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Western Balkans Labor Market Trends 2019

Western Balkans Labor Market Trends 2019 Highlights:

- This report used data from national labor force surveys to examine key labor market indicators for the six Western Balkan countries – Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia – between the second quarter of 2017 and the second quarter of 2018.
- Despite stronger economic growth in 2018 than in 2017, the Western Balkan countries' labor markets improved at a slower pace in 2018 compared with a year earlier.
- During this period, Western Balkan countries created 68,000 new jobs and employment rose a modest 1.1 percent, ranging from a decline of 4.5 percent in Kosovo to an increase of 3.3 percent in Montenegro. More than half of the employment increase in 2018 was due to an increase in female employment.
- The quality of employment seems on the rise, with most new jobs created in the Western Balkans being formal, waged jobs, while informal employment, especially self-employment, is on the decline. Regionally, the number of self-employed declined by around 125,000 people (down 8 percent).
- Unemployment reached new historic lows in most Western Balkan countries. The number of unemployed fell by 65,000 between the second quarter of 2017 and the second quarter of 2018, compared to 169,000 the previous year.
- Youth unemployment was high and persistent in the Western Balkan countries. Although the rate fell to 35 percent in 2018, it was twice as high as the EU average. More than one fifth of the youth population was not in employment, education or training (NEET), which was less than a year earlier, but still high by international standards.
- Wages and labor costs were significantly lower in the Western Balkans, compared to the EU and there was no clear convergence in recent years.
- When compared to productivity, the apparent labor cost advantage of the Western Balkan countries disappears and the two most direct EU competitors, Bulgaria and Romania, with similar or even lower labor costs than some Western Balkan countries, seem significantly more competitive.
- The taxation of labor income in the Western Balkans is skewed towards relatively high social security contributions (combined with a lower and relatively flat personal income tax), which results in a relatively high labor tax level for the lowest wage earners.
- Low wage earners are at a particular disadvantage in the formal labor market in terms of their low net take home pay and the relative high cost of hiring them versus medium or high wage earners.

THE JOBS GATEWAY IN SOUTH EASTERN EUROPE

This report and the accompanying database are available on the website of the Jobs Gateway in South Eastern Europe (SEE Jobs Gateway) at http://SEEJobsGateway.net. The SEE Jobs Gateway is a Community of Practice for labor market policies in the Western Balkans, bringing together policy makers, academics, and experts from international organizations. Most members are from or have an interest in the Western Balkan region, comprising Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia.
Additional information, including recordings of events, data, and blogs, is available at: http://SEEJobsGateway.net.

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SPECIAL TOPIC – TABLES, FIGURES AND BOXES

Abbreviations, country classification, and country codes

Abbreviations

ALL	Albanian lek
AW	average wage
BAM	Bosnian convertible mark
CC	comparison countries
CPI	Consumer price index
ESRP	Economic and Social Reform Programme
EU	European Union
EUR	Euro
FTR	formalization tax rate
GDP	Gross domestic product
ICT	Information and communication technology
ILO	International Labour Organization
ISCED	International Standard Classification of Education
LCS	Labor Cost Survey
LFS	Labor force survey
MKD	Macedonian denar
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne - statistical classification of economic activities in the European Community
NCU	National currency unit
NUTS	Nomenclature of territorial units for statistics
NEET	Young people neither in employment nor in education and training
OECD	Organization for Economic Cooperation and Development
PIT	personal income tax
PPP	Purchasing power parity
SEE	South Eastern Europe
SES	Structure of Earnings Survey
SSC	social security contribution
RSD	Serbian dinar
SILC	Survey on Income and Living Conditions
SORS	Statistical Office of the Republic of Serbia
ULC	Unit labor costs
UNDP	United Nations Development Program

Country classification

EU-CEE countries	Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia
EU peer countries	Austria, Bulgaria, Croatia, Hungary
Western Balkans-6	Albania, Bosnia and Herzegovina, North Macedonia, Kosovo, Montenegro, Serbia

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

This third report on Western Balkan labor market trends presents a descriptive analysis of key labor market indicators for the six Western Balkan countries (Albania, Bosnia and Herzegovina, the Republic of North Macedonia, Montenegro, Kosovo, and Serbia) and selected European Union (EU) countries (Austria, Bulgaria, Croatia, and Hungary) between the second quarter of 2017 and the second quarter of 2018. The report begins with an overview of labor market developments drawn from the Jobs Gateway in South Eastern Europe database (https://SEEJobsGateway.net) and is followed by a special topic on labor costs, labor taxation, and low wages in the Western Balkans.

Despite stronger economic growth in 2018 than in 2017, the Western Balkan countries' labor markets improved at a slower pace in 2018 compared with a year earlier. Employment levels grew modestly (1.1 percent) in the Western Balkan countries through 2018. About 68,000 new jobs were generated between the second quarter of 2017 and the second quarter of 2018 as compared to 231,000 a year earlier. In contrast, GDP growth in the region increased from 2.5 percent in 2017 to 3.9 percent in 2018. On average, regional labor markets recorded improvements in activity rates (up 0.5 percentage points to 62.8 percent), employment rates (up 1 percentage point to 52.9 percent), unemployment rates (down 0.9 percentage points to 15.3 percent), and youth unemployment rates (down 3 percentage points to 34.6 percent).

Unemployment reached historic lows in most Western Balkan countries but remained higher than in comparable EU countries. Unemployment rates ranged from around 12 percent in Serbia and Albania to 29 percent in Kosovo. Unemployment continued to decline, reporting record drops in Albania, Montenegro, North Macedonia, and Serbia. The region also experienced a substantial decrease in long-term unemployment[1] from a peak of 1.5 million in 2011 to 776,000 people, or 10.5 percent of the labor force, in the second quarter of 2018 (down from 11.7 in the second quarter of 2017). Still, unemployment remained a significant challenge in the Western Balkans, where levels were two to three times higher than in EU peer countries presented in this report (Austria, Bulgaria, Croatia, and Hungary). There, unemployment ranged from less than 4 percent in Hungary to 7.6 percent in Croatia and the long-term unemployment rate from 1.4 percent in Austria and Hungary to slightly over 3 percent in Bulgaria and Croatia.

More than half of the employment increase benefited women, who continued to be underrepresented in Western Balkan labor markets. Women made up about 40 percent of the employed in Western Balkan labor markets, ranging from about 44 percent in Albania, Montenegro, and Serbia to a low of 21 percent in Kosovo. Employment among women grew most in Albania (up 5.4 percent or 27,900 people) and in North Macedonia (up 3 percent or 8,800), whereas employment among men grew most in Montenegro (up 4.8 percent or 6,200). In Kosovo, which a year ago reported the highest employment growth in the region, employment fell by 4.5 percent, affecting both men (down 4.4 percent or 12,600) and women (down 4.7 percent or 3,500). As in the previous year, on average, younger (15-24 years of age) and older (55-64 years of age) workers benefited most from new jobs, with few exceptions.

[1] Long-term unemployment refers to persons unemployed for 12 months or more.

The majority of new jobs created in the Western Balkans are formal, waged jobs, while self-employment is on the decline. Amid an overall increase in employment in the region, Serbia experienced a drop in the number of informally employed by more than 30,000 people (where roughly 16,000 jobs were created). The informally employed rose by less than total employment in Albania, increasing by 10,600 people (representing about a fourth of all jobs created). In contrast, it rose by 12,800 (out of roughly 15,000 new jobs created) in North Macedonia.[2] Overall, young men, elderly women, and low-educated workers were most likely to hold informal jobs in the region. Self-employment continued to be the prevailing type of informal employment in the Western Balkans (i.e., self-employed in unregistered businesses, wage workers without a written contract, or unpaid family members). Regionally, the number of self-employed declined by around 125,000 people (down 8 percent). The prevalence of self-employment decreased at the regional level, from 23.5 percent of total employment in the second quarter of 2017 to 21 percent a year later, though it remained high in Albania (34.2 percent of total employment), Kosovo (21.2 percent), and Montenegro and Serbia (19.6 percent).

Consistent with the increase in waged jobs, the region is creating more jobs in industry and services and fewer jobs in agriculture. With the exception of Kosovo (industry) and Serbia (services), Western Balkan countries experienced positive job growth in industry (up 82,000 people) and services (up 19,200). Conversely, jobs in agriculture (down 69,400) were lost in all but Montenegro and North Macedonia.

Observed higher growth and overall improvements in labor markets have not translated to better labor market conditions for low-educated workers. Jobs were primarily lost among workers with low levels of education (down 3.8 percent), whereas the highly-educated (those with tertiary levels of education) benefited most from new jobs. On average, jobs grew by 4.2 percent for workers with tertiary education and by 1.2 percent for those with medium levels of education (lower secondary to post-secondary). The sole exception was North Macedonia where employment for the low-educated grew by 6 percent, while the highly-educated lost roughly 6,000 jobs (down 2.9 percent). This general trend suggests the need to prioritize policies that help integrate the low-educated into the labor market.

Despite their poor standing in the Western Balkan labor market, the employment situation of youth continued to improve. The share of youth (15-24 years of age) not in employment, education and training (NEET) declined by 1.5 percentage points (to 22.3 percent) from 2016 to 2017. NEET rates were lower in Montenegro and Serbia (around 17 percent) than in the other Western Balkan countries (ranging between 24 and 26 percent). Youth unemployment decreased in all countries with the exception of Kosovo (up 4.2 percentage points to 54.9 percent) and North Macedonia (up 0.5 percentage points to 47.6 percent). Over half of unemployed youth were long-term unemployed, ranging from almost 70 percent in Bosnia and Herzegovina to 43 percent in Montenegro. On average, 50 percent of young workers worked on a temporary contract basis, with the highest proportion observed in Kosovo and Montenegro (8 out of 10 young workers).

[2] Data were not available for Bosnia and Herzegovina, Kosovo, and Montenegro.

The high prevalence of permanent and full-time jobs in the Western Balkans, while a positive indicator of job quality, suggests that labor markets are not offering the type of contracts that are more suited to some groups and thus underutilizing a large pool of potential workers. On average, the prevalence of temporary contracts remained unchanged across the region (almost every fourth employee, ranging from every one out of ten employees in Albania to eight out of ten in Kosovo) but increased markedly in Kosovo (up almost 10 percentage points), followed by Montenegro and North Macedonia (up 4 and 2 percentage points, respectively). The prevalence of part-time employment was low and decreased overall from around 12 percent to around 10 percent, ranging from almost 17 percent in Albania to 3.7 percent in Kosovo. While permanent and full-time jobs are generally considered "good quality", part-time or temporary jobs may also offer a channel to enter the labor market for workers who would otherwise be excluded from participating, such as women and the young. This is illustrated by the figures observed for Austria, where one out of every two women worked part-time.

Wage levels in the Western Balkans continue to be significantly lower than in the EU and have not "caught up" in the last decade. Albania reported the strongest real wage growth (6.6 percent) in 2017, followed by North Macedonia (1.2 percent), and Serbia (0.9 percent). Real wages decreased in Montenegro (down 1.1 percent) and Kosovo (down 1.5 percent). Between 2010 and 2017, wage levels – expressed in purchasing power parity (PPP) and relative to the Austrian level – increased in Albania and Kosovo and declined in the remaining Western Balkan countries. This does not appear to reflect changes in labor productivity in the region. Between 2011 and 2017, higher labor productivity growth rates were associated with higher real wage growth rates in Bosnia and Herzegovina, Kosovo and North Macedonia. By contrast, annual labor productivity and real wage growth rates moved in opposite directions in Albania, Montenegro and Serbia.

Total labor costs[3] are significantly lower in the Western Balkans than in the EU, with the exception of their most direct competitors, namely Bulgaria and Romania. In principle, this is good news for the competitiveness of the Western Balkan countries and should give them an advantage in attracting production, and the foreign direct investments that comes with it, in tradable goods and services. In 2016, hourly labor costs (in current Euros) ranged from around 24 percent of the EU average in Montenegro[4], to slightly more than a fifth in Bosnia and Herzegovina and Serbia, to a seventh in North Macedonia, and around a tenth in Albania. Yet, the two most direct EU competitors of the Western Balkan countries, Bulgaria and Romania, have very similar, or even lower labor costs than some Western Balkan countries, which might undermine this advantage.

When productivity is taken into account, the apparent labor cost advantage of the Western Balkan countries all but disappears. In fact, Bosnia and Herzegovina and Montenegro appear the least competitive, with labor costs per full-time equivalent employee above 200 percent of GDP per capita, and all Western Balkan countries above the EU average. Bulgaria and Romania, on the other

[3] The total labor costs to an employer of a waged employee can be expressed as the sum of what the worker gets in terms of take-home pay and all the labor taxes paid in relation to the worker's net wage (most notably, personal tax on wage income and social security contributions).

[4] Since data from the 2016 LCS is not available in case of Montenegro, comparison with the EU is based on the 2012 LCS. Comparison of other Western Balkan countries with the EU is based on the 2016 LCS.

hand, seem significantly more competitive than the Western Balkan countries, with labor costs below the EU average at around 115 percent of GDP per capita.

Labor taxes in the Western Balkans, especially social security contributions, significantly add to labor costs—at times to an even larger extent than in EU countries. Tax wedges (i.e., the ratio of labor taxes to total labor costs) are particularly high in Montenegro (40.3 percent for the average wage earner), Serbia (39.6 percent), and Bosnia and Herzegovina (Federation of Bosnia and Herzegovina – 41.7 percent; Republic of Srpska – 38.2 percent), similar to high EU levels (41.7 percent in the 23 EU countries that are also members of the OECD). In most countries, social security contributions represent a larger portion of the non-wage labor costs than does personal income tax. However, nowhere is this feature more pronounced than in the Western Balkans, where the personal income tax plays only a minor role.

Additionally, labor taxes in the Western Balkan countries are only slightly progressive. The difference in tax wedges for a worker who earns 67 percent of the average wage compared to one who earns 167 percent of the average wage is 8.2 percentage points in the OECD on average and 8.4 percentage points in the 23 EU countries that are also members of the OECD. In contrast, the same difference is between 0.8 and 3 percentage points in five out of six Western Balkan countries. Only Albania approaches international averages, with 6.5 percentage points. This implies a relatively flat labor taxation in Western Balkan countries; taxes do not increase steeply with wage levels, resulting in a relatively high labor tax level for the lowest wage earners.

Consequently, low-wage earners in the Western Balkans are at a disadvantage in the labor market in terms of the higher cost of hiring them compared to medium- and high-wage earners, as well as their relatively lower net take-home pay. Given the low progressivity of labor taxation, tax wedges at the minimum wage level are comparatively high by international standards. At the same time, they are also relatively costly from the labor cost perspective of employers. In other words, although they do not earn much in terms of net take-home pay, minimum wage workers are still relatively costly. For example, in both Montenegro and the Czech Republic, a minimum wage worker's net pay is around 40 percent of that of an average-wage worker. Yet the cost to a firm of hiring a minimum-wage worker in the Czech Republic is only 33 percent of the cost of hiring an average wage worker, compared to 40 percent in Montenegro.

Most countries in the region have recently engaged in labor market flexibilization and minimum wage increases; however, a major reform of the entire system of labor taxation and social insurance might serve as the most promising avenue for the revitalization of regional labor markets. For some time, both the flexibility of employment legislation and the relative level of minimum wages throughout the region have been well within standard international values, indicating no major institutional disruption. Yet, the labor taxation system in the region – and especially among the high-wedge countries – is far from optimal. Introducing progressivity, especially at low wage levels, could boost formal employment and net labor income. Given the dominance of proportional social security contributions in the current structure of labor tax revenues, however, any significant reshuffling of the structure of labor taxation would require policymakers and stakeholders to initiate an informed and open debate on the key features of social protection, and more specifically pension systems in the region.

Labor market developments by country

In **Albania,** high economic growth translated to increases in job creation (38,700 jobs or 3.3 percent) in the second quarter of 2018, representing, along with Serbia, the highest employment rate (close to 60 percent) in the Western Balkans. The increase in employment was largely driven by women who represented 70 percent of the increase. Jobs were created in all main economic sectors. Albania employed the highest share of the low-educated group (45 percent vs 22 percent on regional average) and consequently a smaller proportion of workers with medium and high levels of education. Informal employment, a salient feature of the country's labor market, has declined substantially, especially since the launch of a campaign against informality in 2015. The share of informal employment shrank from 50 percent in 2014 to 36 percent in the second quarter of 2018. Unemployment fell to 12.4 percent in 2018 and represented next to Serbia the lowest unemployment rate in the region. The share of young people neither in employment nor in education and training (NEETs) was among the highest in the region at 26 percent.

Bosnia and Herzegovina experienced small increases in employment (0.8 percent) in 2018, and the employment rate (15-64 years of age) increased to 44 percent. However, this increase resulted more from a substantial decline of the working-age population (due to the joint effect of low fertility rates and outmigration) than from real job creation. Despite increasing, both the activity rate and the employment rate of women were low compared to most other countries in the region, and the country maintained substantial gender gaps in employment. In 2018, jobs were primarily generated in industry and services, but fell in agriculture. Unemployment fell to 18.4 percent, reaching a historic low, which is only partly due to rising employment, but also to the decrease in the working-age population and rising inactivity. Long-term unemployment remained high at 82 percent of total unemployment. Youth unemployment fell by 7 percentage points to 38.8 percent compared to 2017, which could be due in part to continued emigration. Almost every fourth young person was neither in employment nor in education and training (NEET).

Solid economic growth (3.9 percent) in **Kosovo** did not lead to new job creation. Instead, after a steep rise in 2017, employment fell by 4.5 percent in the second quarter of 2018, partly due to a rising working age population, but also to outmigration of the previously employed. Employment declined in agriculture, industry, and construction, but increased in the services sector, particularly in trade, information and communication technology (ICT), and in the public sector. The employment rates for both men and women were the lowest in the region, amounting to 45 percent and 12 percent respectively. Unemployment declined by one percentage point to 29.2 percent, while youth unemployment increased by 4 percentage points to 54.9 percent. The rate of young people neither in education nor employment and training (NEETs) amounted to 26 percent. Thus, for many young people emigration is considered the best or only option for advancement. According to a UNDP survey conducted in August 2018, almost 60 percent of the young respondents considered leaving Kosovo in the next 3 years.

Montenegro recorded 3.3 percent employment growth in the second quarter of 2018, and male employment increased at a higher rate than female employment (4.8 percent growth for men vs 1.4 percent for women). Employment growth was led by agriculture, industry, public services and scientific and technical activities. Unemployment fell to 14.4 percent, and unemployment among the young, which declined at an even faster pace, fell to 23.9 percent – representing the lowest youth

unemployment rate in the region. Regional disparities in unemployment rates were highest in the Western Balkans, varying between 2.7 percent in the coastal region and 34.5 percent in the Northern region.

North Macedonia reported employment growth of 2 percent in 2018, and females experienced larger gains in employment than males (3 percent vs 1.4 percent respectively). Employment growth was supported – apart from rising GDP growth – by a government subsidy program. Jobs were created across a variety of activities, such as industry, construction, tourism and public services. However, the largest portion of this increase was due to a rise in informal sector employment, accounting for about 18 percent of total employment. Self-employment constituted the biggest share of informally employed, while unpaid family work declined. Unemployment continued to fall in 2018, dropping to a historic low of 21.1 percent. By contrast, youth unemployment increased to a small degree to 47 percent. Regional differences in unemployment were wide, ranging between 9.4 percent in the Eastern region and 36.5 percent in the Northeastern region.

In **Serbia,** employment increased modestly (0.5 percent) in 2018 and jobs were generated most in industry, but fell in agriculture. Apart from Albania, Serbia has the highest employment rate in the region (close to 60 percent). Informal employment, fluctuating at around 18 percent of total employment, decreased by 30,000 people. Unemployment remained almost unchanged at 11.9 percent, while youth unemployment fell slightly to 27 percent in the second quarter of 2018. Almost one quarter of the unemployed had completed tertiary education, which points to a considerable gap between acquired skills and labor market demand.

1. Introduction

In this third labor market trends report,[5] labor market developments in the six Western Balkan countries – Albania, Bosnia and Herzegovina, Montenegro, the Republic of North Macedonia, Kosovo and Serbia - between the second quarter (Q2) of 2017 and 2018 Q2 are examined and compared with selected Member States of the European Union (EU), namely Austria, Bulgaria, Croatia, and Hungary.[6] The report draws on data from the South Eastern Europe (SEE) Jobs Gateway Database to explore key labor market indicators. Specifically, labor force survey (LFS) data provided by the statistical offices of the individual Western Balkan countries and by Eurostat for the EU comparative countries are used and can be accessed online at the South-East Europe Jobs Gateway (http://SEEJobsGateway.net).[7] The objective of this report is to highlight these data for a general, non-technical audience, and offer insights into how labor markets in the Western Balkans have developed over the past year.

The report is divided into two parts. The first starts with a discussion of recent economic developments (Section 2), followed by an overview of demographic developments, including the working-age population and labor force participation (Section 3). Sections 4 and 5 focus on employment and unemployment. Section 6 elaborates on wages, and Section 7 discusses aspects of sub-regional labor markets. The second part is devoted to a special topic on labor costs, labor taxation and low wage earners in the Western Balkans. The report includes a statistical annex on key labor market and economic indicators for each of the Western Balkan countries and peer countries.

2. Economic environment

Following a 2.5 percent increase in 2017, the Western Balkan countries' overall GDP growth rose to an estimated 3.9 percent in 2018 (Figure 1)**.** Albania, Kosovo, North Macedonia, and Serbia, the largest economy of the region, experienced higher levels of growth than in the previous year. GDP growth remained unchanged between 2017 and 2018 in Montenegro and declined in Bosnia and Herzegovina only. As for the four peer countries, Austria and Hungary reported accelerating economic growth, while the opposite was true for Bulgaria and Croatia.

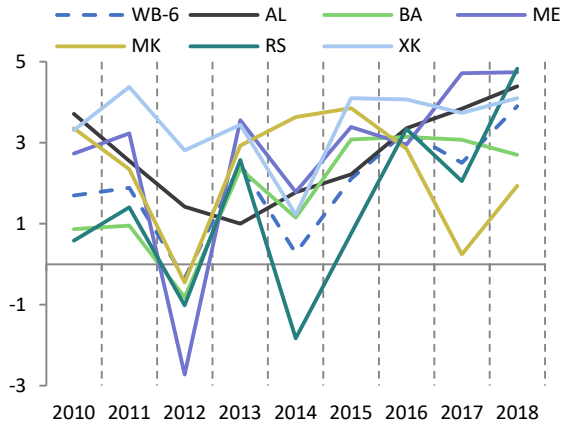
[5] See World Bank (2017) for a discussion of Western Balkan labor market trends between 2010 and 2016 and World Bank (2018) for an analysis of the Western Balkan labor markets in 2017 and a special chapter on migration.

[6] Each of these comparator countries represents a different accession "wave" to the EU (Austria, 1995; Hungary, 2004; Bulgaria, 2007; and Croatia, 2013) and is geographically close and similar in population size to the Western Balkan countries.

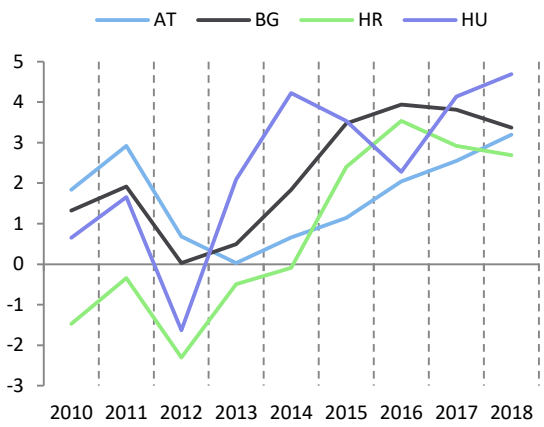
[7] A detailed description of the database, including data sources, methodology, definitions, and limitations can be found in the statistical annex.

Figure 1 / GDP growth, real change in %

Western Balkan countries



EU peer countries



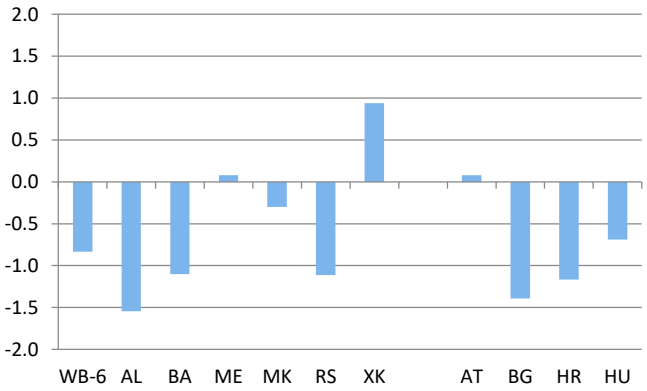
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat and wiiw Database.

3. Population

WORKING-AGE POPULATION

On average, the working-age population (15–64 years) continued to decline in most Western Balkan countries in 2018 (Figure 2). Based on LFS data, the overall working-age population dropped by 0.8 percent between 2017 Q2 and 2018 Q2. LFS data for Albania, Bosnia and Herzegovina, and Serbia indicate an above-average decrease (ranging from 1.1 to 1.5 percent), whereas the working-age population remained unchanged in Montenegro. In Kosovo, the working-age population increased by 0.9 percent. Declines were also registered in the EU peer countries, with the exception of Austria, where the working-age population remained stagnant.

Figure 2 / Working-age population (15-64 years) from 2017 Q2 to 2018 Q2, change in %

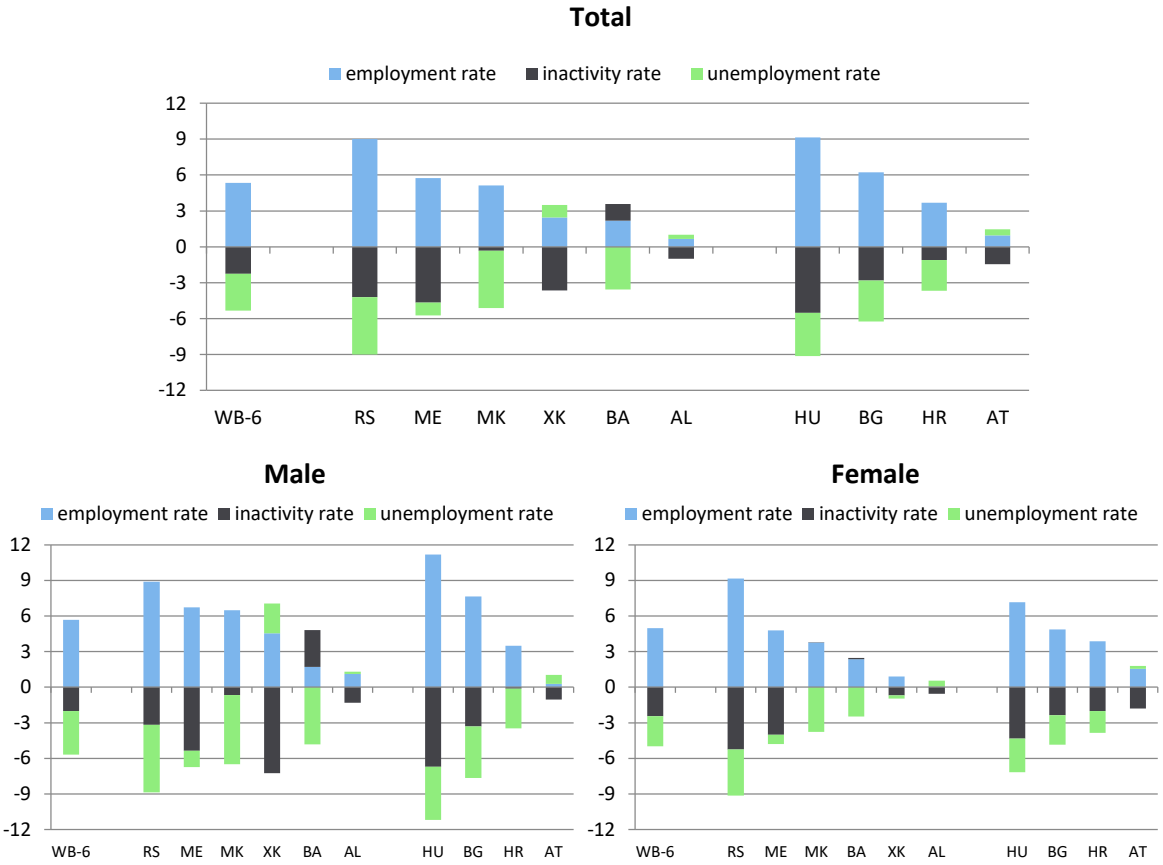


Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Between 2012 and 2017, the Western Balkans experienced an increase in the employment of the working-age population alongside a decrease in inactivity and unemployment (Figure 3). Serbia, followed by Montenegro and North Macedonia, reported the largest increases in employment, while

the share of the inactive fell most in Kosovo, Serbia, and Montenegro. The largest declines in unemployment were reported for Serbia, North Macedonia, Bosnia and Herzegovina, while decreases were modest in Montenegro. The share of the unemployed increased in Albania and Kosovo, but the countries' lower inactivity rates indicate a move in the right direction. By comparison, in the peer countries, the share of employed in the working-age population increased most in Hungary, followed by Bulgaria and Croatia – all three countries starting from low levels. A smaller increase was observed in Austria, which already had a high employment rate in 2012. The share of the inactive persons dropped in all peer countries, with Hungary reporting the largest decline, followed by Bulgaria and Austria. In Croatia, inactivity decreased slightly. With the exception of Austria, the share of the unemployed shrank similarly in all peer countries.

