales workers
Bosnia and Herzegovina	Manufacturing	Operators and assemblers
Bosnia and Herzegovina	Manufacturing	Trades workers
Kosovo	Retail	Service and sales workers
Kosovo	Retail	Trades workers
Kosovo	Extraction	Operators and assemblers
Montenegro	Construction	Operators and assemblers
Montenegro	Construction	Trades workers
Montenegro	Retail	Service and sales workers
North Macedonia	Construction	Trades workers
North Macedonia	Retail	Service and sales workers
North Macedonia	Manufacturing	Trades workers
Serbia	Construction	Trades workers
Serbia	Manufacturing	Operators and assemblers
Serbia	Manufacturing	Trades workers

Source: Authors' calculations using data from fDi Markets, wiiw FDI database, CEDEFOP and ILO.

The skills intensity of FDI-related employment in the Western Balkans between 2010 and 2021 was generally lower than that of total new employment in the region during the same period. Even for overall employment, most new jobs were medium-skill, but their share was lower than for FDI-related employment, while the share of high-skill jobs was generally higher. In Montenegro and Serbia, the share of high-skill jobs in total new employment between 2010 and 2021 was even equal to the share of medium-skill jobs – 40% in Montenegro and 47% in Serbia – which was clearly better than among the FDI-related jobs. In Bosnia and Herzegovina, 33% of new jobs overall were high-skill, while among FDI jobs, that share was 21%. In North Macedonia, 38% of the new jobs were high-skill, compared to 19% of FDI jobs. Only Albania and Kosovo had a skill structure that was similar for both overall employment and FDI-related employment (Figure II. 8). It is important to note that these findings should be interpreted with caution, because they rely on different underlying data: FDI-related employment is gross employment, which excludes replaced and lost jobs, whereas overall employment is net and includes replaced and lost jobs.

Figure II. 8 / Skill structure of net changes in total employment in the Western Balkans between 2010 and 2021



Source: Authors' calculations using data from LFS, CEDEFOP and ILO.

When analyzing the evolution of skill composition over time, one can see that there are different trends across the various countries. Specifically, in Bosnia and Herzegovina and Kosovo, the skill composition of FDI-related jobs improved in the latter half of the period analyzed (2016-2021), compared to the first half (2010-2015). This is evidenced by an increase in the share of high-skill jobs and a decrease in the share of low-skill jobs. However, the opposite is true for Albania, Montenegro, and North Macedonia, where there was a general decline in the share of high-skill jobs and a rise in the share of low-skill jobs. In Serbia, there was no discernible change over time. It is worth noting that these changes were relatively minor, with most jobs remaining medium-skilled across all countries (Table II. 9).

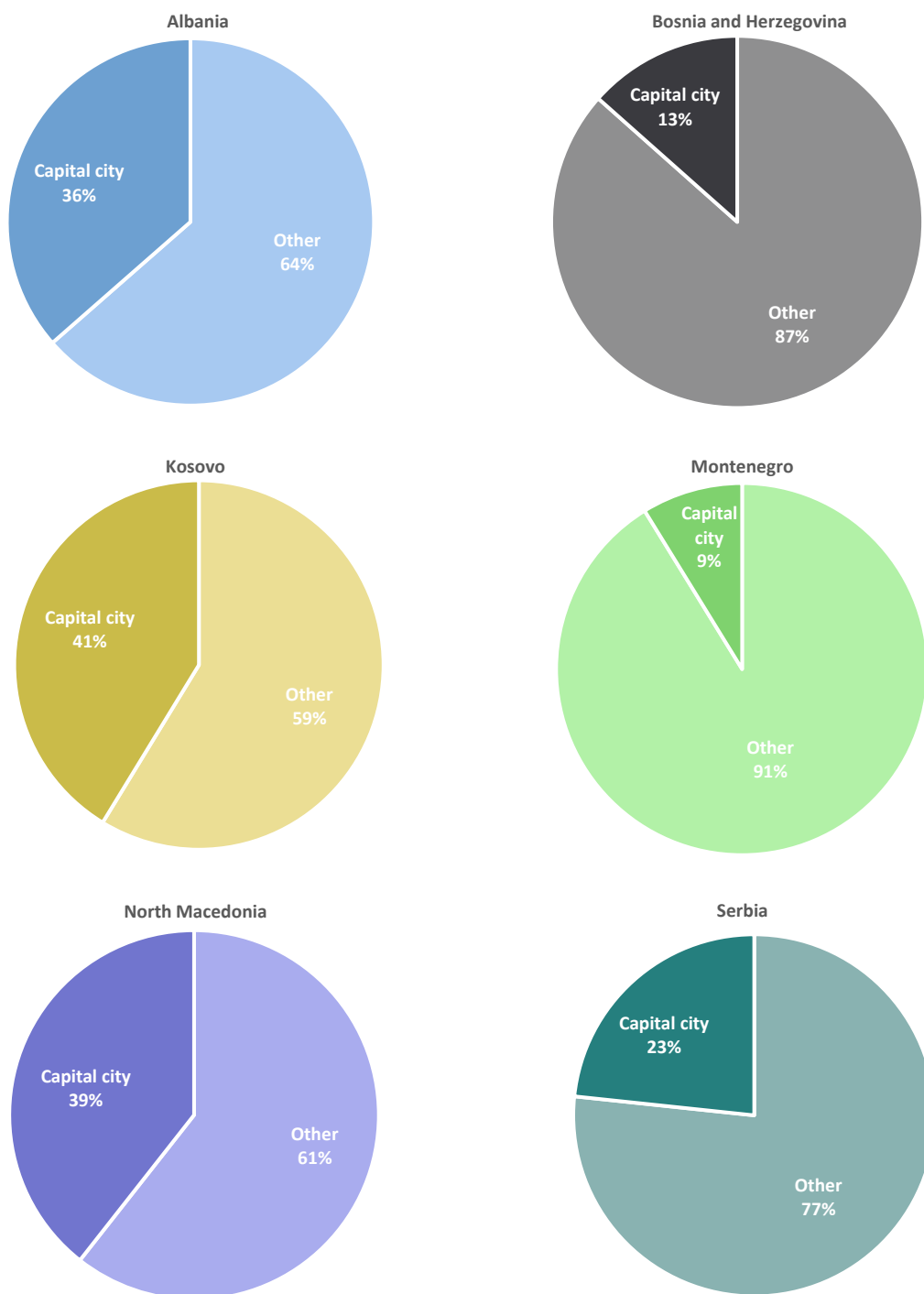
Table II. 9 / Skill composition of FDI-related employment in the Western Balkans in 2010-2015 and 2016-2021 (as a share of total FDI-related employment during the respective periods)

		Low	Medium	High
Albania	2010-2015	15%	63%	22%
	2016-2021	13%	69%	18%
Bosnia and Herzegovina	2010-2015	16%	64%	20%
	2016-2021	11%	67%	22%
Kosovo	2010-2015	11%	62%	27%
	2016-2021	5%	57%	38%
Montenegro	2010-2015	25%	57%	19%
	2016-2021	31%	54%	15%
North Macedonia	2010-2015	17%	65%	19%
	2016-2021	19%	62%	19%
Serbia	2010-2015	18%	65%	17%
	2016-2021	18%	65%	17%

Source: Authors' calculations using data from fDi Markets, wiiw FDI database, CEDEFOP and ILO.

When examining the location of FDI-related employment, it is noteworthy that the majority of jobs were not situated in the capital cities. Across the Western Balkans, only about a quarter of new greenfield FDI employment was located in capital cities, though there were variations across the individual countries. Kosovo had the highest proportion of jobs in its capital city, accounting for 41% of employment; it was followed by North Macedonia with 39% and Albania with 36%. Conversely, the remaining countries had considerably lower percentages of FDI-generated jobs in their capital cities. Montenegro was particularly distinctive, with only 9% of jobs located in the capital city – hardly surprising, as most FDI in Montenegro is associated with tourism, which is not as prevalent in the capital, Podgorica (Figure II. 9). This may suggest that FDI has not exacerbated existing economic and social disparities between urban and rural areas in the region.

Figure II. 9 / Employment in new greenfield FDI in the Western Balkans between 2010 and 2021, by location



Source: Authors' calculations using data from fDi Markets and wiiw FDI database.

8. Conclusion

FDI has been a key pillar of the economic model that the Western Balkan economies introduced in the wake of the transition from socialism. However, despite the attention it has received, and despite the availability of extensive financial data on such investment, there is a lack of understanding about the employment it generates. In order to address this gap, this special topic of this Labor Market Brief has estimated and analyzed employment in the new greenfield FDI in the region from 2010 to 2021. The Financial Times fDi Markets database has been utilized, aligned with official FDI statistics.

It has been found that approximately 180,000 people were employed in these investments, which amounts to 19% of the total employment increase in the region over this time. This loosely means that for every FDI-related job in the region between 2010 and 2021, there were four non-FDI-related jobs. In general, no increasing trend in employment numbers is found over time – indeed, quite the reverse: a declining trend is present in most of the countries. Albania is the only country which saw a clearly upward trend; in Montenegro and Serbia there does not seem to have been any particular trend over this period.

In terms of the activities that witnessed FDI-related employment, there was no major difference compared with non-FDI employment in the region. Most of the FDI-related employment in the region was in the manufacturing sector (53%), followed by construction (23%) and retail (12%). This pattern was similar to that of non-FDI employment in the region, where manufacturing and wholesale and retail trade were the primary drivers of employment growth.

The skill composition of FDI-related jobs was lower than the skill composition of non-FDI-related jobs. Two thirds of FDI-related jobs were medium-skilled, while low-skilled and high-skilled jobs split the remaining third evenly. This skill composition was generally lower than the skill composition of overall new employment in the region, where medium-skill jobs also dominated (though with a lower share than for FDI-related employment), but where the share of high-skill jobs was greater. Furthermore, there was no general improvement in the skill composition of FDI-related employment over time, raising concerns about the contribution of FDI jobs to improving job quality.

All of this came at a time when the governments of the Western Balkans were offering significant financial incentives to foreign companies that invested in their countries. While there are no data on the total fiscal cost of these incentives for all the economies of the region, official information from North Macedonia from 2017 indicates that the incentives were substantial. The government of the Republic of North Macedonia announced in 2017 that it had spent a total of EUR 355 million between 2007 and 2017 on attracting foreign direct investment, the bulk of which was used to offer incentives to foreign investors (Government of the Republic of North Macedonia, 2017a, 2017b). This resulted in 25 companies investing in the country, employing a total of 20,000 people. This means that the government subsidized each new FDI job to the tune of EUR 17,750, which is roughly equivalent to four years' worth of salary for the respective jobs. The World Bank, in its 2022 Trade Policy Strategy for North Macedonia, states that tax incentives that the government has given to the foreign investors between 2017 and 2020 have amounted to 5 percent of total tax revenues during that period (World Bank, 2022). This suggests that careful attention needs to be paid not only to the amount of FDI, but also to the types of jobs that are created, so as to calibrate incentives and benefits in a better way.

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10. Annex

Table II. 10 / Concordance between fDi Markets activities and CEDEFOP sectors

fDi Markets activity	CEDEFOP sector
Manufacturing	Manufacturing
Construction	Construction
Retail	Wholesale & retail trade
Sales, Marketing & Support	Administrative services
Logistics, Distribution & Transportation	Distribution & transport
Business Services	Business services
Electricity	Energy supply services
Extraction	Mining & quarrying
Technical Support Centre	Administrative services
Research & Development	Professional services
Customer Contact Centre	Administrative services
ICT & Internet Infrastructure	ICT services
Recycling	Water and waste treatment
Headquarters	Professional services
Maintenance & Servicing	Administrative services
Education & Training	Education
Shared Services Centre	Administrative services

Source: fDi Markets and CEDEFOP.

Table II. 11 / Skill levels of different occupations

ILO skill level	ISCO-08 occupation
Skill levels 3 and 4 (high)	1. Managers
	2. Professionals
	3. Technicians and Associate Professionals
Skill level 2 (medium)	4. Clerical Support Workers
	5. Services and Sales Workers
	6. Skilled Agricultural, Forestry and Fishery Workers
	7. Craft and Related Trades Workers
	8. Plant and Machine Operators and Assemblers
Skill level 1 (low)	9. Elementary Occupations

Source: ILO.

Statistical Annex

- SEE Jobs Gateway
- Sources and definitions
- Key economic indicators

Tables per country:

- Labor market data
- Earnings and unit labor costs

The tables in the statistical annex provide data on key economic indicators, as well as labor market indicators, according to the labor force survey (LFS) methodology and data on earnings and unit labor costs for the six Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia, and Kosovo) and for four EU peer countries (Austria, Bulgaria, Croatia, and Hungary).

Disclaimer

All data presented in this report and online have been collected directly from the national statistical offices of the six Western Balkan countries and Eurostat, with the objective of harmonizing the data as far as possible across countries. The data have been collected within the framework of the SEE Jobs Gateway and, as such, are not official World Bank estimates.

SEE Jobs Gateway Database

All time series presented in the statistical annex are available in the SEE Jobs Gateway Database at <https://wiiw.ac.at/seejobsgateway.html>

This database covers a unique and detailed set of labor market indicators, based on LFS data for the Western Balkan countries and four EU peer countries. The dataset is harmonized across indicators, gender, age groups, and educational attainment. In addition, some wage-related indicators are included. Overall, the database covers four parts: (i) Key economic indicators, (ii) Labor market – LFS data, (iii) Labor market – administrative data, and (iv) Data on earnings and unit labor costs.

The database contains both raw and derived statistics. The underlying basic employment data (in thousand persons) are provided by the statistical offices on an annual and quarterly basis (raw data, to three decimal places). All corresponding rates and shares on an annual and quarterly basis have been calculated based on these raw data. Flags in the database are used as alerts, drawing attention to the fact that the data could be less accurate (or inaccurate) and should be interpreted with caution.

Major breaks in the LFS series

The LFS in the Western Balkans have steadily improved and are being harmonized with EU and ILO definitions, which means that breaks in the time series are unavoidable. Most of the breaks in the series occur for one or other of the following reasons: change in survey design; change in survey questionnaire; change in survey frequency; revision of the data series based on updated population census results for 2011; and reclassification of educational attainment. In addition, the EU LFS survey was changed as of 2021. The following changes affect the data series' comparability over time and across countries:

- *EU LFS survey changes:* From 2021, a new methodology started to be introduced, in line with the Integrated European Social Statistics (IESS) Regulation. This has resulted in some major changes, which are carefully defined at [Eurostat](https://ec.europa.eu/eurostat/). As of 2021, three Western Balkan countries – Bosnia and Herzegovina, Montenegro, and Serbia – and all four EU peer countries were already applying this new methodology. Any changes in comparison to previous years should be carefully interpreted. A mandatory back-calculation for some major indicators – including gender, age, and education – is required by Eurostat. In this SEE Jobs Gateway Database, no back-calculation is provided.

When calculating labor productivity and unit labor costs a comparable growth rate 2021 is applied for the respective countries, except for Bosnia and Herzegovina and Montenegro.

- *Introduction of a continuous quarterly survey producing quarterly results:* in Albania – from 2012 (previously, the survey was carried out once a year – in 2010, in September-October; in 2011, in July-September); in Bosnia and Herzegovina – from 2020 (until 2019, the survey was carried out once a year in April); in Serbia – from 2015 (in 2010-2013, the survey was carried out twice a year, in April and October; in 2014, a quarterly survey with a fixed reference week was introduced). Amendment: In Kosovo the survey was already based on a continuous quarterly survey; so far the data are only available on an annual basis between 2012 and 2015, and starting from 2016 on a quarterly basis.
- *Updated population census results:* Census 2011 has been applied in Albania and Montenegro from 2011 (data for 2010 are not fully comparable); in Serbia from 2013 (low impact on growth rates in comparison to the previous year). Census 2013 has been applied in Bosnia and Herzegovina from 2020 (due to this and other methodological changes, data are not comparable to previous years). Amendment: In North Macedonia, the 2002 census is applied (Census 2021 has not yet been taken into account).
- *Educational attainment:* Indicators showing educational attainment are based on the International Standard Classification of Education (ISCED 1997 or ISCED 2011). In the following tables, as well as in the SEE Jobs Gateway Database, the definition of low-educated (level 0-2), medium-educated (level 3-4), and high-educated (level 5-8) refers to ISCED 2011. Any deviations (application of ISCED 1997) are described in the metadata.
Detailed ISCED 2011 levels of education: 0 = early childhood education, 1 = primary education, 2 = lower secondary education, 3 = upper secondary education, 4 = post-secondary non-tertiary education, 5 = short-cycle tertiary education, 6 = bachelor's or equivalent, 7 = master's or equivalent, 8 = doctorate or equivalent). In comparison, ISCED 1997 includes only seven levels of education (tertiary education is less detailed). A correspondence table is available at [Eurostat](#).

Regarding *average monthly wages* (gross and net), breaks may occur if the survey basis has changed, or the data are taken from a new or different source. This is the case in Albania (data from General Directorate of Taxation from 2014; before that, Structural Business Statistics data); in Croatia (from 2016, data are based on tax records; before that, survey data; from 2020, employees expressed in full-time equivalents); and in Serbia (from 2018 tax administration data; before that, wage survey data supplemented by tax administration data). The SEE Jobs Gateway database provides comparable growth rates. The comparability between annual and quarterly data may also be impaired by survey coverage (this is the case for Albania and Kosovo).

In the SEE Jobs Gateway Database, all methodological breaks in time series and definitions are defined in the metadata.

In this round of data collection, the existing dataset has been enlarged by the following new indicators:

- 1) Labor productivity
- 2) Registered unemployed persons and registered unemployment rate taken from Public Employment Services.
- 3) Average monthly net wages

Western Balkans-6 aggregate

This country grouping is the sum of the six countries only when data for all the countries are available. Time series therefore start from 2012 (because data for Kosovo are not available prior to this). If necessary, weighted averages have been calculated (GDP, consumer price index (CPI), labor productivity, wages, unit labor cost).

Conventional signs

- . Data not available
- () less accurate estimate
- (()) inaccurate estimate

Sources and definitions

Macro-economic indicators

Sources

SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat. The unit labor costs are calculations done by wiiw.

Definitions

GDP real: gross domestic product at 2015 reference prices, real growth in %.

Labor productivity: GDP at 2015 reference prices per person employed (LFS), growth in %.

Inflation: consumer price index (harmonized CPI for EU peer countries), growth in %.

Labor market indicators

Sources

Data for the Western Balkans are provided by the statistical offices of the respective country; data for the EU peer countries are taken from Eurostat (partly supplemented by data from national statistical offices).

Definitions

Indicators like **population**, **employment**, **unemployment**, etc. are presented in 1,000 persons and refer to averages.

Working-age population: for the Western Balkans population 15+ (ILO); for the EU peer countries population aged 15-74. From 2021, for those countries applying the new EU LFS regulation, the age group refers to 15-89.

Labor force: employed and unemployed persons.

Employment rate: employed persons as a percentage of the working-age population of the respective gender, age, and education group.

Share of self-employed: self-employed as a percentage of the total employment of the respective gender, age, and education group.

Share of part-time employment: part-time employed as a percentage of the total employment of the respective gender, age, and education group.

Share of temporary employment: temporary employees as a percentage of total employees of the respective gender, age, and education group.

Activity rate: labor force as a percentage of the working-age population of the respective gender, age, and education group.

Unemployment rate: unemployed persons as a percentage of the labor force of the respective gender, age, and education group.

NEET rate: young people neither in employment nor education and training (NEET) as a percentage of the young population of the respective gender, age, and education group.

Long-term unemployment: persons unemployed for 12 months or more.

Long-term unemployment rate: long-term unemployed as a percentage of the labor force.

Share of long-term unemployment: long-term unemployed as a percentage of total unemployed.

Data on earnings and unit labor costs

Sources

Data on average monthly gross and net wages and monthly gross minimum wages are provided by the statistical offices of the respective country. Unit labor costs are own calculations from existing time series.

Definitions

Average monthly wages: wages per employee per month (on a gross/net basis – before/after deduction of income tax and social security contributions). Gross wages comprise the basic wage and all kinds of additional payments (bonuses, overtime hours, night work, payments for statutory contractual or voluntarily granted leave, etc.).

Data are taken from administrative sources, except for Austria, where they refer to the National Accounts concept (gross wages per employee, domestic concept, divided by 12 months).

Wages are presented in national currency, in euro (converted using the average exchange rate) and in Purchasing Power Parities (PPPs) (using PPPs in EUR for total GDP).

Monthly gross minimum wages: data refer to national minimum wages as of 1 January of the respective year. The metadata indicate since when the minimum wage has been in effect.

The basic national minimum wage is fixed at an hourly, weekly, or monthly rate in net or gross terms; this minimum wage is enforced by law (the government), often after consultation with the social partners, or directly by national intersectoral agreement. Minimum wages are gross amounts – that is, before deduction of income tax and social security contributions.

In the database monthly gross minimum wages are reported.

Minimum wages are provided in national currency; they are then converted into euro by applying the exchange rate from the end of the previous month. To remove the effect of differences in price levels between the countries, the minimum wages are converted using PPPs for household final consumption expenditure in each country.

Unit labor costs (ULC): average annual nominal gross wages per employee relative to labor productivity (real GDP per employed person, LFS).

Unit labor costs (ULC) exchange rate adjusted: average annual nominal gross wages per employee in EUR relative to labor productivity (real GDP per employed person, LFS).

For both unit labor cost indicators, comparable growth rates have been applied for all breaks.

Key economic indicators

annual growth in %

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Albania										
GDP, real	1.4	1.0	1.8	2.2	3.3	3.8	4.0	2.1	-3.5	8.5
Employment aged 15+	-1.8	-10.2	1.3	4.8	6.5	3.3	3.0	2.8	-1.8	0.4
Labor productivity	3.2	12.5	0.5	-2.4	-3.0	0.5	1.0	-0.7	-1.8	8.0
Inflation	2.0	1.9	1.6	1.9	1.3	2.0	2.0	1.4	1.6	2.0
Monthly gross wages per employee, nominal	2.9	-3.2	0.9	5.2	-0.8	3.0	3.3	3.5	2.4	6.6
Monthly gross wages per employee, real	0.8	-5.0	-0.7	3.2	-2.0	1.0	1.3	2.1	0.8	4.4
Unit labor costs	-0.3	-13.9	0.4	7.8	2.3	2.5	2.3	4.3	4.3	-1.4
Bosnia and Herzegovina										
GDP, real	-0.8	2.3	1.2	4.3	3.2	3.2	3.8	2.9	-3.0	7.4
Employment aged 15+	-0.3	1.0	-1.2	1.2	-2.5	1.8	0.8	-2.4	-1.0	-1.9
Labor productivity	-0.5	1.4	2.3	3.1	5.9	1.4	3.0	5.4	-2.0	9.5
Inflation	2.1	-0.1	-0.9	-1.0	-1.6	0.8	1.4	0.6	-1.1	2.0
Monthly gross wages per employee, nominal	1.5	0.1	-0.1	0.0	0.9	1.6	3.1	4.3	3.8	4.5
Monthly gross wages per employee, real	-0.5	0.2	0.8	1.0	2.5	0.8	1.7	3.7	5.0	2.4
Unit labor costs	2.1	-1.3	-2.4	-3.0	-4.7	0.2	0.1	-1.0	6.0	-4.6
Kosovo										
GDP, real	1.7	5.3	3.3	5.9	5.6	4.8	3.4	4.8	-5.3	10.7
Employment aged 15+	.	12.3	-4.9	-8.2	11.8	7.8	-3.3	5.2	-4.2	10.3
Labor productivity	.	-6.2	8.7	15.3	-5.6	-2.7	7.0	-0.4	-1.2	0.4
Inflation	2.5	1.8	0.4	-0.5	0.3	1.5	1.1	2.7	0.2	3.4
Monthly gross wages per employee, nominal	.	0.8	4.4	3.0	1.7	2.1	5.1	5.3	-2.3	3.9
Monthly gross wages per employee, real	.	-1.0	4.0	3.5	1.4	0.6	4.0	2.5	-2.5	0.4
Unit labor costs	.	7.4	-3.9	-10.7	7.7	5.0	-1.7	5.7	-1.1	3.4
Montenegro										
GDP, real	-2.7	3.5	1.8	3.4	2.9	4.7	5.1	4.1	-15.3	13.0
Employment aged 15+	2.6	0.4	7.1	2.5	1.1	2.3	3.5	2.7	-10.0	-3.1
Labor productivity	-5.2	3.1	-5.0	0.9	1.8	2.4	1.5	1.3	-5.9	16.7
Inflation	4.2	2.2	-0.7	1.6	-0.3	2.4	2.6	0.4	-0.3	2.4
Monthly gross wages per employee, nominal	0.7	-0.1	-0.4	0.3	3.6	1.9	0.1	0.9	1.3	1.3
Monthly gross wages per employee, real	-3.3	-2.3	0.3	-1.3	3.9	-0.5	-2.4	0.6	1.6	-1.1
Unit labor costs	6.2	-3.1	4.8	-0.6	1.8	-0.5	-1.3	-0.4	7.6	-13.2
North Macedonia										
GDP, real	-0.5	2.9	3.6	3.9	2.8	1.1	2.9	3.9	-4.7	3.9
Employment aged 15+	0.8	4.3	1.7	2.3	2.5	2.4	2.5	5.1	-0.3	0.0
Labor productivity	-1.3	-1.4	1.9	1.5	0.4	-1.3	0.4	-1.1	-4.4	3.9
Inflation	3.3	2.8	-0.3	-0.3	-0.2	1.4	1.5	0.8	1.2	3.2
Monthly gross wages per employee, nominal	0.2	1.2	1.0	2.7	2.0	2.6	5.8	5.1	8.3	5.7
Monthly gross wages per employee, real	-3.0	-1.6	1.3	3.0	2.2	1.2	4.2	4.3	7.0	2.4
Unit labor costs	1.5	2.6	-0.9	1.2	1.7	3.9	5.3	6.3	13.3	1.7
Serbia										
GDP, real	-0.7	2.9	-1.6	1.8	3.3	2.1	4.5	4.3	-0.9	7.5
Employment aged 15+	-1.2	3.5	4.7	0.6	5.6	2.8	1.4	2.4	-0.2	2.6
Labor productivity	0.5	-0.6	-6.0	1.2	-2.2	-0.6	3.1	1.9	-0.7	4.8
Inflation	7.3	7.7	2.1	1.4	1.1	3.0	2.0	1.7	1.6	4.1
Monthly gross wages per employee, nominal	8.9	5.7	1.2	-0.5	3.8	3.9	6.0	10.5	9.5	9.4
Monthly gross wages per employee, real	1.0	-1.9	-1.7	-2.4	2.6	0.9	3.9	8.4	7.8	5.2
Unit labor costs	8.4	6.3	7.7	-1.7	6.1	4.6	2.8	8.4	10.2	4.4
Western Balkans-6										
GDP, real	-0.3	2.7	0.5	2.7	3.4	2.7	4.0	3.7	-3.0	7.7
Employment aged 15+	.	1.1	2.4	1.3	4.5	3.0	1.6	2.4	1.2	1.4
Labor productivity	.	1.6	-1.9	1.4	-1.1	-0.2	2.4	1.3	-4.2	6.3
Inflation	4.8	4.4	1.0	0.7	0.4	2.1	1.8	1.4	0.9	3.2
Monthly gross wages per employee, nominal	.	2.1	1.0	1.3	2.2	3.1	4.8	7.0	6.1	7.0
Monthly gross wages per employee, real	.	-2.1	-0.4	0.2	1.6	0.9	2.9	5.4	5.2	3.8
Unit labor costs	.	0.5	2.9	-0.1	3.3	3.4	2.3	5.6	10.7	0.7
Unit labor costs, EUR adjusted	.	1.7	1.3	-1.9	2.2	4.2	3.0	6.2	12.3	0.6

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EU peer countries

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Austria										
GDP, real	0.7	0.0	0.7	1.0	2.0	2.3	2.4	1.5	-6.5	4.6
Employment aged 15-74	0.8	0.5	0.1	0.9	1.7	1.0	1.4	0.8	-1.3	1.3
Labor productivity	-0.1	-0.5	0.5	0.1	0.3	1.3	1.0	0.7	-5.2	3.2
Inflation (harmonized CPI)	2.6	2.1	1.5	0.8	1.0	2.2	2.1	1.5	1.4	2.8
Monthly gross wages per employee, nominal	2.7	2.1	1.8	2.1	2.3	1.6	2.8	3.0	1.6	3.4
Monthly gross wages per employee, real	0.3	0.1	0.1	1.1	1.4	-0.4	0.8	1.5	0.2	0.6
Unit labor costs	2.8	2.6	1.2	1.9	2.1	0.4	1.8	2.2	7.2	0.2
Bulgaria										
GDP, real	0.8	-0.6	1.0	3.4	3.0	2.8	2.7	4.0	-4.0	7.6
Employment aged 15-74	-1.1	0.0	1.6	1.7	-0.5	4.4	0.1	2.6	-3.5	-0.6
Labor productivity	1.8	-0.6	-0.6	1.7	3.5	-1.6	2.6	1.4	-0.5	8.3
Inflation (harmonized CPI)	2.4	0.4	-1.6	-1.1	-1.3	1.2	2.6	2.5	1.2	2.8
Monthly gross wages per employee, nominal	6.6	6.0	6.0	6.8	8.0	9.4	10.5	10.6	9.7	12.3
Monthly gross wages per employee, real	3.5	5.1	7.5	7.0	8.9	7.2	7.5	7.2	7.9	8.7
Unit labor costs	4.7	6.7	6.6	5.1	4.3	11.1	7.7	9.0	10.3	3.7
Croatia										
GDP, real	-2.3	-0.4	-0.4	2.5	3.6	3.4	2.8	3.4	-8.6	13.1
Employment aged 15-74	-3.6	-2.6	2.9	1.3	0.3	2.2	1.7	1.5	-1.3	1.3
Labor productivity	1.3	2.2	-3.2	1.2	3.2	1.1	1.1	1.9	-7.3	11.7
Inflation (harmonized CPI)	3.4	2.3	0.2	-0.3	-0.6	1.3	1.6	0.8	0.0	2.7
Monthly gross wages per employee, nominal	1.0	0.8	0.2	1.3	1.9	3.9	4.9	3.8	2.5	4.2
Monthly gross wages per employee, real	-2.3	-1.4	0.4	1.8	3.0	2.8	3.3	3.0	2.4	1.6
Unit labor costs	-0.3	-1.4	3.5	0.1	-1.3	2.7	3.8	1.8	10.6	-6.7
Hungary										
GDP, real	-1.3	1.8	4.2	3.7	2.2	4.3	5.4	4.9	-4.5	7.1
Employment aged 15-74	1.8	1.7	5.3	2.7	3.4	1.6	1.1	1.0	-1.1	0.7
Labor productivity	-3.0	0.1	-1.1	1.0	-1.1	2.6	4.2	3.9	-3.4	6.4
Inflation (harmonized CPI)	5.7	1.7	0.0	0.1	0.4	2.4	2.9	3.4	3.4	5.2
Monthly gross wages per employee, nominal	4.7	3.4	3.0	4.3	6.1	12.9	11.3	11.4	9.7	8.7
Monthly gross wages per employee, real	-0.9	1.7	3.2	4.4	5.7	10.3	8.3	7.7	6.2	3.4
Unit labor costs	7.9	3.3	4.1	3.3	7.3	10.0	6.8	7.3	13.6	2.2

Notes: For country-specific methodological notes on employment and wages see footnotes to the following tables.

Western Balkans-6: Labor market data for the Western Balkans show the aggregate of six countries only when data are available for all of them. Growth rates for GDP, inflation and wages are weighted averages.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Albania: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	2,900	2,895	2,889	2,881	2,876	2,873	2,866	2,854	2,838	2,812
Working-age population aged 15+ (1,000)	2,297	2,322	2,340	2,354	2,374	2,376	2,363	2,369	2,367	2,362
Employment aged 15+ (1,000)	1,140	1,024	1,037	1,087	1,157	1,195	1,231	1,266	1,243	1,249
Employment rate (% population aged 15+)	49.6	44.1	44.3	46.2	48.7	50.3	52.1	53.4	52.5	52.9
Employment rate (% population aged 15-64)	55.9	49.9	50.5	52.9	55.9	57.4	59.5	61.2	60.6	60.9
Employment rate (% population aged 20-64)	62.4	56.7	56.6	59.3	62.1	63.9	65.6	67.1	66.3	66.3
Employment rate (% population aged 15-24)	25.8	19.0	17.7	18.9	20.2	21.6	25.7	26.7	26.3	26.4
Employment rate (% population aged 25-29)	61.7	54.8	53.2	55.5	59.0	59.4	63.9	68.3	67.7	67.7
Employment rate (% population aged 25-54)	68.9	63.9	64.6	67.5	69.7	71.1	73.7	75.0	73.6	73.6
Employment rate (% population aged 55-64)	56.3	51.1	51.2	53.6	54.8	55.5	58.2	60.4	60.3	60.0
Employment rate for low skilled 15-64 (ISCED 0-2)	52.7	45.3	46.7	50.2	52.5	53.0	56.9	58.3	55.9	54.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	57.3	50.6	49.9	51.8	55.8	57.9	58.6	59.2	59.9	61.5
Employment rate for high skilled 15-64 (ISCED 5-8)	67.1	67.1	66.5	64.4	66.6	69.1	68.0	72.2	73.0	74.4
Self-employed (% of total employment)	26.9	25.8	26.0	29.2	34.9	35.8	34.0	32.3	33.3	31.9
Part-time employment (% of total employment)	22.2	24.3	27.5	26.6	24.3	20.7	18.3	17.1	17.9	17.9
Temporary employment (% of total employees)	10.9	12.6	13.7	11.8	12.4	12.3	9.6	7.9	6.7	7.3
Activity rate (% population aged 15+)	57.3	52.4	53.7	55.7	57.5	58.3	59.4	60.4	59.5	59.8
Activity rate (% population aged 15-64)	64.9	59.6	61.5	64.2	66.2	66.8	68.3	69.6	69.1	69.3
Activity rate (% population aged 15-24)	36.7	27.6	29.0	31.3	31.8	31.8	35.8	36.7	35.8	36.3
Activity rate (% population aged 25-54)	78.4	75.5	76.7	79.7	80.7	81.3	83.0	83.9	83.0	82.1
Activity rate (% population aged 55-64)	60.7	56.6	58.1	60.2	61.4	61.3	63.7	65.2	64.6	66.3
Unemployment aged 15+ (1,000)	176	194	220	224	208	190	173	165	165	163
Unemployment rate (% labor force 15+)	13.4	15.9	17.5	17.1	15.2	13.7	12.3	11.5	11.7	11.5
Youth unemployment rate (% labor force 15-24)	29.8	31.4	39.0	39.8	36.5	31.9	28.3	27.2	26.5	27.1
NEET rate (% population aged 15-24)	27.4	30.8	30.9	29.6	27.0	25.9	26.5	25.5	26.6	24.0
Long-term unemployment rate (% labor force 15+)	10.3	11.5	11.2	11.3	10.1	8.9	8.3	7.3	7.0	7.2
Share of long-term unemployed (% of total)	77.1	72.4	64.3	66.0	66.2	64.8	67.4	63.4	59.5	62.8
Unemployment rate, low educated 15+ (ISCED 0-2)	11.7	14.1	14.5	13.5	12.7	12.3	9.9	8.7	9.5	10.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	14.8	18.9	21.3	20.4	17.5	15.5	14.3	14.4	13.6	13.2
Unemployment rate, high educated 15+ (ISCED 5-8)	16.0	14.9	17.2	19.1	16.9	13.7	14.0	12.3	12.6	10.5
Male										
Total population (1,000)	1,460	1,461	1,461	1,460	1,456	1,446	1,434	1,425	1,415	1,399
Working-age population aged 15+ (1,000)	1,139	1,110	1,140	1,164	1,189	1,190	1,170	1,169	1,166	1,164
Employment aged 15+ (1,000)	637	563	586	621	650	679	691	703	690	693
Employment rate (% population aged 15+)	55.9	50.7	51.4	53.3	54.7	57.1	59.0	60.1	59.2	59.5
Employment rate (% population aged 15-64)	62.2	57.3	58.0	60.5	61.9	64.3	66.7	68.2	67.8	68.2
Employment rate (% population aged 20-64)	70.1	64.8	65.2	68.1	69.4	72.1	73.9	74.7	74.0	74.6
Employment rate (% population aged 15-24)	29.9	24.2	21.4	23.8	23.1	24.9	30.6	31.2	31.4	30.6
Employment rate (% population aged 25-29)	67.0	59.7	59.6	63.7	65.4	69.6	73.4	74.6	74.2	73.0
Employment rate (% population aged 25-54)	76.5	71.6	72.7	75.5	76.3	79.0	80.7	80.9	79.9	80.1
Employment rate (% population aged 55-64)	68.3	62.2	64.7	66.9	67.1	69.1	71.4	73.7	73.2	73.2
Employment rate for low skilled 15-64 (ISCED 0-2)	57.2	51.8	53.0	55.5	57.2	58.7	62.7	64.4	62.6	59.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	66.2	60.3	60.0	62.4	64.9	67.6	68.3	68.9	69.2	71.8
Employment rate for high skilled 15-64 (ISCED 5-8)	71.7	70.6	70.6	71.4	69.4	73.2	73.8	76.7	77.8	81.4
Self-employed (% of total employment)	34.2	32.4	32.8	37.8	42.0	42.6	41.6	39.6	39.3	39.0
Part-time employment (% of total employment)	18.2	19.2	21.3	22.0	21.0	17.0	14.8	13.5	14.4	13.4
Temporary employment (% of total employees)	13.8	16.1	18.0	14.8	15.5	15.8	12.8	10.0	8.3	5.1
Activity rate (% population aged 15+)	65.5	61.7	63.5	64.3	65.0	66.8	67.6	68.0	66.9	67.2
Activity rate (% population aged 15-64)	73.4	70.2	72.2	73.4	74.1	75.8	76.9	77.6	77.1	77.3
Activity rate (% population aged 15-24)	44.3	36.6	37.2	39.2	36.9	37.8	43.4	43.2	43.0	41.1
Activity rate (% population aged 25-54)	87.7	86.4	87.4	88.6	88.7	90.9	90.7	90.6	89.7	89.4
Activity rate (% population aged 55-64)	74.5	70.2	74.9	76.0	76.3	77.4	78.5	79.4	78.3	80.4
Unemployment aged 15+ (1,000)	109	122	139	128	123	116	100	92	90	89
Unemployment rate (% labor force 15+)	14.6	17.8	19.2	17.1	15.9	14.6	12.7	11.6	11.5	11.3
Youth unemployment rate (% labor force 15-24)	32.6	33.8	42.5	39.2	37.4	34.1	29.6	27.8	27.0	25.5
NEET rate (% population aged 15-24)	25.8	29.7	29.6	28.2	26.8	24.7	25.4	25.8	27.1	22.1
Long-term unemployment rate (% labor force 15+)	10.9	12.4	11.7	11.2	10.3	9.2	8.3	7.3	6.9	6.9
Share of long-term unemployed (% of total)	74.8	69.7	61.0	65.8	64.9	63.3	65.6	63.1	59.7	60.5
Unemployment rate, low educated 15+ (ISCED 0-2)	14.3	17.3	17.8	15.4	14.6	14.3	10.9	9.7	9.5	10.7
Unemployment rate, medium educated 15+ (ISCED 3-4)	15.6	19.8	21.6	19.0	17.1	15.3	14.6	13.8	13.6	12.9
Unemployment rate, high educated 15+ (ISCED 5-8)	12.4	13.5	16.0	16.4	16.2	13.5	11.9	10.5	10.6	8.8

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	1,441	1,434	1,428	1,421	1,420	1,427	1,432	1,429	1,423	1,413
Working-age population aged 15+ (1,000)	1,157	1,212	1,199	1,190	1,186	1,187	1,193	1,200	1,201	1,198
Employment aged 15+ (1,000)	503	461	451	466	507	516	540	563	554	555
Employment rate (% population aged 15+)	43.5	38.0	37.6	39.2	42.8	43.5	45.3	46.9	46.1	46.4
Employment rate (% population aged 15-64)	49.6	43.1	43.4	45.5	49.7	50.3	52.4	54.4	53.6	53.8
Employment rate (% population aged 20-64)	54.9	49.3	48.5	50.7	55.0	55.6	57.4	59.7	58.8	58.3
Employment rate (% population aged 15-24)	20.9	14.1	13.9	13.4	16.8	17.7	20.4	22.2	21.1	22.3
Employment rate (% population aged 25-29)	55.7	49.8	46.3	46.3	51.8	48.8	54.1	61.7	61.0	62.0
Employment rate (% population aged 25-54)	62.2	57.3	57.2	60.1	63.4	63.4	67.0	69.2	67.6	67.4
Employment rate (% population aged 55-64)	42.9	40.0	37.3	39.2	42.0	41.7	45.2	46.9	47.5	46.7
Employment rate for low skilled 15-64 (ISCED 0-2)	48.7	40.1	41.3	45.3	48.3	47.8	51.7	52.9	50.2	50.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	46.5	39.4	37.9	38.8	44.3	45.4	46.0	46.5	47.2	47.8
Employment rate for high skilled 15-64 (ISCED 5-8)	62.9	64.2	63.1	58.9	64.4	65.8	63.9	69.0	69.6	69.5
Self-employed (% of total employment)	17.7	17.6	17.2	17.6	25.7	26.8	24.3	23.1	25.8	23.3
Part-time employment (% of total employment)	27.4	30.5	35.4	32.6	28.5	25.5	22.8	21.6	22.3	23.6
Temporary employment (% of total employees)	3.9	7.8	7.9	8.1	8.8	8.0	5.9	5.6	4.9	9.8
Activity rate (% population aged 15+)	49.2	44.0	44.4	47.2	49.9	49.8	51.4	53.0	52.3	52.6
Activity rate (% population aged 15-64)	56.4	50.1	51.3	55.1	58.3	57.7	59.7	61.6	61.2	61.4
Activity rate (% population aged 15-24)	27.6	19.4	20.5	22.7	25.8	24.5	27.6	30.2	28.5	31.5
Activity rate (% population aged 25-54)	70.2	66.1	66.9	71.6	73.1	72.2	75.6	77.4	76.6	75.1
Activity rate (% population aged 55-64)	45.5	42.9	40.8	43.1	45.8	45.2	49.1	50.8	51.1	52.2
Unemployment aged 15+ (1,000)	67	72	81	96	85	74	73	72	75	74
Unemployment rate (% labor force 15+)	11.7	13.5	15.2	17.1	14.4	12.6	11.9	11.4	11.9	11.8
Youth unemployment rate (% labor force 15-24)	24.3	27.3	32.6	40.8	34.9	27.7	26.0	26.3	25.9	29.2
NEET rate (% population aged 15-24)	29.4	31.9	32.2	31.1	27.1	27.3	27.6	25.3	26.2	25.9
Long-term unemployment rate (% labor force 15+)	9.5	10.4	10.7	11.3	9.8	8.4	8.3	7.3	7.1	7.7
Share of long-term unemployed (% of total)	80.9	76.9	70.1	66.2	68.2	67.1	69.8	63.7	59.1	65.5
Unemployment rate, low educated 15+ (ISCED 0-2)	8.6	10.5	10.4	11.2	10.5	9.9	8.8	7.6	9.5	10.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	13.3	17.2	20.7	23.0	18.3	16.0	13.7	15.5	13.7	13.8
Unemployment rate, high educated 15+ (ISCED 5-8)	19.5	16.2	18.2	21.5	17.6	13.8	15.7	13.6	14.1	11.9

Albania: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	37,534	36,332	45,539	47,900	47,522	48,967	50,589	52,380	53,662	57,191
nominal annual growth in %	2.9	-3.2	0.9	5.2	-0.8	3.0	3.3	3.5	2.4	6.6
real annual growth in % (CPI deflated)	0.8	-5.0	-0.7	3.2	-2.0	1.0	1.3	2.1	0.8	4.4
Average monthly gross wages, EUR	270	259	325	343	346	365	397	426	434	467
Average monthly gross wages, EUR (PPP)	635	594	761	806	779	796	811	840	852	892
Average monthly net wages, NCU	.	.	.	.	.	.	.	.	.	.
nominal annual growth in %	.	.	.	.	.	.	.	.	.	.
real annual growth in % (CPI deflated)	.	.	.	.	.	.	.	.	.	.
Average monthly net wages, EUR	.	.	.	.	.	.	.	.	.	.
Average monthly net wages, EUR (PPP)	.	.	.	.	.	.	.	.	.	.
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	20,000	21,000	22,000	22,000	22,000	22,000	24,000	26,000	26,000	30,000
Monthly gross minimum wages, EUR (ER)	144	150	157	157	160	163	181	211	214	243
Monthly gross minimum wages, EUR (PPP)	294	302	313	326	313	313	336	363	354	406
Unit labor costs (ULC)										
ULC, NCU in %	-0.3	-13.9	0.4	7.8	2.3	2.5	2.3	4.3	4.3	-1.4
ULC, EUR in %	0.6	-14.7	0.6	8.0	4.0	5.0	7.6	8.2	3.6	-0.3

Notes: Data based on a continuous quarterly survey and on census 2011. The education groups are according to ISCED 1997.