Figure 3 / Structure of the working-age population (15-64 years) from 2017 Q2 to 2018 Q2, change in %



Note: Unemployment rate defined as unemployed divided by working-age population (15-64 years).
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

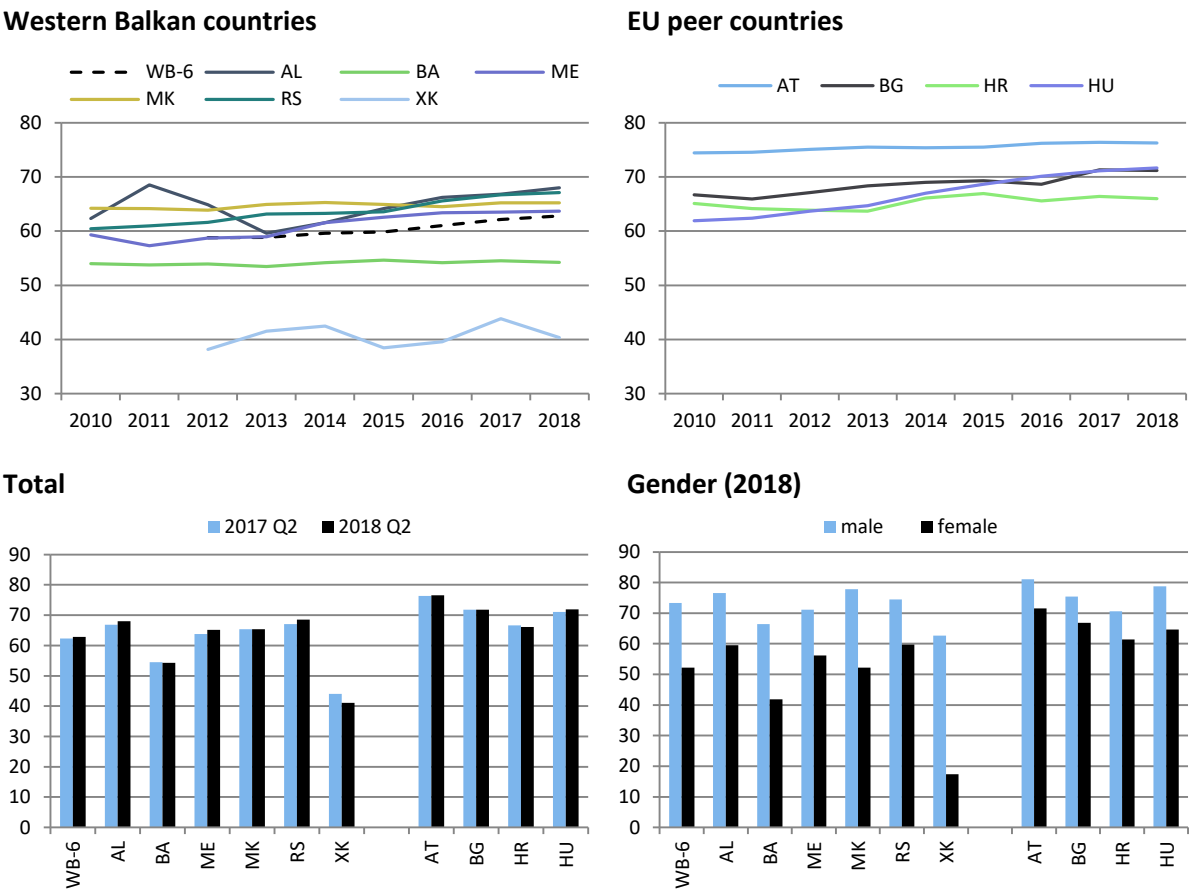
Overall men reported a larger increase in the employment rate, a more pronounced decline in the unemployment rate, and a slightly smaller decline in the inactivity rate compared to women. There were, however, significant differences across countries. With the exception of Serbia, the growth in the employment rate was higher for males than for females; and the decline in the male unemployment rate was larger than in the female rate in all countries except Kosovo and Albania. Kosovo is the only country where the male unemployment rate increased, while the female unemployment rate decreased marginally. In Albania the increase in the female unemployment rate was twice as high as the increase of the male rate. Kosovo stands out for substantial decreases in the

male inactivity rate and increases in the unemployment rate. Bosnia and Herzegovina is the only country where male inactivity increased.

ACTIVITY RATES

Although on the increase since 2013, activity rates in the Western Balkan countries remained low, primarily due to low female labor force participation, but also to low male participation in some countries (Figure 4). Overall, the regional activity rate (15–64 years) increased by 0.5 percentage points to 62.8 percent between 2017 Q2 and 2018 Q2. Serbia, Montenegro, and Albania witnessed above-average increases of between 1.5 and 1.2 percentage points, whereas the activity rate declined in Kosovo by 3.1 percentage points and remained almost unchanged in Bosnia and Herzegovina and in North Macedonia. The labor force participation rates lagged far behind those of the peer countries (except Croatia) and varied substantially across countries, ranging from 41 percent in Kosovo and 54.2 percent in Bosnia and Herzegovina to about 68 percent in Serbia and Albania; these values were higher than in Croatia but far below Austria's 76.6 percent. With regard to gender, the participation of women in the labor market was among the lowest in Europe, whereas male activity rates (with the exceptions of Bosnia and Herzegovina and Kosovo) were comparable to those of the EU peer countries.

Figure 4 / Activity rates (15–64 years), in %

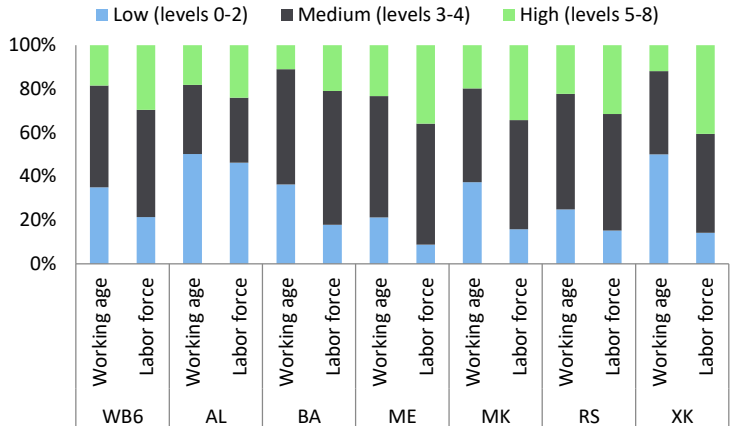


Note: Data for 2018 refer to the average of the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

The gender gap in activity rates widened in the Western Balkan countries between 2017 Q2 and 2018 Q2. The difference between male and female labor market participation increased to 21.3 percentage points in 2018 Q2 from 20.8 percent in 2017 Q2. In 2018 Q2, gender gaps ranged from 15 percentage points in Serbia and Montenegro to almost 46 percentage points in Kosovo, where only about 17 percent of women participated in the labor market. Improvements were registered in Albania, North Macedonia, and Serbia, but the gap widened in Bosnia and Herzegovina and in Montenegro, and remained unchanged in Kosovo. In the EU peer countries, gender gaps in activity rates widened in Austria and Bulgaria, narrowed in Croatia and changed little in Hungary. In 2018, gender gaps in the peer countries ranged from 8.3 percentage points in Bulgaria to 14 percentage points in Hungary. Past research (e.g., World Bank, 2016) indicates that gender gaps in the labor market reflect the underutilization of a large pool of potential workers which, in turn, limit the economic growth of a country.

The low activity rates – of women, in particular – have been the subject of numerous studies (e.g., Atoyan and Rahman, 2017; Petreski et al., 2017; UNDP, 2016).[8] Apart from cultural and religious reasons, family responsibilities or lack of affordable childcare services (especially in rural areas), and low educational levels are the primary causes of female inactivity. As for the latter, in the Western Balkans, the share of women with low levels of education among the working-age population is larger than the share of low-educated women in the labor force (Figure 5) with the largest difference observed in Kosovo (50 percent vs. 14 percent), implying a lower educational level of inactive versus active women. Another explanation is the reliance on remittances, which is considered to decrease employment incentives, resulting in low labor force participation (see, for example Amuedo-Dorantes and Pozo 2006; UNDP, 2016). Finally, research suggests that labor force participation among women is even lower in minority communities and among members of vulnerable groups (e.g. women with disabilities), see, Lazarević and Tadić (2018).

Figure 5 / Female working age population and labor force by educational attainment, 2017, in %



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

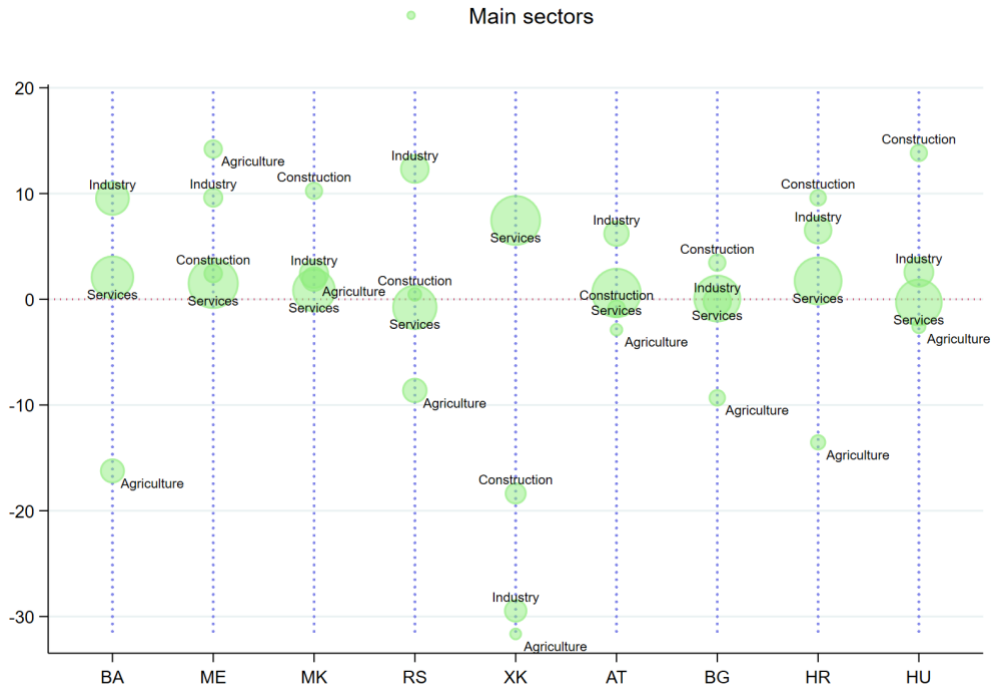
[8] See also, World Bank (2017) Western Balkans Labor market Trends 2017 and World Bank (2018) Western Balkans Labor Market Trends 2018.

4. Employment

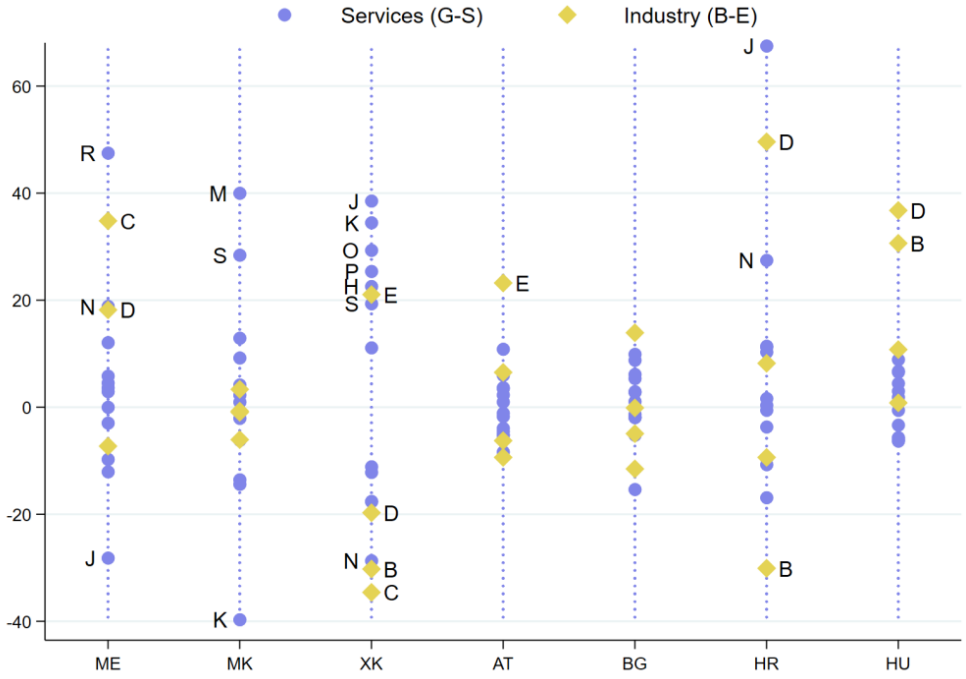
Despite accelerating GDP growth, employment levels grew modestly (1.1 percent) in the Western Balkan countries between the second quarter of 2017 and the second quarter of 2018 (Figure 6 and Table 1)**.** From 2017 Q2 to 2018 Q2, about 68,000 new jobs were generated, as compared to 231,000 a year earlier. Growth was strongest in Albania and Montenegro (3.3 percent each). In Montenegro, employment was primarily generated in agriculture and industry, as well as some service sectors (e.g., transport). In Albania, industry and service contributed most to job creation.[9] North Macedonia also reported above-average employment growth (2.1 percent), partly driven by government employment programs (EC, 2018), with employment creation in construction, industry, and tourism. In Bosnia and Herzegovina, which reported employment growth of 0.8 percent, industry and services were the main drivers, while agriculture's contribution to job creation was negative. In Serbia, employment grew by less than 1 percent and was primarily generated in industry, while agricultural employment went down. In Kosovo, which a year ago reported the highest employment growth in the region, employment fell by 4.5 percent; it declined in agriculture, industry, and construction, but increased in the service sector, particularly in trade, financial and insurance activities, information and communication technology (ICT), and the public sector. Detailed information on the contributions of individual (sub-) sectors is given in Figure 7.

[9] Not shown in Figure 6 or Table 1. Information refers to the Albanian Labor Force Survey 2018 Q2, http://www.instat.gov.al/en/themes/labour-market-and-education/employment-and-unemployment-from-lfs/publication/2018/quarterly-labour-force-survey-q2-2018/.

Figure 6 / Employment growth by economic activities, from 2017 Q2 to 2018 Q2, change in %



Note: The size of the bubbles is defined by its share in total employment in 2018 Q2.



Note: Only those services/industries are labeled that show an increase/decrease of more than 18 percent between 2017 Q2 and 2018 Q2. NACE Rev. 2, 1-digit: B - Mining and quarrying; C – Manufacturing; D - Electricity, gas, steam and air conditioning supply; E - Water supply; sewerage, waste management and remediation activities; G - Wholesale and retail trade; repair of motor vehicles and motorcycles; H - Transportation and storage; I - Accommodation and food service activities; J - Information and communication; K - Financial and insurance activities; L - Real estate activities; M - Professional, scientific and technical activities; N - Administrative and support service activities; O - Public administration and defense; compulsory social security; P – Education; Q - Human health and social work activities; R - Arts, entertainment and recreation; S - Other service activities. Detailed data are not available for Albania, Bosnia and Herzegovina and Serbia.
Source: National Statistical Offices based on LFS of the respective countries.

Table 1 / Employment change by sector, from 2017 Q2 to 2018 Q2

Western Balkan countries

	2018 Q2, th persons					2017 Q2 - 2018 Q2, th persons					2017 Q2 - 2018 Q2, in %				
	BA	ME	MK	RS	XK	BA	ME	MK	RS	XK	BA	ME	MK	RS	XK
Total - all NACE activities	822.4	240.2	755.1	2897	**343.8**	6.8	7.6	15.2	15.8	-16.2	0.8	3.3	2.1	0.5	-4.5
Agriculture, forestry and fishing	129.0	**20.9**	122.6	469.5	10.8	-25.0	2.6	2.3	-44.3	-5.0	-16.2	14.2	1.9	-8.6	-31.6
Industry	264.0	22.8	178.7	657.3	46.2	23.0	2.0	4.2	72.1	-19.3	9.5	9.6	2.4	12.3	-29.5
Mining and quarrying	.	.	6.2	.	3.0	.	.	-0.4	.	-1.3	.	.	-6.1	.	-30.2
Manufacturing	.	**15.1**	**148.5**	.	32.9	.	3.9	4.8	.	-17.4	.	34.8	3.3	.	-34.6
Electricity, gas, steam a. air cond. supply	.	2.6	10.3	.	5.7	.	0.4	-0.1	.	-1.4	.	18.2	-1.0	.	-19.7
Water supply; sewerage, waste manag.	.	5.1	13.7	.	4.6	.	-0.4	-0.1	.	0.8	.	-7.3	-0.7	.	21.1
Construction	.	21.0	**57.0**	129	40.0	.	0.5	5.3	0.6	-9.0	.	2.4	10.3	0.5	-18.4
Services	*429.4*	175.5	396.7	1641	246.8	8.8	2.6	3.3	-12.6	17.1	2.1	1.5	0.8	-0.8	7.5
Trade; repair of motor vehicles	.	46.1	104.6	.	**58.0**		-1.4	-2.2	.	5.8		-2.9	-2.1	.	11.1
Transportation and storage	.	12.7	36.5	.	11.4	.	0.7	-2.4	.	2.1	.	5.8	-6.2	.	22.6
Accommodation and food services	.	20.4	34.1	.	21.6	.	-2.2	3.9	.	-2.7	.	-9.7	12.9	.	-11.1
Information and communication	.	5.1	12.5	.	13.3	.	-2.0	-2.1	.	3.7	.	-28.2	-14.4	.	38.5
Financial and insurance activities	.	3.9	7.9	.	7.8	.	0.0	-5.2	.	2.0	.	0.0	-39.7	.	34.5
Real estate activities	.	.	.	.	0.3	.	.	.	.	0.0	.	.	.	.	0.0
Professional, scientific and techn. act.	.	10.2	**18.2**	.	6.5	.	1.1	5.2	.	-0.9	.	12.1	40.0	.	-12.2
Administrative and support service act.	.	**12.6**	15.4	.	9.2	.	2.0	1.3	.	-3.7	.	18.9	9.2	.	-28.7
Public administration and defense	.	21.1	52.1	.	**26.9**	.	0.6	0.5	.	6.1	.	2.9	1.0	.	29.3
Education	.	14.2	44.8	.	**40.5**	.	0.5	1.0	.	8.2	.	3.6	2.3	.	25.4
Human health and social work activities	.	12.4	42.4	.	19.7	.	-1.7	1.7	.	-4.2	.	-12.1	4.2	.	-17.6
Arts, entertainment and recreation	.	5.9	11.5	.	4.2	.	1.9	-1.8	.	-0.9	.	47.5	-13.5	.	-17.6
Other service activities	.	7	13.1	.	18.5	.	0.3	2.9	.	3.0	.	4.5	28.4	.	19.4

EU peer countries

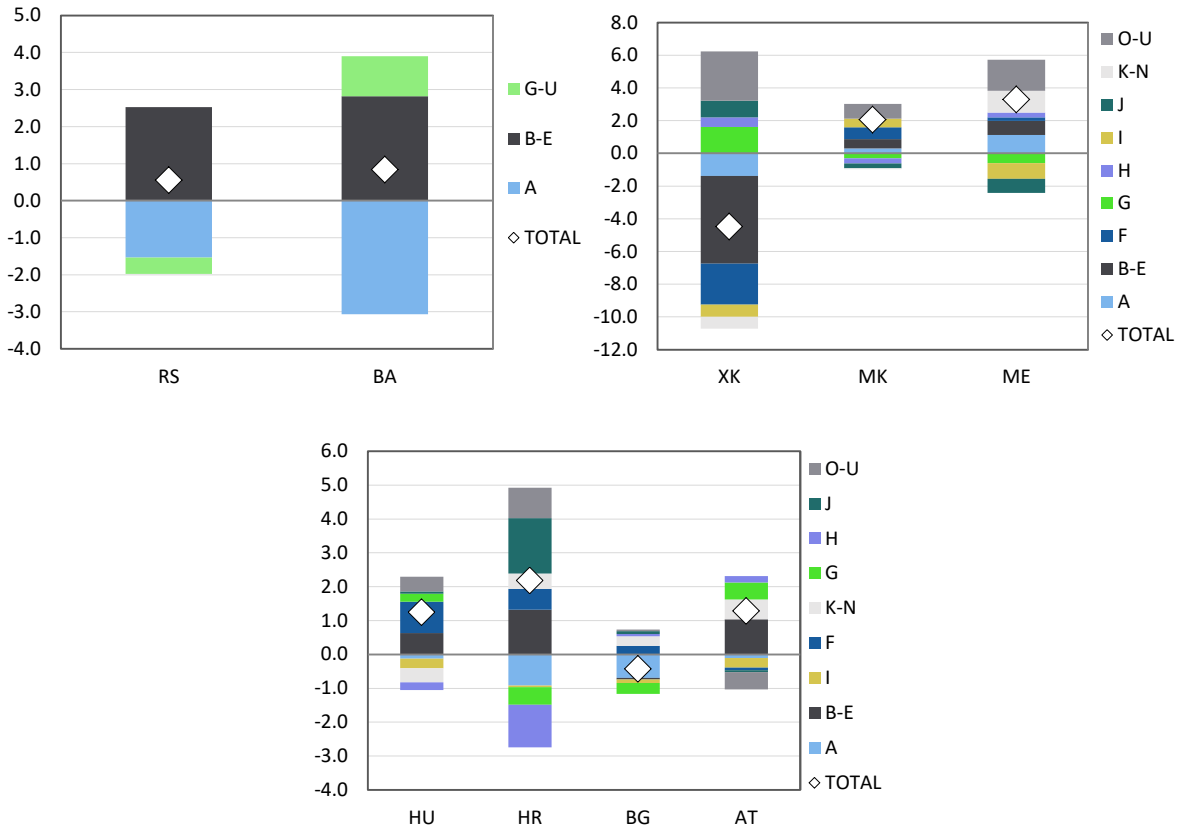
	2018 Q2, th persons				2017 Q2 - 2018 Q2, th persons				2017 Q2 - 2018 Q2, in %			
	AT	BG	HR	HU	AT	BG	HR	HU	AT	BG	HR	HU
Total - all NACE activities	4301.1	3154.0	1666.8	4474.6	54.4	-13.7	35.5	55.0	1.3	-0.4	2.2	1.2
Agriculture, forestry and fishing	158.6	214.1	95.9	215.7	-4.7	-22.0	-15.0	-5.7	-2.9	-9.3	-13.5	-2.6
Industry	754.0	698.6	350.4	1107.8	44.1	-1.3	21.5	27.8	6.2	-0.2	6.5	2.6
Mining and quarrying	5.8	28.4	7.9	14.5	-0.6	-3.7	-3.4	3.4	-9.4	-11.5	-30.1	30.6
Manufacturing	699.0	**598.2**	292.5	**995.9**	42.7	-0.7	22.2	8.1	6.5	-0.1	8.2	0.8
Electricity, gas, steam a. air cond. supply	28.5	39.3	18.1	39.8	-1.9	4.8	6.0	10.7	-6.3	13.9	49.6	36.8
Water supply; sewerage, waste manag.	20.7	32.7	31.9	57.6	3.9	-1.7	-3.3	5.6	23.2	-4.9	-9.4	10.8
Construction	346.2	242.1	**115.3**	338.9	-3.1	8.1	10.1	41.2	-0.9	3.5	9.6	13.8
Services	3042.3	1999.2	1105.2	2812.2	18.1	1.5	18.9	-8.3	0.6	0.1	1.7	-0.3
Trade; repair of motor vehicles	627.3	**537.6**	223.0	548.9	21.2	-10.3	-8.5	10.2	3.5	-1.9	-3.7	1.9
Transportation and storage	220.4	214.6	101.4	287.7	7.8	2.3	-20.6	-9.9	3.7	1.1	-16.9	-3.3
Accommodation and food services	253.2	173.3	125.5	189.3	-12.0	-3.4	-0.7	-12.4	-4.5	-1.9	-0.6	-6.1
Information and communication	131.3	98.7	66.0	**109.2**	-2.3	2.7	26.6	3.2	-1.7	2.8	67.5	3.0
Financial and insurance activities	139.9	67.3	44.8	89.0	-5.7	3.9	-4.7	-5.4	-3.9	6.2	-9.5	-5.7
Real estate activities	35.1	12.2	.	26.1	-3.2	1.1	.	-1.7	-8.4	9.9	.	-6.1
Professional, scientific and techn. act.	257.3	**109.3**	83.5	152.7	25.2	-6.0	7.8	-10.3	10.9	-5.2	10.3	-6.3
Administrative and support service act.	154.3	121.3	**47.8**	158.3	8.7	9.8	10.3	-0.9	6.0	8.8	27.5	-0.6
Public administration and defense	286.8	218.2	112.1	419.9	2.8	6.2	1.8	-25.2	1.0	2.9	1.6	-5.7
Education	289.3	180.2	**122.6**	**345.5**	-15.7	9.2	12.4	21.3	-5.1	5.4	11.3	6.6
Human health and social work activities	450.0	161.5	107.4	306.3	-5.0	-3.1	0.4	13.1	-1.1	-1.9	0.4	4.5
Arts, entertainment and recreation	71.1	47.4	32.2	77.5	1.6	-8.6	3.3	4.9	2.3	-15.4	11.4	6.7
Other service activities	119.9	52.3	35.0	97.9	-6.6	-0.7	-4.2	8.0	-5.2	-1.3	-10.7	8.9

Note: A detailed breakdown by NACE classification is not possible for Bosnia and Herzegovina and Serbia. No data available for Albania.
Source: National Statistical Offices based on LFS of the respective countries.

By comparison, in the EU peer countries, employment rose by 1.2 percent in Hungary and 2.2 percent in Croatia; in Bulgaria – which reported the highest growth in this group of countries a year earlier – employment declined slightly in 2018. In all four countries, jobs were lost in agriculture, but increased in industry (with the exception of Bulgaria). In Croatia, additional jobs were also created in construction, ICT, and public services; in Austria in trade and financial services;

and in Hungary in construction, trade, and public services. In Bulgaria, the decline of employment in agriculture and trade was partly offset by jobs created in construction, administrative and support services and education and public services.

Figure 7 / Contribution to employment growth by industry, from 2017 Q2 to 2018 Q2, in percentage points



Note: A – Agriculture, B-E – Industry, F – Construction, G – Trade, H – Transport and storage, I – Accommodation, J – Information and communication, K-N – Financial services, O-U – Public services. BA – refers to contributions April 2018 vs April 2017.
Source: wiiw Annual Database, national statistical offices and Eurostat.

Women experienced a faster employment growth (1.4 percent) than men (0.9 percent) in the Western Balkans, but differences existed across countries. Between 2017 Q2 and 2018 Q2 in Albania and North Macedonia, women had larger gains in employment than men (Table 2). The largest difference was in Albania, where women experienced a 5.4 percent growth in employment compared to 1.6 percent for men. In Bosnia and Herzegovina, Montenegro, and Serbia, however, male employment increased at a higher rate than female employment. The largest difference between men and women occurred in Montenegro, where a 4.8 percent growth in employment was found for men versus 1.4 percent for women. Kosovo reported an overall decrease in employment, and women experienced a slightly larger decline compared to men. In the peer countries, employment growth was substantially higher for women than for men in Croatia and Hungary, but the opposite was true in Austria. In Bulgaria, which experienced an overall decline in employment, the drop was larger for women than for men.

Table 2 / Employment growth, from 2017 Q2 to 2018 Q2

Table 2.1 / Employment growth in thousands

		Gender		Age			Education		
	Total	Male	Female	15–24	25–54	55–64	Low	Medium	High
Western Balkans	68.0	31.2	36.8	27.7	6.1	22.1	-54.6	63.4	59.2
Albania	38.7	10.9	27.9	23.3	-22.9	20.0	3.5	23.6	11.6
Bosnia and Herzegovina	6.8	6.2	0.6	7.7	0.0	1.4	-17.0	21.6	2.1
Montenegro	7.6	6.2	1.4	5.2	-0.1	1.5	2.8	3.6	1.2
North Macedonia	15.2	6.4	8.8	-2.9	8.0	4.8	7.9	13.0	-5.8
Serbia	15.8	14.1	1.8	2.8	28.1	-5.3	-33.5	8.2	41.2
Kosovo	-16.2	-12.6	-3.5	-8.3	-7.1	-0.4	-18.4	-6.6	8.8
Austria	54.4	44.0	10.5	-11.0	11.7	51.4	11.1	39.9	3.5
Bulgaria	-13.7	-2.6	-11.1	-21.5	-12.8	19.5	-3.6	-26.4	16.2
Croatia	35.5	8.0	27.6	-16.6	27.4	20.5	8.1	-10.8	38.3
Hungary	55.0	25.5	29.5	-7.0	43.9	10.5	-2.7	34.4	23.4

Table 2.2 / Employment growth in %

		Gender		Age			Education		
	Total	Male	Female	15–24	25–54	55–64	Low	Medium	High
Western Balkans	1.1	0.9	1.4	6.7	0.1	2.1	-3.8	1.9	4.2
Albania	3.3	1.6	5.4	24.6	-2.7	10.0	0.6	5.6	5.2
Bosnia and Herzegovina	0.8	1.2	0.2	12.8	0.0	0.9	-12.2	4.0	1.6
Montenegro	3.3	4.8	1.4	28.2	0.0	4.4	11.4	2.6	1.8
North Macedonia	2.1	1.4	3.0	-6.2	1.4	4.4	6.0	3.2	-2.9
Serbia	0.5	0.9	0.1	1.8	1.4	-1.1	-6.4	0.5	5.8
Kosovo	-4.5	-4.4	-4.7	-20.1	-2.7	-0.7	-29.1	-3.1	10.5
Austria	1.3	2.0	0.5	-2.3	0.4	9.0	2.1	1.8	0.2
Bulgaria	-0.4	-0.2	-0.7	-14.2	-0.5	3.4	-1.0	-1.5	1.6
Croatia	2.2	0.9	3.7	-12.6	2.2	8.5	6.1	-1.0	8.4
Hungary	1.2	1.1	1.5	-2.3	1.3	1.5	-0.5	1.3	2.0

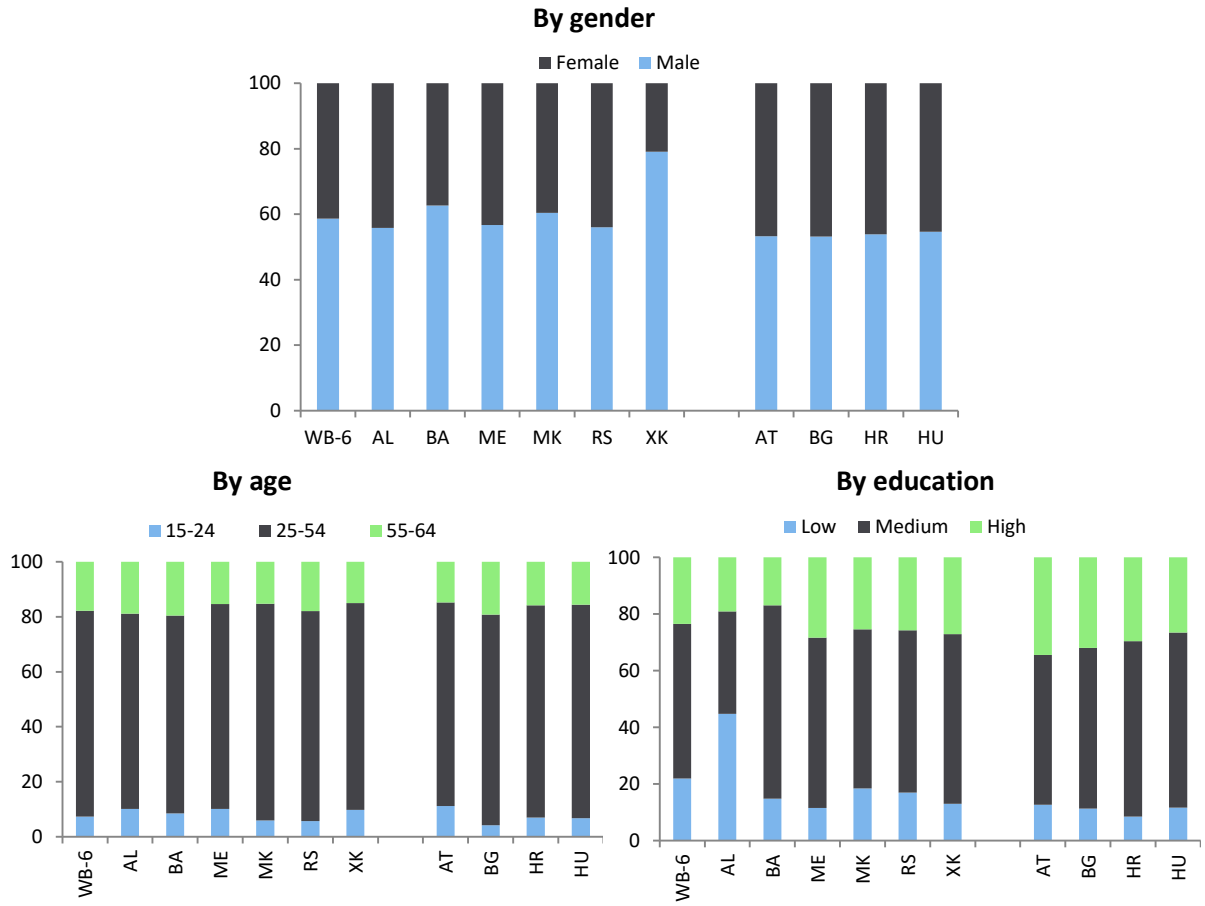
Note: Data on the educational structure are based on the International Standard Classification of Education (ISCED), 2011: level 0–2: early childhood education and primary education; level 3–4: lower secondary education and upper secondary education and post-secondary non-tertiary education; level 5–8: short-cycle tertiary education, bachelor or equivalent, master or equivalent, doctoral or equivalent.
Source: SEE Jobs Gateway, based on data provided by national statistical offices and Eurostat.

Between the second quarter of 2017 and the second quarter of 2018, employment gains in the Western Balkans were larger for younger (15–24 years) and older (55–64 years) age groups, but negligible for the prime-age group (25–54 years), with the exceptions of Serbia and North Macedonia. Youth employment registered a notable increase in Montenegro, Albania, and Bosnia and Herzegovina, but decreased significantly in Kosovo (Table 2). The older age group experienced growth in employment, especially in Albania, but also in North Macedonia and in Montenegro. In the peer countries, youth employment fell, particularly in Bulgaria and Croatia, but gains were reported among the older age group, especially in Austria.

Employment rose most among those with medium levels of education (except Kosovo) and those with high levels of education (except North Macedonia). Albania, North Macedonia and especially Montenegro reported increases in the employment of those with low levels of education (Table 2), whereas in Bosnia and Herzegovina, Serbia and Kosovo jobs of the low-educated were lost. In the peer countries, employment gains were largest among those with high levels of education (except Austria). Employment fell among the low-educated in Bulgaria and Hungary and among the medium-educated in Bulgaria and Croatia.

The share of employed males in the Western Balkans remained similar to 2017 Q2 stable at 59 percent in 2018 Q2, versus 53 percent in the peer countries, reflecting the comparatively lower employment rate of women in the Western Balkan countries (Figure 8). The share of employed males was greater than the regional average in Bosnia and Herzegovina, North Macedonia, and especially Kosovo, where men accounted for 79 percent of the employed in the second quarter of 2018. Differences between men and women were similar in all four peer countries.

Figure 8 / Employment structure 2018 Q2, shares in %



Note: For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Prime age workers (25–54 years) represented 75 percent of the employed in the Western Balkan countries, ranging from 71 percent in Albania and Kosovo to 79 percent in North Macedonia. The share of employed young people was lowest in Serbia and North Macedonia (close to 6 percent each) and highest in Albania, Montenegro and Kosovo (about 10 percent each). The share of the older age group in employment varied from 15 percent each in Kosovo, Montenegro, and North Macedonia to almost 20 percent in Bosnia and Herzegovina and 18 percent in Serbia. In the EU peer countries, the share of the employed in the prime-age group was on average higher (75 percent) to that in the Western Balkan countries. The share of employed youth was highest in Austria (11 percent) and lowest in Bulgaria (4 percent). The share of the employed in the oldest age group was highest in Bulgaria (19 percent) and 14-16 percent in the remaining countries.

Those with medium levels of education accounted for the largest share of total employment (55 percent) in the Western Balkan countries. Those with low and high levels of education represented shares of 22 percent and 23.5 percent, respectively. There was, however, substantial variation across countries. Albania stands out with the highest share of the low-educated (45 percent) and the smallest share of medium-educated workers (36 percent). Bosnia and Herzegovina had the largest portion of the medium-educated (more than two thirds of total employment), while Montenegro had the largest portion of the highly-educated (28 percent). In the peer countries, the share of those with medium levels of education (the largest educational group) ranged from 53 percent in Austria to 62 percent in Croatia. The employment share of the highly-educated varied from 26.5 percent in Hungary to almost 34.5 percent in Austria and among the low-educated between 8.5 percent in Croatia and 12.6 percent in Austria.

EMPLOYMENT RATES

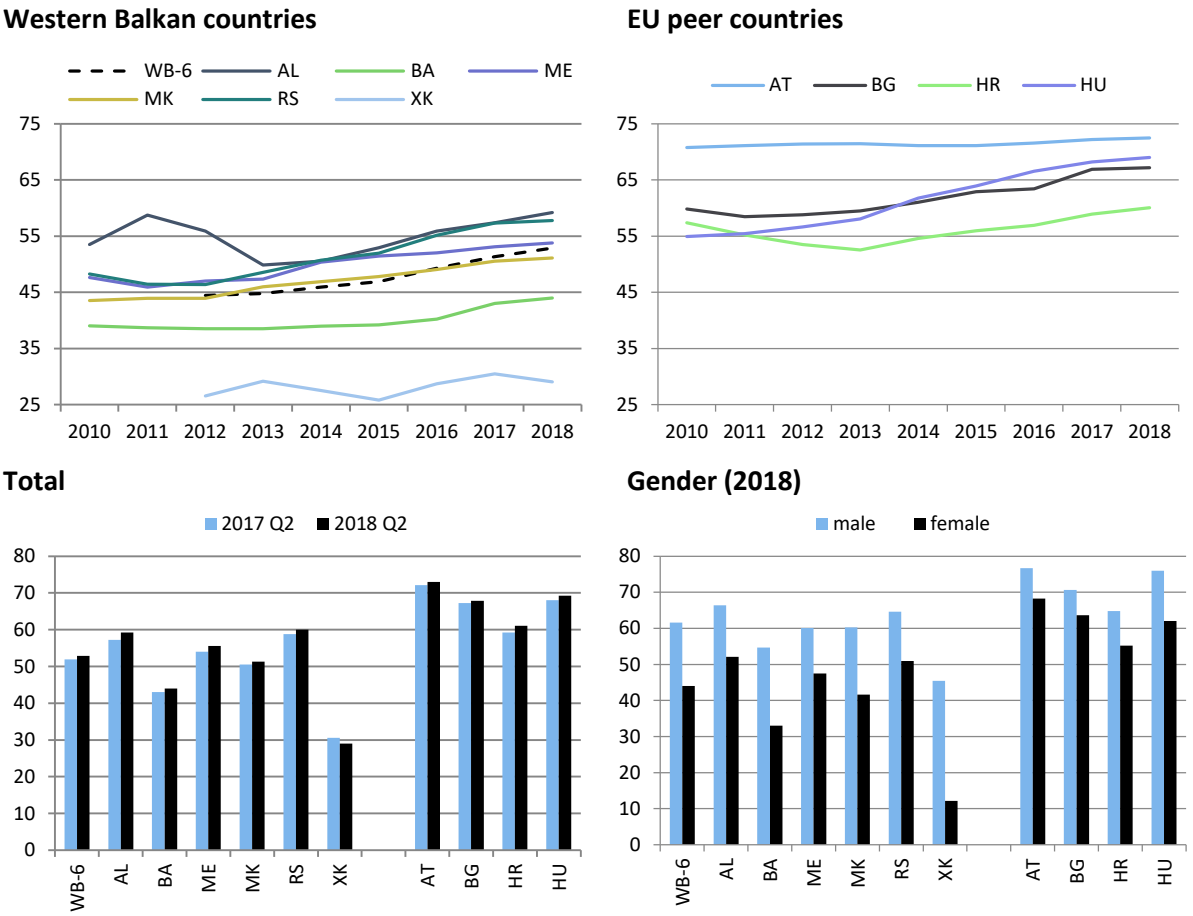
With the exception of Kosovo, between 2017 Q2 and 2018 Q2 employment rates (15-64 years) increased in all Western Balkan countries, but were still far below European standards (Figure 9). For the six Western Balkan countries as a whole, 52.9 percent of the population aged 15–64 years was employed in the second quarter of 2018, but there were large differences across the region, ranging from 29 percent in Kosovo to close to 60 percent in Albania and Serbia. In 2018, the employment rates were above the 2010 level in all countries, and grew most in Serbia and North Macedonia (about 8–10 percentage points). For the peer countries, employment rates varied between 61 percent in Croatia and 73 percent in Austria. The employment rates were above the 2010 level in all countries, and grew most in Hungary (14 percentage points)[10] and Bulgaria (7 percentage points); in Austria, which started from a relatively high level, the employment rate increased by almost 2 percentage points and in Croatia by 2.6 percentage points to 61 percent, representing the lowest level among the peer countries.

Employment rates increased between 2017 Q2 and 2018 Q2 for men and women throughout the region (except Kosovo), but remained low compared to the EU peer countries. The employment rate reached a regional average of 61.6 percent for men and 44.1 percent for women in the second quarter of 2018. The figures varied across countries, with female employment rates ranging from 52.1 percent in Albania to 12.2 percent in Kosovo. Male employment rates varied from 65-66 percent in Albania and Serbia to 45.3 percent in Kosovo. In the peer countries, female employment rates varied between 55.2 percent in Croatia and 68.3 percent in Austria, and male employment rates ranged from 64.8 percent in Croatia to 76-77 percent in Hungary and Austria.

Between 2010 and 2017, the gender employment gap narrowed in Albania, Serbia and Montenegro. In the second quarter of 2018, the biggest gaps were reported for Kosovo and Bosnia and Herzegovina, with gender gaps as high as 33.3 percentage points and 21.7 percentage points, respectively. Serbia, by contrast, reported the smallest gap (13.5 percentage points). In the peer countries, differences between the male and female employment rates were smaller than in the Western Balkan countries, with the exception of Hungary (13.6 percentage points).

[10] In Hungary, the introduction of a public works program in 2011 has contributed significantly to the strong employment increase/unemployment decrease over recent years. In the first three quarters of 2018, public works accounted for 3.4 percent of total employment. In addition, many people have left the country to work abroad.

Figure 9 / Employment rates (15–64 years), in %

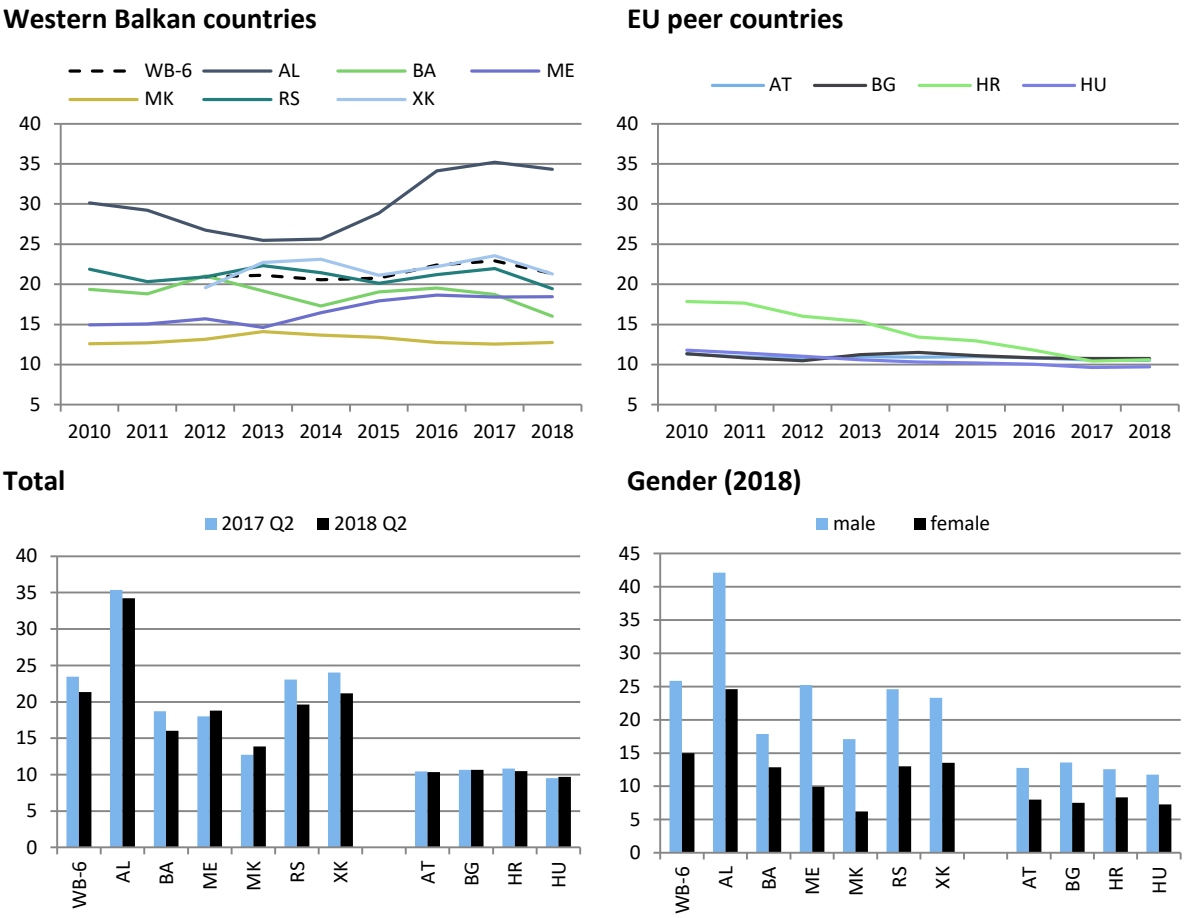


Note: Data for 2018 refer to the average of the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

SELF-EMPLOYMENT

Amid an overall increase in employment, the number of self-employed declined by around 8 percent or 125,000 people between 2017 Q2 and 2018 Q2. Self-employment across the region declined to an average of 21.3 percent. As Figure 10 shows, changes in self-employment varied across the Western Balkans: it declined most in Serbia, Kosovo, and Bosnia and Herzegovina, and increased slightly in Montenegro and North Macedonia. In 2018, self-employment was highest in Albania (34.2 percent of total employment), followed by Kosovo (21.2 percent), Serbia, and Montenegro (both around 19 percent). By contrast, with around 14 and 16 percent of total employment, respectively, self-employment was lowest in North Macedonia and Bosnia and Herzegovina. Self-employment did not significantly change in the peer countries between 2017 Q2 and 2018 Q2, amounting to approximately 10 percent – a level of around a third to half of the self-employment reported for the Western Balkans.

Figure 10 / Self-employment, share of total employment (15–64 years), in %



Note: Data for 2018 refer to the average of the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

The incidence of self-employment was markedly higher among men than among women, both across the Western Balkans and in the peer countries. The difference in self-employment shares between men and women was highest in Albania and Montenegro, followed by Serbia and North Macedonia. By contrast, the discrepancy between men and women in the incidence of self-employment was lowest in Bosnia and Herzegovina and comparable to that in the EU peer countries.

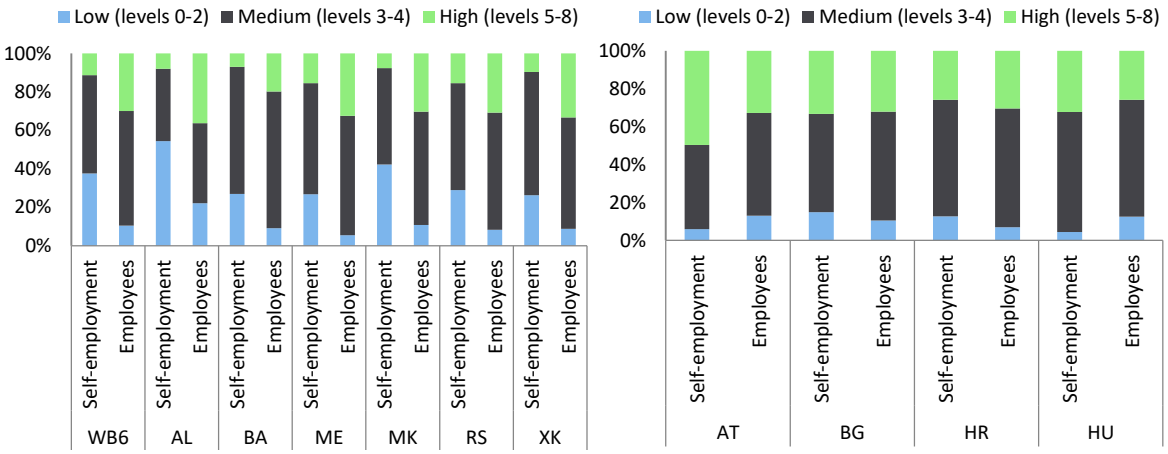
On average, about half of the self-employed in the region had medium levels of education, while 40 percent had low levels and just 10 percent had high levels (Figure 11). This differs markedly from the educational level of employees (waged workers), where 10 percent had low levels of education and 30 percent had a high level (tertiary education), while almost 60 percent had medium levels of education (lower secondary to post-secondary).

In all countries in the region except Albania, the largest portion of the self-employed had medium levels of education. In Bosnia and Herzegovina and Montenegro, this group constituted close to two thirds of the self-employed in the second quarter of 2018. In Albania, the majority of the self-employed had low levels of education. Montenegro and Serbia recorded the highest shares of highly-educated people among the self-employed, with around 15 percent each. By contrast, close to one third of employees had a high level of education in Montenegro, North Macedonia, Serbia

and Kosovo and in Albania even 37 percent. In Bosnia and Herzegovina close to 20 percent had tertiary education. The proportion of the low-educated is substantially lower among employees than among the self-employed, ranging from 5 percent in Montenegro to 11 percent in North Macedonia. Albania stands out with a share of 22 percent. Close to 60 percent of the employees had medium levels of education, exceptions being Bosnia and Herzegovina (71 percent) and Albania (42 percent).

For comparison, in the EU peer countries, those with medium levels of education comprised the largest portion of the self-employed, followed by the highly-educated. The sole exception was Austria where the opposite was true. Differences between the educational level of self-employed and employees were less pronounced in the peer countries than in the Western Balkans, only Austria stands out.

Figure 11 / Self-employed and employees by educational attainment (15-64 years), 2018 2Q, in %



Note: For the definition of the educational structure, see Table 2.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

TEMPORARY AND PART-TIME WORK

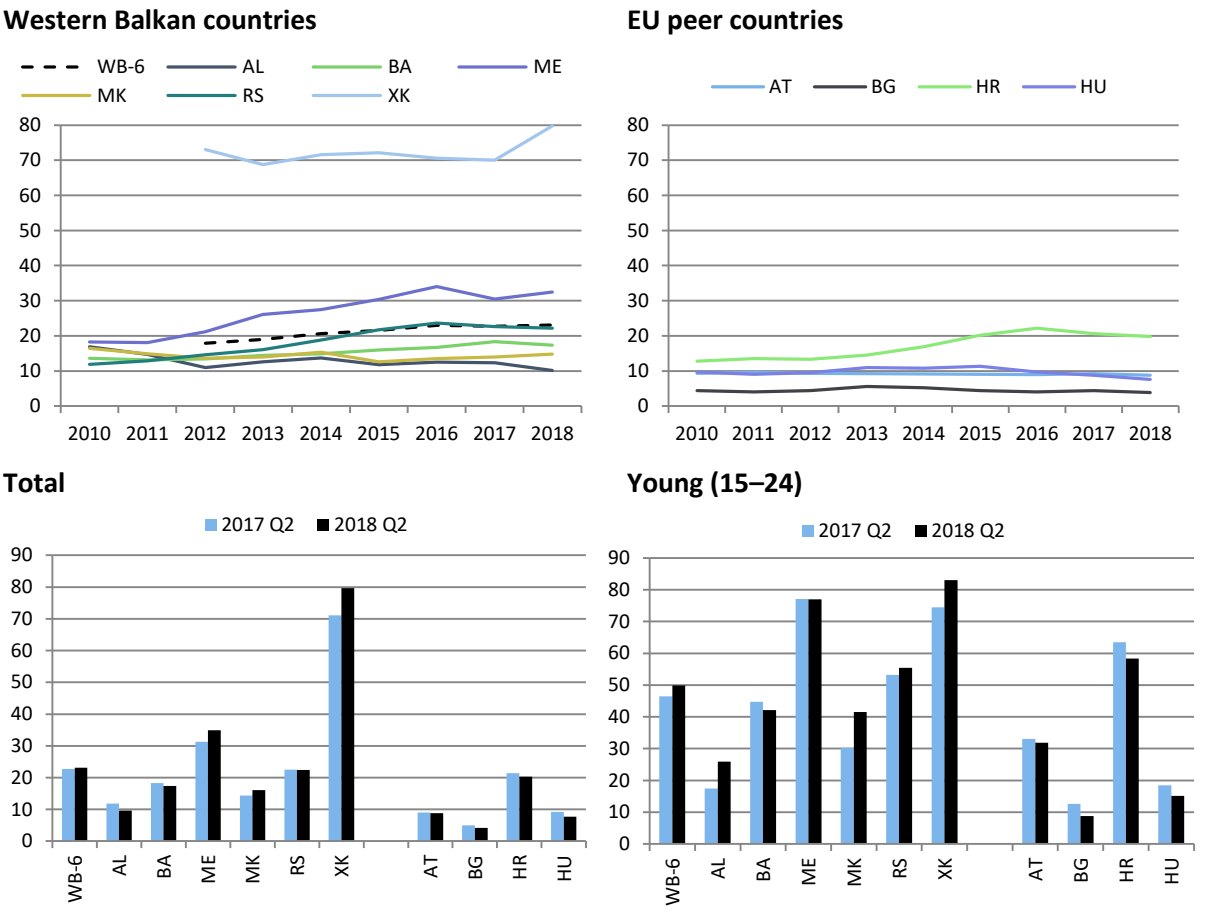
Temporary contracts have become more common across the Western Balkans since 2012; on average, almost every fourth employee had a temporary contract in 2018 Q2. In Figure 12, between the second quarter of 2017 and the second quarter of 2018, temporary employment increased most in Kosovo (by almost 10 percentage points), followed by Montenegro and North Macedonia (by around 4 and 2 percentage points). It declined in the remaining Western Balkan countries, especially in Albania. By comparison, temporary employment fell in all EU peer countries between the second quarter of 2017 and the second quarter of 2018, most strongly in Hungary.

In 2018, the prevalence of temporary contracts varied widely across the Western Balkans: it was lowest in Albania, where every tenth employee had a temporary contract, followed by North Macedonia, where every seventh employee worked on a temporary contract basis. Temporary contracts were more widespread in Serbia and Montenegro, where every fifth and third employee, respectively, had a temporary contract. Temporary employment was most common in Kosovo, where 8 out of 10 employees worked on a temporary basis. In the EU peer countries, temporary employment was less prevalent; on average, 1 employee in 10 worked on a temporary basis.

Throughout the region, temporary employment was consistently higher for men than for women, with gender differences most pronounced in Kosovo, Albania, and Montenegro. Gender differences in temporary employment were almost non-existent in the EU peer countries (though there was a slight skew towards women in Hungary and Austria).

Temporary contracts were more common among younger workers. In the region, on average half of the young people worked on a temporary contract basis. Across all Western Balkan countries, temporary contracts were most common among the young in Kosovo and Montenegro, where 8 out of 10 young employees had temporary contracts. Temporary contracts among the young were least common in Albania, where only 1 young employee in 4 was on a temporary contract. In the EU peer countries, the prevalence of temporary contracts among the young varied to a greater extent, but was generally lower than in the Western Balkans. The only notable exception was Croatia, where around 60 percent of all young employees were on temporary contracts.

Figure 12 / Temporary employees, share of total employees (15–64 years), in %

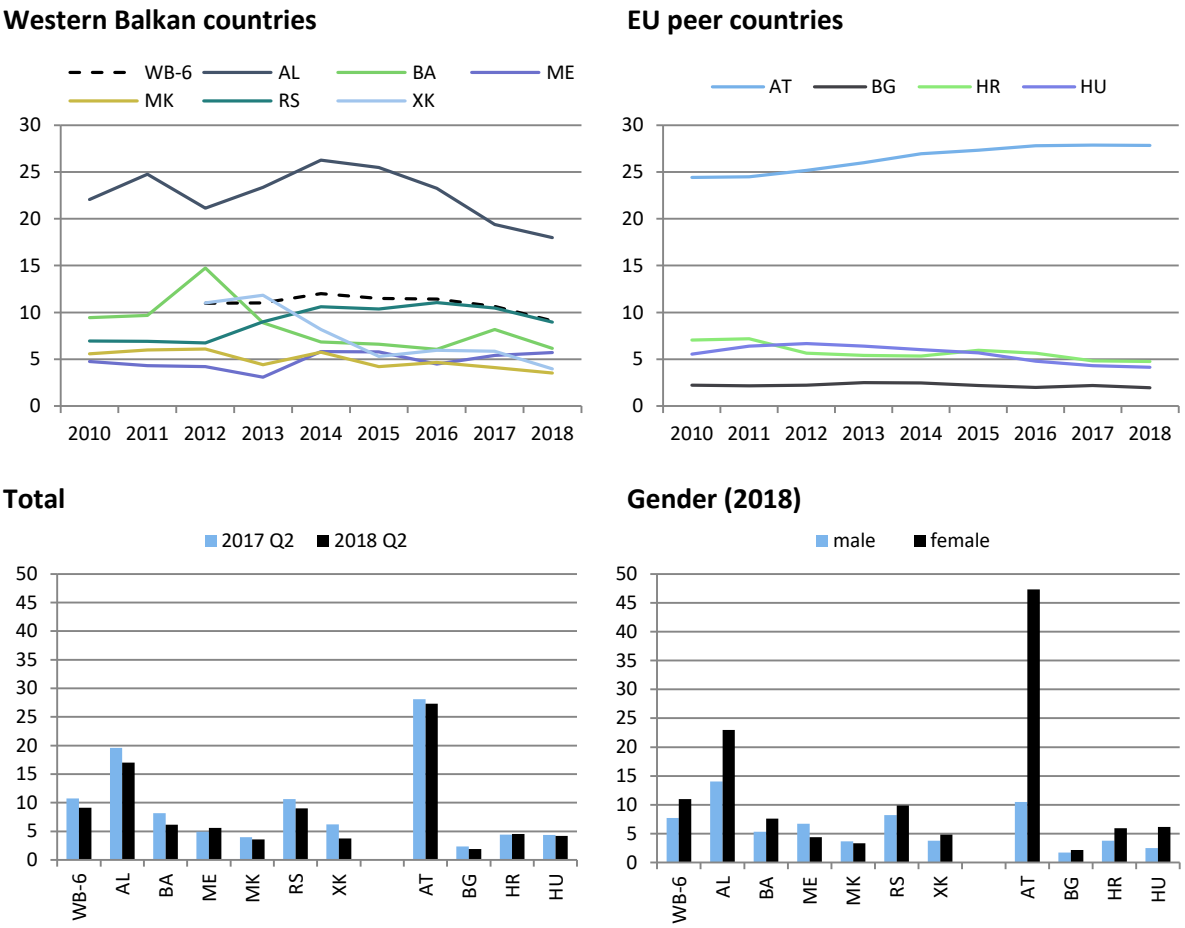


Note: Data for 2018 refer to the average of the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

The prevalence of part-time employment continued to decline in the Western Balkans, reaching the average for the EU peer countries in 2018, where overall 1 employee in 10 worked part time. The share of workers in part-time employment declined in all Western Balkan countries but Montenegro (Figure 13). In Bosnia and Herzegovina, Albania, and Kosovo, this was part of a longer-

term trend, whereas in North Macedonia and Serbia it was more of a recent development. Between 2017 and 2018, the share of workers in part-time employment decreased most in Albania and Kosovo (by around 3 percentage points). Similarly, part-time employment declined in all EU peer countries but Austria – where part-time employment has been on the increase for several years now – and Bulgaria, where it has remained fairly stable.