Wage data are from General Directorate of Taxation from 2014, and Structural Business Statistics (SBS) before; growth rate in 2014 refers to SBS data. Minimum wage data in 2012-2018 refer to the minimum wage in effect since 1 July of the respective previous year, from 2019 to 1 January of the respective year.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Bosnia and Herzegovina: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	3,836	3,832	3,827	3,819	3,816	3,809	3,801	3,791	3,475	3,453
Working-age population aged 15+ (1,000)	2,566	2,598	2,565	2,579	2,489	2,407	2,396	2,262	2,926	2,904
Employment aged 15+ (1,000)	814	822	812	822	801	816	822	803	1,173	1,151
Employment rate (% population aged 15+)	31.7	31.6	31.7	31.9	32.2	33.9	34.3	35.5	40.1	39.6
Employment rate (% population aged 15-64)	38.5	38.5	39.0	39.2	40.2	43.0	44.0	46.4	48.8	48.8
Employment rate (% population aged 20-64)	42.5	42.8	43.2	43.2	44.2	46.6	47.7	49.7	52.5	52.6
Employment rate (% population aged 15-24)	10.8	11.6	10.9	12.1	13.8	17.6	19.7	23.4	21.0	19.8
Employment rate (% population aged 25-29)	44.5	44.5	45.1	45.5	45.6	50.9	54.8	52.3	55.5	54.8
Employment rate (% population aged 25-54)	51.2	51.4	52.5	52.4	53.6	56.4	57.8	59.4	61.7	61.6
Employment rate (% population aged 55-64)	27.2	27.7	28.5	28.2	29.7	32.5	32.6	36.2	35.4	35.6
Employment rate for low skilled 15-64 (ISCED 0-2)	20.8	20.3	18.4	20.1	20.2	22.5	20.7	23.1	21.4	18.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	44.4	43.8	45.5	44.4	45.3	48.0	49.9	51.9	53.5	54.1
Employment rate for high skilled 15-64 (ISCED 5-8)	69.2	69.8	68.0	68.6	66.7	70.5	71.4	72.5	74.4	75.0
Self-employed (% of total employment)	22.7	20.7	19.1	20.7	21.1	20.6	17.6	21.9	15.0	13.1
Part-time employment (% of total employment)	15.7	9.6	7.8	7.2	6.8	9.1	7.0	8.7	5.0	3.2
Temporary employment (% of total employees)	13.5	14.5	14.9	16.1	16.8	18.4	17.5	16.1	12.3	12.7
Activity rate (% population aged 15+)	44.0	43.6	43.7	44.1	43.1	42.6	42.1	42.1	47.7	48.0
Activity rate (% population aged 15-64)	53.9	53.5	54.2	54.6	54.2	54.5	54.2	55.5	58.2	59.1
Activity rate (% population aged 15-24)	29.4	28.3	29.3	32.2	30.2	32.5	32.3	35.4	33.2	32.0
Activity rate (% population aged 25-54)	68.9	69.1	70.8	70.3	70.4	70.3	70.4	70.7	72.3	73.5
Activity rate (% population aged 55-64)	32.1	33.1	32.8	33.1	35.2	36.6	36.5	39.7	39.2	40.2
Unemployment aged 15+ (1,000)	317	311	308	315	273	211	185	149	221	242
Unemployment rate (% labor force 15+)	28.0	27.5	27.5	27.7	25.4	20.5	18.4	15.7	15.9	17.4
Youth unemployment rate (% labor force 15-24)	63.1	59.1	62.7	62.3	54.3	45.8	38.8	33.8	36.6	38.3
NEET rate (% population aged 15-24)	28.4	25.8	26.1	27.7	26.4	24.3	21.6	21.0	21.6	19.9
Long-term unemployment rate (% labor force 15+)	23.0	22.8	23.3	22.6	21.6	16.9	15.2	11.9	11.8	13.6
Share of long-term unemployed (% of total)	82.0	83.1	84.8	81.7	85.0	82.1	82.3	76.0	74.7	78.4
Unemployment rate, low educated 15+ (ISCED 0-2)	26.9	28.2	30.2	27.3	25.6	18.2	18.5	14.1	18.5	24.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	30.6	30.0	28.9	30.0	26.6	22.3	19.2	16.9	16.5	17.9
Unemployment rate, high educated 15+ (ISCED 5-8)	17.9	16.9	19.3	18.4	20.3	15.5	15.1	12.0	12.1	12.0
Male										
Total population (1,000)	1,874	1,872	1,870	1,866	1,864	1,861	1,857	1,853	1,705	1,694
Working-age population aged 15+ (1,000)	1,238	1,268	1,242	1,259	1,208	1,177	1,169	1,109	1,422	1,417
Employment aged 15+ (1,000)	514	515	511	515	514	509	515	495	723	724
Employment rate (% population aged 15+)	41.5	40.6	41.2	40.9	42.5	43.2	44.1	44.6	50.9	51.1
Employment rate (% population aged 15-64)	49.0	48.0	48.9	48.8	51.1	53.3	54.7	57.0	60.2	61.1
Employment rate (% population aged 20-64)	54.2	53.3	54.6	53.9	56.4	58.1	59.5	61.6	64.9	66.0
Employment rate (% population aged 15-24)	14.1	14.9	13.5	15.8	18.3	22.8	26.1	27.4	26.0	25.4
Employment rate (% population aged 25-29)	52.9	52.2	51.3	52.3	54.4	58.6	64.4	62.4	65.4	65.3
Employment rate (% population aged 25-54)	64.0	63.4	64.9	64.6	67.3	69.3	70.7	72.7	75.1	75.7
Employment rate (% population aged 55-64)	37.2	36.4	38.9	37.3	40.4	42.2	42.3	47.3	46.2	47.9
Employment rate for low skilled 15-64 (ISCED 0-2)	31.3	30.4	27.7	30.9	30.9	32.8	32.1	34.2	32.6	29.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	53.0	51.4	53.8	52.2	54.8	56.4	58.9	60.6	64.3	65.4
Employment rate for high skilled 15-64 (ISCED 5-8)	72.6	72.1	70.2	70.1	71.0	76.8	74.0	76.1	77.5	79.8
Self-employed (% of total employment)	25.1	24.0	21.8	23.9	23.6	22.6	19.6	22.8	16.4	14.5
Part-time employment (% of total employment)	14.8	9.0	7.0	6.6	5.7	8.4	6.0	7.7	4.5	3.0
Temporary employment (% of total employees)	15.6	15.5	15.9	16.3	17.9	19.7	18.6	16.5	11.5	11.6
Activity rate (% population aged 15+)	56.4	55.3	55.0	55.1	54.9	53.3	53.2	51.7	59.2	59.7
Activity rate (% population aged 15-64)	67.0	65.7	65.9	66.2	66.2	66.1	66.4	66.4	70.4	71.4
Activity rate (% population aged 15-24)	37.7	36.3	34.6	38.9	38.1	40.2	40.4	39.8	38.5	38.8
Activity rate (% population aged 25-54)	83.3	83.0	84.1	83.8	83.8	83.8	84.2	83.7	85.9	86.8
Activity rate (% population aged 55-64)	44.5	44.4	45.3	44.0	48.2	47.5	47.9	51.7	52.2	53.6
Unemployment aged 15+ (1,000)	184	186	172	179	149	118	107	78	119	122
Unemployment rate (% labor force 15+)	26.4	26.5	25.2	25.8	22.5	18.9	17.2	13.6	14.1	14.4
Youth unemployment rate (% labor force 15-24)	62.6	59.1	61.0	59.5	52.0	43.1	35.4	31.3	32.5	34.5
NEET rate (% population aged 15-24)	30.5	27.4	27.9	29.2	28.0	24.5	22.1	20.7	20.3	19.5
Long-term unemployment rate (% labor force 15+)	21.4	21.7	21.4	21.1	19.2	15.3	14.0	10.3	10.2	11.0
Share of long-term unemployed (% of total)	81.3	81.9	85.0	81.8	85.1	81.0	81.4	75.3	72.6	76.1
Unemployment rate, low educated 15+ (ISCED 0-2)	27.9	29.0	27.9	27.0	24.1	16.4	19.1	13.4	20.3	22.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	27.9	28.3	26.3	27.2	23.6	20.8	17.5	14.5	14.0	14.6
Unemployment rate, high educated 15+ (ISCED 5-8)	14.5	14.3	16.2	15.9	14.8	11.0	13.4	9.2	9.9	8.3

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	1,962	1,960	1,958	1,953	1,952	1,948	1,944	1,938	1,770	1,759
Working-age population aged 15+ (1,000)	1,328	1,330	1,324	1,320	1,281	1,230	1,227	1,153	1,504	1,487
Employment aged 15+ (1,000)	300	307	301	307	288	307	307	308	450	427
Employment rate (% population aged 15+)	22.6	23.0	22.7	23.2	22.4	24.9	25.0	26.7	29.9	28.7
Employment rate (% population aged 15-64)	28.1	28.9	28.9	29.5	29.1	32.5	33.0	35.6	37.3	36.3
Employment rate (% population aged 20-64)	31.1	32.2	31.9	32.4	32.0	35.1	35.8	38.0	40.0	39.1
Employment rate (% population aged 15-24)	7.5	7.9	8.1	8.0	8.7	11.4	12.6	18.6	15.8	13.7
Employment rate (% population aged 25-29)	34.7	35.4	38.0	37.2	35.3	41.7	41.5	39.4	45.0	43.5
Employment rate (% population aged 25-54)	38.2	39.2	39.7	40.0	39.8	43.4	44.5	46.1	47.9	47.1
Employment rate (% population aged 55-64)	18.3	19.7	19.3	19.8	19.4	23.5	23.7	26.0	25.3	24.2
Employment rate for low skilled 15-64 (ISCED 0-2)	14.4	13.7	12.6	13.3	13.6	16.2	13.5	16.6	14.5	11.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	32.9	33.7	34.3	34.0	32.8	37.0	38.2	40.7	39.9	39.5
Employment rate for high skilled 15-64 (ISCED 5-8)	66.0	67.4	65.9	67.3	62.7	64.7	69.0	69.1	71.9	71.0
Self-employed (% of total employment)	18.6	15.2	14.4	15.2	16.5	17.4	14.3	20.4	12.7	10.5
Part-time employment (% of total employment)	17.2	10.7	9.2	8.0	8.8	10.1	8.7	10.3	5.5	3.6
Temporary employment (% of total employees)	9.8	12.7	13.1	15.7	15.0	16.2	15.7	15.4	13.7	14.5
Activity rate (% population aged 15+)	32.6	32.5	33.0	33.5	32.1	32.4	31.4	32.9	36.7	36.8
Activity rate (% population aged 15-64)	41.0	41.0	42.4	42.9	41.9	42.7	41.8	44.4	46.1	46.7
Activity rate (% population aged 15-24)	20.9	19.4	23.3	24.5	21.3	23.4	23.1	29.9	27.6	24.8
Activity rate (% population aged 25-54)	54.3	54.8	57.1	56.6	56.8	56.5	56.1	57.6	58.3	59.8
Activity rate (% population aged 55-64)	21.1	22.9	21.9	22.9	22.9	26.5	25.9	28.7	27.3	27.8
Unemployment aged 15+ (1,000)	133	125	136	136	124	92	78	71	102	120
Unemployment rate (% labor force 15+)	30.7	29.0	31.2	30.7	30.0	23.1	20.3	18.8	18.5	22.0
Youth unemployment rate (% labor force 15-24)	64.0	59.2	65.4	67.3	58.9	51.4	45.5	37.9	42.8	44.5
NEET rate (% population aged 15-24)	26.2	24.1	24.0	26.0	24.7	24.0	21.1	21.4	23.0	20.4
Long-term unemployment rate (% labor force 15+)	25.4	24.6	26.4	25.1	25.5	19.3	17.0	14.4	14.3	17.7
Share of long-term unemployed (% of total)	82.8	84.8	84.7	81.6	85.0	83.6	83.6	76.8	77.1	80.8
Unemployment rate, low educated 15+ (ISCED 0-2)	25.5	27.0	33.1	27.8	27.5	20.3	17.5	15.0	15.9	27.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	35.8	33.2	33.9	35.0	32.6	25.2	22.3	21.2	21.2	24.1
Unemployment rate, high educated 15+ (ISCED 5-8)	21.2	19.6	22.2	20.9	25.5	19.9	16.7	14.7	13.9	15.2

Bosnia and Herzegovina: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	1,290	1,291	1,290	1,289	1,301	1,321	1,363	1,421	1,476	1,542
nominal annual growth in %	1.5	0.1	-0.1	0.0	0.9	1.6	3.1	4.3	3.8	4.5
real annual growth in % (CPI deflated)	-0.5	0.2	0.8	1.0	2.5	0.8	1.7	3.7	5.0	2.4
Average monthly gross wages, EUR	660	660	659	659	665	676	697	727	755	788
Average monthly gross wages, EUR (PPP)	1,349	1,358	1,345	1,335	1,337	1,333	1,370	1,420	1,465	1,514
Average monthly net wages, NCU	826	827	831	830	838	851	879	921	956	998
nominal annual growth in %	1.2	0.1	0.4	0.0	0.9	1.6	3.3	4.8	3.8	4.4
real annual growth in % (CPI deflated)	-0.8	0.2	1.3	1.0	2.6	0.7	1.9	4.2	4.9	2.4
Average monthly net wages, EUR	422	423	425	425	428	435	449	471	489	510
Average monthly net wages, EUR (PPP)	864	870	866	860	861	859	884	920	949	980
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	.	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (ER)	.	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	.	.	.	.	.	.	.	.
Unit labor costs (ULC)										
ULC, NCU in %	2.1	-1.3	-2.4	-3.0	-4.7	0.2	0.1	-1.0	6.0	-4.6
ULC, EUR in %	2.1	-1.3	-2.4	-3.0	-4.7	0.2	0.1	-1.0	6.0	-4.6

Notes: Until 2019 the survey conducted once a year in April (data allocated to the 2nd quarter of each year) based on census 1991. From 2020 onwards, continuous quarterly survey, based on census 2013, with further adjustments according to EU + ILO guidelines. Data before and after 2020 are not comparable. From 2021, new methodology in line with the Integrated European Social Statistics Regulation (IESS); growth rates are not fully comparable before and after 2021. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.

Minimum wages are available for the three entities separately but not for the whole territory.

ULC: Employment growth rate in 2020 estimated by wiw based on administrative sources.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Kosovo: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	1,807	1,818	1,813	1,788	1,778	1,791	1,797	1,789	1,790	1,786
Working-age population aged 15+ (1,000)	1,311	1,330	1,351	1,328	1,349	1,387	1,401	1,391	1,414	1,417
Employment aged 15+ (1,000)	305	342	325	299	334	360	348	366	351	387
Employment rate (% population aged 15+)	23.2	25.7	24.1	22.5	24.8	26.0	24.9	26.3	24.8	27.3
Employment rate (% population aged 15-64)	25.6	28.5	26.9	25.3	28.0	29.8	28.8	30.1	28.4	31.1
Employment rate (% population aged 20-64)	29.7	33.1	31.3	29.1	32.3	34.4	33.2	34.2	32.3	35.1
Employment rate (% population aged 15-24)	9.9	10.1	9.0	8.6	10.1	11.2	10.0	13.2	11.4	13.4
Employment rate (% population aged 25-29)	28.5	31.8	29.6	27.4	31.0	32.3	32.0	33.7	32.1	36.6
Employment rate (% population aged 25-54)	33.5	37.3	35.4	33.2	36.7	38.3	37.3	37.9	35.9	39.0
Employment rate (% population aged 55-64)	25.9	30.8	29.8	27.2	29.6	32.7	31.5	32.2	30.9	32.1
Employment rate for low skilled 15-64 (ISCED 0-2)	9.1	12.0	11.0	9.4	12.9	12.9	9.7	11.9	10.9	10.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	37.2	38.5	35.4	32.0	33.8	37.0	35.9	35.9	33.1	35.5
Employment rate for high skilled 15-64 (ISCED 5-8)	60.6	64.9	58.9	53.3	56.3	56.3	65.8	61.6	60.0	62.7
Self-employed (% of total employment)	20.0	23.1	23.6	21.2	22.5	23.7	22.1	21.9	22.4	19.4
Part-time employment (% of total employment)	11.3	12.2	8.4	5.8	6.1	5.9	4.9	6.8	7.5	7.1
Temporary employment (% of total employees)	71.9	67.9	71.1	71.4	69.9	70.1	73.8	53.6	53.2	53.7
Activity rate (% population aged 15+)	33.5	36.6	37.2	33.5	34.2	37.3	35.2	35.3	33.4	34.4
Activity rate (% population aged 15-64)	36.9	40.6	41.6	37.7	38.7	42.9	40.9	40.5	38.4	39.3
Activity rate (% population aged 15-24)	21.9	22.9	23.1	20.2	21.3	23.8	22.5	26.0	22.4	21.6
Activity rate (% population aged 25-54)	46.0	50.8	52.3	47.8	48.6	53.7	51.3	49.1	47.0	48.5
Activity rate (% population aged 55-64)	28.5	34.3	35.2	31.1	33.7	36.8	34.9	34.8	34.3	34.8
Unemployment aged 15+ (1,000)	134	145	177	146	127	157	145	125	122	100
Unemployment rate (% labor force 15+)	30.6	29.7	35.2	32.8	27.5	30.3	29.4	25.5	25.7	20.6
Youth unemployment rate (% labor force 15-24)	55.0	55.8	61.0	57.7	52.4	52.8	55.4	49.4	49.1	38.0
NEET rate (% population aged 15-24)	35.1	35.3	30.2	31.4	30.1	27.4	30.1	32.7	33.6	32.1
Long-term unemployment rate (% labor force 15+)	18.2	19.9	24.9	23.7	18.0	21.7	17.2	16.2	18.5	14.6
Share of long-term unemployed (% of total)	59.6	67.0	70.7	72.3	65.5	71.5	58.4	63.6	71.7	70.7
Unemployment rate, low educated 15+ (ISCED 0-2)	44.6	40.4	46.3	47.0	32.4	35.0	40.0	32.2	34.2	30.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	29.1	29.1	35.4	32.6	28.9	30.6	30.4	24.9	26.1	20.9
Unemployment rate, high educated 15+ (ISCED 5-8)	17.6	16.8	20.6	19.9	18.5	25.8	19.7	22.5	19.7	15.7
Male										
Total population (1,000)	910	915	912	895	885	889	885	875	874	875
Working-age population aged 15+ (1,000)	660	658	672	667	677	692	697	693	702	704
Employment aged 15+ (1,000)	241	264	250	232	259	284	274	283	264	285
Employment rate (% population aged 15+)	36.6	40.1	37.2	34.7	38.3	41.0	39.3	40.8	37.6	40.4
Employment rate (% population aged 15-64)	40.0	44.2	41.3	38.7	43.1	46.7	45.3	46.2	42.8	45.9
Employment rate (% population aged 20-64)	46.7	51.6	48.3	44.9	49.9	54.0	52.6	53.0	48.8	51.9
Employment rate (% population aged 15-24)	14.5	15.2	13.4	12.9	15.2	16.7	14.6	18.6	16.1	18.4
Employment rate (% population aged 25-29)	41.6	45.8	43.4	38.5	43.9	48.1	45.5	46.0	42.1	46.7
Employment rate (% population aged 25-54)	53.0	58.4	55.3	51.0	56.5	61.2	59.6	58.8	54.2	57.5
Employment rate (% population aged 55-64)	44.5	50.5	47.2	45.2	49.4	52.0	51.6	53.7	51.1	51.8
Employment rate for low skilled 15-64 (ISCED 0-2)	20.8	25.4	23.8	20.2	27.4	28.6	21.6	26.6	24.5	24.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	46.7	50.3	46.2	42.9	45.9	51.0	50.2	49.0	44.2	47.7
Employment rate for high skilled 15-64 (ISCED 5-8)	69.9	71.8	66.0	61.3	64.5	65.1	75.1	72.8	71.2	72.4
Self-employed (% of total employment)	23.1	26.1	26.5	23.4	24.6	26.3	24.3	24.8	26.3	22.9
Part-time employment (% of total employment)	11.4	11.4	7.8	5.1	4.5	5.3	4.7	6.9	7.6	7.5
Temporary employment (% of total employees)	72.2	67.7	71.0	73.1	70.2	72.1	75.8	56.1	54.0	53.6
Activity rate (% population aged 15+)	50.6	54.7	55.5	50.8	51.9	57.4	54.9	52.6	49.0	49.8
Activity rate (% population aged 15-64)	55.4	60.4	61.8	56.8	58.3	65.4	63.3	59.7	56.0	56.7
Activity rate (% population aged 15-24)	29.9	30.6	30.6	28.1	28.9	32.4	30.1	33.3	29.4	27.8
Activity rate (% population aged 25-54)	70.2	77.0	79.8	72.9	74.4	84.3	81.7	73.8	69.2	70.6
Activity rate (% population aged 55-64)	49.8	56.7	56.4	52.2	57.0	59.2	57.9	58.6	57.2	56.3
Unemployment aged 15+ (1,000)	93	96	123	107	92	113	108	82	80	66
Unemployment rate (% labor force 15+)	27.7	26.7	33.1	31.7	26.2	28.5	28.3	22.4	23.3	18.9
Youth unemployment rate (% labor force 15-24)	51.7	50.4	56.2	54.2	47.2	48.4	51.5	44.1	45.2	33.7
NEET rate (% population aged 15-24)	30.7	30.0	26.6	28.3	26.5	23.8	30.1	31.4	34.0	31.8
Long-term unemployment rate (% labor force 15+)	16.3	18.2	22.8	22.5	17.2	20.7	17.3	13.9	16.8	13.5
Share of long-term unemployed (% of total)	58.8	68.4	69.0	71.1	65.7	72.5	61.2	61.8	72.1	71.1
Unemployment rate, low educated 15+ (ISCED 0-2)	40.4	37.6	45.4	48.9	34.5	37.4	41.8	32.3	34.0	28.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	26.8	25.5	32.4	30.6	27.1	28.2	28.0	21.9	23.6	19.0
Unemployment rate, high educated 15+ (ISCED 5-8)	12.7	14.2	16.1	14.6	12.0	19.5	17.2	15.2	13.5	12.5

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	897	903	901	893	892	902	912	914	916	911
Working-age population aged 15+ (1,000)	651	672	679	661	672	695	704	699	712	712
Employment aged 15+ (1,000)	63	78	76	67	75	76	74	84	87	102
Employment rate (% population aged 15+)	9.7	11.6	11.1	10.2	11.1	10.9	10.5	12.0	12.2	14.4
Employment rate (% population aged 15-64)	10.7	12.9	12.5	11.5	12.7	12.7	12.3	13.9	14.1	16.5
Employment rate (% population aged 20-64)	12.5	14.9	14.5	13.2	14.6	14.6	14.1	15.6	16.0	18.5
Employment rate (% population aged 15-24)	4.7	4.6	4.2	3.7	4.4	5.2	5.0	7.1	6.4	8.0
Employment rate (% population aged 25-29)	14.1	16.1	14.3	14.5	15.5	14.0	16.4	19.5	21.0	25.3
Employment rate (% population aged 25-54)	14.1	17.0	16.3	15.6	17.2	16.2	15.7	17.5	18.2	21.0
Employment rate (% population aged 55-64)	7.9	12.2	13.5	9.6	10.0	12.4	11.8	11.6	11.8	13.5
Employment rate for low skilled 15-64 (ISCED 0-2)	2.4	4.5	4.0	3.5	4.8	4.2	3.2	4.0	3.7	3.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	20.1	19.2	17.4	14.3	14.7	14.3	13.6	15.1	15.6	16.7
Employment rate for high skilled 15-64 (ISCED 5-8)	45.8	54.7	49.8	43.2	45.7	45.8	54.0	49.7	48.4	53.2
Self-employed (% of total employment)	8.3	12.8	13.9	13.9	15.1	14.2	13.9	12.1	10.4	9.4
Part-time employment (% of total employment)	10.8	14.7	10.4	8.4	11.8	8.4	5.7	6.2	7.3	5.9
Temporary employment (% of total employees)	71.0	68.5	71.2	66.3	69.0	63.6	67.2	46.3	51.3	53.9
Activity rate (% population aged 15+)	16.1	18.9	19.0	16.0	16.3	17.2	15.8	18.2	18.0	19.2
Activity rate (% population aged 15-64)	17.8	21.1	21.4	18.2	18.6	20.0	18.5	21.2	20.8	22.0
Activity rate (% population aged 15-24)	12.9	14.5	14.8	11.4	12.8	14.3	14.0	17.8	14.9	15.0
Activity rate (% population aged 25-54)	22.0	25.8	25.9	23.0	23.2	24.2	21.9	25.0	25.7	27.0
Activity rate (% population aged 55-64)	8.1	13.2	15.1	10.5	10.7	13.2	12.2	11.9	12.5	14.5
Unemployment aged 15+ (1,000)	42	49	54	39	35	44	37	44	41	34
Unemployment rate (% labor force 15+)	39.7	38.4	41.5	36.5	31.7	36.4	33.3	34.4	32.2	25.0
Youth unemployment rate (% labor force 15-24)	63.5	68.3	71.7	67.2	65.4	63.6	64.7	60.3	57.2	46.5
NEET rate (% population aged 15-24)	40.1	40.9	34.0	34.9	34.2	31.4	30.0	34.2	33.2	32.4
Long-term unemployment rate (% labor force 15+)	24.4	24.7	31.1	27.6	20.6	25.1	16.6	23.0	22.8	17.4
Share of long-term unemployed (% of total)	61.4	64.3	74.8	75.5	65.0	69.0	50.0	67.0	70.9	69.9
Unemployment rate, low educated 15+ (ISCED 0-2)	58.8	47.9	49.2	40.0	24.8	24.4	32.5	32.2	35.0	35.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	37.5	41.2	45.9	41.0	36.7	41.8	41.4	37.6	35.7	28.3
Unemployment rate, high educated 15+ (ISCED 5-8)	27.5	21.4	27.3	28.1	28.3	34.7	23.6	31.8	27.7	19.8