Figure 13 / Part-time employment, share of total employment (15–64 years), in %



Note: Data for 2018 refer to the average of the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

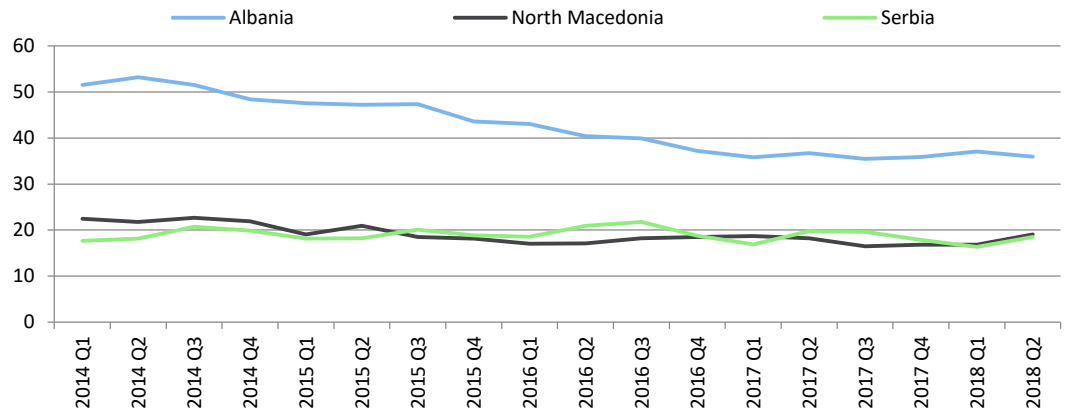
In 2018, the share of employees in part-time employment varied widely across both the Western Balkans and the EU peer countries. In the Western Balkans, part-time employment was most prevalent in Albania, where every sixth employee worked part time, and least common in North Macedonia and Kosovo, where only 4 in 100 employees held a part-time job. Among EU peer countries, part-time employment was highest in Austria, where every fourth employee worked part time. By contrast, at 2 to 5 percent, part-time employment was less common in the remaining EU peer countries. Regarding gender differences in part-time employment, women had a higher incidence of part-time employment than men, except in Montenegro and North Macedonia. Gender-specific discrepancies in part-time employment were highest in Albania and fairly low in the remaining Western Balkan countries. A similar pattern was observed for the EU peer countries, where part-time employment was disproportionately common among women. In this respect,

Austria stands out among the EU peer countries; there the incidence of part-time employment among women was almost 40 percentage points higher than among men.

INFORMAL EMPLOYMENT

The informal sector still accounts for a large proportion of employment in the Western Balkan labor markets. Data on informality are collected regularly by the labor force surveys of Albania, North Macedonia, and Serbia only; all use the comprehensive International Labour Organization (ILO) definition for informal employment. Accordingly, informal employment covers (1) Self-employed in unregistered businesses, (2) Wage workers without a written contract, and (3) Unpaid family workers. For other countries such as Kosovo and Bosnia and Herzegovina, the LFS collects information about unstable employment (Kosovo) or other categories of employment which are not part of administrative data sources but could include informal employment (Bosnia and Herzegovina). Nevertheless, according to the respective statistical offices, this information is not representative of informal employment.[11]

Figure 14 / Informal employment, share of total employment, in %

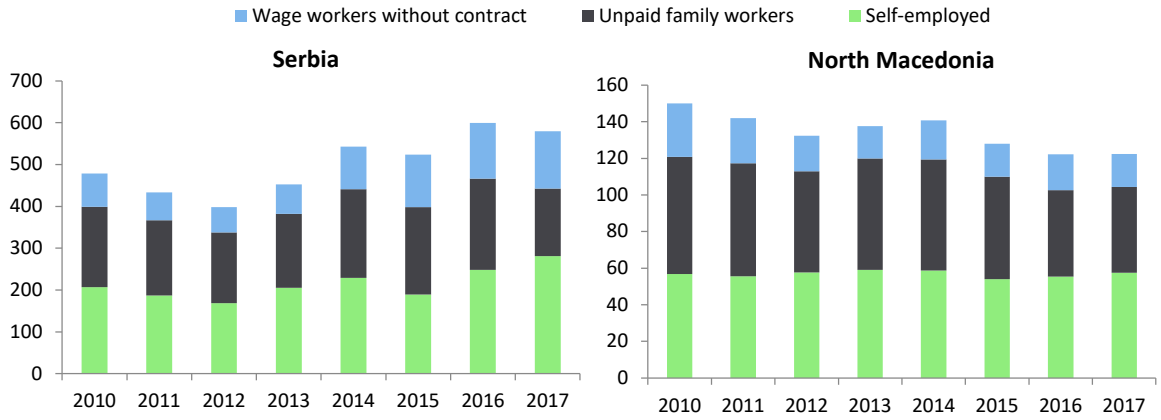


Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

In recent years, the total number of informal workers has risen, particularly in Albania and North Macedonia, but its share of total employment has declined slightly. Between the second quarter of 2017 and the second quarter of 2018, the number of informally employed rose by 10,600 and 12,800 persons, respectively, in Albania and North Macedonia, but dropped by more than 30,000 in Serbia. Nevertheless, the share of informal employment in total employment remained almost unchanged (Figure 14). Such patterns in Albania and North Macedonia resulted because the increase in total employment was relatively higher than the rise in informal employment. In the medium term, a visible improvement has occurred in Albania, especially since the launch of a campaign against informality in September 2015; the share of informal employment shrank from 50 percent in 2014 to 36 percent in the second quarter of 2018. Still, its level remains among the highest in the region: 1 employed person in 3 is still working informally, compared to 1 in 5 in North Macedonia and Serbia (an already high level of informal employment).

[11] Source: Bosnia and Herzegovina Labour Force Survey, 2018, page 20; Kosovo Labour Force Survey, Q2.2018, page 8.

Figure 15 / Individual types of informal employment in total informal employment, shares in %

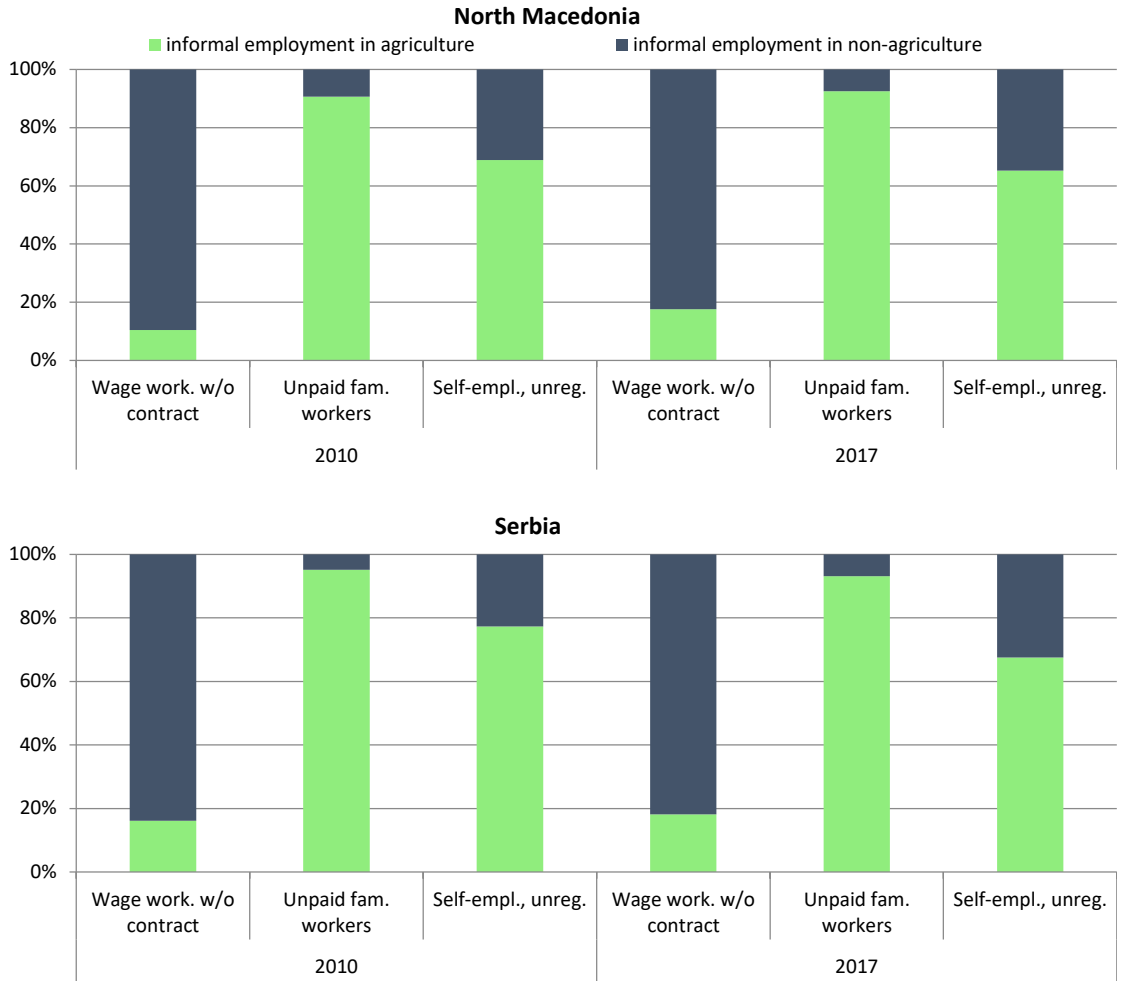


Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Self-employment continues to be the prevailing type of informal employment, whereas unpaid family work is becoming less of a source of employment. Almost half of those informally employed belong in the category of self-employment, and its share has been widening over time, both in North Macedonia and in Serbia (Figure 15). At odds with the rise in informal self-employment, the share of unpaid family workers has been falling. The share of wage workers without a work contract is lowest in Serbia and North Macedonia. Nevertheless, recent trends suggest that while the share of this type of informal employment has fallen steadily in North Macedonia, it is rising in Serbia. This indicates that, particularly in Serbia, there is increased economic vulnerability due to informal self-employment and unregistered work contracts. This will result in tangible consequences in the long run: incomplete reporting (or underreporting) of social security contributions today implies relatively low or no coverage from the social security system, low retirement benefits, and consequently a high risk of poverty and social exclusion.

There is strong segregation across sectors and categories of informal employment. Informal self-employment and unpaid family work were widespread in agriculture (Figure 16). However, detailed information available for North Macedonia and Serbia suggests that the share of unpaid family workers in agriculture has been on the decline in both countries over the 2010-2017 period, while self-employment became more important. The high level of informality of family work in agriculture is often not a voluntary choice: rather, it is driven by the atypical or non-standard form of production involved – especially the production of goods for one's own consumption in the agricultural sector (Novkovska, 2013). Consequently, family work in agriculture continues to remain undeclared, leaving those who are involved unregulated, unprotected, and at greater risk of falling into poverty. The share of wage workers without a contract in agriculture remained almost unchanged in Serbia, but almost doubled in North Macedonia. By contrast, informal employment in the non-agricultural sector is dominated by self-employment and wage workers without a contract. A work contract is frequently missing in the case of secondary occupations, seasonal and low-paid jobs (Centre for Research and Policy Making, 2014; Shurkov, 2018). Unpaid family workers play only a minor role in non-agricultural informal sector employment.

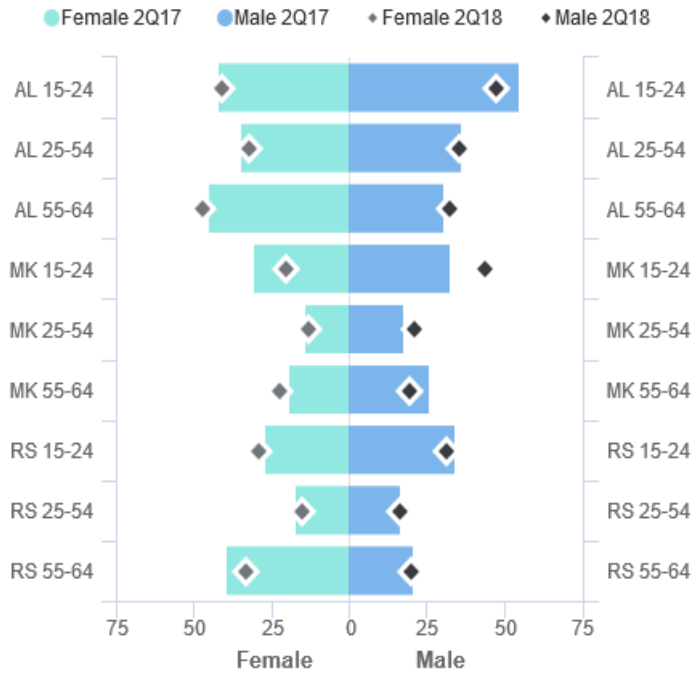
Figure 16 / Informal employment in agriculture and non-agriculture, 2010 and 2017, shares of individual categories in %



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

Young men and older women are affected most by informal employment. Among men, younger age cohorts were more likely to be informally employed than older workers (Figure 17). The period between the second quarter of 2017 and the second quarter of 2018 was characterized by a drop in the share of younger men in informal employment, except for North Macedonia. Among women, it was the older workers who were more likely to be informally employed. However, between the second quarter of 2017 and the second quarter of 2018 in North Macedonia, the share of informally employed young women (aged 15–24) dropped by at least 10 percentage points, down to 20 percent. This could be a result of a number of labor market programs initiated by the government of North Macedonia and aimed at improving the integration of young women into the labor market (ESRP Monitoring, 2018).

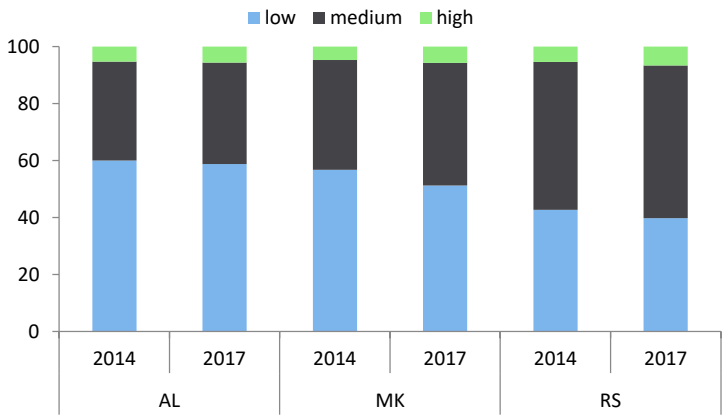
Figure 17 / Informal employment as a share of total employment of the respective gender and age group, in Albania, Serbia and North Macedonia, change between 2017 Q2 and 2018 Q2, in percentage points



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

Those with low and medium levels of education were more likely to be informally employed than those with high levels of education. Over time, however, the latter group gained in terms of share of total employed in the informal sector. Particularly in Albania and North Macedonia, more than half of the informally employed are low-educated, whereas in Serbia, the medium-educated prevail (Figure 18). Nevertheless, over time the informally employed are less likely to have low levels of education and more likely to have medium or high levels of education (particularly in Serbia).

Figure 18 / Educational attainment of persons employed in the informal sector, share in %



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

Overall, a large portion of the employed continues to be accounted for by those working in the informal sector. Informal employment is strongly associated with vulnerable groups, in this case

younger men, older women, low-educated (but also medium-educated) workers, the self-employed and, in particular, unpaid family workers in the agricultural sector. Informality in employment is becoming more pronounced in Serbia (in the form of unregistered work contracts) but is decreasing in North Macedonia. The upsurge in economic growth continues to fall far short of the level that would substantially spur formal private sector job creation and reduce poverty in the region. Consequently, the informal sector shows little sign of dissipating.

5. Unemployment

With the exception of Serbia, unemployment continued to fall across the region, reaching all-time lows in most countries; yet, unemployment levels in the Western Balkans were two to three times higher than those found in the EU peer countries. Although the economic environment was more favorable than in the preceding year, the number of unemployed fell at a slower rate – by 65,000 between the second quarter of 2017 and the second quarter of 2018, compared to 169,000 the previous year. The overall unemployment rate stood at 15.3 percent in 2018, down 0.9 percentage points from 2017 (Figure 19). This decline was most pronounced in Bosnia and Herzegovina – a drop of 2.1 percentage points against the second quarter of 2017. In Albania, North Macedonia, and Kosovo, the drop in unemployment was between 1.3 and 1.5 percentage points, and 0.7 percentage points in Montenegro. Unemployment levels remained unchanged in Serbia.

In Bosnia and Herzegovina, the drop in unemployment was partly driven by a combination of rising employment and, higher inactivity (rising by 6,800 people). In Kosovo, the decline was mainly due to rising inactivity (an increase of 81,380 people). Decreases in unemployment were also recorded in the EU peer countries, especially in Croatia, where it fell by 3.5 percentage points to 7.6 percent in the second quarter of 2018, but remaining still the highest within this group of countries. Hungary reported the lowest unemployment rate (3.6 percent). Both in the Western Balkan countries, but also in the EU peer countries of Bulgaria, Croatia, and Hungary, emigration contributed to the decline in unemployment.

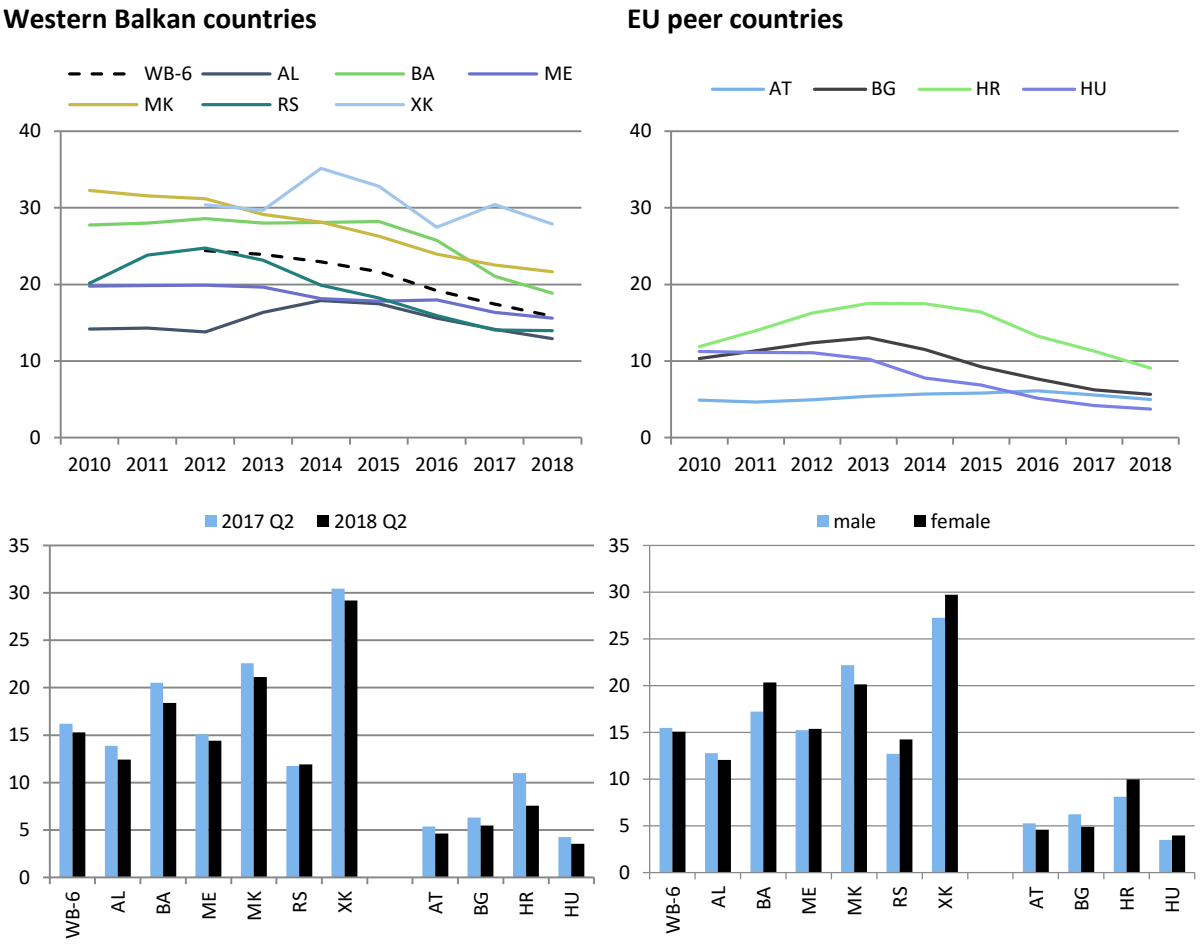
In contrast to many Eastern European EU countries, labor markets in the Western Balkans did not face significant labor shortages; nevertheless, skill shortages were reported in certain sectors such as IT personnel in Serbia[12] and Kosovo (Kosovo IT Strategy Working Group, 2016) and medical doctors in Albania, Bosnia and Herzegovina, and North Macedonia.[13] The shortage of skilled labor was exacerbated by the continued emigration of highly-educated people. The emigration potential of the Western Balkan countries remains strong. Germany, the largest destination country of migrants from the Western Balkans, is attracting people, including graduates, from all over the region. This is due in part to the "Western Balkan regulation" (*Westbalkan-Regelung*)[14], which went into effect in January of 2016 and allows Western Balkan citizens with job offers in Germany to request work visas (see also Bither and Ziebarth, 2018).

[12] https://www.serbianmonitor.com/en/serbia-lacks-15000-it-professionals/

[13] For Albania: http://www.tiranatimes.com/?p=139141; for North Macedonia: https://www.dw.com/en/balkan-medical-system-gripped-by-endemic-corruption/a-43572500; for Bosnia and Herzegovina: https://www.reuters.com/article/us-balkans-healthcare-germany-idUSKBN16G18X

[14] https://www3.arbeitsagentur.de/web/content/DE/service/Ueberuns/WeitereDienststellen/ZentraleAuslandsundFachvermittlung/Arbeit/ArbeiteninDeutschland/WestbalkanRegelung/index.htm

Figure 19 / Unemployment rates, in %



Note: Data for 2018 refer to the average of the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.

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

Box 1 / The dynamics between employment and unemployment

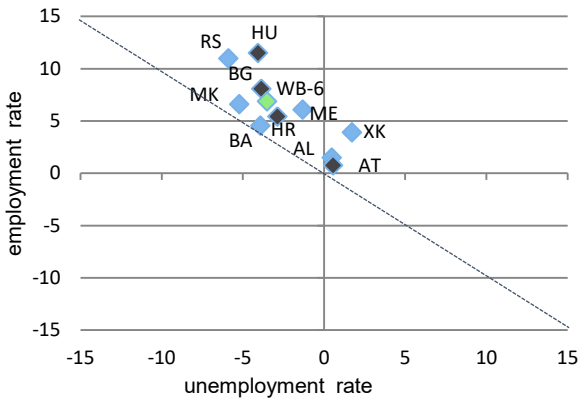
Rising employment contributed most to increases in the labor force in the majority of Western Balkan and EU peer countries. Figure 20 focuses on labor market dynamics and shows the relationship between changes in the unemployment rate (defined as the number of unemployed divided by the working-age population, 15-64 years) and the employment rate between 2012 and 2017. Under the assumption of a constant working-age population, it illustrates changes in the total labor force which resulted from the relative change in the number of employed and unemployed people (which together form the labor force).

The 45 degree line refers to instances in which the labor force remained constant since any decrease in the unemployment rate was compensated one-for-one by an increase in the employment rate, and vice versa. By contrast, as indicated by their respective positions above the 45 degree line, the labor force increased in all Western Balkan and EU peer countries, for different reasons though. In the cluster of countries in the top left of Figure 20, this was primarily driven by an increase in the employment rate which more than compensated for the drop in the unemployment rate. In this cluster of countries, the labor force increased the most in Serbia, by around 5 percentage points, which resulted from an increase in the employment rate of 11 percentage points together with a decrease in the unemployment rate of only 6 percentage points. Conversely, in Bosnia and Herzegovina, the labor force rose minimally because an increase in the employment rate of 4.5 percentage points only slightly exceeded the decrease in the unemployment rate of 4 percentage points.

By contrast, in the small cluster of countries comprising Kosovo, Albania and Austria in the top right of Figure 20, the increase in the labor force stemmed from an increase in both the employment and the unemployment rates. In this cluster of countries, Kosovo had the largest increase in the labor force of 6 percentage points which could be attributed to an increase in the employment rate of 4 percentage points and an increase in the unemployment rate of 2 percentage points.

Among the group of EU peer countries, the labor force increased the most in Hungary, primarily due to an increase in the employment rate of 11 percentage points which far exceeded the decline in the unemployment rate of 4 percentage points.

Figure 20 / Employment and unemployment shifts, 2017 vs 2012, total change in percentage points



Note: Unemployment rate defined as unemployed divided by working-age population.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Between 2012 and 2017, the youth labor force decreased in some Western Balkan and EU peer countries. In contrast to what is observable for the total labor force, the youth labor force – 15 to 24 year olds working or actively looking for work – increased in a few Western Balkan countries only, such as Montenegro, Bosnia and Herzegovina and Kosovo (see Figure 21). In Bosnia and Herzegovina and Montenegro, this was the result of an increase in the youth employment rate which overcompensated the associated reduction in the youth unemployment rate. In Kosovo, slight increases in both the youth employment and youth unemployment rates led to a small increase in the youth labor force.

By contrast, the youth labor force decreased in Albania and North Macedonia which was mainly due to an increase in inactivity among young people. In Albania, as indicated by the strong fall in the employment rate of 4 percentage points, the youth labor force decreased predominantly as a result of formerly employed young people moving into inactivity. In North Macedonia, this was primarily driven by young people moving from unemployment into inactivity as shown by the reduction in the unemployment rate of 3 percentage points as compared to the smaller increase in the

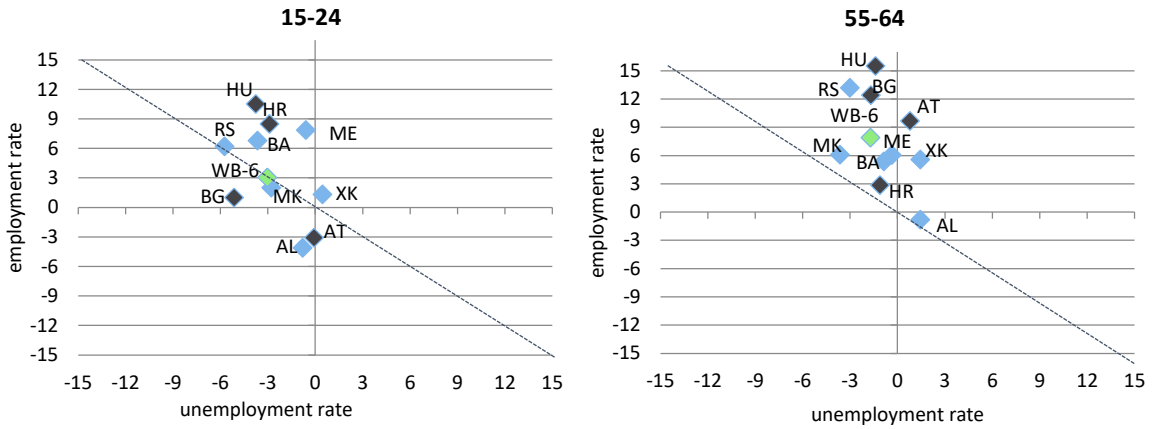
employment rate of 2 percentage points. Among EU peer countries, the youth labor force also decreased in Bulgaria and Austria. In Austria, this was solely driven by a fall in the youth employment rate.

As indicated by its position on the 45 degree line, the youth labor force in Serbia remained constant between 2012 and 2017 because the increase in the employment rate of 6 percentage points compensated one-for-one for the decrease in the unemployment rate of equal size.

Similar to what is observable for the total labor force, the labor force of the older population aged 55 to 64 increased in all Western Balkan and EU peer countries. As shown in Figure 21, except for Albania, increases in the labor force of the older population were the result of similar underlying labor market dynamics of employment and unemployment as for the total labor force. By contrast, in Albania, the rise in the labor force of the older population predominantly stemmed from an increase in the unemployment rate of around 2 percentage points which exceeded the reduction in the employment rate of around 1 percentage point.

Figure 21 / Employment and unemployment shifts, 2017 vs 2012, by age

change in percentage points



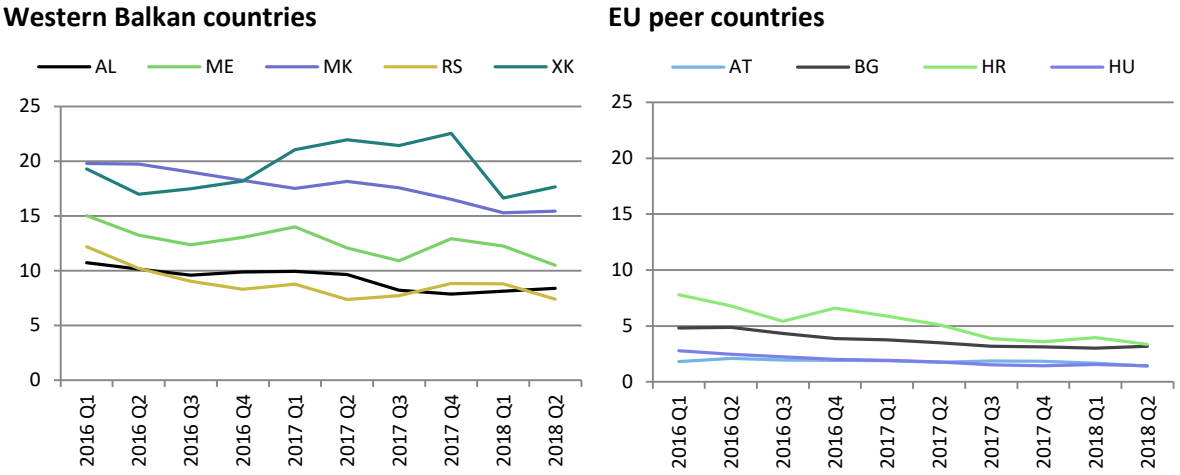
Note: Unemployment rate defined as unemployed divided by working-age population.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

LONG-TERM UNEMPLOYMENT

Despite recent declines, long-term unemployment[15] remained a persistent challenge for the Western Balkan labor markets. The number of long-term unemployed fell to 776,000 (10.5 percent of the labor force) in the second quarter of 2018, starting from a peak of 1.5 million in 2011. Serbia and Albania registered long-term unemployment rates below the region's average (at 7.4 percent and 8.4 percent respectively), whereas rates were substantially higher in Bosnia and Herzegovina and North Macedonia (15 percent each), and particularly in Kosovo (17.7 percent), see Figure 22. In the second quarter of 2018, the long-term unemployment rate fell significantly in Kosovo (4.3 percentage points) and in North Macedonia (2.7 percentage points). In the EU peer countries, too, long-term unemployment was on the decline, decreasing to 3.4 percent in both Bulgaria and Croatia, and to 1.4 percent in Austria and Hungary.

[15] Long-term unemployment refers to persons unemployed for 12 months or more.

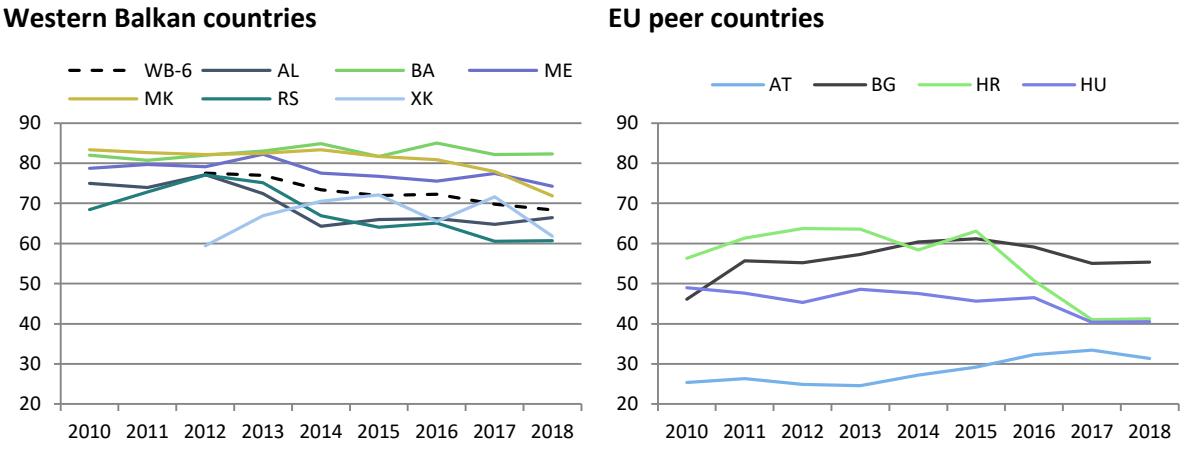
Figure 22 / Long-term unemployment rates (15+ years), in % of labor force, quarterly



Note: There are no quarterly data for Bosnia and Herzegovina. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

The fall in long-term unemployment translated into a declining share of those jobless for 12 months or more, particularly in countries reporting the highest unemployment rates in the past. Kosovo reported a decline of almost 12 percentage points against the second quarter of 2017 (Figure 23). This decrease was partly driven by a combination of rising inactivity (see above) and rising short-term unemployment. Also, in Montenegro and North Macedonia, the proportion of long-term unemployed fell substantially – by 7.4 percentage points in both cases. In Serbia, it remained unchanged at close to 61 percent and, in Bosnia and Herzegovina, at 82.3 percent – considerably higher than the regional average (68.4 percent). The share of long-term unemployed also decreased in Austria, Croatia, and Hungary, but rose by 3 percentage points in Bulgaria. Overall, the share of long-term unemployment in the EU peer countries was much lower than in the Western Balkans, ranging from 30.7 percent in Austria to 58.3 percent in Bulgaria.

Figure 23 / Long-term unemployed as a share of total unemployed, in %

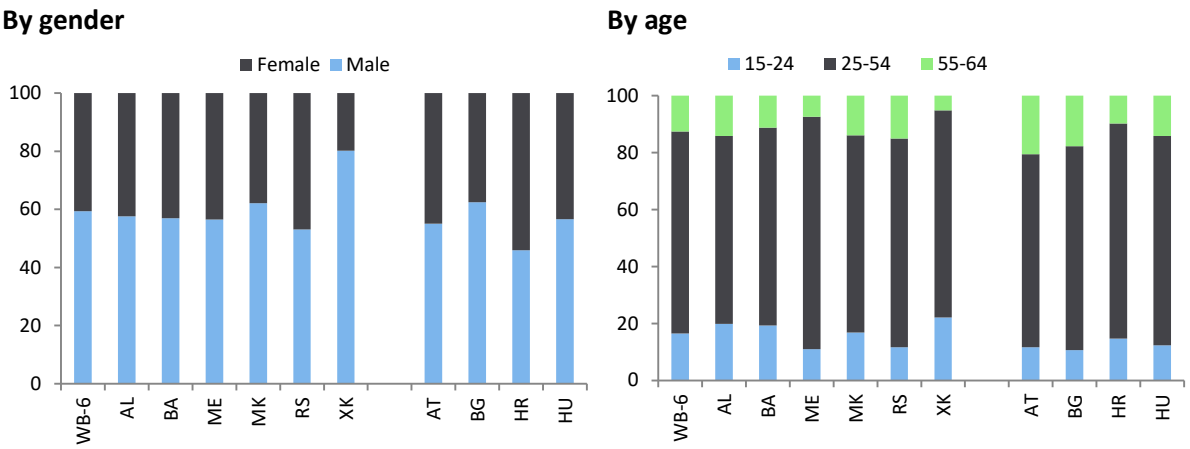


Note: Data for 2018 refer to the average of the first two quarters. Data for 2018 refer to the first two quarters. Data for Kosovo available from 2012. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Men accounted for the bulk (60 percent) of the long-term unemployed in the Western Balkan countries (Figure 24). There were, however, substantial variations across countries; the highest share of men among the long-term unemployed was found in Kosovo (80 percent) – an even higher share than a year ago – and the lowest in Serbia (53 percent). With the exception of Croatia (46 percent), men were more affected than women by long-term unemployment in the EU peer countries, ranging from 62 percent in Bulgaria to 55 percent in Austria.

The prevalence of long-term unemployment in the Western Balkans was highest for prime-aged people (25–54 years), who comprised on average 71 percent. In Montenegro, this age group accounted for 82 percent of the long-term unemployed, as against 66 percent in Albania (Figure 24). Young people were affected most in Kosovo (22 percent), Albania, and Bosnia and Herzegovina (19-21 percent), and least in Montenegro (11 percent). The share of the older age group (55–64 years) among the long-term unemployed was highest in Albania, North Macedonia and Serbia (15 percent each) and lowest in Kosovo (5.1 percent). By comparison, in the EU peer countries the share of prime-aged people among the long-term unemployed varied from 67.8 percent in Austria to 75 percent in Croatia. Young people were affected most in Croatia while the older age group was affected most in Bulgaria and Austria, accounting for around 18 and 21 percent of the unemployed respectively – almost double the share in the Western Balkan countries.

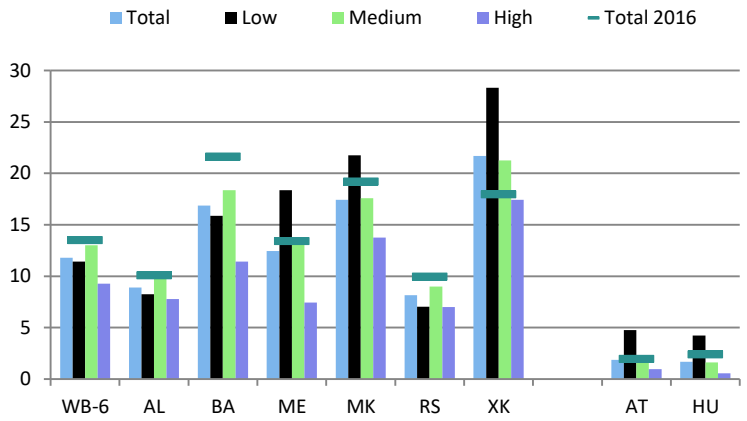
Figure 24 / Structure of long-term unemployment, 2018 Q2, shares in %



Note: For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

The risk of long-term unemployment in the Western Balkan countries was on average highest for those with medium levels of education, but there were key differences across countries (Figure 25). In Montenegro, North Macedonia and Kosovo, the incidence of long-term unemployment was highest for the low-educated, while the medium-educated were affected most in Albania, Bosnia and Herzegovina, and Serbia. In the two peer countries for which data are available – Austria and Hungary – long-term unemployment was highest among those with the lowest levels of education.

Figure 25 / Long-term unemployment rate by educational attainment (15+ years), 2017, in %

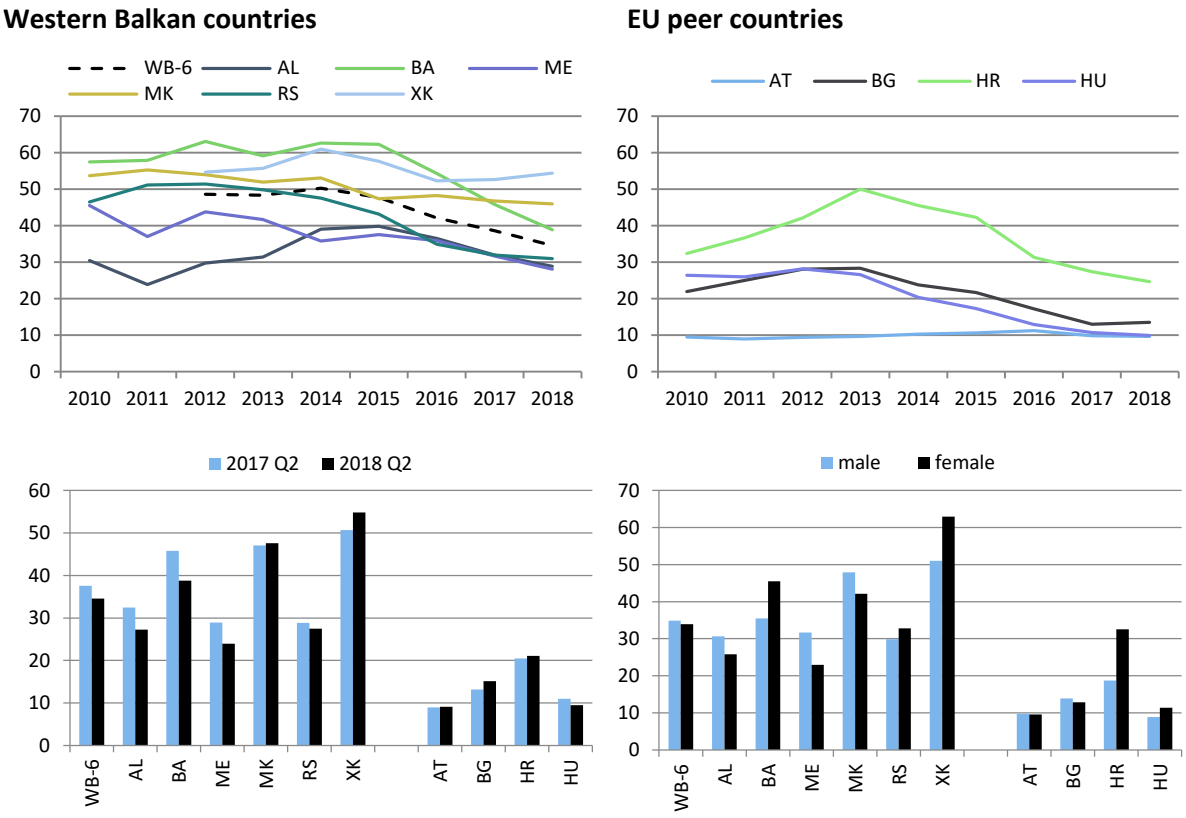


Note: for educational levels, see the footnote to Table 2. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

YOUTH UNEMPLOYMENT

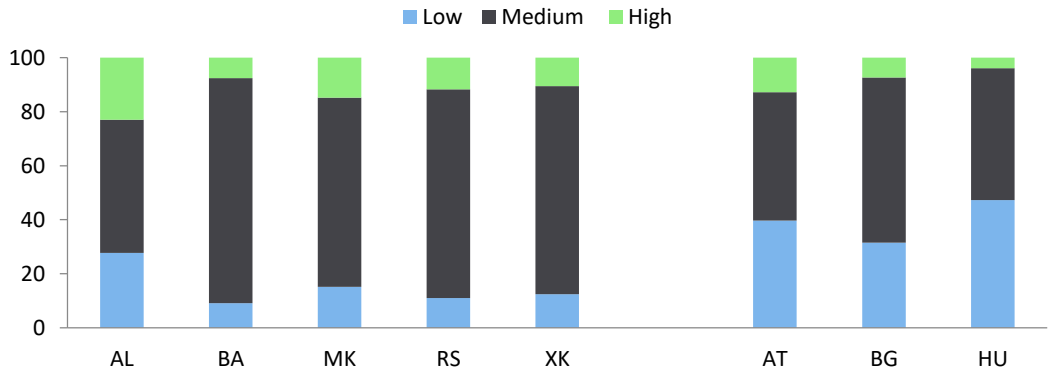
Youth unemployment began to decrease in 2015 in the Western Balkan region as a whole, but was almost four times higher than in Austria and Hungary – two of the peer countries. In the second quarter of 2018, the youth unemployment rate was 34.6 percent, down 3 percentage points from the second quarter of 2017 (Figure 26). Since 2012, youth unemployment rates dropped significantly throughout the region, but especially in Bosnia and Herzegovina, Montenegro, and Serbia. In 2018, youth unemployment was below its 2012 level, with the sole exception of Kosovo, where it remained stagnant. Though declining, unemployment among young people remained high in several countries of the region, ranging from 24 percent in Montenegro to 55 percent in Kosovo. Youth unemployment also dropped in most peer countries since 2013/2014, except for Austria (where it began at a low level). In the second quarter of 2018, youth unemployment ranged from 9 percent in Austria to 21 percent in Croatia.

Figure 26 / Youth unemployment rates (15–24 years), in %



Note: Data for 2018 refer to the average of the first two quarters. Data for Kosovo are available from 2012. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Figure 27 / Educational attainment of unemployed youth, 2018 Q2, in %



Note: Missing information for Montenegro due to inaccurate data. For country-specific methodologies, see the statistical annex of the respective country. Educational categories refer to the ISCED classification. See, footnote Table 2 above.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

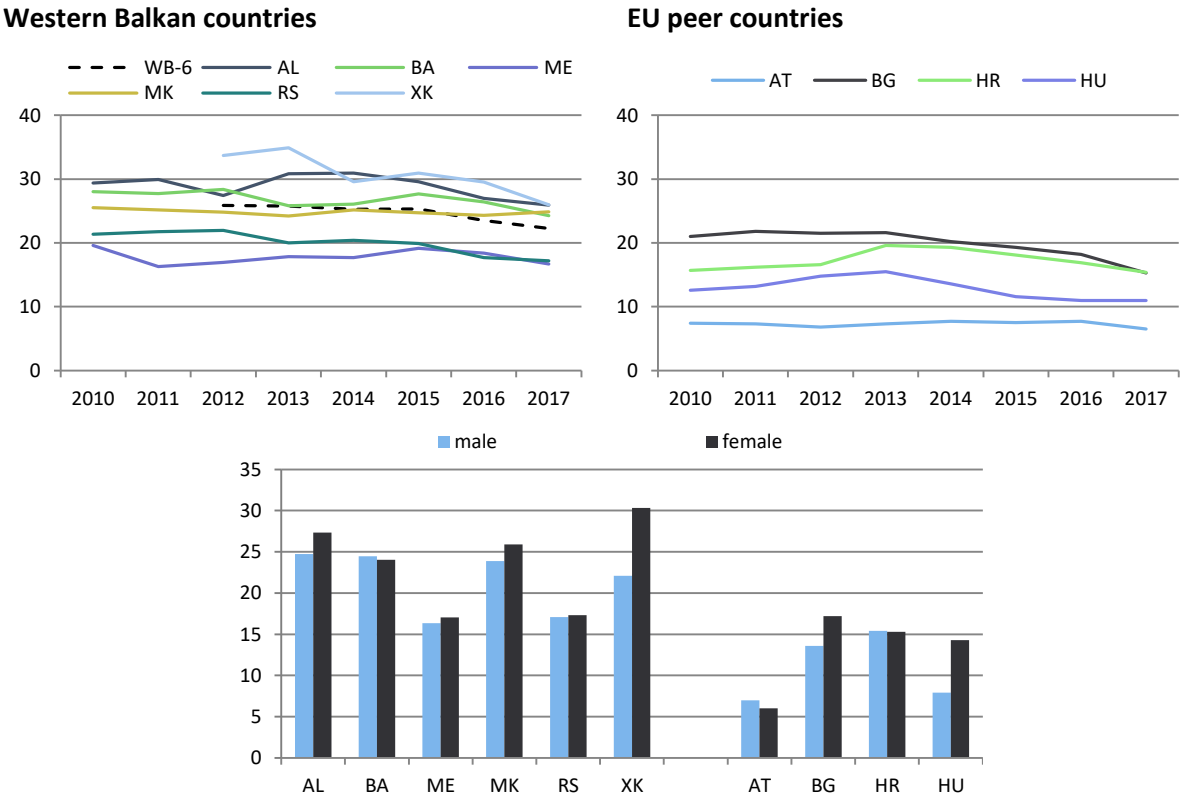
In terms of education, the largest share of unemployed young people in the Western Balkan countries was those with medium levels of education, which was also the case in the peer countries, especially in Croatia (Figure 27). The percentage of unemployed young people who had medium levels of education ranged from 50 percent in Albania to 83 percent in Bosnia and Herzegovina. In all countries except Serbia, the low-educated group was the next most likely to be unemployed (hovering at around 10–15 percent in all countries bar Albania); in Serbia, it was those with the

highest levels of education. In the peer countries the low-educated group was next to the medium-educated, but their share was significantly higher than in the Western Balkan countries. In Austria, about 40 percent of unemployed young people had low levels of education.

YOUNG PEOPLE NEITHER IN EMPLOYMENT NOR IN EDUCATION AND TRAINING

As with the high unemployment rates among young people, the rates for young people neither in employment nor in education and training (NEET) were substantially higher in the Western Balkan countries than elsewhere in Europe. Despite a decline in 2017, the NEET rate averaged 22.3 percent in the Western Balkans, placing many young people at risk of poverty and social exclusion. This percentage varied from 24–26 percent in Albania, Bosnia and Herzegovina, North Macedonia, and Kosovo, to 17 percent in Montenegro and Serbia (Figure 28). In the peer countries, the highest NEET rates were reported for Bulgaria and Croatia (15 percent each), while the lowest rate was found in Austria (6.5 percent). With the exception of Bosnia and Herzegovina and Austria, the NEET rates among those aged 15–24 years were higher for young women than for young men; in Serbia and Croatia, the rates for men and women were similar. For North Macedonia, Novkovska (2017) found that the majority of NEETs (60 percent) were unemployed non-students, while the remaining 40 percent were inactive non-students. In Serbia, the shares of unemployed and inactive young people within the NEET category were equal.

Figure 28 / NEET rates (15–24 years), as % of the respective population



Note: Data for 2018 refer to the average of the first two quarters. Data for Kosovo available from 2012. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Box 2 / Youth[16] in the Western Balkans

The labor market situation of young people in the Western Balkan countries is characterized by high inactivity, persistent high levels of unemployment, high share of informal sector employment and continued emigration.

- **The labor force participation of young people in the Western Balkans was low by European standards and remained almost unchanged in recent years.** In 2018, labor force participation of the young averaged 30.5 percent and was particularly low among young women (22.5 percent). Kosovo stands out, where only 12.5 percent of young women were active. Family responsibilities, a lack of child care facilities and low levels of education were likely barriers to female labor force participation. For young people, the transition from school to work often takes up to two years (Djurić, 2016; Marjanović, 2016).
- **The employment rate of the young population in the Western Balkans was far below that of the same age group in the EU.** In 2018, the employment rate reached close to 20 percent for people aged 15-24 years (accounting for about 440,000 persons) compared with 35 percent in the EU. The employment rate was particularly low for young females (13 percent) versus 23 percent for young men. In Kosovo, only 5 percent of the respective female working-age population was employed.
- **Young people were more likely to be working on temporary contracts than adults.** In the region, one half of the young people worked on a temporary contract basis. This was most common in Kosovo and Montenegro, where 8 out of 10 young employees had temporary contracts and least common in Albania where every fourth young employee held a temporary contract.
- **A high share of young people was left with informal sector employment leaving them excluded from benefit systems.** Although steadily on the decline, almost every fourth of the young employed worked in the informal sector in Albania, and almost every third in North Macedonia and Serbia. In 2018, young men were more likely working in the informal economy than females in Albania and North Macedonia (where this share increased substantially), while in Serbia both males and females were equally affected.
- **Like overall unemployment, youth unemployment was high and persistent in the Western Balkan countries for years.** Since 2012, when half of young people were unemployed, the rate fell to 35 percent in 2018, but was still more than twice as high as the EU average. Across the region, rates ranged from 24 percent in Montenegro to about 55 percent in Kosovo.
- **Young men and women were differently affected by unemployment across the region.** The incidence of unemployment was higher for young men in Albania, Montenegro and North Macedonia, whereas young women were affected most in Bosnia and Herzegovina, Serbia and Kosovo. Gender gaps were, however, smaller than gaps in activity and employment rates.
- **Above average unemployment rates for the high-educated point to a severe skills mismatch in some Western Balkan countries.** In Albania, Bosnia and Herzegovina and Serbia, the highly-educated were affected most by unemployment, whereas the incidence for the low-educated group was highest in North Macedonia and in Kosovo. The poor quality of education, which fails to meet the demands of the labor markets, is considered one of the major causes of the high youth unemployment rate in the six Western Balkan countries (Oruc and Bartlett, 2018).
- **More than half of the young people were long-term unemployed, in Bosnia and Herzegovina close to 70 percent.** Those affected run the risk of skill loss, reduced motivation to search for employment, and potentially exiting the official labor market altogether.
- **Despite a slight decline, more than one fifth of young people (15-24 years) identified as NEETs, young people neither in employment nor in education and training.** This percentage varied from 24-26 percent in Albania, Bosnia and Herzegovina, North Macedonia and Kosovo to 17 percent in Montenegro and Serbia. Young people who are detached from jobs or education for long periods may experience difficulty reintegrating into the labor market, or even risk labor market and social exclusion. They also earn less when they do find work due to the degradation of skills. Earnings can be 20 percent less than for those who find employment sooner, and the earnings deficit can persist for a long period of time (World Bank, 2016).
- **Emigration of young people continues unabated due to high unemployment, a lack of job opportunities, and dissatisfaction with the economic situation in their home countries.** In a recent Gallup survey[17] on the "brain drain", the Western Balkan countries performed worst in Europe. The study – carried out between 2015 and 2017 – reported that 57 percent of young people from Bosnia wanted to emigrate; 52 percent from North Macedonia;

[16] Unless otherwise stated, youth refers to those aged 15-24 years.

[17] https://demostat.rs/sr/vesti/ekskluziva/srbija-medu-zemljama-sa-najvecom-pretnjom-od--odliva-mozgova-/573 and https://europeanwesternbalkans.com/2018/12/25/brain-drain-important-migration-issue-western-balkans/

48 percent from Kosovo; 46 percent from Serbia; and 25 percent from Albania. In the long run, continued emigration – especially of the young and highly-skilled – will generate mismatches between the available skill levels and the required composition of the work force in the sending country.[18]

Table 3 / Youth (15-24 years), 2018 Q2

	WB-6	AL	BA	ME	MK	RS	XK	AT	BG	HR	HU
Employment rate (% of the age group)	20.0	25.6	19.7	27.4	17.0	21.5	9.7	50.1	20.6	25.2	28.7
Unemployment rate (% of labor force)	34.6	27.3	38.8	23.9	47.6	27.5	54.9	9.1	15.2	21.1	9.5
Unemployment share (% of the age group)	10.6	9.6	12.5	8.6	15.4	8.2	11.8	5.0	3.7	6.7	3.0
Long-term unemployment share (% of total unemployment)	54.6	52.7	68.7	43.4	62.1	47.4	47.2	15.7	48.1	28.8	26.4
Temporary employment share (% of total employment)	49.9	26.0	42.1	77.0	41.6	55.4	83.0	31.9	8.8	58.3	15.2
Part-time employment share (% of total employment)	12.8	19.1	8.3	12.4	5.0	14.2	4.3	24.0	6.8	9.6	7.5
NEET rate (% of the age group)	22.3	25.9	24.3	16.7	24.9	17.2	25.9	6.5	15.3	15.4	11.0

Note: Young people neither in employment nor in education and training (NEET) rate refers to 2017.

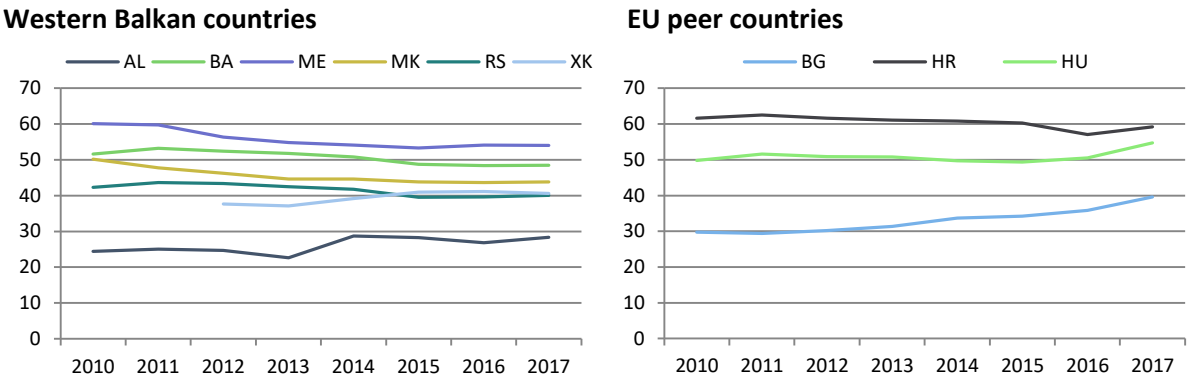
6. Wages

Wage levels across the Western Balkan countries are lower and more dispersed than among the EU peer countries. Expressed in purchasing power parities (PPP) to account for differences in price levels across countries in 2017, wage levels in all Western Balkan countries were lower than in most of the EU peer countries (Figure 29 and Table 4.1). Only Bulgaria had lower wage levels than most of the Western Balkan countries, comparable to the levels of Serbia and Kosovo. Across the Western Balkans, wage levels were highest in Montenegro and in Bosnia and Herzegovina with 55 percent and 48 percent of the Austrian wage level (the most developed among the peer countries), respectively. By contrast, Albania was bottom of the league, with average wages of around 30 percent of the Austrian level. Since 2010, wage levels – expressed in PPP and relative to the Austrian level – have increased in Albania and Kosovo but declined in the remaining Western Balkan countries, resulting in widening wage gaps with Austria over the last eight years. In the past three years, however, the average wage gap with Austria remained fairly stable. By contrast, the wage gap with Austria narrowed in the EU peer countries, particularly in Bulgaria (as part of a longer-term wage convergence process), and in Croatia and Hungary (where the wage gap with Austria started narrowing only recently).