Kosovo: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	383	386	403	415	422	431	453	477	466	484
nominal annual growth in %	.	0.8	4.4	3.0	1.7	2.1	5.1	5.3	-2.3	3.9
real annual growth in % (CPI deflated)	.	-1.0	4.0	3.5	1.4	0.6	4.0	2.5	-2.5	0.4
Average monthly gross wages, EUR	383	386	403	415	422	431	453	477	466	484
Average monthly gross wages, EUR (PPP)	856	837	850	880	864	870	911	941	911	940
Average monthly net wages, NCU	348	351	365	376	382	390	409	430	416	432
nominal annual growth in %	.	0.9	4.0	3.0	1.6	2.1	4.9	5.1	-3.3	3.8
real annual growth in % (CPI deflated)	.	-0.9	3.6	3.5	1.3	0.6	3.7	2.4	-3.4	0.4
Average monthly net wages, EUR	348	351	365	376	382	390	409	430	416	432
Average monthly net wages, EUR (PPP)	778	761	770	797	782	788	823	848	814	839
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	170	170	170	170	170	170	170	170	170	170
Monthly gross minimum wages, EUR (ER)	170	170	170	170	170	170	170	170	170	170
Monthly gross minimum wages, EUR (PPP)	340	328	319	322	321	317	311	301	296	294
Unit labor costs (ULC)										
ULC, NCU in %	.	7.4	-3.9	-10.7	7.7	5.0	-1.7	5.7	-1.1	3.4
ULC, EUR in %	.	7.4	-3.9	-10.7	7.7	5.0	-1.7	5.7	-1.1	3.4

Notes: Data are based on a continuous quarterly survey and census 2011. Education groups refer to ISCED 1997. The data are slightly revised in comparison to the previous editions (in this report including persons without any school education).

Minimum wages refer to employees aged between 35 and 65. For employees up to the age of 35 minimum wage is EUR 130. These minimum wages are in effect since 1 January 2011.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Montenegro: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	621	621	622	622	622	622	622	622	621	619
Working-age population aged 15+ (1,000)	501	501	501	501	500	500	500	500	501	499
Employment aged 15+ (1,000)	201	202	216	222	224	229	237	244	219	213
Employment rate (% population aged 15+)	40.1	40.3	43.2	44.3	44.9	45.9	47.5	48.7	43.8	42.6
Employment rate (% population aged 15-64)	47.0	47.4	50.4	51.4	52.0	53.1	54.7	56.0	50.3	49.3
Employment rate (% population aged 20-64)	52.2	52.6	55.6	56.7	57.1	58.2	59.8	60.8	55.2	54.2
Employment rate (% population aged 15-24)	13.5	13.5	18.8	18.8	21.0	21.3	23.2	27.3	19.8	18.7
Employment rate (% population aged 25-29)	53.1	56.0	58.4	59.8	61.5	61.1	59.7	62.5	52.0	49.9
Employment rate (% population aged 25-54)	60.9	61.2	64.6	65.6	65.4	66.3	67.4	67.1	61.9	61.8
Employment rate (% population aged 55-64)	37.6	38.7	38.7	40.0	41.2	43.7	46.6	50.1	44.2	41.1
Employment rate for low skilled 15-64 (ISCED 0-2)	14.8	14.0	16.6	19.4	22.2	24.4	25.4	23.5	18.1	17.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	50.0	49.4	52.6	53.0	52.9	54.0	55.7	57.5	51.5	49.4
Employment rate for high skilled 15-64 (ISCED 5-8)	75.8	78.9	77.6	78.2	77.1	77.7	78.6	77.8	73.5	73.3
Self-employed (% of total employment)	16.1	14.8	16.8	18.4	19.2	19.1	19.2	18.0	19.1	16.9
Part-time employment (% of total employment)	4.5	3.3	6.3	6.0	4.9	5.9	5.4	4.9	4.1	2.7
Temporary employment (% of total employees)	21.2	26.0	27.4	30.2	33.8	30.3	32.6	33.4	30.6	30.7
Activity rate (% population aged 15+)	50.0	50.1	52.7	53.7	54.5	54.7	56.0	57.4	53.3	51.0
Activity rate (% population aged 15-64)	58.7	58.9	61.6	62.6	63.4	63.5	64.7	66.2	61.5	59.2
Activity rate (% population aged 15-24)	24.0	23.2	29.2	30.2	32.7	31.2	32.9	36.5	30.9	29.7
Activity rate (% population aged 25-54)	75.3	75.4	77.9	78.5	78.9	78.9	79.5	79.3	75.1	73.5
Activity rate (% population aged 55-64)	41.3	43.3	43.4	44.9	45.0	47.0	50.0	54.1	49.0	43.5
Unemployment aged 15+ (1,000)	49	49	47	47	48	44	42	43	48	42
Unemployment rate (% labor force 15+)	19.7	19.5	18.0	17.5	17.7	16.1	15.2	15.1	17.9	16.6
Youth unemployment rate (% labor force 15-24)	43.7	41.6	35.8	37.6	35.9	31.7	29.4	25.2	36.0	37.1
NEET rate (% population aged 15-24)	16.9	17.9	17.7	19.1	18.4	16.7	16.2	17.3	21.1	19.4
Long-term unemployment rate (% labor force 15+)	15.6	16.0	13.9	13.5	13.4	12.4	11.4	11.9	13.4	11.6
Share of long-term unemployed (% of total)	79.1	82.3	77.5	76.8	75.6	77.5	75.1	79.0	74.8	69.8
Unemployment rate, low educated 15+ (ISCED 0-2)	35.9	41.5	31.8	28.1	24.2	21.8	19.7	25.4	33.0	28.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	20.9	20.6	19.7	19.2	19.5	17.5	16.6	15.4	18.0	17.4
Unemployment rate, high educated 15+ (ISCED 5-8)	10.9	9.8	9.9	10.3	11.9	10.9	10.3	11.3	13.2	12.3
Male										
Total population (1,000)	307	307	307	308	308	308	308	308	307	306
Working-age population aged 15+ (1,000)	244	244	244	244	244	244	244	245	245	244
Employment aged 15+ (1,000)	112	111	119	121	123	129	133	136	123	117
Employment rate (% population aged 15+)	45.9	45.4	48.9	49.4	50.5	52.6	54.5	55.7	50.0	47.9
Employment rate (% population aged 15-64)	52.4	51.9	55.5	56.0	57.3	59.4	61.0	62.3	56.1	54.2
Employment rate (% population aged 20-64)	58.4	57.8	61.4	61.9	63.0	65.2	66.7	67.5	61.7	59.8
Employment rate (% population aged 15-24)	14.1	14.8	21.5	19.9	22.6	23.9	25.6	30.9	24.2	20.7
Employment rate (% population aged 25-29)	56.0	57.1	60.0	61.9	64.5	62.6	64.4	67.9	54.2	53.9
Employment rate (% population aged 25-54)	66.6	65.7	69.5	70.5	71.3	73.5	74.5	73.6	67.6	67.0
Employment rate (% population aged 55-64)	49.2	48.5	48.3	48.2	49.6	52.8	55.8	59.8	53.5	49.3
Employment rate for low skilled 15-64 (ISCED 0-2)	19.0	18.7	22.4	24.5	29.1	33.6	34.7	32.6	24.6	22.9
Employment rate for medium skilled 15-64 (ISCED 3-4)	55.2	54.4	58.5	57.7	58.6	61.2	63.0	65.5	58.9	55.5
Employment rate for high skilled 15-64 (ISCED 5-8)	77.5	78.8	77.5	78.7	77.8	78.8	78.6	76.6	74.4	74.6
Self-employed (% of total employment)	20.8	19.2	21.3	23.5	24.6	25.0	26.3	24.5	25.2	22.6
Part-time employment (% of total employment)	4.6	3.9	6.7	5.7	5.4	5.9	5.7	5.1	4.5	2.3
Temporary employment (% of total employees)	20.6	25.9	28.6	28.9	35.4	31.6	34.5	36.2	33.3	32.4
Activity rate (% population aged 15+)	56.9	56.8	59.5	60.1	61.8	62.2	64.3	65.2	60.6	57.8
Activity rate (% population aged 15-64)	65.1	65.1	67.7	68.3	70.2	70.5	72.3	73.3	68.3	65.5
Activity rate (% population aged 15-24)	26.1	26.3	33.7	33.2	35.7	34.4	38.3	41.6	36.4	34.6
Activity rate (% population aged 25-54)	81.6	81.4	83.4	84.2	86.4	86.5	87.3	86.6	81.5	79.8
Activity rate (% population aged 55-64)	54.4	54.6	54.6	54.4	54.6	57.2	60.0	63.9	59.3	52.3
Unemployment aged 15+ (1,000)	27	28	26	26	28	23	24	23	26	24
Unemployment rate (% labor force 15+)	19.3	20.1	17.8	17.7	18.2	15.4	15.2	14.7	17.5	17.1
Youth unemployment rate (% labor force 15-24)	46.1	43.8	36.0	39.9	36.9	30.7	33.3	25.8	33.6	40.0
NEET rate (% population aged 15-24)	17.2	19.3	18.9	19.9	18.7	16.3	18.6	18.8	21.5	23.3
Long-term unemployment rate (% labor force 15+)	15.2	16.8	13.8	13.6	13.8	12.2	11.3	11.4	12.8	12.3
Share of long-term unemployed (% of total)	79.1	84.0	77.7	76.7	75.8	79.1	74.1	77.6	73.4	72.0
Unemployment rate, low educated 15+ (ISCED 0-2)	33.6	39.8	31.0	26.3	24.9	19.1	15.9	20.3	27.0	26.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	20.4	20.8	18.8	19.4	19.4	16.4	16.5	14.4	17.8	17.7
Unemployment rate, high educated 15+ (ISCED 5-8)	10.6	10.3	10.0	9.8	12.4	10.5	11.0	13.2	13.1	13.2

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	314	314	314	315	315	315	315	314	314	313
Working-age population aged 15+ (1,000)	257	257	256	256	256	256	255	255	256	256
Employment aged 15+ (1,000)	89	91	97	101	101	101	104	107	97	96
Employment rate (% population aged 15+)	34.6	35.4	37.8	39.4	39.4	39.4	40.8	42.1	37.9	37.5
Employment rate (% population aged 15-64)	41.6	42.8	45.3	46.9	46.8	46.8	48.4	49.7	44.4	44.4
Employment rate (% population aged 20-64)	46.0	47.5	49.7	51.5	51.3	51.4	52.9	54.2	48.8	48.7
Employment rate (% population aged 15-24)	12.9	12.2	15.8	17.7	19.3	18.6	20.6	23.5	15.0	16.4
Employment rate (% population aged 25-29)	50.1	54.9	56.8	57.7	58.3	59.4	54.7	56.3	49.6	45.8
Employment rate (% population aged 25-54)	55.3	56.8	59.6	60.6	59.5	59.2	60.3	60.5	56.3	56.6
Employment rate (% population aged 55-64)	26.7	29.4	29.7	32.3	33.2	35.1	37.9	40.9	35.5	33.3
Employment rate for low skilled 15-64 (ISCED 0-2)	11.5	10.1	11.8	15.4	16.9	16.7	17.4	15.5	12.3	11.9
Employment rate for medium skilled 15-64 (ISCED 3-4)	44.4	44.0	46.1	47.5	46.2	45.6	47.2	48.4	43.1	42.6
Employment rate for high skilled 15-64 (ISCED 5-8)	74.1	79.0	77.7	77.8	76.5	76.9	78.6	78.8	72.7	72.3
Self-employed (% of total employment)	10.1	9.3	11.3	12.3	12.6	11.4	10.2	9.8	11.4	9.9
Part-time employment (% of total employment)	4.5	2.6	5.7	6.4	4.4	5.9	4.9	4.5	3.6	3.1
Temporary employment (% of total employees)	21.7	26.1	26.1	31.5	32.1	28.8	30.5	30.5	27.5	28.8
Activity rate (% population aged 15+)	43.4	43.6	46.2	47.6	47.6	47.5	48.1	49.9	46.4	44.5
Activity rate (% population aged 15-64)	52.3	52.8	55.4	56.9	56.6	56.5	57.2	59.1	54.7	52.9
Activity rate (% population aged 15-24)	21.7	19.8	24.4	27.0	29.5	27.8	27.0	31.1	24.8	24.5
Activity rate (% population aged 25-54)	69.1	69.5	72.4	72.8	71.4	71.3	71.7	72.1	68.6	67.2
Activity rate (% population aged 55-64)	29.1	32.8	32.9	35.9	35.9	37.5	40.6	44.9	39.2	35.4
Unemployment aged 15+ (1,000)	23	21	22	21	21	21	19	20	22	18
Unemployment rate (% labor force 15+)	20.3	18.8	18.2	17.3	17.1	16.9	15.1	15.7	18.4	15.9
Youth unemployment rate (% labor force 15-24)	40.7	38.5	35.4	34.5	34.6	33.1	23.6	24.3	39.7	32.8
NEET rate (% population aged 15-24)	16.6	16.3	16.4	18.3	18.0	17.1	13.6	15.8	20.6	15.3
Long-term unemployment rate (% labor force 15+)	16.1	15.1	14.1	13.3	12.8	12.8	11.5	12.7	14.0	10.6
Share of long-term unemployed (% of total)	79.1	79.9	77.3	76.9	75.2	75.5	76.5	80.7	76.3	66.8
Unemployment rate, low educated 15+ (ISCED 0-2)	38.8	43.8	33.0	30.0	23.3	25.7	24.9	32.9	40.8	30.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	21.6	20.4	21.1	19.0	19.6	19.1	16.8	16.8	18.4	16.9
Unemployment rate, high educated 15+ (ISCED 5-8)	11.3	9.4	9.9	10.6	11.4	11.3	9.7	9.8	13.3	11.6

Montenegro: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	727	726	723	725	751	765	766	773	783	793
nominal annual growth in %	0.7	-0.1	-0.4	0.3	3.6	1.9	0.1	0.9	1.3	1.3
real annual growth in % (CPI deflated)	-3.3	-2.3	0.3	-1.3	3.9	-0.5	-2.4	0.6	1.6	-1.1
Average monthly gross wages, EUR	727	726	723	725	751	765	766	773	783	793
Average monthly gross wages, EUR (PPP)	1,452	1,439	1,432	1,449	1,494	1,497	1,491	1,525	1,562	1,540
Average monthly net wages, NCU	487	479	477	480	499	510	511	515	524	532
nominal annual growth in %	0.6	-1.6	-0.4	0.6	4.0	2.2	0.2	0.8	1.7	1.5
real annual growth in % (CPI deflated)	-3.3	-3.8	0.3	-0.9	4.2	-0.2	-2.3	0.4	2.1	-0.9
Average monthly net wages, EUR	487	479	477	480	499	510	511	515	524	532
Average monthly net wages, EUR (PPP)	972	950	945	959	993	998	995	1,016	1,045	1,033
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	.	.	288	288	288	288	288	288	331	331
Monthly gross minimum wages, EUR (ER)	.	.	288	288	288	288	288	288	331	331
Monthly gross minimum wages, EUR (PPP)	.	.	507	513	515	506	501	504	553	564
Unit labor costs (ULC)										
ULC, NCU in %	6.2	-3.1	4.8	-0.6	1.8	-0.5	-1.3	-0.4	7.6	-13.2
ULC, EUR in %	6.2	-3.1	4.8	-0.6	1.8	-0.5	-1.3	-0.4	7.6	-13.2

Notes: Data are based on a continuous quarterly survey and census 2011. From 2021, new methodology in line with the Integrated European Social Statistics Regulation (IESS); growth rates are not fully comparable before and after 2021. Education groups refer to ISCED 1997 until 2012, ISCED 2011 from 2013.

The minimum wage in the country is fixed in net terms, the gross wage shown in the table is calculated. Until 2019 the minimum wage is in effect as of 21 March of the respective previous year, from 2020 it is in effect as of 1 July of the respective previous year.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

North Macedonia: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	2,061	2,064	2,067	2,070	2,072	2,075	2,076	2,077	2,073	2,065
Working-age population aged 15+ (1,000)	1,670	1,672	1,673	1,677	1,679	1,680	1,683	1,685	1,686	1,683
Employment aged 15+ (1,000)	651	679	690	706	724	741	759	798	795	795
Employment rate (% population aged 15+)	39.0	40.6	41.2	42.1	43.1	44.1	45.1	47.3	47.2	47.2
Employment rate (% population aged 15-64)	44.0	46.0	46.9	47.8	49.1	50.5	51.7	54.7	54.7	55.1
Employment rate (% population aged 20-64)	48.2	50.3	51.3	51.9	53.3	54.8	56.1	59.2	59.1	59.5
Employment rate (% population aged 15-24)	15.5	16.2	15.2	17.3	16.2	17.5	17.4	20.7	19.8	17.9
Employment rate (% population aged 25-29)	45.7	45.9	48.2	47.3	49.6	51.5	53.4	56.7	55.7	58.6
Employment rate (% population aged 25-54)	55.8	57.9	59.3	59.4	61.2	62.7	63.9	66.8	66.6	67.8
Employment rate (% population aged 55-64)	35.4	37.9	38.6	40.1	40.7	41.4	42.7	45.1	45.7	44.9
Employment rate for low skilled 15-64 (ISCED 0-2)	25.7	28.4	29.9	28.9	27.3	28.4	29.2	30.6	29.3	27.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	50.1	52.4	52.5	53.6	55.4	56.4	57.7	61.0	60.2	61.1
Employment rate for high skilled 15-64 (ISCED 5-8)	68.1	67.5	69.1	72.0	72.4	73.7	74.8	77.5	78.1	79.7
Self-employed (% of total employment)	13.6	14.5	14.0	13.9	13.2	12.9	13.3	11.9	10.0	9.2
Part-time employment (% of total employment)	6.4	4.6	5.9	4.4	5.0	4.2	3.6	4.4	4.0	3.5
Temporary employment (% of total employees)	13.7	14.0	15.4	12.6	13.6	14.0	15.0	16.7	17.8	17.8
Activity rate (% population aged 15+)	56.5	57.2	57.3	57.0	56.5	56.8	56.9	57.2	56.4	56.0
Activity rate (% population aged 15-64)	63.9	64.9	65.3	64.9	64.5	65.3	65.4	66.3	65.5	65.5
Activity rate (% population aged 15-24)	33.6	33.6	32.4	32.8	31.3	32.8	31.8	32.2	30.9	28.1
Activity rate (% population aged 25-54)	78.5	79.2	80.0	78.8	78.7	79.1	78.9	79.9	78.7	79.3
Activity rate (% population aged 55-64)	47.2	49.9	49.9	50.6	49.4	49.7	51.4	51.1	52.0	51.4
Unemployment aged 15+ (1,000)	293	277	269	249	225	214	199	166	156	148
Unemployment rate (% labor force 15+)	31.0	29.0	28.0	26.1	23.7	22.4	20.7	17.3	16.4	15.7
Youth unemployment rate (% labor force 15-24)	53.9	51.9	53.1	47.3	48.2	46.7	45.4	35.6	35.7	36.4
NEET rate (% population aged 15-24)	24.8	24.2	25.2	24.7	24.3	24.9	24.1	18.1	19.6	17.9
Long-term unemployment rate (% labor force 15+)	25.5	23.9	23.4	21.3	19.2	17.4	15.5	13.1	12.4	12.5
Share of long-term unemployed (% of total)	82.1	82.5	83.4	81.6	80.9	77.9	74.7	75.9	75.6	79.5
Unemployment rate, low educated 15+ (ISCED 0-2)	37.7	34.2	32.1	29.7	29.1	26.5	23.7	23.2	21.4	22.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	31.4	28.7	28.3	26.6	23.7	22.6	21.0	16.6	16.1	15.6
Unemployment rate, high educated 15+ (ISCED 5-8)	22.4	23.5	22.5	21.1	19.4	18.7	17.8	14.3	13.7	11.7
Male										
Total population (1,000)	1,033	1,034	1,036	1,037	1,038	1,039	1,040	1,040	1,037	1,034
Working-age population aged 15+ (1,000)	835	837	837	839	840	841	842	843	844	842
Employment aged 15+ (1,000)	393	408	420	424	440	450	459	477	472	473
Employment rate (% population aged 15+)	47.1	48.7	50.1	50.5	52.3	53.6	54.4	56.6	55.9	56.2
Employment rate (% population aged 15-64)	52.4	54.5	56.1	56.6	58.6	60.5	61.4	64.4	63.7	64.3
Employment rate (% population aged 20-64)	57.5	59.7	61.6	61.5	63.7	65.6	66.6	69.7	68.9	69.5
Employment rate (% population aged 15-24)	18.1	18.9	18.9	20.2	20.4	22.6	21.7	25.4	25.1	23.0
Employment rate (% population aged 25-29)	50.9	52.3	57.1	53.8	56.7	61.1	61.9	65.1	62.4	64.9
Employment rate (% population aged 25-54)	65.4	67.4	69.8	69.1	71.2	73.2	74.0	76.5	75.1	76.4
Employment rate (% population aged 55-64)	46.6	49.4	50.3	52.2	55.0	54.5	56.8	60.1	60.3	60.3
Employment rate for low skilled 15-64 (ISCED 0-2)	37.8	41.9	44.3	42.2	42.6	43.3	44.7	47.9	45.4	42.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	55.4	57.3	58.6	59.7	61.9	63.5	64.4	67.5	66.3	67.9
Employment rate for high skilled 15-64 (ISCED 5-8)	72.1	71.4	72.8	74.8	75.7	78.3	78.6	79.7	81.0	81.3
Self-employed (% of total employment)	18.2	19.2	19.4	18.9	17.2	17.3	17.6	15.5	12.8	12.0
Part-time employment (% of total employment)	5.9	4.4	6.5	4.3	4.6	4.1	3.5	4.3	3.7	3.0
Temporary employment (% of total employees)	14.8	14.6	16.9	13.8	14.8	15.2	16.5	18.1	19.7	18.4
Activity rate (% population aged 15+)	68.7	68.5	69.3	68.9	69.2	69.3	69.2	67.8	67.1	67.2
Activity rate (% population aged 15-64)	76.6	76.8	77.7	77.5	77.8	78.4	78.3	77.3	76.7	77.1
Activity rate (% population aged 15-24)	40.5	39.9	39.3	40.1	39.2	41.7	40.6	38.1	38.0	34.6
Activity rate (% population aged 25-54)	92.2	91.9	93.2	91.8	92.1	92.4	91.5	90.9	89.2	90.5
Activity rate (% population aged 55-64)	63.9	65.7	66.8	67.4	68.1	67.0	69.3	67.7	69.4	69.7
Unemployment aged 15+ (1,000)	180	166	160	155	142	133	124	94	95	93
Unemployment rate (% labor force 15+)	31.5	29.0	27.6	26.7	24.4	22.7	21.3	16.5	16.7	16.4
Youth unemployment rate (% labor force 15-24)	55.2	52.5	52.0	49.7	47.9	45.7	46.6	33.4	34.0	33.5
NEET rate (% population aged 15-24)	25.3	23.3	23.6	24.5	23.6	23.9	23.3	17.1	19.4	18.3
Long-term unemployment rate (% labor force 15+)	26.1	24.0	23.1	22.1	20.1	17.6	15.7	12.9	12.7	13.3
Share of long-term unemployed (% of total)	83.0	82.7	83.6	82.5	82.5	77.5	73.7	78.0	76.2	81.2
Unemployment rate, low educated 15+ (ISCED 0-2)	40.6	35.3	32.8	31.2	30.3	29.3	26.2	20.1	23.4	25.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	31.0	28.6	27.4	27.0	24.2	22.7	21.5	16.3	16.1	15.3
Unemployment rate, high educated 15+ (ISCED 5-8)	18.7	19.8	20.0	19.3	17.6	15.4	15.2	13.4	12.2	12.1

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	1,029	1,030	1,032	1,033	1,034	1,036	1,036	1,037	1,035	1,031
Working-age population aged 15+ (1,000)	835	835	836	838	839	839	840	841	842	841
Employment aged 15+ (1,000)	257	271	271	282	284	290	301	320	323	322
Employment rate (% population aged 15+)	30.8	32.5	32.4	33.7	33.8	34.6	35.8	38.1	38.4	38.3
Employment rate (% population aged 15-64)	35.3	37.3	37.4	38.8	39.2	40.3	41.7	44.7	45.3	45.5
Employment rate (% population aged 20-64)	38.7	40.7	40.8	42.1	42.5	43.7	45.2	48.4	49.0	49.2
Employment rate (% population aged 15-24)	12.6	13.3	11.3	14.2	11.8	12.0	12.8	15.8	14.3	12.4
Employment rate (% population aged 25-29)	40.2	39.2	38.9	40.6	42.2	41.3	44.4	47.8	48.6	52.0
Employment rate (% population aged 25-54)	45.8	48.0	48.5	49.3	50.9	51.8	53.5	56.7	57.7	58.8
Employment rate (% population aged 55-64)	24.5	26.6	27.1	28.3	26.6	28.5	28.8	30.3	31.3	29.8
Employment rate for low skilled 15-64 (ISCED 0-2)	16.6	18.0	18.5	18.4	15.5	17.3	17.8	17.8	17.2	16.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	43.1	45.8	44.4	45.3	46.6	46.6	48.5	52.4	52.2	51.8
Employment rate for high skilled 15-64 (ISCED 5-8)	64.2	64.1	66.0	69.6	69.6	69.9	71.7	75.7	75.7	78.3
Self-employed (% of total employment)	6.5	7.4	5.6	6.4	6.9	6.0	6.8	6.5	6.0	5.1
Part-time employment (% of total employment)	7.2	5.0	5.0	4.7	5.7	4.5	3.6	4.5	4.5	4.3
Temporary employment (% of total employees)	12.2	13.2	13.3	11.0	11.8	12.3	12.9	14.8	15.2	16.9
Activity rate (% population aged 15+)	44.3	45.8	45.3	44.9	43.8	44.3	44.6	46.6	45.7	44.8
Activity rate (% population aged 15-64)	50.8	52.7	52.5	52.0	50.8	51.7	52.2	54.8	54.0	53.4
Activity rate (% population aged 15-24)	26.2	27.1	25.1	25.1	23.0	23.4	22.5	25.8	23.3	21.2
Activity rate (% population aged 25-54)	64.4	66.0	66.4	65.3	64.8	65.3	65.8	68.6	67.9	67.7
Activity rate (% population aged 55-64)	31.2	34.5	33.5	34.2	31.0	32.6	33.8	34.7	34.8	33.4
Unemployment aged 15+ (1,000)	112	111	108	94	83	81	75	72	61	55
Unemployment rate (% labor force 15+)	30.3	29.0	28.6	25.1	22.7	21.8	19.9	18.4	15.9	14.6
Youth unemployment rate (% labor force 15-24)	51.8	51.0	55.0	43.3	48.8	48.6	43.2	38.9	38.6	41.3
NEET rate (% population aged 15-24)	24.2	25.2	26.8	24.9	25.1	25.9	25.1	19.2	19.8	17.6
Long-term unemployment rate (% labor force 15+)	24.5	23.8	23.8	20.1	17.8	17.2	15.2	13.5	11.9	11.2
Share of long-term unemployed (% of total)	80.7	82.2	83.1	80.2	78.2	78.6	76.4	73.2	74.8	76.6
Unemployment rate, low educated 15+ (ISCED 0-2)	32.2	32.1	30.9	26.8	26.3	20.7	18.7	28.8	17.3	17.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	31.9	28.9	29.8	25.9	22.7	22.3	20.1	17.0	16.2	16.1
Unemployment rate, high educated 15+ (ISCED 5-8)	26.0	26.7	24.6	22.5	21.0	21.7	20.1	15.0	15.1	11.4

North Macedonia: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	30,670	31,025	31,325	32,171	32,821	33,688	35,626	37,446	40,566	42,887
nominal annual growth in %	0.2	1.2	1.0	2.7	2.0	2.6	5.8	5.1	8.3	5.7
real annual growth in % (CPI deflated)	-3.0	-1.6	1.3	3.0	2.2	1.2	4.2	4.3	7.0	2.4
Average monthly gross wages, EUR	498	504	508	522	533	547	579	609	658	696
Average monthly gross wages, EUR (PPP)	1,192	1,172	1,182	1,190	1,202	1,220	1,275	1,334	1,426	1,495
Average monthly net wages, NCU	20,902	21,145	21,394	21,904	22,342	22,928	24,276	25,213	27,182	28,718
nominal annual growth in %	0.3	1.2	1.2	2.4	2.0	2.6	5.9	3.9	7.8	5.7
real annual growth in % (CPI deflated)	-2.9	-1.6	1.5	2.7	2.2	1.2	4.4	3.1	6.5	2.3
Average monthly net wages, EUR	340	343	347	356	363	372	395	410	441	466
Average monthly net wages, EUR (PPP)	812	799	807	810	819	830	869	898	955	1,001
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	12,266	12,268	13,140	13,482	14,739	14,739	17,130	17,370	21,107	21,776
Monthly gross minimum wages, EUR (ER)	199	199	214	219	239	240	279	282	343	353
Monthly gross minimum wages, EUR (PPP)	406	407	441	455	499	491	558	567	669	713
Unit labor costs (ULC)										
ULC, NCU in %	1.5	2.6	-0.9	1.2	1.7	3.9	5.3	6.3	13.3	1.7
ULC, EUR in %	1.5	2.5	-1.0	1.2	1.7	4.0	5.5	6.3	13.0	1.8

Notes: Data based on a continuous quarterly survey and census 2002. Education groups refer to ISCED 2011.

Minimum wage in 2012-2017 was in effect since 1 January of the respective year, in 2018 since 1 September of the previous year, in 2019 since 1 July of the previous year, in 2020 since 1 January, in 2021 since 1 July of the previous year.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Serbia: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	7,201	7,167	7,132	7,095	7,058	7,021	6,983	6,945	6,899	6,834
Working-age population aged 15+ (1,000)	6,268	6,121	6,099	6,060	6,018	5,985	5,955	5,924	5,894	5,857
Employment aged 15+ (1,000)	2,362	2,444	2,559	2,574	2,719	2,795	2,833	2,901	2,895	2,849
Employment rate (% population aged 15+)	37.7	39.9	42.0	42.5	45.2	46.7	47.6	49.0	49.1	48.6
Employment rate (% population aged 15-64)	46.4	48.5	50.7	52.0	55.2	57.3	58.8	60.7	61.3	62.2
Employment rate (% population aged 20-64)	50.0	52.3	54.7	55.9	59.1	61.4	63.1	65.1	65.9	66.7
Employment rate (% population aged 15-24)	14.7	14.7	14.9	16.6	19.7	20.9	21.1	21.5	20.8	24.5
Employment rate (% population aged 25-29)	50.7	49.2	52.4	53.5	56.2	58.9	62.5	63.5	62.4	67.0
Employment rate (% population aged 25-54)	61.7	63.3	65.9	67.1	69.2	71.3	73.1	74.5	74.8	75.5
Employment rate (% population aged 55-64)	32.3	35.1	36.7	37.3	42.7	45.5	46.5	50.2	52.2	51.4
Employment rate for low skilled 15-64 (ISCED 0-2)	30.4	32.3	32.9	33.9	37.3	38.2	37.6	39.1	37.9	36.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	47.9	50.5	52.3	53.3	56.5	58.7	60.4	62.1	63.4	64.4
Employment rate for high skilled 15-64 (ISCED 5-8)	67.5	66.9	70.1	70.9	72.5	75.7	77.8	79.8	79.2	81.2
Self-employed (% of total employment)	22.4	24.1	23.4	22.0	23.7	24.8	22.7	23.0	22.4	17.0
Part-time employment (% of total employment)	7.8	10.5	12.2	11.8	13.0	12.5	11.3	12.2	11.6	8.0
Temporary employment (% of total employees)	14.6	16.1	18.8	21.8	23.7	22.8	23.0	16.5	15.0	17.6
Activity rate (% population aged 15+)	49.7	51.5	51.9	51.6	53.3	54.0	54.5	54.6	54.0	54.7
Activity rate (% population aged 15-64)	61.6	63.2	63.3	63.6	65.6	66.7	67.8	68.1	67.7	70.3
Activity rate (% population aged 15-24)	30.2	29.3	28.5	29.2	30.3	30.6	30.0	29.6	28.3	33.3
Activity rate (% population aged 25-54)	80.2	81.1	81.1	81.0	82.0	82.5	83.8	83.2	82.2	84.7
Activity rate (% population aged 55-64)	39.3	41.7	41.9	42.1	46.9	49.5	51.0	53.7	55.1	55.2
Unemployment aged 15+ (1,000)	755	708	608	552	489	435	412	336	287	352
Unemployment rate (% labor force 15+)	24.2	22.5	19.2	17.7	15.3	13.5	12.7	10.4	9.0	11.0
Youth unemployment rate (% labor force 15-24)	51.4	49.9	47.5	43.2	34.9	31.9	29.7	27.5	26.7	26.4
NEET rate (% population aged 15-24)	21.9	20.0	20.4	19.9	17.7	17.2	16.5	15.3	15.9	16.4
Long-term unemployment rate (% labor force 15+)	18.7	16.9	12.8	11.3	9.9	8.2	7.5	6.0	4.9	5.5
Share of long-term unemployed (% of total)	77.1	75.1	66.9	64.0	65.1	60.5	59.4	58.3	54.8	49.9
Unemployment rate, low educated 15+ (ISCED 0-2)	23.4	20.6	17.3	15.0	12.4	11.0	12.1	10.7	8.6	13.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	26.8	24.5	21.2	19.4	16.7	14.8	13.7	11.2	9.6	11.6
Unemployment rate, high educated 15+ (ISCED 5-8)	17.3	18.6	15.4	15.3	13.9	12.2	10.8	8.3	7.9	8.6
Male										
Total population (1,000)	3,507	3,490	3,473	3,455	3,438	3,420	3,402	3,384	3,360	3,327
Working-age population aged 15+ (1,000)	3,028	2,956	2,941	2,922	2,902	2,886	2,873	2,858	2,844	2,825
Employment aged 15+ (1,000)	1,373	1,413	1,457	1,466	1,532	1,565	1,590	1,617	1,609	1,595
Employment rate (% population aged 15+)	45.3	47.8	49.5	50.2	52.8	54.2	55.4	56.6	56.6	56.5
Employment rate (% population aged 15-64)	53.6	56.2	57.7	59.1	61.9	63.9	65.6	67.1	67.7	69.3
Employment rate (% population aged 20-64)	57.8	60.6	62.3	63.6	66.3	68.5	70.5	72.1	72.9	74.2
Employment rate (% population aged 15-24)	19.6	19.3	19.0	21.2	24.9	26.1	26.0	26.7	26.3	30.7
Employment rate (% population aged 25-29)	56.3	57.1	58.4	59.3	61.7	64.8	69.3	69.7	70.4	73.9
Employment rate (% population aged 25-54)	68.3	70.9	72.4	73.3	74.8	76.8	79.0	79.9	80.4	81.5
Employment rate (% population aged 55-64)	43.1	45.8	47.7	48.9	53.8	55.9	57.2	60.8	62.1	62.0
Employment rate for low skilled 15-64 (ISCED 0-2)	39.8	41.3	41.7	42.3	44.3	45.9	45.3	46.6	45.6	45.9
Employment rate for medium skilled 15-64 (ISCED 3-4)	55.1	58.5	59.5	61.0	64.2	65.8	68.0	69.7	70.7	72.2
Employment rate for high skilled 15-64 (ISCED 5-8)	69.8	69.9	73.6	74.3	75.8	79.0	81.4	82.2	82.3	84.6
Self-employed (% of total employment)	28.7	30.9	30.8	29.9	31.0	30.9	28.8	28.7	27.6	23.4
Part-time employment (% of total employment)	7.2	10.0	11.6	11.2	12.0	11.6	10.5	11.5	10.4	7.2
Temporary employment (% of total employees)	16.2	17.3	20.0	23.2	25.8	23.9	24.5	16.2	14.3	16.9
Activity rate (% population aged 15+)	59.0	60.4	60.7	60.3	61.8	62.2	62.9	62.7	62.0	62.9
Activity rate (% population aged 15-64)	70.3	71.6	71.3	71.6	73.1	73.8	75.1	74.9	74.6	77.5
Activity rate (% population aged 15-24)	37.9	35.3	35.3	35.4	36.8	36.8	36.3	36.2	35.1	40.7
Activity rate (% population aged 25-54)	87.1	88.3	87.4	87.3	87.7	88.1	89.5	88.5	87.7	90.4
Activity rate (% population aged 55-64)	53.1	55.4	55.2	55.9	59.6	61.4	63.0	65.0	65.9	66.5
Unemployment aged 15+ (1,000)	414	372	327	296	262	230	215	176	153	180
Unemployment rate (% labor force 15+)	23.2	20.8	18.3	16.8	14.6	12.8	11.9	9.8	8.7	10.2
Youth unemployment rate (% labor force 15-24)	48.3	45.2	46.1	40.1	32.2	29.2	28.3	26.1	25.0	24.6
NEET rate (% population aged 15-24)	22.3	20.1	21.0	20.2	17.2	17.1	16.0	14.8	17.0	16.9
Long-term unemployment rate (% labor force 15+)	17.6	15.4	12.0	10.6	9.5	7.9	7.2	5.8	4.7	4.9
Share of long-term unemployed (% of total)	76.0	74.2	65.7	63.0	65.1	61.4	60.4	58.9	54.7	48.6
Unemployment rate, low educated 15+ (ISCED 0-2)	22.9	19.5	16.9	15.8	13.6	11.1	12.3	11.0	9.0	12.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	25.3	22.2	20.1	17.9	15.4	13.9	12.8	10.2	9.0	10.7
Unemployment rate, high educated 15+ (ISCED 5-8)	15.8	17.5	13.7	14.1	12.8	11.0	9.1	7.6	7.5	7.4

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	3,695	3,677	3,659	3,640	3,621	3,601	3,581	3,562	3,539	3,507
Working-age population aged 15+ (1,000)	3,240	3,166	3,158	3,138	3,115	3,098	3,083	3,066	3,050	3,032
Employment aged 15+ (1,000)	989	1,031	1,102	1,108	1,188	1,230	1,243	1,284	1,285	1,253
Employment rate (% population aged 15+)	30.5	32.6	34.9	35.3	38.1	39.7	40.3	41.9	42.1	41.3
Employment rate (% population aged 15-64)	39.0	40.9	43.7	44.9	48.4	50.8	52.0	54.3	54.8	55.2
Employment rate (% population aged 20-64)	42.2	44.1	47.1	48.2	51.9	54.4	55.8	58.2	58.9	59.3
Employment rate (% population aged 15-24)	9.5	9.7	10.6	11.7	14.2	15.3	15.9	15.9	14.9	17.9
Employment rate (% population aged 25-29)	44.1	41.3	46.1	47.5	50.4	52.7	55.3	57.1	54.0	59.7
Employment rate (% population aged 25-54)	54.9	55.8	59.5	60.9	63.6	65.7	67.1	69.1	69.1	69.3
Employment rate (% population aged 55-64)	22.0	25.1	26.6	26.6	32.5	36.0	36.7	40.5	43.2	41.7
Employment rate for low skilled 15-64 (ISCED 0-2)	22.7	24.9	25.8	26.7	31.4	31.7	31.0	32.5	31.0	28.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	39.6	41.4	44.0	44.4	47.5	50.4	51.6	53.4	54.9	55.5
Employment rate for high skilled 15-64 (ISCED 5-8)	65.6	64.3	67.4	68.3	70.0	73.2	75.0	78.0	77.0	78.6
Self-employed (% of total employment)	13.6	14.9	13.7	11.6	14.1	17.0	14.9	15.8	15.8	8.8
Part-time employment (% of total employment)	8.5	11.1	13.0	12.7	14.2	13.6	12.2	13.1	13.0	9.0
Temporary employment (% of total employees)	12.6	14.7	17.4	20.2	21.4	21.6	21.3	16.8	15.9	18.5
Activity rate (% population aged 15+)	41.1	43.2	43.8	43.5	45.4	46.3	46.7	47.1	46.5	47.0
Activity rate (% population aged 15-64)	52.9	54.8	55.3	55.6	58.1	59.6	60.6	61.3	60.8	63.0
Activity rate (% population aged 15-24)	22.0	22.9	21.3	22.6	23.4	24.1	23.3	22.7	21.1	25.4
Activity rate (% population aged 25-54)	73.2	73.9	74.8	74.6	76.1	76.9	78.0	77.8	76.5	78.9
Activity rate (% population aged 55-64)	26.0	28.8	29.6	29.5	35.2	38.5	40.0	43.4	45.2	44.9
Unemployment aged 15+ (1,000)	341	336	281	256	228	205	197	160	134	172
Unemployment rate (% labor force 15+)	25.6	24.6	20.3	18.8	16.1	14.3	13.7	11.1	9.4	12.1
Youth unemployment rate (% labor force 15-24)	57.0	57.5	50.0	48.2	39.5	36.3	32.0	29.9	29.5	29.5
NEET rate (% population aged 15-24)	21.5	19.9	19.9	19.6	18.3	17.3	17.0	15.8	14.8	15.9
Long-term unemployment rate (% labor force 15+)	20.1	18.7	13.9	12.2	10.5	8.5	8.0	6.4	5.2	6.2
Share of long-term unemployed (% of total)	78.4	76.2	68.2	65.2	65.1	59.5	58.4	57.6	54.9	51.4
Unemployment rate, low educated 15+ (ISCED 0-2)	24.3	22.0	17.9	13.9	11.1	10.9	11.8	10.2	8.2	14.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	29.3	28.0	23.0	21.6	18.6	16.0	15.1	12.7	10.5	12.9
Unemployment rate, high educated 15+ (ISCED 5-8)	18.6	19.5	16.8	16.4	14.8	13.3	12.3	8.9	8.3	9.6

Serbia: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	57,430	60,708	61,426	61,145	63,474	65,976	68,629	75,814	82,984	90,784
nominal annual growth in %	8.9	5.7	1.2	-0.5	3.8	3.9	6.0	10.5	9.5	9.4
real annual growth in % (CPI deflated)	1.0	-1.9	-1.7	-2.4	2.6	0.9	3.9	8.4	7.8	5.2
Average monthly gross wages, EUR	508	537	524	506	516	544	580	643	706	772
Average monthly gross wages, EUR (PPP)	1,116	1,114	1,106	1,079	1,090	1,110	1,135	1,243	1,332	1,420
Average monthly net wages, NCU	41,377	43,932	44,530	44,432	46,097	47,893	49,650	54,919	60,073	65,864
nominal annual growth in %	9.0	6.2	1.4	-0.2	3.7	3.9	6.5	10.6	9.4	9.6
real annual growth in % (CPI deflated)	1.1	-1.5	-1.5	-2.1	2.5	0.9	4.4	8.5	7.7	5.4
Average monthly net wages, EUR	366	388	380	368	374	395	420	466	511	560
Average monthly net wages, EUR (PPP)	804	806	802	784	791	806	821	901	965	1,030
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	24,067	27,206	26,976	28,431	28,403	30,613	33,813	36,408	40,502	43,044
Monthly gross minimum wages, EUR (ER)	230	239	235	235	234	248	285	308	344	366
Monthly gross minimum wages, EUR (PPP)	416	445	437	458	448	469	512	547	588	614
Unit labor costs (ULC)										
ULC, NCU in %	8.4	6.3	7.7	-1.7	6.1	4.6	2.8	8.4	10.2	4.4
ULC, EUR in %	-2.3	6.3	3.8	-4.5	4.1	6.2	5.5	8.8	10.5	4.4

Notes: Until 2013 the labor force survey was carried out twice a year in April and October; in 2014 quarterly in a fixed reference week; from 2015, the survey is conducted continuously. Further adjustments according to EU guidelines were introduced 2014. For better comparability, the data before 2014 were recalculated by applying double entries for 2014. For LFS data census 2011 is applied from 2013 with low impact on growth rates in comparison to previous year. From 2021, new methodology in line with the Integrated European Social Statistics Regulation (IESS); growth rates are not fully comparable before and after 2021. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.