Wage growth in the Western Balkan countries was more volatile and lower than in the peer countries. As Table 4.2 shows, between 2010 and 2017, real average monthly gross wage growth fluctuated most in Montenegro, Albania, and Kosovo, and least in Bosnia and Herzegovina. Among EU peer countries, only Hungary reported similarly volatile monthly gross wages. Over the same time period, average wage growth was below 1 percent in all Western Balkan countries, except Kosovo, where average wage growth rates were around 3 percent between 2013 and 2017. In Albania and Serbia, average wage growth was negative. By comparison, among EU peer countries during this same time frame, average wage growth was highest in Bulgaria (6.4 percent) and Hungary (2.7 percent) but negligible in Austria and Croatia.

[18] For detailed information, see World Bank (2018), Special topic: Improving data on labor mobility in the Western Balkans.

Figure 29 / Average monthly gross wages, Austria=100 (PPP EUR based)



Note: Wage data refer to register-based survey data for the Western Balkans and peer countries, except Austria, which are based on gross wages of National Accounts. Albania: methodological break 2013/2014.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat, own calculations.

Table 4 / Average monthly gross wages, total

Table 4.1 / at purchasing power parities (PPP – euro based)

	2010	2011	2012	2013	2014	2015	2016	2017
Albania	602	627	650	605	782	805	760	806
Bosnia and Herzegovina	1271	1335	1381	1382	1383	1388	1371	1376
Montenegro	1479	1497	1486	1465	1473	1517	1534	1534
North Macedonia	1235	1197	1219	1193	1215	1246	1237	1245
Serbia	1042	1095	1143	1134	1137	1126	1123	1139
Kosovo	.	.	993	992	1065	1165	1165	1153
Austria	2461	2507	2636	2671	2721	2845	2834	2841
Bulgaria	733	738	797	837	916	973	1017	1125
Croatia	1517	1567	1624	1631	1654	1714	1616	1681
Hungary	1226	1293	1342	1356	1354	1404	1433	1556

Table 4.2 / Average monthly wages (gross) at exchange rates in EUR

	2010	2011	2012	2013	2014	2015	2016	2017
Albania	252	260	270	259	325	335	334	372
Bosnia and Herzegovina	622	650	660	660	659	659	665	676
Montenegro	715	722	727	726	723	725	751	765
North Macedonia	491	497	498	504	508	522	533	547
Serbia	460	517	508	537	524	506	516	544
Kosovo	.	.	431	444	482	510	519	511
Austria	2709	2763	2839	2899	2950	3010	3082	3128
Bulgaria	331	351	374	396	420	449	485	542
Croatia	1053	1048	1047	1048	1042	1058	1029	1079
Hungary	735	763	771	777	770	800	845	961

real change (gross) in national currency, in %

	2010	2011	2012	2013	2014	2015	2016	2017
Albania	-7.0	1.5	0.9	-5.0	-0.7	0.9	-3.4	6.6
Bosnia and Herzegovina	-1.0	0.7	-0.5	0.2	0.8	1.0	2.0	0.4
Montenegro	10.6	-2.2	-3.2	-1.9	0.1	-1.1	3.5	-1.1
North Macedonia	-0.6	-2.6	-3.0	-1.6	1.3	3.0	2.2	1.2
Serbia	0.7	0.1	1.0	-1.9	-1.7	-2.4	2.6	0.9
Kosovo	.	.	.	1.2	8.1	6.3	1.5	-1.5
Austria	-0.6	-1.5	0.1	0.0	0.3	1.3	1.5	-0.2
Bulgaria	3.3	2.3	4.1	5.6	7.7	8.0	9.4	10.5
Croatia	-1.5	-0.7	-2.3	-1.5	0.0	1.6	2.5	2.6
Hungary	-3.2	1.3	-1.0	1.7	3.0	4.2	5.7	10.2

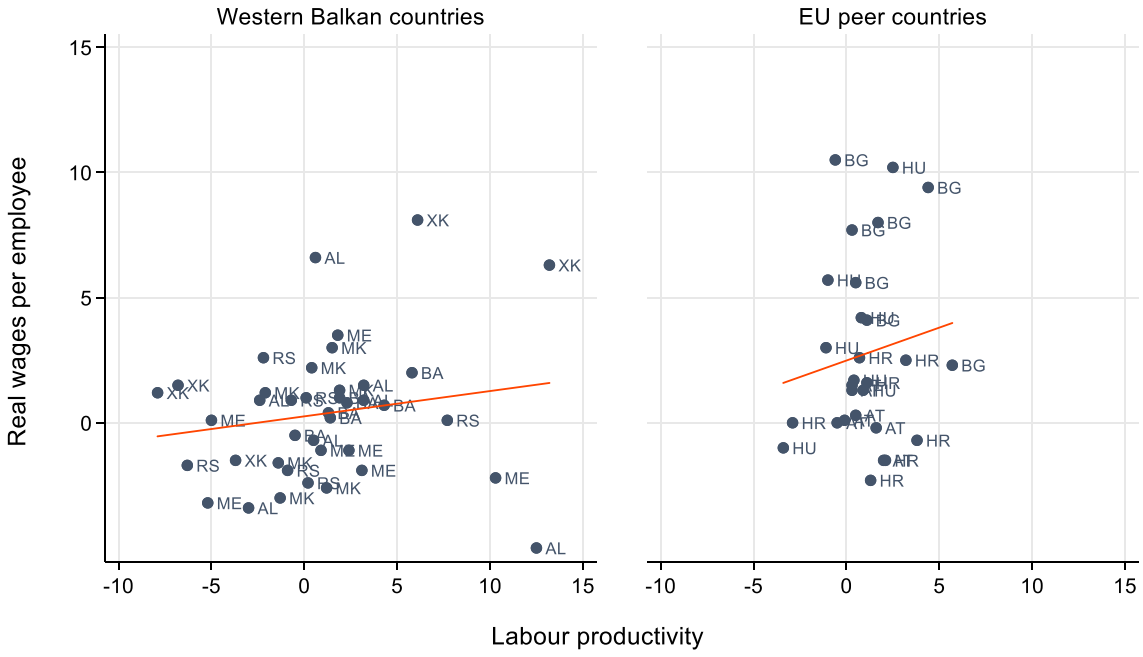
Note: Wage data are based on administrative data (enterprise surveys or tax administration data or a combination of it) for the Western Balkans and peer countries, except Austria, which is based on gross wages of National Accounts. Albania: data since 2015 refer to tax administration data; data prior to 2015 refer to SBS data.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

LABOR PRODUCTIVITY, WAGES AND UNEMPLOYMENT

In the group of Western Balkan and EU peer countries alike, the relationship between labor productivity growth and real wage growth was positive. As shown in Figure 30, between 2011 and 2017, the annual real wage and labor productivity growth rates were positively related in both country groups. As indicated by the somewhat flatter correlation line, the productivity-wage nexus was weaker in the group of Western Balkan countries than in the group of EU peer countries.

However, this differs across individual countries as in half of all Western Balkan and EU peer countries, the relationship between labor productivity growth and real wage growth was negative. Between 2011 and 2017, higher labor productivity growth rates were associated with higher real wage growth rates (and vice versa) in Bosnia and Herzegovina, Kosovo and North Macedonia (see Figure 31). By contrast, annual labor productivity and real wage growth rates moved in opposite directions in Albania, Montenegro and Serbia. Similarly, among EU peer countries, the relationship between annual labor productivity and real wage growth was positive in Croatia and Hungary but negative in Austria and Bulgaria.

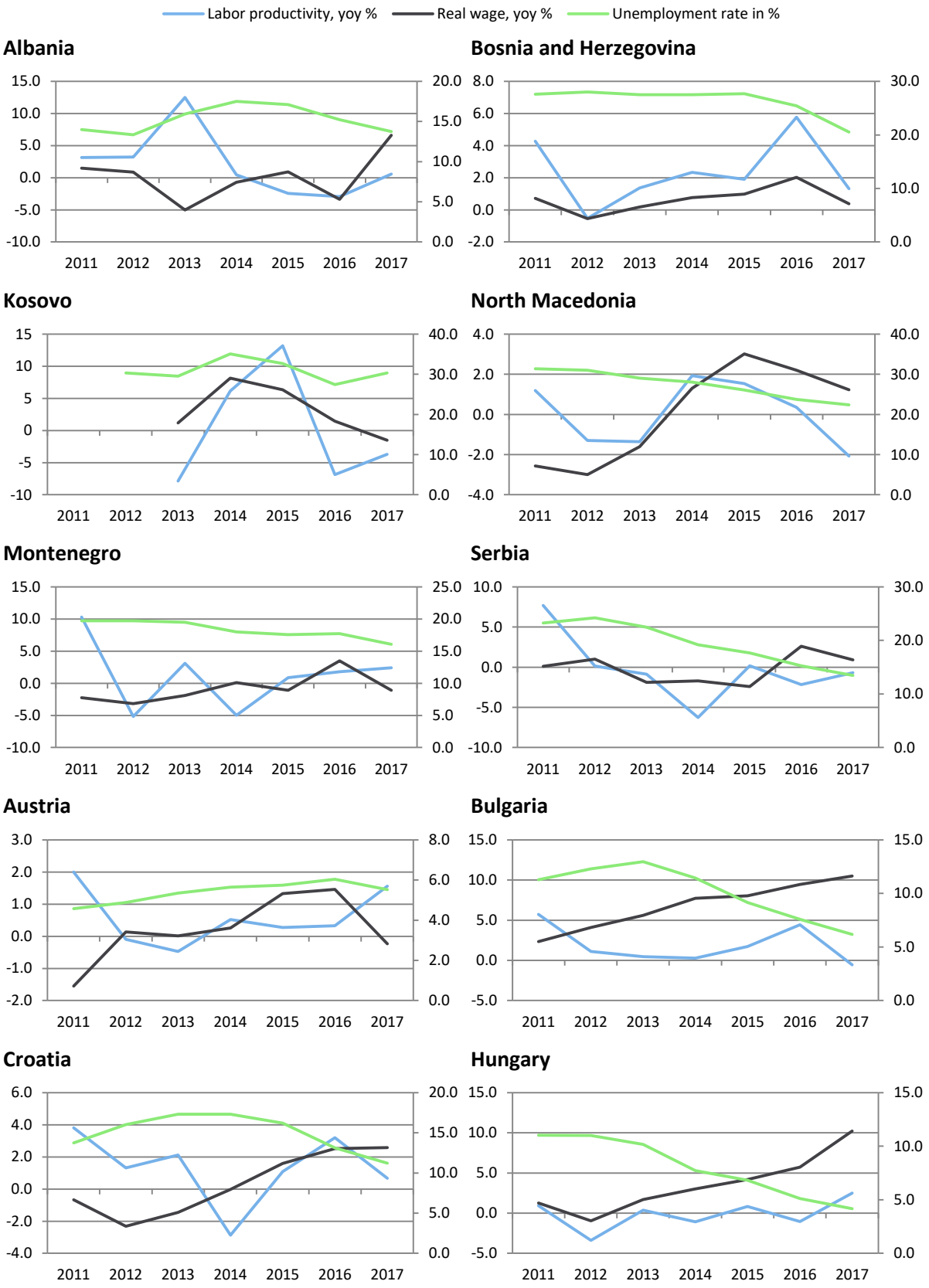
Figure 30 / Labor productivity and real wage growth per employee, 2011-2017, in %



Source: Author's calculations based on SEE Jobs Gateway Database.

In all Western Balkan countries but Kosovo, the relationship between unemployment and real wage growth was negative. Except for Kosovo, in all Western Balkan countries lower unemployment rates were related to higher growth in real wages (see Figure 31). In Kosovo, the very high unemployment rate seems to be unrelated to real wage growth. Similarly, except for Austria, all EU peer countries experienced a decline in the unemployment rate between 2011 and 2017 which was accompanied by an increase in the real wage growth rate. By contrast, in Austria a continuously rising unemployment rate was accompanied by an increasing wage growth rate up to 2016.

Figure 31 / Labor productivity, real wage growth and unemployment



Note: Left hand scale - labor productivity and real wages; right hand scale – unemployment rate.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat and wiiw Database.

7. Sub-regional labor market developments

Labor market outcomes differ across the Western Balkan countries, but there is also significant variation within countries. Montenegro and North Macedonia displayed the greatest regional differences both in terms of employment and unemployment rates. By contrast, regional variations in Albania, Bosnia and Herzegovina (apart from the district of Brčko), and Serbia were less significant. The results should, however, be interpreted with caution because the regions were not subject to uniform classification, and Kosovo did not provide regional data. As for the peer countries, regional disparities in employment rates were widest in Bulgaria and lowest in Croatia. With respect to unemployment rates, there were also regions that reported rates double (or more) the average, but the unemployment rate itself was much lower than in the Western Balkan countries.

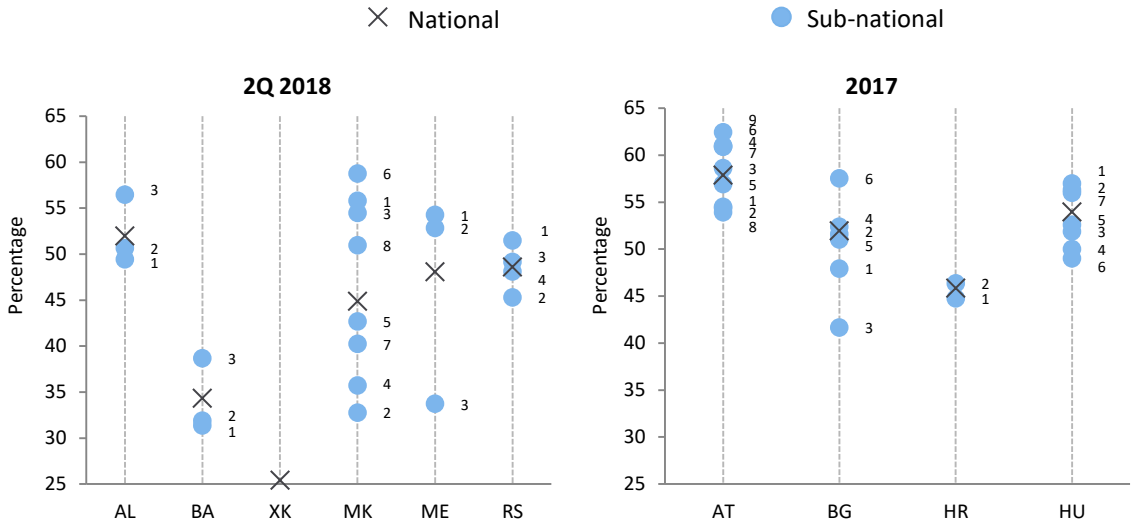
EMPLOYMENT RATES

Regional differences in the employment rates were significant in Montenegro and in North Macedonia, but they were comparably low in Albania, Bosnia and Herzegovina, and Serbia. Figure 32 62.4shows the employment rates for the population aged 15 years and over for 22 NUTS-2 and NUTS-3 level regions (the latter applying to North Macedonia).[19] In the second quarter of 2018, the highest regional employment rates in the Western Balkans were recorded in the Southeastern region of North Macedonia, where 58.8 percent of the population aged 15 years and over was employed. Rates of above 50 percent were reported in the Southern region of Albania; the Eastern region and Pelagonia (North Macedonia); the Coastal and Central regions of Montenegro; and the Belgrade region of Serbia. The lowest employment rates, at about one third, were by contrast observed in the Federation of Bosnia and Herzegovina and Brčko district (Bosnia and Herzegovina); and in the Northeastern and Polog regions of North Macedonia. The differences in the employment rates of the various regions were greatest in North Macedonia and Montenegro (26 and 21 percentage points, respectively), while variations in employment rates were in the order of 10 percentage points in Bosnia and Herzegovina and of 6–7 percentage points in Albania and Serbia.

In the peer countries, the lowest employment rate was recorded for the North West of Bulgaria, where 41.7 percent of the population aged 15 years and over was employed, and the highest was recorded in Vorarlberg (Austria, 62.4 percent. Differences in the employment rates among regions were largest in Bulgaria (almost 15 percentage points), while variations in employment rates were marginal in Croatia.

[19] The NUTS classification (Nomenclature of Territorial Units for Statistics), is a hierarchical system for dividing the economic territory of the EU. NUTS-1: major socio-economic regions; NUTS-2: basic regions for the application of regional policies; NUTS-3: small regions for specific diagnoses (Eurostat definition).

Figure 32 / Employment rate – sub-national



Legend of sub-national:

	AL	BA	XK	MK	ME	RS	AT	BG	HR	HU
1	Central	Brcko district	-	East	Central region	Belgrade	Burgenland	North Central	Adriatic Croatia	Central Hungary
2	North	Federation of Bosnia and Herzegovina	-	Northeast	Costal region	Southern and Eastern Serbia	Carinthia	North East	Continental Croatia	Central Transdanubia
3	South	Republic of Srpska	-	Pelagonia	Northern region	Sumadija and Western Serbia	Lower Austria	North West	-	Northern Great Plain
4	-	-	-	Polog	-	Vojvodina	Salzburg	South Central	-	Northern Hungary
5	-	-	-	Skopje	-	-	Styria	South East	-	Southern Great Plain
6	-	-	-	Southeast	-	-	Tyrol	South West	-	Southern Transdanubia
7	-	-	-	Southwest	-	-	Upper Austria	-	-	Western Transdanubia
8	-	-	-	Vardar	-	-	Vienna	-	-	-
9	-	-	-	-	-	-	Vorarlberg	-	-	-
X	total	total	total	total	total	total	total	total	total	total

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

UNEMPLOYMENT RATES

There were wide variations in regional unemployment, particularly in Montenegro and North Macedonia, while differences were small in Albania and Bosnia and Herzegovina (Figure 33).

Regional unemployment rates varied widely across the 22 regions of the Western Balkans in the second quarter of 2018, with the lowest rates recorded in the Coastal region of Montenegro (2.7 percent), and the highest in the Northeastern region of North Macedonia (36 percent) and the Northern region of Montenegro (34.5 percent).

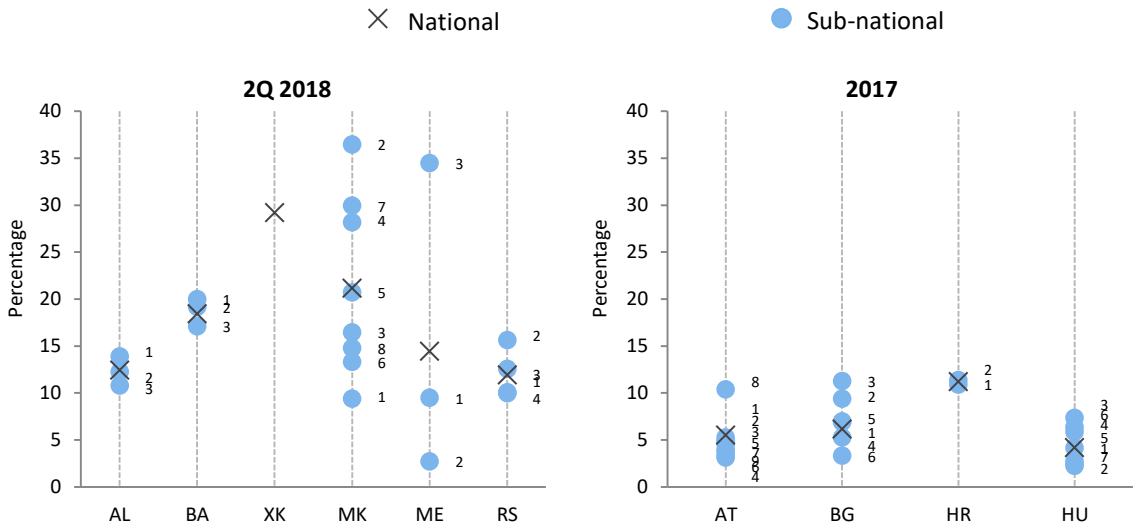
Out of the 22 Western Balkan regions analyzed in this report, 15 reported a decline in their unemployment rate in 2018, the most significant being in Brčko district (Bosnia and Herzegovina) and Vardar region of North Macedonia (decreases of 8.6 and 6 percentage points, respectively).

By contrast, unemployment continued to rise in Southern and Eastern Serbia and in the Southeastern region of North Macedonia.

In the peer countries, regional unemployment rates varied from around 2 percent in Central Transdanubia (Hungary) to 11.4 percent in Continental Croatia. Annual data suggest that unemployment fell in almost all regions between 2016 and 2017, and most markedly in the Coastal regions of Croatia and the North Central region of Bulgaria. In Austria, which reported data quarterly, unemployment fell in all regions in 2018.

Differences in the unemployment rates among regions were largest in Bulgaria and Austria (8 and 7 percentage points, respectively), while variations in unemployment rates were negligible in Croatia.

Figure 33 / Unemployment rate – sub-national



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

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Special topic: Labor costs, labor taxes and low-wage earners in the Western Balkans

1. Introduction

From a European perspective, the Western Balkans is a region of low wages, coupled with low employment, high unemployment, and high levels of informal and vulnerable employment. While wage or labor cost differentials between the Western Balkan economies and the European Union (EU) may be consistent with the differences in GDP per capita and in the overall level of economic development, it is challenging to explain the reasons behind the unfavorable quantitative labor market indicators in the Western Balkans – not only from a European perspective, but also from a global perspective.

This special topic will focus on analyzing institutional features that have been identified as the most likely causes for the poor performance of Western Balkan labor markets. The analysis is motivated by the need to reassess labor costs and the level and structure of labor taxes (understood broadly as the non-wage portion of total employee compensation), which was last studied comprehensively in a regional report over 10 years ago (Arandarenko and Vukojevic, 2008).

Data are drawn from two EU-wide labor market surveys: the Labor Cost Survey (LCS) and the Structure of Earnings Survey (SES). In the past decade, these surveys have become available in five (LCS) and three (SES) countries of the region. The two surveys provide important new information on how the region is faring comparatively, from a European perspective, as it relates to labor costs and wage distribution.

The special topic is organized as follows. After the introduction, Section 2 presents the main results of regional Labor Cost Surveys and provides comparisons of economy-wide hourly labor costs across Western Balkan countries, as well as comparisons of hourly labor costs by sector and industry. While largely informational, this section offers important supply- and demand-side insights into the comparative disadvantage of low-wage industries.

Section 3 moves on to explore the features of the labor taxation systems in the region, applying the standard OECD methodology. This analysis identifies three countries in the region with relatively high overall levels of labor taxes, resulting in a heavy burden on not just employers but also on low-wage workers. The results also show that all countries rely predominantly on social security contributions (SSCs) as the main source of revenue from labor taxes.

Section 4 looks at low wages, using two different sources of information. The first is SES. However, since SES covers only a portion of the formal labor force, it tends to exclude large swathes of low-wage earners (as defined by its own threshold). To provide a fuller picture of the size and characteristics of the low-wage population (thus defined), the SES wage distribution is compared with the wage distribution from the Labor Force Survey (LFS). Furthermore, there is some evidence that low-wage earners, especially those below the age of 30, tend to get stuck in a low-wage situation for prolonged periods of time.

Section 5 looks at policy options and obstacles to implementation of a thorough reform of the labor taxation system. Unfortunately, it is those countries most in need of such reform that also face the largest political-economy and technical obstacles to it. Regardless, such reform is necessary to counter the double disadvantage of low wages and low employment in high tax-wedge countries of

the region. An alternative avenue – a gradual but persistent reduction in labor supply due to emigration and population shrinking – is far less attractive.

2. Labor costs in the Western Balkans

This section explores the size and structure of labor costs faced by employers in the Western Balkan countries, with a focus on the compensation of employees. Data are drawn from the Labor Cost Survey, a Europe-wide survey conducted every four years. The LCS collects detailed information on the structure and level of labor costs, the number of employees, and data on hours worked and hours paid. Like another EU-wide survey, the Structure of Earnings Survey, the LCS is carried out in firms with 10 or more employees. Some countries have included smaller units, so that a sixth category (units with fewer than 10 employees) is sometimes available.

In the Western Balkans, the LCS was conducted for the first time in North Macedonia and Serbia in 2008; Albania, Bosnia and Herzegovina, and Montenegro joined the survey in 2012. In 2016[20] the survey was again administered in all five countries, but the results for Montenegro have not yet been made public.

LABOR COST STATISTICS

The focus here is on total labor costs, which serves as the indicator that captures all relevant costs faced by firms in relation to the employment of workers. Businesses must account for the total compensation of employees, which comprises:

- Net (take home) wage
- Personal income tax
- Employee social security contributions
- Employer social security contributions.

Employers also need to account for other costs related to the employment of their employees, including:

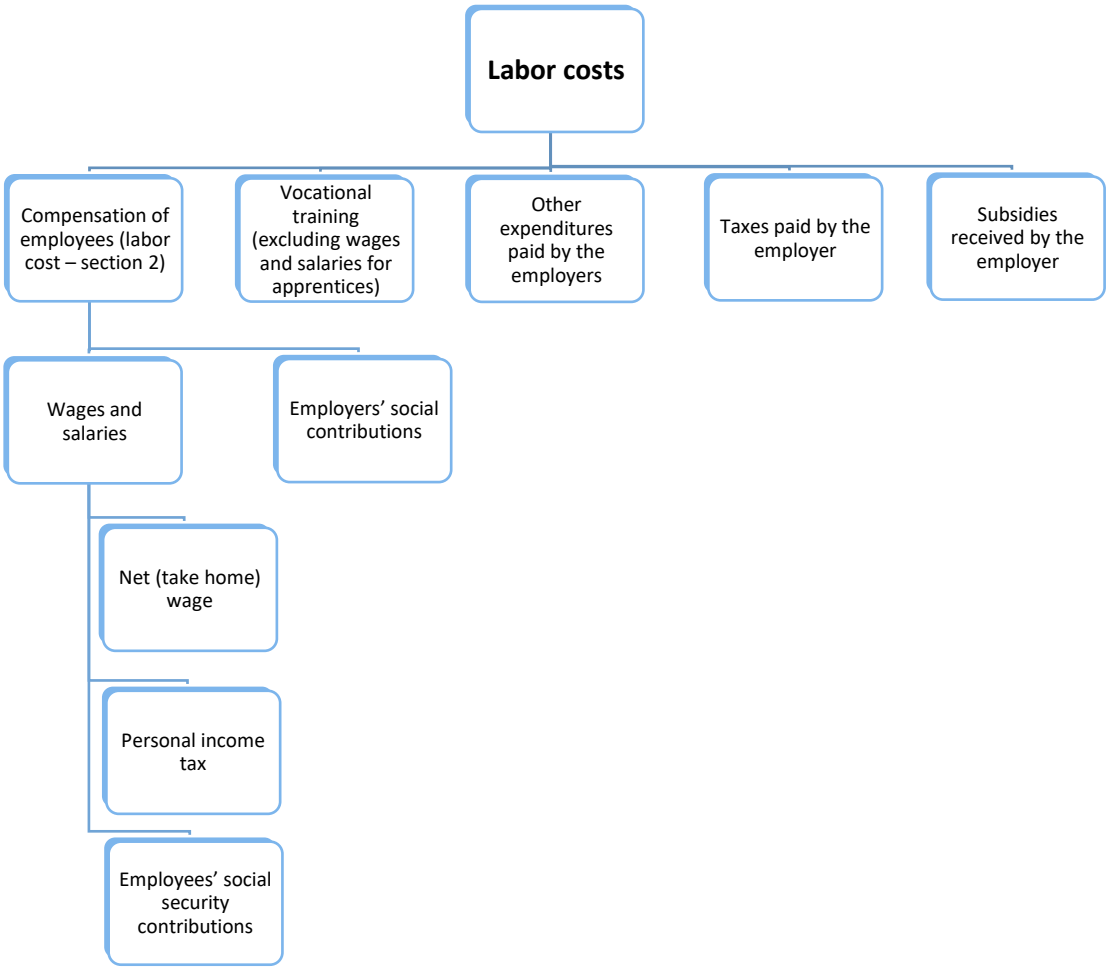
- Costs of vocational education and training
- Other expenses such as recruitment costs
- Taxes on wage bills or payroll.

As a rule, these other costs are a small fraction of total labor costs.

Finally, employers sometimes receive government subsidies covering a portion of their labor costs. These subsidies are treated statistically as negative labor costs and are thus deducted from the sum of “gross” labor costs. A schematic representation of the structure of labor costs is presented in Figure 1.

[20] The survey was administered in 2017, but the reference year is 2016.