From 2018, average monthly wages based on tax administration data and full-time equivalent (FTE) employees, before that survey data supplemented by tax administration data. The minimum wage in 2012 was in effect from June 2011, and in 2013 from April 2012; since 2014 it is in effect as of January of the respective year.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Western Balkans-6: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	18,427	18,397	18,350	18,276	18,223	18,191	18,146	18,078	17,696	17,569
Working-age population aged 15+ (1,000)	14,613	14,545	14,529	14,498	14,409	14,335	14,297	14,131	14,787	14,721
Employment aged 15+ (1,000)	5,472	5,512	5,640	5,709	5,960	6,135	6,231	6,377	6,676	6,643
Employment rate (% population aged 15+)	37.4	37.9	38.8	39.4	41.4	42.8	43.6	45.1	45.1	45.1
Employment rate (% population aged 15-64)	44.3	44.7	45.8	46.8	49.2	51.2	52.4	54.4	54.1	54.8
Employment rate (% population aged 20-64)	48.6	49.3	50.5	51.3	53.8	55.9	57.1	59.1	58.8	59.3
Employment rate (% population aged 15-24)	15.6	14.5	14.1	15.3	17.0	18.6	19.8	21.7	20.3	21.3
Employment rate (% population aged 25-29)	47.8	47.2	48.5	49.0	51.5	53.8	56.9	58.7	57.4	59.6
Employment rate (% population aged 25-54)	57.4	58.0	59.6	60.3	62.5	64.4	65.9	67.5	66.7	67.4
Employment rate (% population aged 55-64)	35.1	36.2	37.1	38.0	40.9	43.0	44.1	47.1	47.3	46.8
Employment rate for low skilled 15-64 (ISCED 0-2)	30.5	30.0	30.2	31.5	33.9	34.9	34.8	36.8	34.5	33.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	47.8	48.4	49.3	49.5	51.9	54.1	55.4	57.0	57.0	57.9
Employment rate for high skilled 15-64 (ISCED 5-8)	67.7	67.8	68.8	68.8	70.0	72.4	74.2	75.9	75.6	77.0
Self-employed (% of total employment)	22.0	22.3	21.9	22.0	24.0	24.7	22.9	23.0	21.5	18.3
Part-time employment (% of total employment)	11.9	12.0	13.2	12.5	12.7	12.0	10.6	11.2	10.2	8.3
Temporary employment (% of total employees)	17.9	19.0	20.6	21.6	23.1	22.8	22.8	18.1	16.4	18.1
Activity rate (% population aged 15+)	49.2	49.5	50.0	49.9	50.9	51.5	51.7	52.1	51.9	52.2
Activity rate (% population aged 15-64)	58.6	58.7	59.5	59.7	60.9	62.0	62.5	63.2	62.5	63.6
Activity rate (% population aged 15-24)	30.3	28.2	28.4	29.3	29.4	30.4	30.7	31.9	30.1	31.1
Activity rate (% population aged 25-54)	74.2	74.7	75.6	75.4	76.1	77.0	77.6	77.5	76.2	77.4
Activity rate (% population aged 55-64)	41.5	42.8	43.1	43.7	46.2	47.8	49.0	51.1	51.1	51.4
Unemployment aged 15+ (1,000)	1,724	1,684	1,630	1,533	1,370	1,251	1,157	985	998	1,047
Unemployment rate (% labor force 15+)	24.0	23.4	22.4	21.2	18.7	16.9	15.7	13.4	13.0	13.6
Youth unemployment rate (% labor force 15-24)	48.6	48.4	50.2	47.7	42.1	38.6	35.6	32.1	32.6	31.5
NEET rate (% population aged 15-24)	26.1	25.8	25.4	25.4	23.6	22.5	22.3	21.4	22.3	21.2
Long-term unemployment rate (% labor force 15+)	18.6	18.0	16.4	15.2	13.5	11.8	10.5	8.9	8.6	8.9
Share of long-term unemployed (% of total)	77.5	77.0	73.4	72.0	72.2	69.7	67.4	66.4	66.2	65.5
Unemployment rate, low educated 15+ (ISCED 0-2)	22.7	22.7	22.0	19.8	17.1	(15.5)	14.7	(13.0)	13.1	15.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	26.6	25.6	24.5	23.3	20.4	18.5	17.0	14.4	13.8	14.5
Unemployment rate, high educated 15+ (ISCED 5-8)	17.7	18.0	17.1	17.1	16.0	14.6	13.3	11.3	11.1	10.5
Male	9090	9079	9059	9020	8989	8962	8925	8884	8699	8634
Total population (1,000)	9,090	9,079	9,059	9,020	8,989	8,962	8,925	8,884	8,699	8,634
Working-age population aged 15+ (1,000)	7,145	7,074	7,077	7,095	7,060	7,030	6,995	6,917	7,222	7,197
Employment aged 15+ (1,000)	3,271	3,274	3,342	3,378	3,518	3,616	3,662	3,710	3,880	3,887
Employment rate (% population aged 15+)	45.8	46.3	47.2	47.6	49.8	51.4	52.3	53.6	53.7	54.0
Employment rate (% population aged 15-64)	52.7	53.4	54.3	55.1	57.6	59.9	61.2	63.0	62.8	63.9
Employment rate (% population aged 20-64)	58.0	58.9	60.0	60.6	63.1	65.5	66.9	68.5	68.2	69.3
Employment rate (% population aged 15-24)	19.7	18.7	17.8	19.4	21.4	23.4	24.7	26.4	25.4	26.6
Employment rate (% population aged 25-29)	54.7	54.7	55.7	55.8	58.5	62.2	65.4	66.2	65.2	67.0
Employment rate (% population aged 25-54)	66.8	67.8	69.0	69.3	71.5	73.9	75.3	76.3	75.6	76.6
Employment rate (% population aged 55-64)	46.7	47.4	49.0	50.0	53.1	54.7	56.1	59.6	59.3	59.5
Employment rate for low skilled 15-64 (ISCED 0-2)	40.4	40.1	40.6	41.5	43.9	45.5	45.4	47.9	45.5	44.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	55.2	56.2	57.0	57.3	60.1	62.2	63.8	65.2	65.3	66.8
Employment rate for high skilled 15-64 (ISCED 5-8)	71.1	71.1	72.2	72.5	73.3	76.4	78.3	79.2	79.3	81.3
Self-employed (% of total employment)	27.3	27.8	27.7	28.4	29.6	29.7	28.1	27.8	25.6	23.1
Part-time employment (% of total employment)	10.6	10.6	11.5	11.0	11.1	10.5	9.2	9.9	8.8	6.9
Temporary employment (% of total employees)	20.5	21.1	22.9	23.7	25.6	25.2	25.5	19.2	16.8	17.8
Activity rate (% population aged 15+)	59.9	60.0	60.6	60.2	61.1	61.9	62.0	61.5	61.5	62.0
Activity rate (% population aged 15-64)	69.4	69.6	70.2	70.1	71.1	72.5	73.1	72.7	72.3	73.6
Activity rate (% population aged 15-24)	37.9	35.3	35.3	36.2	36.1	37.4	38.1	38.1	36.7	37.5
Activity rate (% population aged 25-54)	85.3	86.2	86.7	86.0	86.5	88.1	88.3	87.0	85.9	87.2
Activity rate (% population aged 55-64)	56.1	56.9	57.8	58.1	60.7	61.5	62.8	64.6	64.6	65.2
Unemployment aged 15+ (1,000)	1,008	970	947	891	795	734	679	546	562	574
Unemployment rate (% labor force 15+)	23.6	22.9	22.1	20.9	18.4	16.9	15.6	12.8	12.7	12.9
Youth unemployment rate (% labor force 15-24)	48.0	46.9	49.5	46.3	40.8	37.4	35.1	30.7	30.8	29.2
NEET rate (% population aged 15-24)	25.7	25.0	25.0	25.1	23.1	21.6	22.0	21.0	22.5	21.0
Long-term unemployment rate (% labor force 15+)	18.0	17.4	16.0	15.0	13.3	11.8	10.6	8.5	8.4	8.4
Share of long-term unemployed (% of total)	76.6	76.3	72.3	71.9	72.4	70.0	67.5	66.5	66.2	65.1
Unemployment rate, low educated 15+ (ISCED 0-2)	24.5	24.1	23.4	21.8	19.1	(17.4)	(16.4)	(13.6)	14.4	15.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	25.3	24.2	23.5	22.1	19.5	17.9	16.6	13.4	13.1	13.3
Unemployment rate, high educated 15+ (ISCED 5-8)	15.1	(16.2)	15.2	(15.2)	(14.2)	(12.7)	(11.6)	(10.0)	9.7	9.1

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	9,337	9,318	9,291	9,255	9,234	9,229	9,220	9,194	8,997	8,935
Working-age population aged 15+ (1,000)	7,468	7,471	7,453	7,403	7,348	7,305	7,302	7,214	7,565	7,525
Employment aged 15+ (1,000)	2,202	2,239	2,298	2,331	2,442	2,520	2,569	2,667	2,796	2,756
Employment rate (% population aged 15+)	29.5	30.0	30.8	31.5	33.2	34.5	35.2	37.0	37.0	36.6
Employment rate (% population aged 15-64)	35.8	36.1	37.3	38.4	40.7	42.4	43.5	45.8	45.4	45.6
Employment rate (% population aged 20-64)	39.2	39.9	41.0	42.1	44.4	46.2	47.3	49.7	49.4	49.4
Employment rate (% population aged 15-24)	11.1	10.2	10.2	10.8	(12.3)	(13.3)	(14.5)	16.5	14.9	15.9
Employment rate (% population aged 25-29)	40.1	39.3	40.8	41.5	43.8	44.8	47.6	50.6	49.1	51.7
Employment rate (% population aged 25-54)	48.1	48.4	50.2	51.4	53.5	54.9	56.4	58.7	57.8	58.0
Employment rate (% population aged 55-64)	23.8	25.8	26.1	26.6	29.3	32.0	32.9	35.4	36.1	34.9
Employment rate for low skilled 15-64 (ISCED 0-2)	23.1	22.4	22.5	23.9	26.2	26.7	26.6	28.3	26.3	25.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	38.5	38.7	39.6	39.7	41.5	43.8	44.7	46.7	46.5	46.7
Employment rate for high skilled 15-64 (ISCED 5-8)	64.5	64.9	65.9	65.8	67.2	69.1	70.9	73.3	72.7	73.6
Self-employed (% of total employment)	14.1	14.3	13.4	12.7	16.0	17.5	15.6	16.4	15.8	11.6
Part-time employment (% of total employment)	13.8	14.1	15.6	14.7	15.1	14.1	12.5	13.0	12.2	10.2
Temporary employment (% of total employees)	13.2	16.2	17.6	18.9	19.8	19.6	19.3	16.5	15.8	18.5
Activity rate (% population aged 15+)	39.1	39.5	40.0	40.2	41.1	41.6	41.7	43.1	42.7	42.9
Activity rate (% population aged 15-64)	47.7	47.9	48.7	49.3	50.5	51.4	51.9	53.7	52.8	53.7
Activity rate (% population aged 15-24)	22.1	20.8	21.1	21.8	22.1	22.6	22.8	25.2	23.2	24.4
Activity rate (% population aged 25-54)	63.2	63.5	64.6	64.8	65.7	66.0	66.7	68.1	66.5	67.5
Activity rate (% population aged 55-64)	27.5	29.5	29.3	29.9	32.4	34.8	36.1	38.3	38.5	38.4
Unemployment aged 15+ (1,000)	716	714	682	642	575	516	478	439	435	473
Unemployment rate (% labor force 15+)	24.5	24.2	22.9	21.6	19.1	17.0	15.7	14.1	13.5	14.7
Youth unemployment rate (% labor force 15-24)	49.8	50.9	51.5	50.3	44.6	40.9	(36.5)	(34.3)	35.7	35.1
NEET rate (% population aged 15-24)	26.5	26.7	25.9	25.7	24.2	23.5	22.6	21.9	22.1	21.3
Long-term unemployment rate (% labor force 15+)	19.3	18.9	17.1	15.6	13.7	11.8	10.5	9.4	8.9	9.7
Share of long-term unemployed (% of total)	78.8	78.0	74.9	72.0	72.1	69.3	67.1	66.3	66.2	65.9
Unemployment rate, low educated 15+ (ISCED 0-2)	20.1	20.9	20.0	17.0	14.5	(13.0)	(12.4)	(12.3)	11.5	14.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	28.8	28.1	26.4	25.3	22.1	19.4	17.8	16.1	15.1	16.5
Unemployment rate, high educated 15+ (ISCED 5-8)	20.2	19.6	18.8	18.8	17.7	(16.3)	(14.8)	(12.5)	12.3	11.7

Western Balkans-6: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU
nominal annual growth in %	.	2.1	1.0	1.3	2.2	3.1	4.8	7.0	6.1	7.0
real annual growth in % (CPI deflated)	.	-2.1	-0.4	0.2	1.6	0.9	2.9	5.4	5.2	3.8
Average monthly gross wages, EUR	481	497	506	503	508	529	559	602	648	692
Average monthly gross wages, EUR (PPP)	1,058	1,056	1,084	1,082	1,079	1,092	1,120	1,190	1,263	1,322
Average monthly net wages, NCU
nominal annual growth in %
real annual growth in % (CPI deflated)
Average monthly net wages, EUR
Average monthly net wages, EUR (PPP)
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU
Monthly gross minimum wages, EUR (ER)
Monthly gross minimum wages, EUR (PPP)
Unit labor costs (ULC)										
ULC, NCU in %	.	0.5	2.9	-0.1	3.3	3.4	2.3	5.6	10.7	0.7
ULC, EUR in %	.	1.7	1.3	-1.9	2.2	4.2	3.0	6.2	12.3	0.6

Notes: Labor market data for the Western Balkans show the aggregate of six countries only when data are available for all of them. Annual time series therefore start from 2012 (because data for Kosovo are not available prior to this).

Wage data for the Western Balkan are weighted averages with employment data from LFS.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Austria: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	8,430	8,480	8,546	8,643	8,737	8797.6	8,841	8,880	8,917	8,956
Working-age population aged 15+ (1,000)	6,440	6,486	6,527	6,555	6,612	6,615	6,630	6,645	6,677	6,720
Employment aged 15+ (1,000)	4,071	4,092	4,098	4,133	4,204	4,245	4,304	4,338	4,282	4,296
Employment rate (% population aged 15+)	63.2	63.1	62.8	63.1	63.6	64.2	64.9	65.3	64.1	63.9
Employment rate (% population aged 15-64)	71.4	71.4	71.1	71.1	71.5	72.2	73.0	73.6	72.4	72.4
Employment rate (% population aged 20-64)	74.4	74.6	74.2	74.3	74.8	75.4	76.2	76.8	75.5	75.6
Employment rate (% population aged 15-24)	53.7	53.1	52.1	51.4	51.0	50.6	51.3	51.6	50.2	50.1
Employment rate (% population aged 25-29)	81.4	80.4	79.2	80.2	80.9	80.4	80.7	81.8	79.4	81.1
Employment rate (% population aged 25-54)	84.3	84.0	83.4	83.5	83.6	84.1	84.5	85.3	83.9	83.8
Employment rate (% population aged 55-64)	41.6	43.8	45.1	46.3	49.2	51.3	54.0	54.5	54.7	55.4
Employment rate for low skilled 15-64 (ISCED 0-2)	48.3	47.3	47.5	47.2	47.3	46.9	48.2	48.2	47.5	47.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	75.8	76.2	73.8	73.5	73.8	74.5	75.4	76.1	74.1	73.8
Employment rate for high skilled 15-64 (ISCED 5-8)	86.2	85.3	83.3	83.3	84.0	84.6	84.5	84.7	84.6	84.7
Self-employed (% of total employment)	11.1	11.3	11.2	11.3	11.1	10.9	10.7	11.0	10.9	10.4
Part-time employment (% of total employment)	25.8	26.7	27.7	28.0	28.5	28.6	28.0	27.8	27.8	29.3
Temporary employment (% of total employees)	9.3	9.2	9.1	9.1	9.0	9.2	9.1	8.7	8.2	8.8
Activity rate (% population aged 15+)	66.5	66.7	66.5	66.9	67.7	67.9	68.2	68.4	67.8	68.2
Activity rate (% population aged 15-64)	75.1	75.5	75.4	75.5	76.2	76.4	76.8	77.1	76.6	77.2
Activity rate (% population aged 15-24)	59.2	58.8	58.0	57.4	57.5	56.1	56.6	56.4	56.1	56.3
Activity rate (% population aged 25-54)	88.1	88.3	88.0	88.0	88.4	88.7	88.5	89.0	88.3	89.0
Activity rate (% population aged 55-64)	43.1	45.5	46.9	48.6	51.7	53.6	56.2	56.4	57.0	58.4
Unemployment aged 15+ (1,000)	209	231	245	252	270	248	220	205	244	284
Unemployment rate (% labor force 15+)	4.9	5.4	5.6	5.7	6.0	5.5	4.9	4.5	5.4	6.2
Youth unemployment rate (% labor force 15-24)	9.4	9.7	10.3	10.6	11.2	9.8	9.4	8.5	10.5	11.0
NEET rate (% population aged 15-24)	6.8	7.3	7.7	7.5	7.7	6.5	6.8	7.1	8.0	8.5
Long-term unemployment rate (% labor force 15+)	1.2	1.3	1.5	1.7	1.9	1.8	1.4	1.1	1.3	2.0
Share of long-term unemployed (% of total)	24.9	24.6	27.2	29.3	32.3	33.4	28.9	25.1	24.6	31.5
Unemployment rate, low educated 15+ (ISCED 0-2)	9.8	10.3	11.4	11.2	12.7	13.0	11.4	10.7	12.3	13.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.4	4.7	5.0	5.4	5.8	5.1	4.2	4.0	5.0	5.7
Unemployment rate, high educated 15+ (ISCED 5-8)	2.4	3.5	4.0	3.9	3.6	3.2	3.2	3.0	3.4	4.0
Male										
Total population (1,000)	4,111	4,139	4,178	4,236	4,292	4,325	4,348	4,368	4,388	4,411
Working-age population aged 15+ (1,000)	3,174	3,198	3,221	3,242	3,282	3,279	3,285	3,293	3,311	3,335
Employment aged 15+ (1,000)	2,163	2,171	2,164	2,183	2,223	2,244	2,286	2,304	2,268	2,283
Employment rate (% population aged 15+)	68.2	67.9	67.2	67.3	67.7	68.4	69.6	70.0	68.5	68.5
Employment rate (% population aged 15-64)	76.2	76.0	75.3	75.1	75.4	76.2	77.4	78.0	76.5	76.7
Employment rate (% population aged 20-64)	79.3	79.1	78.3	78.4	78.7	79.4	80.7	81.2	79.5	79.9
Employment rate (% population aged 15-24)	57.1	56.4	54.3	54.0	52.9	52.1	53.9	54.8	52.7	54.6
Employment rate (% population aged 25-29)	84.1	82.2	81.3	81.6	82.1	81.5	84.0	85.3	81.6	83.7
Employment rate (% population aged 25-54)	88.3	87.5	86.6	86.6	86.6	87.2	87.8	88.5	86.9	86.9
Employment rate (% population aged 55-64)	50.2	52.8	54.3	54.1	57.6	60.1	63.5	63.1	62.7	62.6
Employment rate for low skilled 15-64 (ISCED 0-2)	53.5	52.0	51.7	51.5	51.7	51.2	52.9	53.4	52.6	53.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	79.2	79.7	77.5	76.7	77.1	78.0	79.4	80.1	77.8	77.8
Employment rate for high skilled 15-64 (ISCED 5-8)	89.4	88.1	85.4	85.8	86.2	87.3	87.4	87.7	87.4	87.4
Self-employed (% of total employment)	13.5	13.7	13.7	13.7	13.6	13.3	13.0	13.4	13.3	12.7
Part-time employment (% of total employment)	8.9	10.0	10.6	10.8	11.5	11.6	10.9	10.4	10.5	11.5
Temporary employment (% of total employees)	9.3	9.4	9.2	9.1	8.9	9.2	8.8	8.6	8.3	8.9
Activity rate (% population aged 15+)	71.7	71.7	71.4	71.7	72.4	72.7	73.3	73.3	72.5	73.0
Activity rate (% population aged 15-64)	80.2	80.4	80.0	80.1	80.7	81.0	81.6	81.8	81.0	81.9
Activity rate (% population aged 15-24)	63.1	62.3	60.7	60.7	60.2	58.4	59.5	60.3	59.5	61.1
Activity rate (% population aged 25-54)	92.3	92.1	91.5	91.6	91.8	92.3	92.1	92.4	91.4	92.3
Activity rate (% population aged 55-64)	52.3	55.1	56.8	57.4	61.2	63.0	66.0	65.6	65.5	66.4
Unemployment aged 15+ (1,000)	113	124	135	142	153	142	121	112	132	152
Unemployment rate (% labor force 15+)	5.0	5.4	5.9	6.1	6.5	5.9	5.0	4.6	5.5	6.3
Youth unemployment rate (% labor force 15-24)	9.5	9.4	10.6	11.1	12.1	10.8	9.4	9.2	11.3	10.7
NEET rate (% population aged 15-24)	6.6	7.2	8.0	7.7	8.0	7.0	6.6	7.0	9.0	8.5
Long-term unemployment rate (% labor force 15+)	1.3	1.4	1.7	1.9	2.2	2.0	1.5	1.2	1.5	2.1
Share of long-term unemployed (% of total)	25.9	25.9	28.2	31.9	34.2	33.7	29.1	26.3	26.6	33.0
Unemployment rate, low educated 15+ (ISCED 0-2)	11.0	11.6	13.0	12.9	14.7	15.0	13.2	12.5	13.9	15.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.6	4.9	5.3	5.8	6.1	5.5	4.3	4.0	5.1	5.6
Unemployment rate, high educated 15+ (ISCED 5-8)	2.0	2.9	3.8	4.0	3.8	3.1	3.1	2.7	3.0	4.0