Figure 1 / The structure of labor costs



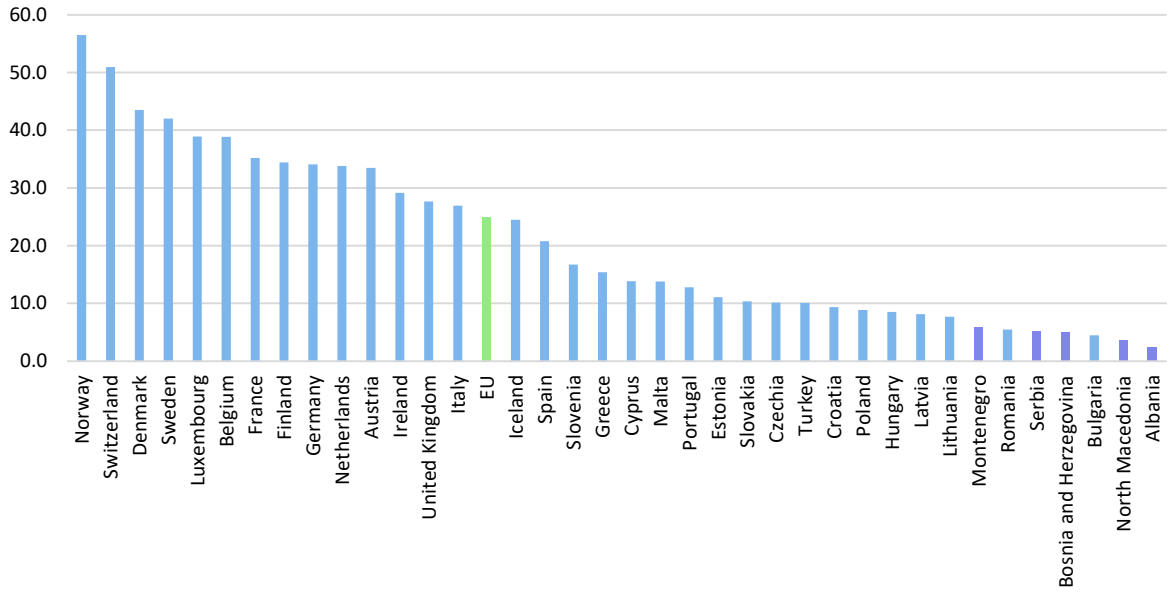
Source: Scheme adjusted from Eurostat.

Workers are primarily concerned with their net ("take home") wage, which is calculated as the difference between the gross wage and the sum of the employee's social contributions and personal income tax. Traditionally, however, the primary indicator for payments to employees by employers has been the gross wage, which for most purposes serves as a good proxy for the labor costs of employers and the net pay to employees. As a statistical measure, however, the gross wage has major drawbacks, especially in the context of international comparisons. This is because the regulations delineating the employee's part and the employer's part of total employee compensation differ significantly from country to country, thus limiting the informative and analytical value of international comparisons of gross wages only. In some countries, including two from the Western Balkans, the gross wage is almost equivalent to employee compensation. In others, a large portion of non-wage labor costs could fall outside the gross wage.

TOTAL LABOR COSTS IN THE WESTERN BALKANS

Eurostat defines labor costs as "the total expenditure borne by employers for the purpose of employing staff". They include employee compensation, mainly comprising gross wages and salaries in cash, and employers' social security contributions; vocational training costs; other expenditures, such as recruitment costs and spending on employee uniforms, and employment taxes, regarded as labor costs[21]; minus subsidies received.

Figure 2 / Labor costs per hour for the business economy (B–N), 2016, in EUR, at current exchange rates



Note: Business economy B-N covers industry, construction, and services. Montenegro data refer to B-S_X_O comprising Industry, construction and services (except public administration, defense, compulsory social security). Data for France, Italy, Iceland and Montenegro are for 2012.
Source: Eurostat.

The LCS provides structural information on labor costs according to the EU's NACE Rev. 2 statistical classification of productive economic activities. Figure 2 provides information on labor costs in the business economy (defined as NACE sections B–N, covering industry, construction, and services)[22], across the EU, in the Western Balkans, and in several other European countries outside the EU. As Figure 2 shows, the hourly labor costs in the business economy range from EUR 56.50 in Norway to EUR 2.40 in Albania. Among the EU Member States, the corresponding range is from EUR 43.50 in Denmark to EUR 4.50 in Bulgaria.

Lagging far behind the European average in overall level of economic development, the five Western Balkan countries (Kosovo has not yet conducted an LCS) have correspondingly far lower labor costs than the EU average, as presented in Table 1.

[21] Employment taxes are also referred to as payroll taxes. They are set in relation to the payroll (wage bill), rather than to individual wage.

[22] Business economy does not include agriculture, forestry and fishing (section A) and public sector and non-market activities (sections O to U).

Table 1 / Total hourly labor costs in the Western Balkans, by main cost components, business economy (B–N), 2016, in EUR, at current exchange rates

Country			Compensation of employees					
		Labour cost	Wages and salaries	Employers' social contributions	Vocational training costs	Other expenditure	Taxes	Subsidies
WB	Albania	2.41	2.02	0.34	0.01	0.03	0.01	0.00
	Bosnia and Herzegovina	4.93	4.51	0.38	0.01	0.02	0.01	0.01
	North Macedonia	3.55	3.50	0.04	0.01	0.02	n/a	0.01
	Montenegro	5.84	4.66	1.12	0.02	0.05	0.08	0.08
	Serbia	5.26	4.48	0.89	0.02	0.02	0.01	0.16
CC	Austria	33.46	24.49	8.07	0.14	0.08	0.82	0.14
	Bulgaria	4.47	3.78	0.69	0.01	0.01	0.00	0.02
	Croatia	9.33	7.86	1.42	0.04	0.05	n/a	0.04
	Hungary	8.51	6.34	1.86	0.15	0.13	0.05	0.02
	EU	24.85	19.44	5.08	0.22	0.11	0.05	0.05

Note: WB – Western Balkans; CC – comparison countries. Montenegro data are for 2012.
Source: Eurostat.

In 2016, hourly labor costs ranged from around 24 percent of the EU average in Montenegro (based on the 2012 LCS in Montenegro and the 2016 LCS for the EU), through slightly more than a fifth in Bosnia and Herzegovina and Serbia, to a seventh in North Macedonia, and around a tenth in Albania[23].

Table 2 / Total hourly labor costs in the Western Balkans relative to EU average, 2012–2016, in EUR, at current exchange rates

	B-S_X_O			B_N		
	2012	2016	Change	2012	2016	Change
North Macedonia	14.0%	14.2%	0.20	14.2%	14.3%	0.06
Albania	8.9%	10.0%	1.10	8.3%	9.7%	1.36
Serbia	20.7%	20.5%	-0.19	20.9%	21.2%	0.23
Bosnia and Herzegovina	21.3%	20.7%	-0.64	20.3%	19.8%	-0.45

Note: See, footnote Figure 2.
Source: Eurostat.

For four of the five Western Balkan countries, the labor cost data are available for both 2012 and 2016, which allows for an exploration of whether there was convergence with the EU average between the two surveys. Table 2 provides some hints.

Looking at all sectors (except Agriculture, section A), Albania and North Macedonia recorded some convergence, with an increase in the relative level of labor costs compared to the EU average; meanwhile, Bosnia and Herzegovina and Serbia experienced divergence. In the same period, however, Serbia did record convergence in labor costs for the business economy. Serbian overall divergence between 2012 and 2016, driven by labor cost trends outside the business economy, was largely due to the fiscal consolidation measures introduced in 2014, which involved a 10 percent

[23] It should be stressed that comparisons of labor costs in the Western Balkans and EU are presented in current Euros, and thus these ratios are significantly lower than PPP-based wage ratios presented earlier in this report.

reduction in public sector wages. For the region as a whole, LCS data suggest that between 2012 and 2016 there was some intra-regional convergence in labor costs, rather than overall regional convergence with the EU. This is most likely related to the implementation of programs of fiscal consolidation in Serbia and Bosnia and Herzegovina, rather than to independent labor market dynamics.

STRUCTURE OF COMPENSATION OF EMPLOYEES

Compensation of employees, the key component of labor costs, comprises the gross wage and employer social contributions. Depending on the country-specific regulations, the relative shares of the gross wage and employer contributions in the compensation of employees can vary greatly. Figure 3 illustrates this for the Western Balkans and a group of comparison countries (CC). While in 2016, the gross wage comprised 99 percent of compensation of employees in North Macedonia, it was 92 percent in Bosnia and Herzegovina, 86 percent in Albania, 83 percent in Serbia, and (in 2012) 81 percent in Montenegro.

Figure 3 / Structure of compensation of employees, 2016, in %

Note: Montenegro data are for 2012.
Source: Eurostat.

Consequently, if gross wages serve as a proxy for the intra-regional comparison of employee compensation (or labor costs), this could result in significant relative overestimation of true labor costs in North Macedonia and Bosnia and Herzegovina, and their relative underestimation in Montenegro and Serbia.

Furthermore, looking farther afield, the share of the gross wage in employee compensation in all Western Balkan countries is above the EU average. In other words, statistics on gross wages overestimate, from a European perspective, true employee compensation (or labor costs) throughout the Western Balkans – from a small degree (in Montenegro and Serbia) to a much larger, significant degree (in North Macedonia, Bosnia and Herzegovina, and Albania).

SECTORAL STRUCTURE OF LABOR COSTS BY MAIN COST COMPONENTS

Within-country inter-sectoral comparisons of key components of labor costs sometimes reveal surprising variability, reflecting the complexity of general labor taxation rules, the differentiation of these rules across sectoral or regional lines, as well as idiosyncrasies of national policy on labor subsidies.

In some sectors, a high concentration of employees with reduced years of service for retirement (e.g., in mining and quarrying) might result in an above-average share of employer contributions in employee compensation, as employer pension contributions are paid at a higher rate to make up for reduced years of service for retirement.

In high-wage sectors, the share of social security contributions might be below average – reflecting the existence of a maximum base for social insurance contributions, above which employer social contributions need not be paid.

Systematic intra-regional differences in labor cost rules and structures often remain hidden if national aggregation of labor costs is done without regard for these differences. Within the region, this is the case with Bosnia and Herzegovina, where the labor taxation rules and procedures differ significantly between the two entities – the Federation of Bosnia and Herzegovina and Republic of Srpska (discussed in more detail in Section 3). Similarly, in Montenegro, although there are three different rates of so-called "location surtaxes" (additional tax on personal income, earmarked to finance local government in three main regions of the country), these differences are averaged out within the LCS and cannot be retrieved.

In a typical European economy, the compensation of employees accounts for around 99 percent of total labor costs (as presented in Table 1). However, in some sectors the relation between the compensation of employees and labor costs is far from straightforward, and sometimes the compensation of employees is significantly higher than labor costs. This is possible because subsidies tend to be clustered in certain sectors.

Within the region, the most prominent example of the distortive impact of subsidies on the sectoral structure of labor costs is to be found in Serbia[24]. As Table 3 shows, in Serbia, the average hourly subsidy of EUR 0.16 per hour worked (2016) accounted for as much as 3 percent of the labor cost of EUR 5.40 (net of subsidies). However, subsidies were heavily concentrated in two sectors only – transportation and storage (making up as much as 20.7 percent of gross labor costs in the sector) and mining and quarrying (making up 13.9 percent of gross labor costs). Consequently, the compensation of employees in these sectors was much higher than labor costs. While subsidizing employer contributions in mining is an established practice, the subsidies disbursed to transportation reflect a major overhaul of the national railway company.

[24] Not all job subsidy schemes or even employer subsidy schemes can be captured under the 'subsidy' item in labor cost statistics. In the region, there exist employer contribution subsidy schemes for particular vulnerable groups in the waiver form – the Government does not actually reimburse the waived employer contributions either to firms or to social insurance funds, but the rights to social insurance benefits are still accrued to workers for whom contributions are not paid. Such schemes lower the reported amounts of non-wage labor costs, but do not show up as subsidies in statistics.

Table 3 / Structure of labor costs (inclusive of subsidies) per hour actually worked in Serbia, 2016, in %

	2016							
	Labour cost	Compensation of employees	Wages	Employers' SC	Vocational training costs	Other expenditure	Taxes	Subsidies received by the employer
Total	97.9	99.2	83.2	16.0	0.3	0.3	0.2	2.1
A - Agriculture, forestry and fishing	99.6	99.1	83.5	15.4	0.2	0.5	0.2	0.4
B - Mining and quarrying	86.1	99.2	78.2	21.1	0.2	0.5	0.0	13.9
C - Manufacturing	99.8	98.7	82.5	16.2	0.2	0.7	0.2	0.2
D - Electricity, gas, steam and air conditioning supply	99.8	99.3	76.2	23.2	0.2	0.4	0.0	0.2
E - Water supply; sewerage, waste manag. and remediation activities	98.4	99.0	83.1	15.8	0.2	0.7	0.2	1.6
F - Construction	100.0	98.5	83.0	15.5	0.2	0.9	0.4	0.0
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	99.8	99.1	84.8	14.2	0.2	0.4	0.2	0.2
H - Transportation and storage	79.3	99.3	80.3	19.0	0.2	0.3	0.2	20.7
I - Accommodation and food service activities	99.3	99.3	83.7	15.6	0.2	0.5	0.2	0.7
J - Information and communication	97.5	99.1	82.6	16.5	0.4	0.2	0.2	2.5
K - Financial and insurance activities	100.0	99.0	82.8	16.1	0.6	0.1	0.3	0.0
L - Real estate activities	100.0	99.1	82.4	16.9	0.2	0.5	0.2	0.0
M - Professional, scientific and technical activities	98.4	99.0	85.6	13.4	0.6	0.2	0.2	1.6
N - Administrative and support service activities	99.6	99.0	84.5	14.5	0.2	0.4	0.2	0.4
O - Public administration and defense; compulsory social security	99.7	99.5	84.2	15.3	0.3	0.3	0.0	0.3
P - Education	100.0	99.7	85.0	14.6	0.2	0.0	0.0	0.0
Q - Human health and social work activities	99.8	99.3	83.4	15.9	0.3	0.2	0.2	0.2
R - Arts, entertainment and recreation	99.0	99.4	84.4	14.9	0.2	0.2	0.2	1.0
S - Other service activities	99.1	99.4	84.7	14.7	0.2	0.6	0.2	0.9

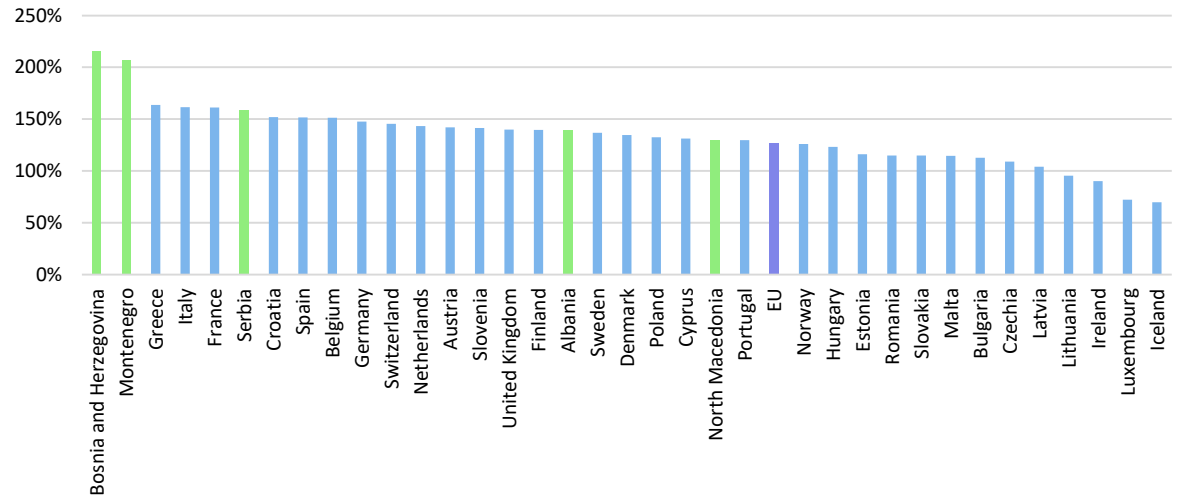
Source: Labor Cost Survey, Statistical Office of the Republic of Serbia.

COMPARING LABOR COSTS PER WORKER AND GDP PER CAPITA

The previous analysis suggests that, although labor costs were significantly lower in the Western Balkans than in the EU, there were significant differences in the structure of employee compensation within the region, across sectors (due to differential tax treatment and the concentration of subsidies in specific sectors), and even within countries (due to the different tax regimes across regional entities).

Furthermore, to get a rough idea about a country's labor cost competitiveness it is instrumental to look at the ratio of annual labor cost per full-time equivalent employee to GDP per capita. In Figure 4, this ratio is presented for the EU, several other European countries, and for the five Western Balkan countries that have conducted LCSs.

Figure 4 / Annual labor costs (B-S_X_O) per full-time-equivalent employee as a % of GDP per capita, 2016, in current Euros



Source: Eurostat, LCS data; GDP per capita – Eurostat for EU and other non-Western Balkan countries, World Bank for Western Balkan countries; Montenegro data on LC and GDP are for 2012.

As is evident from Figure 4, what appeared to be a huge absolute labor cost advantage (in current Euro terms) for the Western Balkan countries becomes a relative disadvantage, according to this rough measure of competitiveness, especially for Bosnia and Herzegovina, Montenegro and Serbia. In the following sections it will be further elaborated that this relative disadvantage stems largely from exaggerated non-wage part of total employee compensation.

3. Labor taxes and tax wedges

LABOR TAXES

For over 10 years now, the taxation of labor has been singled out as one of the most problematic institutional features of labor markets in the Western Balkans. Initially, emphasis was put on presumed negative effects of high labor tax wedges on job creation and investment, especially in labor-intensive low-wage industries, and on disincentives for the formalization of informal employment (Arandarenko and Vukojevic, 2008). Koettl and Weber (2012) and Koettl (2012a) emphasized the interaction between labor taxation and the social benefit system, and found a very high formalization tax rate in the region. Furthermore, Koettl (2012a) singled out the rules regarding the minimum social contribution base as an impediment to the growth of formal part-time jobs and to improvements in the work-life balance, especially in view of the high gender employment gap. Labor taxation was highlighted as one of the main factors affecting job growth in the analysis conducted by Kovtun et al. (2014). More recently, the high inequality of disposable income in the region has been explained partly as a consequence of an apparent failure by labor taxation systems to reduce market income inequality (Arandarenko et al., 2017; Jusic, 2018).

However, frequent changes in labor taxation rules within countries and the substantial differences found in those rules among the six Western Balkan economies call for a careful country-by-country

analysis. While earlier analyses reported comparatively high tax wedges, more recently the variability in taxation rules and tax wedges across the region has increased.

Still, two important and long-standing features appear to be common or dominant (though not universal) across the region. The first is a reliance on social security contributions as the main component of labor taxes; they comprised the bulk of total revenue from labor taxation, while the personal income tax component remained marginal or modest, at best. The second, stemming to a significant degree from the first point, is the low progressivity of labor taxation, as measured by the tax wedge differentials at various points of the wage distribution.

The rules regarding the taxation of wages across the Western Balkans around 2016 are presented in Table 4.

All countries have individual income tax systems, which means that married couples do not have an option to jointly pay taxes. A personal tax-free allowance (zero tax bracket) exists in all countries, except Montenegro. This ensures some indirect progressivity of income tax schedules. A tax-free allowance for dependents (spouse and/or children) exists only in Bosnia and Herzegovina.

Only in Albania (since 2014) and Kosovo is personal tax on labor income directly progressive (i.e., there are at least two non-zero tax rates, increasing as the wage income increases). However, the highest marginal personal income tax (PIT) rate of 10 percent in Kosovo is low, and the top rate of 23 percent in Albania is also relatively low in a comparative perspective.

In Albania, Kosovo, Montenegro and Serbia, headline personal income tax rates are levied on the gross wage (minus the personal allowance – except in Montenegro, where it does not exist). In Bosnia and Herzegovina (in both entities) and in North Macedonia, the base for personal income tax is reduced, following the more common international practice, because the headline PIT rate is levied after the deduction of the employee social security contributions (SSCs) paid and, in Bosnia and Herzegovina, after the deduction of family benefits as well.

Montenegro currently has a second, higher PIT rate of 11 percent (compared with the headline rate of 9 percent) levied on wages of over EUR 750; although its legal status is not fully clear, this is still treated as a temporary, crisis measure. Furthermore, Montenegro has a PIT surtax, which is levied on individual personal income tax at the rate of 10 percent, 13 percent, or 15 percent, depending on the region, and is specifically earmarked to provide revenue for local governments.

Table 4 / Labor taxation rules in the Western Balkans

	Albania	Bosnia and Herzegovina		Kosovo***	North Macedonia	Montenegro	Serbia
		FBiH	RS				
PIT rates	Under 30,000 ALL - 0%, 30,001-130,000 ALL - 13%, Over 130,001 ALL - 23%	10%	10%	Under 80 EUR - 0%, 81-250 EUR - 4%, 251-450 EUR - 8%, Over 451 EUR - 10%	10%	9% Over 750 EUR - 11% (Temporary crisis tax rate)	10%
Personal allowance	None (13,000 ALL)	300 BAM	200 BAM*	None (80 EUR)	7,357 MKD	None	11,790 RSD**
Family allowance	0	Spouse - 150 BAM, One child - 150 BAM, Two child - 210 KM, Three or more child - 270 BAM, Close family member - 90 BAM	75 BAM for every dependent family member	0	0	0	0
Tax base	Gross wage	Gross wage - PA - FA - Employee SSC	Gross wage - PA - FA - Employee SSC	Gross wage	Gross wage - PA - Employee SSC	Gross wage	Gross wage - PA
Employee SSC rates	Health - 1.7% Pension - 9.5%	Pension - 17% Health - 12.5% Unemployment - 1.5%	Pension - 18.5% Health - 12% Unemployment - 1% Child care - 1.5%	Pension - mandatory 5%, could be 10% or 15%	Pension - 18% Comp. health - 7.3% Additional health - 0.5% Unemployment - 1.2%	Pension - 15% Health - 8.5% Unemployment - 0.5%	Pension - 14% Health - 5.15% Unemployment - 0.75%
Employer SSC rates	Health - 1.7% Pension - 15%	Pension - 6% Health - 4% Unemployment - 0.5%	0.00%	Pension - mandatory 5%, could be 10% or 15%	0.00%	Pension - 5.5% Health - 4.3% Unemployment - 0.5%	Pension - 12% Health - 5.15% Unemployment - 0.75%
SSC base	Gross wage SSC minimum - 22,00LEK SSC maximum - 95,130LEK Health - uncapped	Gross wage	Gross wage	Gross wage	Gross wage Minimum - 50% of AW Maximum - 1200% of AW	Gross wage	Gross wage Minimum - 35% of AW Maximum - 500% of AW
Payroll tax	0	Clear water tax (0.5% on net wage) Accident fund (0.5% on net wage) Disability fund (0.5% on gross wage)	0	0	0	0	0
Surtax	0	0	0	0	0	Podgorica and Cetinje - 15%, Budva - 10%, Other -13%	0
Surtax base	0	0	0	0	0	Amount of PIT	0
Additional contributions paid by Employer	0	0	0	0	0	Work fund - 0.2%, Chamber of Commerce - 0.27%, Labour Union - 0.2%	0

*500 BAM (Bosnian convertible mark) since September 2018
** 15,000 RSD (Serbian dinar) since February 2018
*** 2017
Note: Bosnia and Herzegovina consists of two entities FBiH (Federation of Bosnia and Herzegovina) and RS (Republic of Srpska).
FA stands for family allowance, PA for personal allowance
Source: National legislation regulating personal income tax and social security contributions

There follows a brief run through the main statutory features of labor taxes in the region, as of around 2018.

Serbia has two additional rates of annual income tax, whereby tax rates of 10 percent and 15 percent are applied on all net personal income (labor and non-labor) over the exceedingly high thresholds; these affect some 1 percent of all personal income taxpayers.

Bosnia and Herzegovina has two different, but not entirely dissimilar, labor taxation systems in its two main entities, Federation of Bosnia and Herzegovina and Republic of Srpska. While the PIT rates are flat and unified, the amounts of personal allowance differ across the entities, as do the amounts of tax relief for family members. Social security contribution rates also differ, as do social insurance

types. Federation of Bosnia and Herzegovina has three small additional payroll taxes, levied on a firm's net or gross wage bill.

In all countries, the main components of SSCs are the same: pension, health, and unemployment insurance contributions. Kosovo does not have unemployment insurance contributions, and health contributions were introduced only in 2017 (and have yet to be implemented). In Republic of Srpska, in addition to three standard social insurance types, a child care contribution is levied at the rate of 1.5 percent of the gross wage.

However, the way in which contributions are shared between employers and employees varies substantially:

- All SSCs are paid by employees in North Macedonia and Republic of Srpska entity of Bosnia and Herzegovina.
- In the Federation of Bosnia and Herzegovina entity, employees contribute almost three times more than employers.
- In Serbia the contribution rate is almost the same – 19.5 percent for employees and 17.5 percent for employers.
- In Kosovo social insurance contributions are split equally between employers and employees.
- And in Albania, employers pay significantly more than employees (16.7 percent, as against 11.2 percent).

Pension contributions in all countries make up the bulk of the total SSC burden on wages. Although the economic incidence of taxes will depend on the relative elasticities of labor demand and supply, legal labor tax incidence and the way it changes over time may be of some practical importance for labor market outcomes, especially in the short run.

It should be noted that the analysis of labor taxation rules does not extend to self-employed, and persons on service contracts (outside of employment relationship). As a rule, countries in the region have been rather heavy handed toward self-employed, offering little tax incentives and mandating the same SSC rates and minimum SSC bases as for wage employees. Therefore, unlike in some EU countries, the practice of false self-employment is not widespread in low-wage sectors, such as construction and manufacturing. Instead, it is becoming more common in high-wage sectors, such as IT, because of tax regulations allowing certain categories of self-employed to pay lump-sum taxes and contributions up to very high income thresholds. Thus, if anything, self-employment is taxed more regressively than wage employment.

On the other hand, labor taxes for service contractors and workers on temporary employment contracts typically are equivalent to the ones for workers on standard employment contracts. Due to mandatory minimum bases for SSC, part-time workers may face higher tax wedges than their full-time peers. In Serbia, for example, casual student work faces a not-insignificant tax wedge of 29 percent, inclusive of mandatory fixed service fee rate set by a cartel of service providers (so called student co-operatives), and both PIT and VAT. Students, on the other hand, get no pension and hardly any health benefits.

Overall, the increased share of temporary workers, as documented in the section on Employment in this report, cannot be ascribed to a lighter taxation of atypical work. In some cases, this reflects the

importance of seasonal work in some economies (e.g. Montenegro), while it also represents a secular trend in the world of flexibilization of labor market institutions and waning trade union power. Simply, firms opt to employ workers on flexible contracts because they can pay them less and make them work harder.

RECENT CHANGES IN LABOR TAXATION SYSTEMS

In the past 10 years, numerous reforms of elements of labor taxes can be observed in almost all tax jurisdictions in the region; but hardly any of them could be said to have brought about a profound change, even if they have formally involved a shift from flat to progressive taxation (or vice versa). The most important changes are presented below, country by country. More detailed discussion of the motivation for and limitations of these reforms, as well as of the underlying policy strategies regarding the tax-benefit systems in the region, will be presented in Section 5.

Albania

In 2014, the taxation of employment income changed from a flat tax rate regime of 10 percent to a progressive tax scale. Monthly employment income of up to 30,000 Albanian lek (ALL) is exempt from taxation; income of between ALL 30,000 and ALL 130,000 (approx. EUR 215 and EUR 930) is taxed at 13 percent; and any income above ALL 130,000 is taxed at 23 percent. The first ALL 30,000 of employment income is thus income tax exempt. It is interesting to note that under the previous tax regime, the tax-exempt amount was the same; however, employees earning more than ALL 30,000 per month were taxed at 10 percent on their entire wage, resulting in a marginal effective tax rate of well over 100 percent immediately above that threshold point.

Bosnia and Herzegovina

In the past 10 years or so, there have been several changes in Republic of Srpska, while the labor taxation regime has remained unchanged in the Federation of Bosnia and Herzegovina. In 2011, Republic of Srpska increased its headline PIT rate from 8 percent to 10 percent and its SSC rates from 30.6 percent to 33 percent. In 2012, a minor tax-wedge and revenue-neutral correction of SSC rates was introduced, with the pension contribution rate rising from 18 percent to 18.5 percent, and a corresponding decrease in the health insurance contribution from 12.5 percent to 12 percent. Between 2014 and 2016, there was a “solidarity contribution” of 0.4 percent on wages and pensions above 500 convertible marks (BAM), to help alleviate the consequences of the 2014 floods. Finally, in September 2018, the personal tax-free allowance was increased by 150 percent, from BAM 200 to BAM 500, resulting in an increase in nominal wages.

Kosovo

In 2009, PIT rates within the then moderately progressive tax system were slashed: wage income of up to EUR 80 per month is not taxed; for income of between EUR 80 and EUR 250, the tax rate was reduced from 5 percent to 4 percent; for income of between EUR 250 and EUR 450, it was reduced from 10 percent to 8 percent; and for income of above EUR 450, it was cut from 20 percent to 10 percent. As of July 2017, health contribution rates have been introduced, with a combined employer–employee rate of 7 percent of the gross wage; however, this has not yet been implemented. Pension contribution rates have remained unchanged, with a mandatory contribution

rate of 10 percent (5 percent each for employee and employer) and with the possibility of contributing up to 30 percent of the gross wage on a voluntary basis.

Montenegro

Montenegro introduced flat tax reform in 2007, with a headline rate of 15 percent and the aim of gradually reducing it to 9 percent. By 2010, that goal had been achieved. However, in early 2013 fiscal hurdles brought about the introduction of a so-called "crisis" tax, when a higher PIT rate of 15 percent was introduced on net monthly wages exceeding EUR 480 (about the average wage level). That "crisis" tax has been gradually reduced, but has not been revoked. In 2018, it stood at 11 percent of monthly gross wages above EUR 750 (roughly the average wage).