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	4,319	4,340	4,368	4,406	4,444	4,472	4,493	4,512	4,529	4,545
Working-age population aged 15+ (1,000)	3,266	3,288	3,306	3,313	3,330	3,336	3,345	3,353	3,366	3,384
Employment aged 15+ (1,000)	1,909	1,921	1,934	1,950	1,981	2,001	2,018	2,035	2,014	2,013
Employment rate (% population aged 15+)	58.4	58.4	58.5	58.9	59.5	60.0	60.3	60.7	59.8	59.5
Employment rate (% population aged 15-64)	66.7	66.9	66.9	67.1	67.7	68.2	68.6	69.2	68.3	68.1
Employment rate (% population aged 20-64)	69.6	70.0	70.1	70.2	70.9	71.4	71.7	72.4	71.5	71.3
Employment rate (% population aged 15-24)	50.3	49.7	49.9	48.7	49.0	49.0	48.7	48.4	47.8	45.7
Employment rate (% population aged 25-29)	78.6	78.8	77.2	78.7	79.8	79.2	77.3	78.2	77.1	78.5
Employment rate (% population aged 25-54)	80.4	80.5	80.3	80.3	80.6	81.0	81.3	82.1	80.8	80.7
Employment rate (% population aged 55-64)	33.5	35.2	36.4	38.8	41.1	42.8	44.8	46.0	47.0	48.3
Employment rate for low skilled 15-64 (ISCED 0-2)	44.5	43.9	44.3	44.1	43.8	43.4	44.5	43.9	43.3	42.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	72.2	72.6	69.8	69.9	70.1	70.6	71.1	71.8	70.1	69.3
Employment rate for high skilled 15-64 (ISCED 5-8)	82.5	82.1	81.3	80.7	81.8	82.0	81.6	81.7	81.7	82.0
Self-employed (% of total employment)	8.4	8.6	8.5	8.6	8.4	8.2	8.1	8.3	8.2	7.9
Part-time employment (% of total employment)	45.0	45.5	46.8	47.3	47.6	47.6	47.4	47.5	47.2	49.6
Temporary employment (% of total employees)	9.3	9.0	9.1	9.0	9.1	9.2	9.3	8.8	8.1	8.7
Activity rate (% population aged 15+)	61.4	61.7	61.8	62.2	63.0	63.2	63.3	63.5	63.1	63.4
Activity rate (% population aged 15-64)	70.1	70.7	70.8	70.9	71.7	71.8	72.0	72.3	72.1	72.6
Activity rate (% population aged 15-24)	55.4	55.3	55.4	54.1	54.6	53.7	53.8	52.5	52.8	51.5
Activity rate (% population aged 25-54)	84.0	84.5	84.5	84.4	84.9	85.0	84.8	85.7	85.1	85.6
Activity rate (% population aged 55-64)	34.5	36.4	37.5	40.2	42.7	44.5	46.6	47.4	48.8	50.7
Unemployment aged 15+ (1,000)	96	108	110	110	117	106	99	93	111	131
Unemployment rate (% labor force 15+)	4.8	5.3	5.4	5.3	5.6	5.0	4.7	4.4	5.2	6.1
Youth unemployment rate (% labor force 15-24)	9.2	10.0	9.9	10.0	10.2	8.7	9.4	7.8	9.5	11.3
NEET rate (% population aged 15-24)	7.0	7.4	7.4	7.3	7.4	6.0	7.1	7.3	6.9	8.5
Long-term unemployment rate (% labor force 15+)	1.1	1.2	1.4	1.4	1.6	1.7	1.3	1.0	1.2	1.8
Share of long-term unemployed (% of total)	23.7	23.2	25.9	25.9	29.7	33.1	28.8	23.7	22.1	29.8
Unemployment rate, low educated 15+ (ISCED 0-2)	8.8	9.3	10.0	9.6	10.9	11.1	9.6	8.8	10.6	12.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.2	4.6	4.7	5.0	5.4	4.5	4.1	3.9	4.9	6.0
Unemployment rate, high educated 15+ (ISCED 5-8)	2.8	4.2	4.2	3.7	3.4	3.2	3.4	3.4	3.8	4.1

Austria: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	2,839	2,899	2,950	3,010	3,081	3,131	3,219	3,315	3,369	3,484
nominal annual growth in %	2.7	2.1	1.8	2.1	2.3	1.6	2.8	3.0	1.6	3.4
real annual growth in % (HICP deflated)	0.3	0.1	0.1	1.1	1.4	-0.4	0.8	1.5	0.2	0.6
Average monthly gross wages, EUR	2,839	2,899	2,950	3,010	3,081	3,131	3,219	3,315	3,369	3,484
Average monthly gross wages, EUR (PPP)	2,576	2,624	2,646	2,709	2,754	2,775	2,852	2,919	2,957	3,054
Average monthly net wages, NCU	.	.	.	.	.	.	.	.	.	.
nominal annual growth in %	.	.	.	.	.	.	.	.	.	.
real annual growth in % (CPI deflated)	.	.	.	.	.	.	.	.	.	.
Average monthly net wages, EUR	.	.	.	.	.	.	.	.	.	.
Average monthly net wages, EUR (PPP)	.	.	.	.	.	.	.	.	.	.
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	.	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (ER)	.	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	.	.	.	.	.	.	.	.
Unit labor costs (ULC)										
ULC, NCU in %	2.8	2.6	1.2	1.9	2.1	0.4	1.8	2.2	7.2	0.2
ULC, EUR in %	2.8	2.6	1.2	1.9	2.1	0.4	1.8	2.2	7.2	0.2

Notes: Data based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 (based on registration) is applied throughout. From 2021, new methodology in line with the Integrated European Social Statistics Regulation (IESS); growth rates are not fully comparable before and after 2021. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.

Average monthly gross wages refer to National Accounts (gross wages per employee, domestic concept, divided by 12 months).

In Austria 'minimum wages' are set by sectoral collective agreements (no national minimum wage).

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Bulgaria: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	7,306	7,265	7,224	7,178	7,128	7,076	7,025	6,976	6,934	6,878
Working-age population aged 15+ (1,000)	5,698	5,649	5,609	5,563	5,510	5,455	5,398	5,348	5,298	5,253
Employment aged 15+ (1,000)	2,931	2,932	2,978	3,029	3,014	3,146	3,148	3,229	3,117	3,073
Employment rate (% population aged 15+)	51.4	51.9	53.1	54.4	54.7	57.7	58.3	60.4	58.8	58.5
Employment rate (% population aged 15-64)	58.8	59.5	61.0	62.9	63.4	66.9	67.7	70.1	68.5	68.1
Employment rate (% population aged 20-64)	63.0	63.5	65.1	67.1	67.7	71.3	72.4	75.0	73.4	73.2
Employment rate (% population aged 15-24)	21.9	21.2	20.7	20.3	19.8	22.9	20.7	21.8	18.8	16.8
Employment rate (% population aged 25-29)	63.7	61.4	64.2	66.6	64.7	69.0	69.9	72.9	70.4	69.0
Employment rate (% population aged 25-54)	73.1	73.3	74.5	76.1	76.2	79.4	80.1	82.3	80.5	80.4
Employment rate (% population aged 55-64)	45.7	47.4	50.0	53.0	54.5	58.2	60.7	64.4	64.2	64.8
Employment rate for low skilled 15-64 (ISCED 0-2)	27.4	27.8	29.7	29.6	29.6	33.4	34.8	38.4	35.2	34.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	63.4	63.6	65.2	67.2	67.8	71.7	72.4	74.6	72.7	71.5
Employment rate for high skilled 15-64 (ISCED 5-8)	81.1	80.7	81.7	84.0	84.2	85.5	86.1	88.5	87.6	88.7
Self-employed (% of total employment)	10.7	11.4	11.8	11.4	11.1	11.1	10.9	10.2	10.4	10.4
Part-time employment (% of total employment)	2.4	2.6	2.6	2.4	2.2	2.4	2.0	2.1	2.0	1.7
Temporary employment (% of total employees)	4.5	5.6	5.3	4.4	4.2	4.5	4.1	4.4	3.6	3.5
Activity rate (% population aged 15+)	58.6	59.6	59.9	59.9	59.2	61.5	61.5	63.0	62.0	61.8
Activity rate (% population aged 15-64)	67.1	68.4	69.0	69.3	68.7	71.3	71.5	73.2	72.2	72.0
Activity rate (% population aged 15-24)	30.4	29.6	27.2	26.0	23.9	26.3	23.7	23.9	21.9	20.0
Activity rate (% population aged 25-54)	82.3	83.1	83.3	83.2	82.0	84.3	84.3	85.8	84.7	84.7
Activity rate (% population aged 55-64)	51.1	54.1	56.6	58.0	58.8	61.8	63.7	66.9	67.1	67.9
Unemployment aged 15+ (1,000)	410	436	385	305	247	207	173	143	169	171
Unemployment rate (% labor force 15+)	12.3	13.0	11.4	9.2	7.6	6.2	5.2	4.2	5.1	5.3
Youth unemployment rate (% labor force 15-24)	28.1	28.4	23.8	21.7	17.2	12.9	12.7	8.9	14.2	15.9
NEET rate (% population aged 15-24)	21.5	21.6	20.2	19.3	18.2	15.3	15.0	13.7	14.4	14.0
Long-term unemployment rate (% labor force 15+)	6.8	7.4	6.9	5.6	4.5	3.4	3.1	2.4	2.3	2.6
Share of long-term unemployed (% of total)	55.3	57.4	60.5	61.3	59.2	55.1	58.8	57.1	45.4	49.4
Unemployment rate, low educated 15+ (ISCED 0-2)	28.0	29.9	28.3	25.1	22.2	18.1	15.5	13.1	13.9	16.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	11.7	12.3	10.7	8.3	6.7	5.3	4.5	3.4	4.7	4.9
Unemployment rate, high educated 15+ (ISCED 5-8)	5.8	6.4	5.1	4.0	3.4	3.0	2.3	1.9	2.5	2.0
Male										
Total population (1,000)	3,556	3,535	3,513	3,490	3,464	3,436	3,409	3,383	3,360	3,331
Working-age population aged 15+ (1,000)	2,808	2,785	2,766	2,743	2,717	2,689	2,661	2,636	2,611	2,589
Employment aged 15+ (1,000)	1,540	1,545	1,575	1,606	1,606	1,680	1,683	1,730	1,673	1,647
Employment rate (% population aged 15+)	54.8	55.5	56.9	58.5	59.1	62.5	63.2	65.6	64.1	63.6
Employment rate (% population aged 15-64)	61.3	62.1	63.9	65.9	66.7	70.6	71.5	74.1	72.5	72.0
Employment rate (% population aged 20-64)	65.8	66.4	68.1	70.4	71.3	75.3	76.5	79.3	77.8	77.3
Employment rate (% population aged 15-24)	24.9	24.0	24.0	24.0	23.1	26.5	24.2	25.0	21.7	20.3
Employment rate (% population aged 25-29)	68.6	67.0	69.4	71.5	71.7	77.7	77.6	80.9	78.4	75.0
Employment rate (% population aged 25-54)	74.3	75.0	76.4	78.5	79.2	82.8	83.5	86.0	84.4	83.9
Employment rate (% population aged 55-64)	50.8	51.9	54.5	56.8	58.3	62.5	65.4	69.2	69.4	69.9
Employment rate for low skilled 15-64 (ISCED 0-2)	31.2	31.7	34.3	34.6	35.4	40.1	41.7	46.2	42.7	41.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	66.9	67.2	69.1	71.5	72.3	76.2	77.0	78.9	77.7	76.4
Employment rate for high skilled 15-64 (ISCED 5-8)	82.9	83.1	84.5	86.7	86.7	87.9	89.1	91.7	89.9	90.7
Self-employed (% of total employment)	13.5	14.4	14.9	14.4	13.7	13.8	13.7	12.8	13.1	12.9
Part-time employment (% of total employment)	2.1	2.1	2.3	2.0	1.9	2.1	1.8	1.8	1.7	1.4
Temporary employment (% of total employees)	4.9	6.2	5.7	4.8	4.5	5.0	4.4	4.7	4.0	3.9
Activity rate (% population aged 15+)	63.4	64.4	64.9	64.9	64.3	66.7	67.1	68.7	67.8	67.3
Activity rate (% population aged 15-64)	71.0	72.2	72.9	73.2	72.7	75.4	75.9	77.6	76.8	76.2
Activity rate (% population aged 15-24)	35.3	34.3	31.5	30.5	28.0	30.5	27.9	27.6	25.3	24.2
Activity rate (% population aged 25-54)	84.8	85.7	86.2	86.4	85.7	88.0	88.3	90.0	89.1	88.4
Activity rate (% population aged 55-64)	57.3	59.9	62.5	62.7	63.4	66.8	69.1	72.0	72.6	73.5
Unemployment aged 15+ (1,000)	241	250	222	174	142	114	102	82	96	96
Unemployment rate (% labor force 15+)	13.5	13.9	12.3	9.8	8.1	6.4	5.7	4.5	5.4	5.5
Youth unemployment rate (% labor force 15-24)	29.5	30.2	23.8	21.2	17.4	13.3	13.2	9.4	14.6	16.1
NEET rate (% population aged 15-24)	21.6	22.1	19.2	18.6	17.1	13.6	13.3	12.7	13.7	12.7
Long-term unemployment rate (% labor force 15+)	7.7	8.1	7.7	6.1	4.8	3.6	3.4	2.6	2.6	2.7
Share of long-term unemployed (% of total)	56.9	58.4	62.6	62.4	59.2	56.7	60.4	57.9	47.7	50.1
Unemployment rate, low educated 15+ (ISCED 0-2)	28.2	30.3	28.5	24.3	21.4	16.4	15.0	12.2	12.6	14.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	12.6	12.8	10.8	8.5	6.8	5.3	4.8	3.7	4.9	4.9
Unemployment rate, high educated 15+ (ISCED 5-8)	6.3	6.5	5.5	4.0	3.5	3.3	2.5	1.8	2.6	2.0

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	3,750	3,730	3,710	3,688	3,664	3,640	3,616	3,593	3,574	3,547
Working-age population aged 15+ (1,000)	2,890	2,865	2,843	2,820	2,794	2,766	2,738	2,712	2,687	2,664
Employment aged 15+ (1,000)	1,392	1,388	1,403	1,423	1,408	1,466	1,465	1,499	1,443	1,426
Employment rate (% population aged 15+)	48.2	48.4	49.4	50.5	50.4	53.0	53.5	55.3	53.7	53.5
Employment rate (% population aged 15-64)	56.3	56.8	58.2	59.8	60.0	63.1	63.9	66.0	64.3	64.2
Employment rate (% population aged 20-64)	60.2	60.7	62.0	63.8	64.0	67.3	68.3	70.7	68.9	68.9
Employment rate (% population aged 15-24)	18.7	18.4	17.3	16.5	16.3	19.1	17.0	18.4	15.7	13.1
Employment rate (% population aged 25-29)	58.5	55.4	58.8	61.4	57.2	59.9	61.7	64.4	62.1	62.6
Employment rate (% population aged 25-54)	71.8	71.5	72.5	73.6	73.0	75.8	76.5	78.3	76.4	76.7
Employment rate (% population aged 55-64)	41.3	43.4	46.0	49.5	51.0	54.3	56.4	59.9	59.4	60.1
Employment rate for low skilled 15-64 (ISCED 0-2)	23.6	23.7	24.8	24.2	23.4	26.2	27.3	30.1	27.2	26.5
Employment rate for medium skilled 15-64 (ISCED 3-4)	59.2	59.2	60.3	61.9	62.3	66.1	66.9	69.3	66.7	65.5
Employment rate for high skilled 15-64 (ISCED 5-8)	80.0	79.1	79.9	82.3	82.6	83.9	84.1	86.4	86.0	87.3
Self-employed (% of total employment)	7.6	8.1	8.3	7.9	8.1	7.9	7.6	7.2	7.3	7.5
Part-time employment (% of total employment)	2.7	3.2	3.0	2.8	2.5	2.7	2.3	2.4	2.4	2.1
Temporary employment (% of total employees)	4.0	5.1	4.9	4.1	3.7	4.0	3.8	4.0	3.2	3.0
Activity rate (% population aged 15+)	54.0	54.9	55.1	55.1	54.2	56.4	56.1	57.5	56.4	56.4
Activity rate (% population aged 15-64)	63.2	64.5	65.0	65.4	64.6	67.1	67.0	68.7	67.6	67.7
Activity rate (% population aged 15-24)	25.3	24.7	22.6	21.2	19.6	21.8	19.3	20.0	18.2	15.5
Activity rate (% population aged 25-54)	79.8	80.3	80.2	79.8	78.2	80.5	80.2	81.4	80.1	80.7
Activity rate (% population aged 55-64)	45.5	49.0	51.4	53.8	54.6	57.3	58.7	62.2	62.0	62.7
Unemployment aged 15+ (1,000)	169	187	163	131	106	93	72	61	72	76
Unemployment rate (% labor force 15+)	10.8	11.8	10.4	8.4	7.0	6.0	4.7	3.9	4.8	5.0
Youth unemployment rate (% labor force 15-24)	26.0	25.7	23.7	22.2	17.0	12.5	11.8	(8.3)	13.8	15.4
NEET rate (% population aged 15-24)	21.5	21.1	21.4	20.0	19.4	17.2	16.8	14.8	15.2	15.4
Long-term unemployment rate (% labor force 15+)	5.8	6.6	6.0	5.0	4.1	3.2	2.6	2.2	2.0	2.4
Share of long-term unemployed (% of total)	53.1	56.0	57.7	59.8	59.0	53.1	56.5	56.1	42.2	48.6
Unemployment rate, low educated 15+ (ISCED 0-2)	27.7	29.3	28.1	26.3	23.5	20.7	16.4	14.5	16.1	18.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.4	11.7	10.4	8.0	6.6	5.3	4.1	3.0	4.4	4.9
Unemployment rate, high educated 15+ (ISCED 5-8)	5.5	6.4	4.8	3.9	3.3	2.9	2.2	1.9	2.4	1.9

Bulgaria: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	731	775	822	878	948	1,037	1,146	1,267	1,391	1,561
nominal annual growth in %	6.6	6.0	6.0	6.8	8.0	9.4	10.5	10.6	9.7	12.3
real annual growth in % (HICP deflated)	3.5	5.1	7.5	7.0	8.9	7.2	7.5	7.2	7.9	8.0
Average monthly gross wages, EUR	374	396	420	449	485	530	586	648	711	798
Average monthly gross wages, EUR (PPP)	779	823	891	930	988	1,053	1,143	1,219	1,325	1,440
Average monthly net wages, NCU	.	.	.	.	.	.	.	.	.	.
nominal annual growth in %	.	.	.	.	.	.	.	.	.	.
real annual growth in % (CPI deflated)	.	.	.	.	.	.	.	.	.	.
Average monthly net wages, EUR	.	.	.	.	.	.	.	.	.	.
Average monthly net wages, EUR (PPP)	.	.	.	.	.	.	.	.	.	.
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	270	310	340	360	420	460	510	560	610	650
Monthly gross minimum wages, EUR (ER)	138	159	174	184	215	235	261	286	312	332
Monthly gross minimum wages, EUR (PPP)	266	312	352	370	432	459	503	534	568	598
Unit labor costs (ULC)										
ULC, NCU in %	4.7	6.7	6.6	5.1	4.3	11.1	7.7	9.0	10.3	3.7
ULC, EUR in %	4.7	6.7	6.6	5.1	4.3	11.1	7.7	9.0	10.3	3.7

Notes: Data based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 is applied throughout. From 2021, new methodology in line with the Integrated European Social Statistics Regulation (IESS); growth rates are not fully comparable before and after 2021. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Croatia: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	4,269	4,254	4,236	4,208	4,172	4,130	4,091	4,067	4,047	3,958
Working-age population aged 15+ (1,000)	3,271	3,258	3,243	3,210	3,185	3,162	3,142	3,125	3,113	3,104
Employment aged 15+ (1,000)	1,558	1,518	1,562	1,582	1,587	1,623	1,651	1,675	1,652	1,675
Employment rate (% population aged 15+)	47.6	46.6	48.2	49.3	49.8	51.3	52.5	53.6	53.1	54.0
Employment rate (% population aged 15-64)	53.5	52.5	54.6	56.0	56.9	58.9	60.6	62.1	62.0	63.4
Employment rate (% population aged 20-64)	58.1	57.2	59.2	60.6	61.4	63.6	65.2	66.7	66.9	68.2
Employment rate (% population aged 15-24)	17.4	14.9	18.3	19.1	25.6	25.9	25.6	27.7	25.6	25.8
Employment rate (% population aged 25-29)	61.8	61.5	64.5	66.0	66.2	68.7	70.9	73.3	71.3	71.9
Employment rate (% population aged 25-54)	69.2	68.3	71.2	72.3	72.4	74.9	77.0	78.3	78.3	79.4
Employment rate (% population aged 55-64)	37.5	37.8	36.2	39.2	38.1	40.4	42.8	44.0	45.5	48.6
Employment rate for low skilled 15-64 (ISCED 0-2)	29.5	27.5	26.7	28.0	27.4	24.4	25.8	26.7	25.3	27.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	56.7	55.5	57.0	58.0	59.5	62.6	63.9	65.5	64.9	66.1
Employment rate for high skilled 15-64 (ISCED 5-8)	76.5	75.7	78.4	78.7	79.7	81.5	81.5	81.8	83.4	84.1
Self-employed (% of total employment)	17.1	16.2	14.0	13.6	12.4	11.0	10.7	11.0	11.3	11.5
Part-time employment (% of total employment)	6.7	6.2	6.0	6.8	6.4	5.5	5.7	5.4	5.2	5.4
Temporary employment (% of total employees)	13.3	14.5	16.9	20.3	22.2	20.7	19.9	18.2	15.4	13.6
Activity rate (% population aged 15+)	56.7	56.3	58.2	58.8	57.4	57.8	57.4	57.4	57.4	58.4
Activity rate (% population aged 15-64)	63.9	63.7	66.1	66.9	65.6	66.4	66.3	66.5	67.1	68.7
Activity rate (% population aged 15-24)	30.1	29.9	33.6	33.2	37.2	35.7	33.5	33.2	32.5	33.0
Activity rate (% population aged 25-54)	80.9	80.8	84.1	84.5	82.0	83.3	83.4	83.6	83.9	85.3
Activity rate (% population aged 55-64)	41.8	41.9	41.0	44.3	42.2	43.6	44.8	45.5	47.8	50.8
Unemployment aged 15+ (1,000)	297	318	327	306	240	205	152	119	135	138
Unemployment rate (% labor force 15+)	16.0	17.3	17.3	16.2	13.1	11.2	8.5	6.6	7.5	7.6
Youth unemployment rate (% labor force 15-24)	42.1	50.0	45.5	42.3	31.3	27.4	23.7	16.6	21.1	21.9
NEET rate (% population aged 15-24)	16.6	19.6	19.3	18.1	16.9	15.4	13.6	11.8	12.2	12.7
Long-term unemployment rate (% labor force 15+)	10.2	11.0	10.1	10.2	6.7	4.6	3.4	2.5	2.2	2.8
Share of long-term unemployed (% of total)	63.7	63.6	58.4	63.1	50.7	41.0	40.2	37.2	28.9	37.0
Unemployment rate, low educated 15+ (ISCED 0-2)	18.6	21.5	25.7	21.5	17.4	19.8	11.6	9.3	10.2	10.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	17.3	18.7	18.7	18.1	14.6	11.7	9.2	6.9	8.2	8.5
Unemployment rate, high educated 15+ (ISCED 5-8)	10.6	11.3	9.6	9.2	7.8	7.1	6.0	5.3	5.4	4.9
Male										
Total population (1,000)	2,059	2,053	2,044	2,031	2,014	1,994	1,977	1,972	1,968	1,906
Working-age population aged 15+ (1,000)	1,607	1,602	1,596	1,579	1,567	1,556	1,547	1,540	1,535	1,531
Employment aged 15+ (1,000)	852	818	847	854	858	880	891	905	897	905
Employment rate (% population aged 15+)	53.0	51.1	53.1	54.1	54.8	56.5	57.6	58.8	58.5	59.1
Employment rate (% population aged 15-64)	58.5	56.5	59.1	60.3	61.4	63.8	65.4	67.0	67.1	68.2
Employment rate (% population aged 20-64)	63.7	61.6	64.2	65.4	66.2	68.9	70.3	72.0	72.5	73.4
Employment rate (% population aged 15-24)	20.0	17.4	21.2	22.4	28.9	29.8	30.5	33.2	31.9	31.1
Employment rate (% population aged 25-29)	65.8	64.2	69.0	71.3	70.3	73.2	77.8	78.9	78.0	78.2
Employment rate (% population aged 25-54)	73.0	71.6	74.5	75.4	76.3	78.7	80.4	81.7	82.0	83.4
Employment rate (% population aged 55-64)	48.0	45.0	45.8	48.2	45.1	49.0	51.0	52.6	53.4	55.1
Employment rate for low skilled 15-64 (ISCED 0-2)	33.7	32.3	30.3	32.2	33.0	29.8	30.5	31.3	31.1	34.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	62.1	59.5	62.5	63.1	64.2	68.1	69.8	71.3	70.7	72.1
Employment rate for high skilled 15-64 (ISCED 5-8)	77.3	76.5	78.4	79.0	81.0	82.9	82.2	83.3	85.7	84.1
Self-employed (% of total employment)	19.7	19.2	17.4	17.3	15.7	13.3	12.8	13.8	14.7	15.2
Part-time employment (% of total employment)	5.5	5.3	4.8	5.6	5.2	4.4	4.3	3.8	4.0	4.7
Temporary employment (% of total employees)	13.2	14.8	16.7	20.5	22.0	20.7	19.4	17.0	14.4	11.8
Activity rate (% population aged 15+)	63.1	62.1	63.5	64.0	62.6	63.2	62.4	62.7	63.2	63.8
Activity rate (% population aged 15-64)	69.8	68.9	70.9	71.6	70.3	71.5	70.9	71.5	72.6	73.6
Activity rate (% population aged 15-24)	34.6	34.7	38.5	38.2	41.9	40.9	37.9	38.8	39.2	38.4
Activity rate (% population aged 25-54)	85.2	84.7	86.6	86.9	85.2	86.7	86.4	86.9	88.1	89.3
Activity rate (% population aged 55-64)	53.9	51.0	52.1	54.9	50.7	52.8	53.4	54.2	55.7	57.4
Unemployment aged 15+ (1,000)	162	176	167	157	123	105	74	60	73	71
Unemployment rate (% labor force 15+)	16.0	17.7	16.5	15.6	12.5	10.6	7.7	6.2	7.5	7.3
Youth unemployment rate (% labor force 15-24)	42.1	49.9	44.9	41.4	31.3	27.1	19.6	14.6	18.7	18.9
NEET rate (% population aged 15-24)	17.9	20.6	21.9	20.5	19.0	15.4	13.2	11.4	12.2	12.1
Long-term unemployment rate (% labor force 15+)	10.1	11.3	9.6	10.1	6.8	4.7	3.1	2.4	2.1	2.9
Share of long-term unemployed (% of total)	63.6	63.8	58.3	64.8	54.0	43.8	40.3	39.5	28.6	40.1
Unemployment rate, low educated 15+ (ISCED 0-2)	19.7	22.8	24.9	21.4	17.0	19.5	(11.8)	(10.8)	(10.0)	(9.5)
Unemployment rate, medium educated 15+ (ISCED 3-4)	16.9	18.9	17.3	16.6	13.7	10.5	7.9	6.2	8.1	7.8
Unemployment rate, high educated 15+ (ISCED 5-8)	9.9	10.5	8.9	9.2	6.8	7.3	5.4	(4.4)	4.9	4.7

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	2,210	2,201	2,192	2,177	2,158	2,136	2,114	2,095	2,079	2,052
Working-age population aged 15+ (1,000)	1,664	1,657	1,647	1,631	1,618	1,605	1,594	1,585	1,578	1,573
Employment aged 15+ (1,000)	706	700	715	728	729	743	759	770	755	770
Employment rate (% population aged 15+)	42.4	42.3	43.4	44.6	45.0	46.3	47.6	48.5	47.8	48.9
Employment rate (% population aged 15-64)	48.5	48.5	50.0	51.6	52.4	54.0	55.9	57.1	56.9	58.6
Employment rate (% population aged 20-64)	52.6	52.8	54.2	55.9	56.6	58.3	60.1	61.5	61.3	62.9
Employment rate (% population aged 15-24)	14.7	12.4	15.3	15.7	22.2	21.8	20.3	21.9	19.0	20.0
Employment rate (% population aged 25-29)	57.7	58.7	59.8	60.5	62.0	64.2	63.8	67.5	64.3	65.5
Employment rate (% population aged 25-54)	65.2	64.9	67.9	69.3	68.5	71.1	73.5	74.9	74.5	75.4
Employment rate (% population aged 55-64)	27.7	31.0	27.3	30.7	31.6	32.3	35.2	35.9	38.2	42.7
Employment rate for low skilled 15-64 (ISCED 0-2)	26.3	23.7	23.8	24.8	22.9	19.9	21.7	22.9	20.4	21.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	50.5	50.9	50.6	52.0	54.0	56.2	57.0	58.4	57.9	59.1
Employment rate for high skilled 15-64 (ISCED 5-8)	75.9	75.1	78.3	78.4	78.7	80.4	81.0	80.8	81.7	84.1
Self-employed (% of total employment)	14.0	12.8	9.9	9.3	8.4	8.3	8.2	7.7	7.3	7.0
Part-time employment (% of total employment)	8.2	7.3	7.5	8.2	7.9	6.7	7.3	7.4	6.7	6.2
Temporary employment (% of total employees)	13.4	14.1	17.2	20.1	22.5	20.8	20.6	19.5	16.5	15.5
Activity rate (% population aged 15+)	50.5	50.8	53.1	53.7	52.3	52.6	52.5	52.3	51.8	53.2
Activity rate (% population aged 15-64)	58.0	58.5	61.3	62.3	60.9	61.4	61.7	61.5	61.6	63.7
Activity rate (% population aged 15-24)	25.3	24.8	28.5	28.0	32.3	30.2	28.8	27.3	25.3	27.2
Activity rate (% population aged 25-54)	76.6	76.8	81.5	82.1	78.8	79.9	80.3	80.2	79.8	81.2
Activity rate (% population aged 55-64)	30.6	33.4	30.6	34.4	34.2	35.1	36.7	37.5	40.4	44.6
Unemployment aged 15+ (1,000)	135	142	160	149	117	101	78	59	62	67
Unemployment rate (% labor force 15+)	16.1	16.8	18.3	16.9	13.8	11.9	9.4	7.2	7.6	8.0
Youth unemployment rate (% labor force 15-24)	41.9	50.1	46.4	43.7	31.3	27.8	29.4	19.9	25.0	26.4
NEET rate (% population aged 15-24)	15.2	18.6	16.7	15.6	14.6	15.3	14.0	12.1	12.3	13.3
Long-term unemployment rate (% labor force 15+)	10.2	10.6	10.7	10.4	6.5	4.5	3.8	2.5	2.2	2.7
Share of long-term unemployed (% of total)	63.7	63.2	58.6	61.3	47.2	38.1	40.1	34.9	29.2	33.7
Unemployment rate, low educated 15+ (ISCED 0-2)	17.4	19.9	26.5	21.7	17.9	20.3	(11.4)	(7.5)	(10.4)	(12.1)
Unemployment rate, medium educated 15+ (ISCED 3-4)	17.9	18.5	20.6	20.0	15.9	13.4	10.8	7.9	8.5	9.4
Unemployment rate, high educated 15+ (ISCED 5-8)	11.3	11.9	10.2	9.3	8.6	7.0	6.5	5.9	5.7	5.0

Croatia: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU	1,045	1,054	1,056	1,069	1,029	1,069	1,121	1,163	1,223	1,274
nominal annual growth in %	1.0	0.8	0.2	1.3	1.9	3.9	4.9	3.8	2.5	4.2
real annual growth in % (HICP deflated)	-2.3	-1.4	0.4	1.8	3.0	2.8	3.3	3.0	2.4	1.6
Average monthly gross wages, EUR	1,047	1,048	1,042	1,058	1,029	1,079	1,139	1,182	1,223	1,275
Average monthly gross wages, EUR (PPP)	1,587	1,602	1,608	1,649	1,592	1,664	1,730	1,799	1,909	1,954
Average monthly net wages, NCU	727	732	734	758	755	794	828	857	898	946
nominal annual growth in %	0.7	0.7	0.3	3.2	1.6	5.3	4.3	3.4	2.7	5.4
real annual growth in % (CPI deflated)	-2.6	-1.5	0.5	3.7	2.4	4.2	2.8	2.6	2.6	2.7
Average monthly net wages, EUR	728	728	725	750	755	802	841	870	897	947
Average monthly net wages, EUR (PPP)	1,104	1,113	1,119	1,169	1,168	1,236	1,278	1,325	1,401	1,452
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU	373	396	401	402	414	435	457	498	539	564
Monthly gross minimum wages, EUR (ER)	373	395	396	396	408	434	463	506	546	563
Monthly gross minimum wages, EUR (PPP)	526	562	578	587	604	634	657	710	763	790
Unit labor costs (ULC)										
ULC, NCU in %	-0.3	-1.4	3.5	0.1	-1.3	2.7	3.8	1.8	10.6	-6.7
ULC, EUR in %	-1.4	-2.1	2.7	0.3	-0.2	3.7	4.4	1.8	8.8	-6.6

Notes: Data based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 is applied throughout. From 2021, new methodology in line with the Integrated European Social Statistics Regulation (IESS); growth rates are not fully comparable before and after 2021. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.

From 2016 wage data based on tax administration data, survey data before. From 2020 employees expressed in full-time equivalents (FTE), before those employees' receiving compensation, except those working less than 80 hours per month. In both cases growth rates comparable. Euro-introduction on 1 Jan 2023: Time series in HRK (NCU) have been divided by the conversion factor 7.5345 (HRK per EUR) to EUR-HRK.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Hungary: Labor market indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total										
Total population (1,000)	9,920	9,893	9,866	9,843	9,814	9,788	9,776	9,771	9,750	9,710
Working-age population aged 15+ (1,000)	7,636	7,610	7,573	7,538	7,508	7,460	7,432	7,419	7,409	7,359
Employment aged 15+ (1,000)	3,827	3,893	4,101	4,211	4,352	4,421	4,470	4,512	4,461	4,635
Employment rate (% population aged 15+)	50.1	51.2	54.1	55.9	58.0	59.3	60.1	60.8	60.2	63.0
Employment rate (% population aged 15-64)	56.7	58.1	61.8	63.9	66.5	68.2	69.2	70.1	69.7	73.1
Employment rate (% population aged 20-64)	61.6	63.0	66.7	68.9	71.5	73.3	74.4	75.3	75.0	78.8
Employment rate (% population aged 15-24)	18.4	20.1	23.5	25.7	28.1	29.0	29.0	28.5	27.2	27.5
Employment rate (% population aged 25-29)	67.4	69.0	73.0	73.6	75.5	77.5	77.6	77.8	76.3	81.3
Employment rate (% population aged 25-54)	74.6	75.7	79.2	80.6	82.2	83.7	84.1	84.4	82.9	87.0
Employment rate (% population aged 55-64)	36.1	37.9	41.8	45.3	49.8	51.7	54.4	56.7	59.6	62.8
Employment rate for low skilled 15-64 (ISCED 0-2)	26.0	26.9	31.5	33.9	36.6	38.5	39.4	39.4	37.7	39.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	61.9	63.3	66.7	68.8	71.5	73.1	73.7	74.8	74.3	77.1
Employment rate for high skilled 15-64 (ISCED 5-8)	78.5	78.8	80.8	82.1	84.4	84.3	85.1	85.2	85.2	89.9
Self-employed (% of total employment)	11.3	10.9	10.6	10.6	10.4	10.1	10.2	10.6	11.8	12.2
Part-time employment (% of total employment)	7.1	6.8	6.4	6.0	5.2	4.8	4.8	5.2	5.7	5.4
Temporary employment (% of total employees)	9.5	10.9	10.8	11.4	9.7	8.8	7.3	6.6	5.9	5.9
Activity rate (% population aged 15+)	56.3	57.0	58.7	59.9	61.1	61.8	62.5	63.0	62.9	65.6
Activity rate (% population aged 15-64)	63.7	64.7	67.0	68.6	70.1	71.2	71.9	72.6	72.8	76.2
Activity rate (% population aged 15-24)	25.7	27.4	29.5	31.0	32.3	32.4	32.3	32.2	31.2	31.8
Activity rate (% population aged 25-54)	82.9	83.3	85.0	85.8	86.1	86.9	87.0	87.0	86.2	90.1
Activity rate (% population aged 55-64)	39.5	41.2	44.6	48.1	52.1	53.6	55.8	58.0	61.4	64.7
Unemployment aged 15+ (1,000)	473	441	343	308	235	192	172	160	198	196
Unemployment rate (% labor force 15+)	11.0	10.2	7.7	6.8	5.1	4.2	3.7	3.4	4.3	4.1
Youth unemployment rate (% labor force 15-24)	28.2	26.6	20.4	17.3	12.9	10.7	10.2	11.4	12.7	13.5
NEET rate (% population aged 15-24)	14.8	15.5	13.6	11.6	11.0	11.0	10.7	11.0	11.7	10.6
Long-term unemployment rate (% labor force 15+)	5.0	4.9	3.7	3.1	2.4	1.7	1.4	1.1	1.1	1.3
Share of long-term unemployed (% of total)	45.3	48.6	47.5	45.6	46.5	40.4	38.5	31.9	26.2	31.2
Unemployment rate, low educated 15+ (ISCED 0-2)	24.8	23.7	18.5	17.4	13.2	11.1	10.3	9.7	10.9	11.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.7	10.0	7.4	6.4	4.8	3.8	3.3	3.0	4.1	4.0
Unemployment rate, high educated 15+ (ISCED 5-8)	4.5	3.9	3.1	2.4	1.8	1.6	1.5	1.5	1.8	1.7
Male										
Total population (1,000)	4,720	4,710	4,700	4,692	4,682	4,673	4,674	4,678	4,672	4,654
Working-age population aged 15+ (1,000)	3,676	3,668	3,654	3,641	3,632	3,613	3,605	3,606	3,608	3,584
Employment aged 15+ (1,000)	2,049	2,104	2,221	2,284	2,363	2,417	2,446	2,480	2,461	2,472
Employment rate (% population aged 15+)	55.7	57.4	60.8	62.7	65.0	66.9	67.9	68.8	68.2	69.0
Employment rate (% population aged 15-64)	61.6	63.7	67.8	70.3	73.0	75.2	76.3	77.3	77.0	77.9
Employment rate (% population aged 20-64)	67.3	69.3	73.5	75.8	78.6	81.0	82.1	83.1	83.1	84.1
Employment rate (% population aged 15-24)	19.8	23.0	26.4	28.1	31.5	32.9	33.4	32.8	31.1	30.9
Employment rate (% population aged 25-29)	74.7	76.4	82.3	83.2	84.4	86.8	86.9	85.8	84.8	85.2
Employment rate (% population aged 25-54)	80.2	81.4	85.3	86.8	88.2	90.1	90.4	90.8	89.8	90.4
Employment rate (% population aged 55-64)	41.4	44.8	49.6	54.4	59.7	62.5	65.5	69.0	71.6	74.1
Employment rate for low skilled 15-64 (ISCED 0-2)	30.0	30.8	36.3	39.9	42.5	44.2	45.8	46.0	43.9	45.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	66.8	69.1	73.1	75.2	78.2	80.2	81.0	82.3	81.9	82.6
Employment rate for high skilled 15-64 (ISCED 5-8)	84.4	85.3	87.1	88.6	90.5	91.6	91.9	93.1	93.5	93.8
Self-employed (% of total employment)	14.1	13.6	13.4	13.0	12.7	11.9	12.1	12.7	14.0	14.5
Part-time employment (% of total employment)	4.7	4.5	4.5	4.4	3.5	3.1	3.1	3.3	3.5	3.5
Temporary employment (% of total employees)	10.5	11.4	11.2	11.6	9.3	8.2	6.7	6.2	5.4	5.7
Activity rate (% population aged 15+)	62.9	63.9	65.7	67.2	68.6	69.6	70.3	71.1	71.1	71.8
Activity rate (% population aged 15-64)	69.6	71.0	73.4	75.3	76.9	78.2	79.1	80.0	80.3	81.1
Activity rate (% population aged 15-24)	27.9	31.0	33.0	34.4	36.1	36.5	37.1	37.3	35.3	35.1
Activity rate (% population aged 25-54)	89.4	89.5	91.2	92.0	92.4	93.3	93.3	93.4	93.1	93.6
Activity rate (% population aged 55-64)	45.4	49.0	53.2	57.8	62.4	64.5	67.1	70.6	74.0	76.6
Unemployment aged 15+ (1,000)	262	239	182	162	128	96	88	86	104	100
Unemployment rate (% labor force 15+)	11.3	10.2	7.6	6.6	5.1	3.8	3.5	3.4	4.1	3.9
Youth unemployment rate (% labor force 15-24)	29.1	25.6	20.0	18.3	12.9	9.7	9.8	12.0	11.9	12.0
NEET rate (% population aged 15-24)	13.6	13.6	12.0	10.4	8.9	7.9	7.6	8.9	9.5	8.2
Long-term unemployment rate (% labor force 15+)	5.2	5.0	3.6	3.1	2.3	1.5	1.4	1.1	1.1	1.2
Share of long-term unemployed (% of total)	45.5	48.6	48.0	47.1	45.8	40.6	40.6	32.1	27.5	31.6
Unemployment rate, low educated 15+ (ISCED 0-2)	25.3	24.5	18.4	16.8	13.7	11.0	10.1	9.4	10.7	10.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.9	9.8	7.0	6.0	4.5	3.2	3.0	2.9	3.8	3.5
Unemployment rate, high educated 15+ (ISCED 5-8)	4.2	3.4	2.8	2.2	1.8	1.4	1.2	1.5	1.6	1.7

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Female										
Total population (1,000)	5,200	5,183	5,167	5,151	5,132	5,115	5,102	5,093	5,078	5,056
Working-age population aged 15+ (1,000)	3,960	3,942	3,919	3,897	3,876	3,848	3,827	3,813	3,800	3,775
Employment aged 15+ (1,000)	1,778	1,789	1,880	1,927	1,989	2,004	2,023	2,032	2,000	2,163
Employment rate (% population aged 15+)	44.9	45.4	48.0	49.5	51.3	52.1	52.9	53.3	52.6	57.3
Employment rate (% population aged 15-64)	51.9	52.6	55.9	57.8	60.2	61.3	62.3	63.0	62.3	68.2
Employment rate (% population aged 20-64)	56.2	56.9	60.2	62.1	64.6	65.7	66.8	67.6	67.0	73.5
Employment rate (% population aged 15-24)	17.0	17.0	20.5	23.1	24.6	24.8	24.3	24.0	23.1	23.9
Employment rate (% population aged 25-29)	59.9	61.4	63.3	63.5	66.1	67.6	67.7	69.3	67.2	77.3
Employment rate (% population aged 25-54)	69.0	70.0	73.2	74.4	76.2	77.2	77.7	78.0	75.9	83.4
Employment rate (% population aged 55-64)	31.7	32.1	35.2	37.7	41.5	42.4	44.9	46.2	49.2	52.9
Employment rate for low skilled 15-64 (ISCED 0-2)	22.6	23.7	27.3	28.7	31.5	33.7	33.7	33.4	32.0	33.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	56.5	56.8	59.6	61.6	63.9	65.0	65.4	66.1	65.4	70.6
Employment rate for high skilled 15-64 (ISCED 5-8)	74.3	74.2	76.1	77.3	80.0	78.9	80.0	79.8	79.4	87.2
Self-employed (% of total employment)	8.2	7.8	7.4	7.7	7.8	7.8	7.8	8.1	9.2	9.4
Part-time employment (% of total employment)	9.8	9.4	8.6	8.0	7.3	6.9	6.9	7.5	8.2	7.7
Temporary employment (% of total employees)	8.5	10.4	10.3	11.1	10.2	9.5	8.0	7.2	6.5	6.2
Activity rate (% population aged 15+)	50.2	50.5	52.1	53.2	54.1	54.6	55.1	55.2	55.1	59.8
Activity rate (% population aged 15-64)	58.0	58.6	60.7	62.2	63.5	64.2	64.9	65.3	65.3	71.2
Activity rate (% population aged 15-24)	23.4	23.6	25.9	27.5	28.2	28.2	27.2	26.9	26.9	28.3
Activity rate (% population aged 25-54)	76.5	77.1	78.8	79.6	79.8	80.4	80.7	80.6	79.1	86.6
Activity rate (% population aged 55-64)	34.5	34.7	37.4	39.9	43.5	44.3	46.3	47.2	50.6	54.3
Unemployment aged 15+ (1,000)	211	202	162	146	107	96	84	74	94	96
Unemployment rate (% labor force 15+)	10.6	10.1	7.9	7.0	5.1	4.6	4.0	3.5	4.5	4.2
Youth unemployment rate (% labor force 15-24)	27.1	27.9	20.9	15.9	12.9	12.0	10.7	10.6	14.0	15.5
NEET rate (% population aged 15-24)	16.0	17.4	15.3	12.8	13.3	14.3	14.0	13.2	14.1	13.2
Long-term unemployment rate (% labor force 15+)	4.8	4.9	3.7	3.1	2.4	1.8	1.5	1.1	1.1	1.3
Share of long-term unemployed (% of total)	45.0	48.5	46.8	44.0	47.3	40.1	36.4	31.7	24.8	30.7
Unemployment rate, low educated 15+ (ISCED 0-2)	24.4	22.7	18.7	18.1	12.7	11.3	10.6	10.1	11.2	11.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.5	10.4	7.9	6.9	5.1	4.4	3.8	3.2	4.6	4.5
Unemployment rate, high educated 15+ (ISCED 5-8)	4.7	4.3	3.4	2.6	1.8	1.8	1.7	1.6	2.1	1.8

Hungary: Earnings and unit labor costs

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wages										
Average monthly gross wages, NCU th	223	231	238	248	263	297	330	368	404	439
nominal annual growth in %	4.7	3.4	3.0	4.3	6.1	12.9	11.3	11.4	9.7	8.7
real annual growth in % (HICP deflated)	-0.9	1.7	3.2	4.4	5.7	10.3	8.3	7.7	6.2	3.4
Average monthly gross wages, EUR	771	777	770	800	845	961	1,035	1,131	1,149	1,224
Average monthly gross wages, EUR (PPP)	1,311	1,332	1,316	1,345	1,384	1,500	1,608	1,723	1,819	1,880
Average monthly net wages, NCU th	144	151	156	162	175	198	219	245	268	292
nominal annual growth in %	2.1	4.9	3.0	4.3	7.8	12.9	11.3	11.4	9.7	8.7
real annual growth in % (CPI deflated)	-3.4	3.1	3.2	4.4	7.4	10.3	8.3	7.7	6.2	3.4
Average monthly net wages, EUR	498	509	504	524	562	639	688	752	764	814
Average monthly net wages, EUR (PPP)	847	873	862	881	921	997	1,070	1,146	1,210	1,250
Minimum wages as of January 1st										
Monthly gross minimum wages, NCU th	93	98	102	105	111	128	138	149	161	167
Monthly gross minimum wages, EUR (ER)	296	335	342	333	351	412	445	464	487	460
Monthly gross minimum wages, EUR (PPP)	513	540	545	552	571	625	656	680	692	684
Unit labor costs (ULC)										
ULC, NCU in %	7.9	3.3	4.1	3.3	7.3	10.0	6.8	7.3	13.6	2.2
ULC, EUR in %	4.2	0.7	0.1	2.8	6.8	10.8	3.5	5.1	5.2	0.1

Notes: Data based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 is applied throughout. From 2021, new methodology in line with the Integrated European Social Statistics Regulation (IESS); growth rates are not fully comparable before and after 2021. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.

Wage data refer to enterprises with 5 and more employees.

Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.



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<https://data.wiwi.ac.at/seejobsgateway.html>