North Macedonia

North Macedonia had a major labor tax overhaul in 2007–2008, introducing a flat tax with a low headline rate of 10 percent and reducing the tax wedge. The early effects of that reform on employment have been assessed favorably by Mojsoska-Blazevski (2012). In 2019, a higher tax rate of 18 percent will be implemented for monthly incomes of over 90,000 Macedonian denar (about EUR 1,460). However, the expected effects of this change will be rather symbolic – the Ministry of Finance has stated that the threshold was selected because it only affects the highest-earning 1 percent of the total population.

Serbia

Serbia introduced flat tax reform in 2001, with a headline PIT rate of 14 percent and no tax-free allowance. A tax-free allowance was introduced in 2007 to compensate for changes in the PIT and SSC rates. This allowance is adjusted annually – either to reflect real wage trends or to rebalance the tax wedge in a revenue-neutral and distribution-neutral fashion. The PIT rate stood at 12 percent between 2007 and 2012; since 2013 it has been 10 percent. In 2013, to compensate for the reduction in the PIT rate, the employee pension contribution rate was raised by 2 percentage points, thus increasing the total SSC rate to 37.8 percent of the gross wage. The pension contribution rate was increased by an additional 2 percentage points in 2014, but at the same time the health contribution rate was reduced by the same rate, leaving the tax burden unchanged. As of 2019, the employer portion of the unemployment insurance contribution has been abolished, thus reducing the total SSC rate to 37.05 percent.

TAX WEDGES

The total *labor costs* to an employer of a waged employee (or, more precisely, employee compensation, in terms of the definitions in Section 2)[25] can be expressed as the sum of what the worker gets in terms of take-home pay and all the labor taxes paid in relation to the worker's net wage (most notably, personal tax on wage income and social security contributions). The ratio of labor taxes to total labor costs is known as the "tax wedge". In other words, the tax wedge measures the proportional difference between the cost of a worker to his/her employer and the employee's

[25] Following the OECD terminology, this section uses the term "labor costs" more frequently than "employee compensation," in terms of the LCS statistics presented in Section 2.

net (take-home) wage. It therefore measures both the incentive to work (labor supply side) and to hire employees (labor demand side). Put differently, the higher the tax wedge, the greater is both the disincentive for someone to work and the disincentive for an employer to take on a worker.

However, in most modern jurisdictions, not all workers face the same (absolute or relative) tax burden. Typically, lower wages are taxed less than higher wages. Furthermore, having a spouse and dependent children often reduces the tax base, thanks to family allowances. In some countries, there are additional tax reliefs.

Since workers on various wage levels and with various family statuses (not to mention further potential variations in the tax treatment of an individual within a country) face different tax wedges, it becomes complicated to make an international comparison of the labor tax burden. To make such a comparison meaningful, one or more representative individuals or families may be used for each country. The OECD, the top authority in the field, uses eight such hypothetical family types in its flagship publication (OECD, 2018). The model family types vary by marital status, number of children and economic status: a single taxpayer, without children, earning 67 percent, 100 percent, and 167 percent of the average wage (AW); a single parent, with two children, earning 67 percent of the AW; a single-earner couple at the AW level, with two children; a two-earner couple at 133 percent and 167 percent of the AW, with two children; and a two-earner couple, without children, at 133 percent of the AW.

The main advantage of the OECD approach is its simplicity. Instead of calculating the actual average (or median) tax burden on labor in the economy – most likely, a complicated and imprecise endeavor – the statutory tax burden on a hypothetical ("representative") worker earning the exact average wage is calculated, and the exact tax wedge for such a worker is easily obtained. In fact, the tax wedge for a representative single worker without children at 100 percent of the average wage is often used as a sufficient proxy for international comparisons of the tax burden on labor. Below, using the example of the Western Balkan countries, there is indication that such a practice could be misleading.

Tax wedges for a single worker without dependents

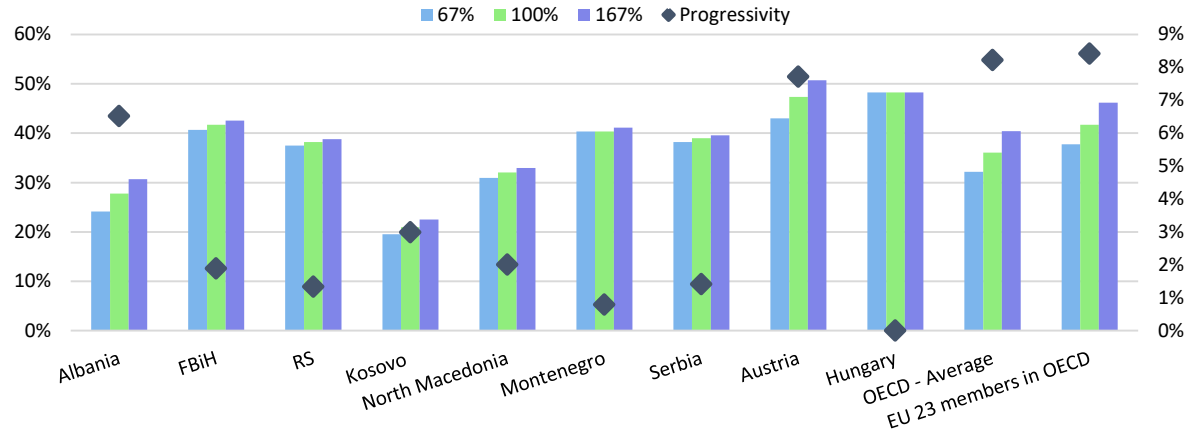
Figure 5 shows that there is quite a diversity of tax burdens within the region. High tax wedges at the average wage level are found in Montenegro (40.3 percent), Serbia (39.6 percent), and Bosnia and Herzegovina (Federation of Bosnia and Herzegovina – 41.7 percent; Republic of Srpska – 38.2 percent). These figures are close to the EU-23[26] average of 41.7 percent and are above the OECD average of 36.1 percent, taking into account that the highest labor tax wedges worldwide are to be found in the European Union. Furthermore, whereas labor taxes in these three countries are on average at higher wage levels, they are high at lower wage levels, due to the low progressivity of the income tax regimes. North Macedonia has a moderate tax wedge (33 percent), while Albania and Kosovo have low to moderate tax wedges (27.8 percent and 20.9 percent, respectively). These regional differences between high and low tax-wedge countries are driven not by the level of PIT

[26] EU-23 stands in reference to 23 EU Member States that are at the same time members of OECD: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom.

rates or by the divide between the flat and progressive PIT systems, but by the difference in SSC rates.

Another key finding, largely stemming from the low PIT rates, is that in five of the six Western Balkan countries (not Albania), workers face small increases in their average tax burden as they progress to higher wage levels. While the average increase in the tax wedge between 67 percent and 167 percent of the average wage is 8.4 percentage points in the EU-23 and 8.2 percentage points in the OECD, in those five Western Balkan countries the increase is between 0.8 and 3 percentage points. Only in Albania does it come close to the international averages, with 6.5 percentage points.

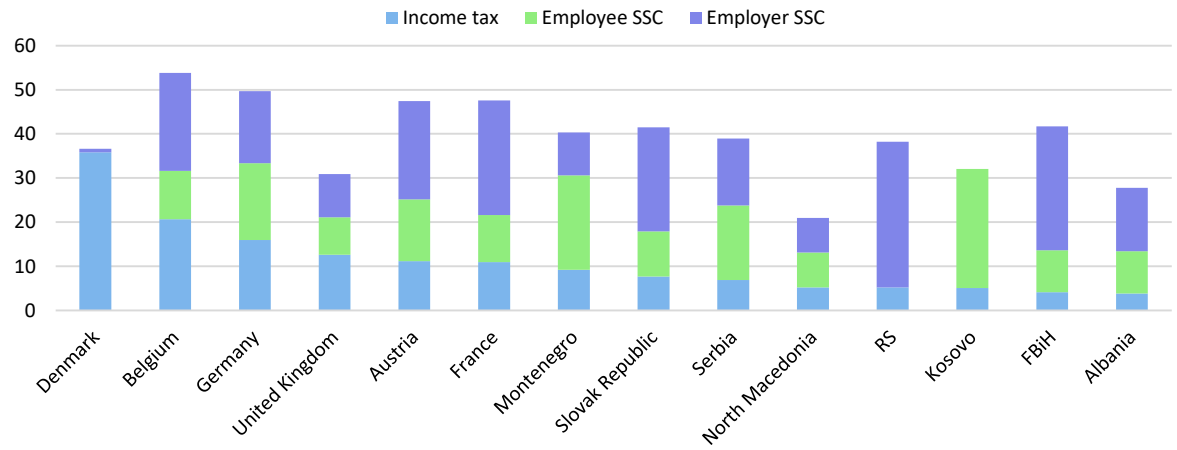
Figure 5 / Labor tax wedges in Western Balkans for a single worker at 67%, 100%, and 167% of average wage, in a comparative perspective



Note: FBiH – Federation of Bosnia and Herzegovina, RS – Republic of Srpska.
Source: Author's calculations for Western Balkan countries; OECD (2018) for others.

In most countries, SSCs represent a larger portion of the non-wage labor costs than does PIT. In Figure 6, the only exception is Denmark. However, nowhere is this feature more pronounced than in the Western Balkans.

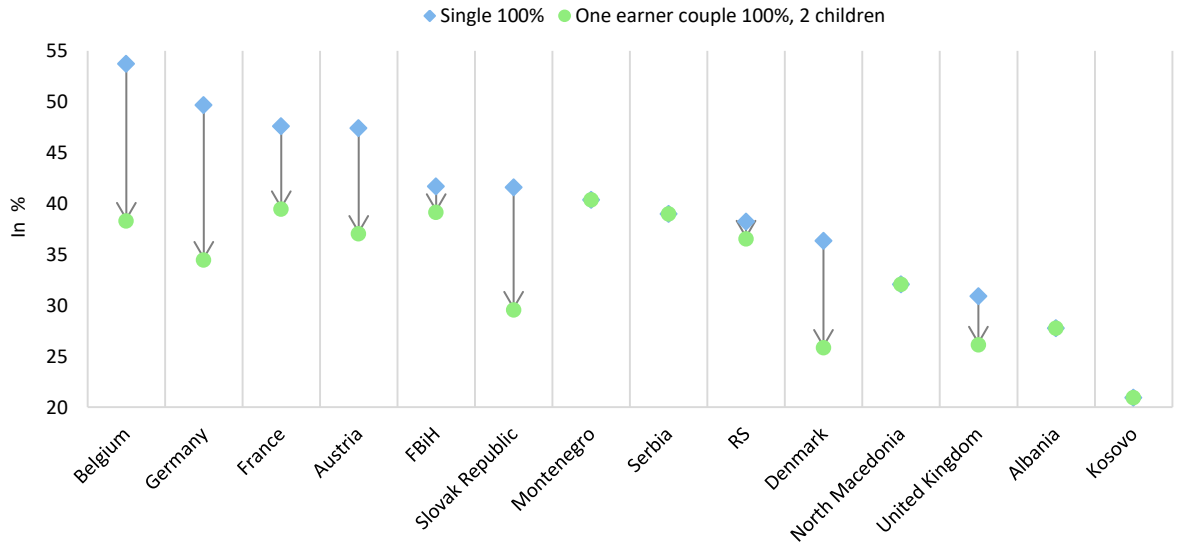
Figure 6 / Tax wedge components as a percentage of labor costs, single workers without dependents, on the average wage



Note: FBiH – Federation of Bosnia and Herzegovina, RS – Republic of Srpska.
Source: Author's calculations for Western Balkan countries; OECD (2018) for others.

The lack of tax-free family allowances (except for comparatively small amounts in Bosnia and Herzegovina) suggests that the effective tax burden per employee should be even higher from a comparative perspective than if only single workers without dependents are taken into account. Figure 7 supports this assumption by showing the difference between the tax wedge for a single worker earning 100 percent of the average wage and the tax wedge for the same worker with a non-employed spouse and two children. For the latter family, in terms of the tax wedge, Montenegro shifts its ranking from 7th place to the top of all countries in the graph; Serbia moves from 8th place to 4th; and so on.

Figure 7 / Comparison of tax wedge for a single worker (100%) and one-earner couple with two children (100+0%)



Note: FBiH – Federation of Bosnia and Herzegovina, RS – Republic of Srpska.
Source: Author's calculations for Western Balkan countries; OECD (2018) for others.

The absence of family allowances and many deductions partly explains why the Western Balkan countries are able to collect a similar share of GDP in revenue from labor taxes as more developed European countries that have much higher employment rates. In the Western Balkans, the high tax wedge observed in Montenegro, Serbia, and Bosnia and Herzegovina applies to all workers in almost the same percentage, regardless of their income or family situation. In most other countries, tax wedges are in practice lower for lower-income workers or those with dependents. As a result, similar levels of labor tax collection are achieved in the Western Balkans – where higher average labor taxes are applied on a smaller base (because of lower employment rates) – as in the EU, where lower average taxes are applied on a wider base (because of higher employment rates).

4. Low-wage earners

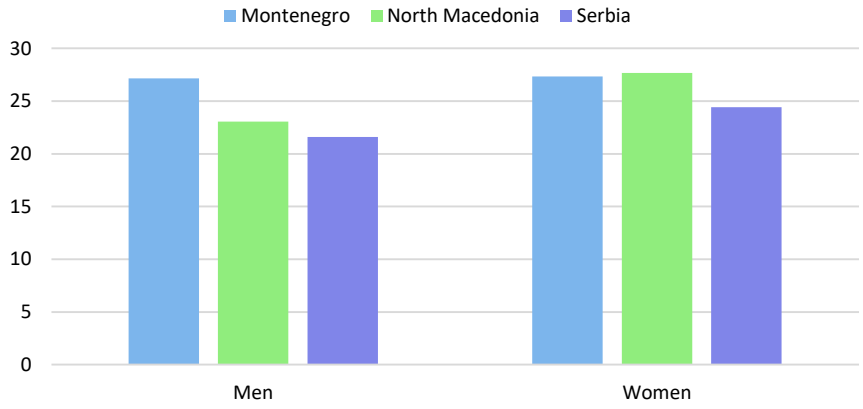
The analysis of the taxation of labor in the region has revealed that low-wage earners are at a particular disadvantage in the labor market in terms of the costs of hiring and the net take-home pay that this group of workers can obtain. This section will take a closer look at the characteristics of this group of workers and their relative situation in the labor market.

Recent evidence from the Survey on Income and Living Conditions (SILC) and SILC-inspired special modules of local household surveys increasingly confirms that Western Balkan countries have high income inequality (Jusic, 2018). By extension, it may be expected that wage inequality is also pronounced; however, that component of income inequality has not been researched in depth by SILC or any other household surveys.

Low-wage earners are internationally defined as those who make less than two thirds of the median wage in their country. However – apart from Serbia, as of 2018 – the primary sources of wage statistics in the region do not provide information on how individual wages are dispersed. The results of the 2014 wave of the SES conducted in Montenegro, North Macedonia, and Serbia thus offer a rare opportunity to examine distributional information in a comparative European perspective, using high-quality employer-based individual wage datasets. The SES survey not only confirmed that average wages are very low in European terms, but also indicated that wage inequality appears to be significant, pushing relatively large proportions of workers into the low-wage category. As revealed in World Bank (2018), Montenegro has the highest proportion of low-wage workers of any European country that participated in SES in 2014 (27.3 percent). North Macedonia has the third-highest proportion (25.1 percent), and Serbia also has an above-average share of low-wage workers (22.9 percent, compared to the EU average of 17.2 percent).

As expected, exposure to low-wage risk varies with certain salient characteristics of workers and jobs. Figure 8 below shows that women are more frequently among low-wage earners in Serbia and North Macedonia (although the differences between women and men are rather moderate in a comparative perspective), while in Montenegro the same percentage of men and women are among low-wage earners.

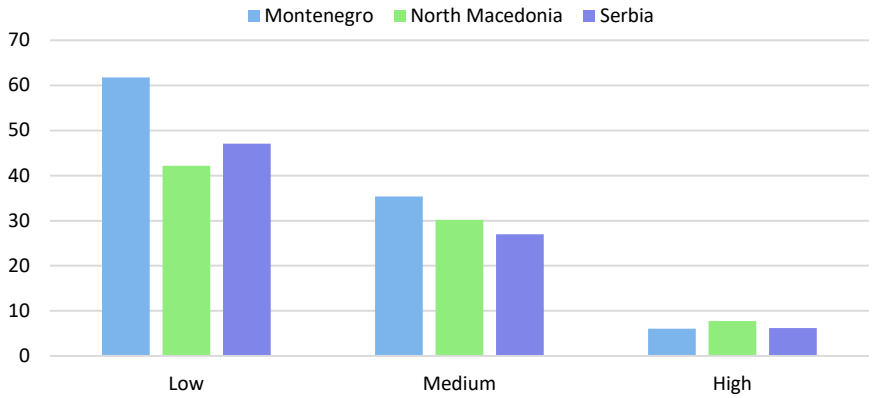
Figure 8 / Low-wage earners by gender in three Western Balkan countries, SES 2014, in %



Source: Eurostat.

In all three countries, as expected, level of education and exposure to low wages are strongly inversely correlated. Still, as shown in Figure 9 below, in North Macedonia this finding is somewhat less pronounced than in Montenegro and Serbia. Whereas in North Macedonia moving from a low to a medium level of education reduces the risk of being a low-wage worker by only a third, from 42.2 percent to 32.2 percent, the situation is much better in Montenegro (61.8 percent to 35.4 percent) and Serbia (47.1 percent to 25 percent).

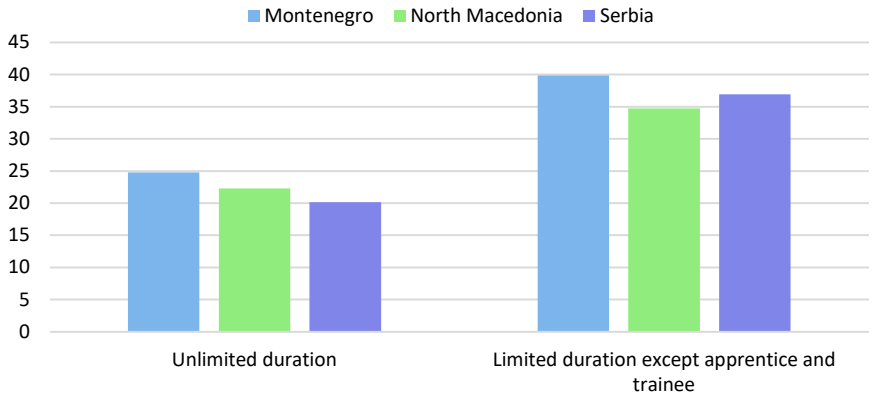
Figure 9 / Low-wage earners by level of education in three Western Balkan countries, SES 2014, in %



Source: Eurostat.

Finally, in all three countries, workers on fixed-term contracts run a significantly higher risk of earning low wages than do workers on permanent contracts, as shown in Figure 10.

Figure 10 / Low-wage earners by type of contract in three Western Balkan countries, SES 2014, in %



Source: Eurostat.

It should be noted, however, that SES is likely less representative of the overall population of waged employees in the Western Balkans than in most EU countries. This is because the sub-population of wage earners not covered by the SES – that is, formal employees in micro firms and unincorporated businesses, as well as waged employees in informal businesses regardless of business size – makes up a larger share of the total wage-earner population in the Western Balkans than in most, if not all, EU countries.

Still, it is unclear whether the wage dispersion in the Western Balkans – as measured by, for example, the ratio of the median wage to the average wage – will rise further above the EU average if all waged employees are taken into account. This is because the inclusion of a large section of mostly low-wage workers reduces both the median and the mean wage in uncertain – but possibly similar – proportions.

Box 1 / Low-pay persistence for young and older workers: the case of Serbia

While the share of low-wage workers is useful for international comparisons, it does not indicate much either about the level of persistence of low-wage employment in a given country over time, or about the underlying causes of low-wage employment. In terms of persistence, consider two extreme situations that can result in exactly the same share of low-wage earners. In the first case, every worker gets a low wage for a short period of time, and then moves on to a non-low-wage state (until his or her turn comes round again). In the second case, low-wage workers remain on a low wage throughout their work career, while non-low-wage workers never experience a low wage. In the first case – that of extreme non-persistence – the flows into and out of low-wage status are dynamic. In the second case – that of extreme persistence – these flows are slow.

The speed with which individual low-wage workers leave low-wage employment may be due either to their own characteristics (e.g., skills, experience, age) or to the characteristics of their jobs (e.g., formal vs. informal, open-ended vs. fixed term). However, if their individual or job characteristics are not discernible from those of non-low-wage workers, but they are still more likely to find themselves in a low-wage status, then this must be because they were unfortunate enough to be in the low-wage state in the previous period; this is called state dependency.

If individual-level datasets contain information on wages and personal and job characteristics of the same workers at two or more points in time, it is possible to use statistical techniques to calculate the conditional probability of a person remaining (persisting) on low pay and econometric techniques to isolate the effects of worker and job heterogeneity from state dependency (the effect of initial low-wage state on the end-of-period low-wage state).

Such a procedure is applied to the microdata from the Serbian Labor Force Survey for the period 2013-2017, separately for young (15–29) and older (30–64) workers. The results are presented in the following table.

Box Table 1 / Low pay persistence (in %)

Age	(1) Raw probability	(2) Conditional probability	(3) Inflow	(4) Persistence (2-3)	(5) State Dependency*	(6) Heterogeneity (4-5)	(7) State Dependency Share
Total	14.85	64.31	5.95	58.36	40.99	17.37	**70.20%**
30-64	13.97	65.67	5.55	60.12	41.39	18.73	**68.80%**
15-29	21.41	58.56	9.32	49.24	40.33	8.91	**81.90%**

*Statistically significant at 1%.

Source: Author's calculation based on micro data from Labor Force Survey 2013-2017, SORS.

As expected, young workers are more often low-wage earners (21.41 percent) than are workers aged over 30 (13.97 percent). They are less likely to be low-wage earners in two consecutive years (column 2); but their inflow to low-wage employment is almost double that of older workers (column 3). Given the low overall inflow probability (5.95 percent), low-wage persistence is high (58.36 percent), although somewhat lower (49.24 percent) for young workers (column 4).

However, once personal and job characteristics are accounted for (column 6), the advantage of young low-wage workers over their older counterparts almost disappears (column 5). More than 80 percent of young persistently low-wage workers are in such a situation because of their initial low-wage status, while less than 20 percent are on low pay because of their individual or job characteristics (column 7).

High shares of low-pay state dependency in Serbia are indicative of a dual or segmented labor market. The high prevalence of low-pay state dependency among young workers is especially worrisome. It is by now well established that the so-called "scarring" effect negatively impacts not only individuals directly affected, but also the overall growth potential of a nation.

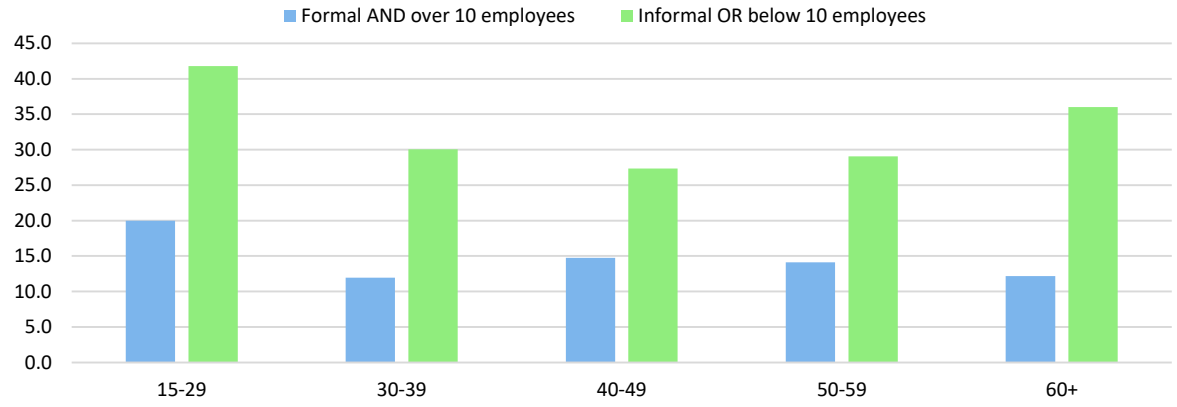
EXPOSURE TO LOW-WAGE RISK IN SERBIA

To illustrate the relationship between two sub-populations of waged employees in terms of their exposure to low-wage risk, individual-level data on wages are used from the 2014 Serbian Labor Force Survey (which coincided timewise with the SES). These sub-populations are labeled "SES workers" (formal waged employees in firms with 10+ employees) and "non-SES workers" (all other waged employees – those employed in informal businesses or in formal firms with fewer than 10 employees). Thus, collectively they are the "SES sector" and the "non-SES sector," respectively. Excluded from the total worker population are the self-employed (for whom employment income data are not collected) and family members who help out (and who do not have their own income).

The analysis of LFS wage data starts by asking: Who constitutes the bottom 20 percent of wage earners in Serbia? This is a useful question, since, if the same definition of low-wage earnings is applied to the SES and the LFS (i.e., two thirds of median earnings), it turns out that the proportion of low-wage earners in the LFS was almost exactly 20 percent – calculated on the basis of all waged employees in the country. Furthermore, the net wage threshold for the bottom 20 percent was 20,800 Serbian dinars – some 10 percent above the statutory minimum wage in the country in 2014. The results obtained are shown in Figure 11.

Figure 11 / Bottom 20% of wage earners, by wage sector (SES and non-SES) and age in Serbia, 2014

(as the percentage of employees in the respective wage sector and age band)

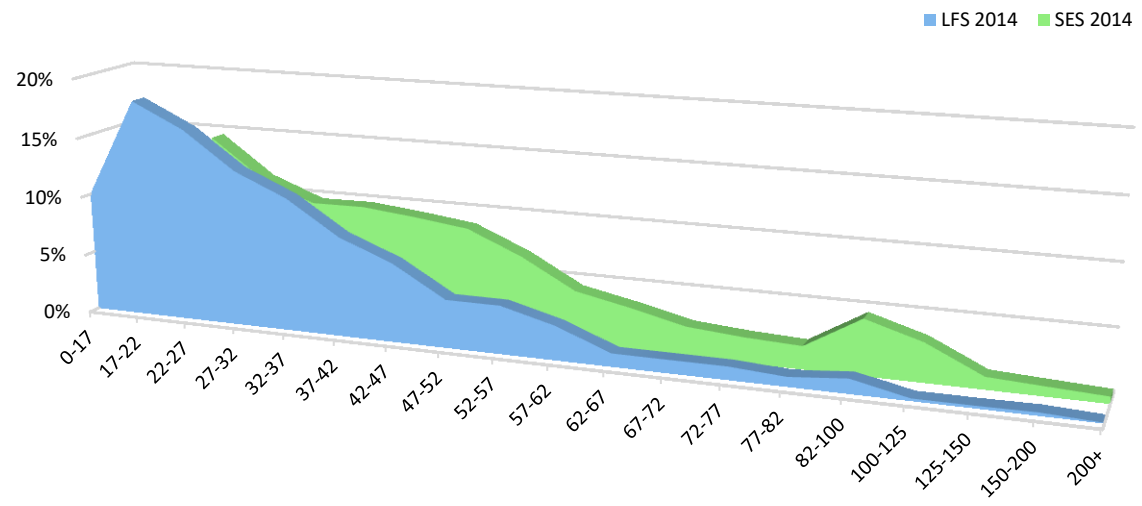


Source: Author's calculations, based on micro data from Serbian LFS and SES.

Overall, out of some 1.8 million waged employees, 360,000 are low-wage earners – roughly half from the SES sector and half from the non-SES sector. However, because of the difference in the size of the sectors, whereas some 15 percent of waged employees from the SES sector are in the low-wage category, this is true for almost a third of waged employees from the non-SES sector. It turns out that on average, working outside the formal sector or in a firm with fewer than 10 employees more than doubles the risk of someone being a low-wage earner – especially (as the figure shows) among workers aged below 40 and above 60.

If the dinar amount of the net low-wage threshold is taken from the 2014 SES and applied to the wage distribution of the 2014 LFS, the share of SES low-wage earners in the LFS doubles to 40.4 percent. It turns out that the amounts of SES net low-wage threshold and net median wage calculated from the LFS data are almost the same – 27,700 and 27,800 dinars, respectively. The structure of this broad category of low-wage earners from LFS is divided about 50:50 between waged employees from the SES sector and those from the non-SES sector. As expected, going along the wage distribution further to the right, the SES sector takes over, and SES workers dominate among high-wage earners. These very different distributions can be seen in Figure 12, even though it compares the SES and the LFS distributions, the latter thus conflating the SES and non-SES sectors.

Figure 12 / SES and LFS wage distributions in Serbia compared, in thousands of dinars, 2014



Source: Author's calculations based on micro data from Labor Force Survey 2014 and Structure of Earnings Survey 2014, SORS.

The key message to be taken from the comparisons of wage distribution of SES and LFS is the over-representation of the non-SES sector in the lower segments of the wage distribution – up to the point of the median LFS wage. This sector is characterized by various "shades of informality" – from full informality, to frequent shifts between formality and informality, to dominant formality accompanied with some undeclared work, often in the form of envelope wages.

Around and slightly above the (net) minimum wage, the share of this not-fully-formal non-SES sector in Serbia (in regional terms, a country with low to moderate informal employment) exceeds 50 percent. In fact, the LFS data show that very few "true" informal employees make substantially above the minimum wage: some 64 percent of them are in the bottom 20 percent, and almost four fifths of them are in the bottom 40 percent of waged employees.

TAX BURDEN FOR LOW-WAGE EARNERS

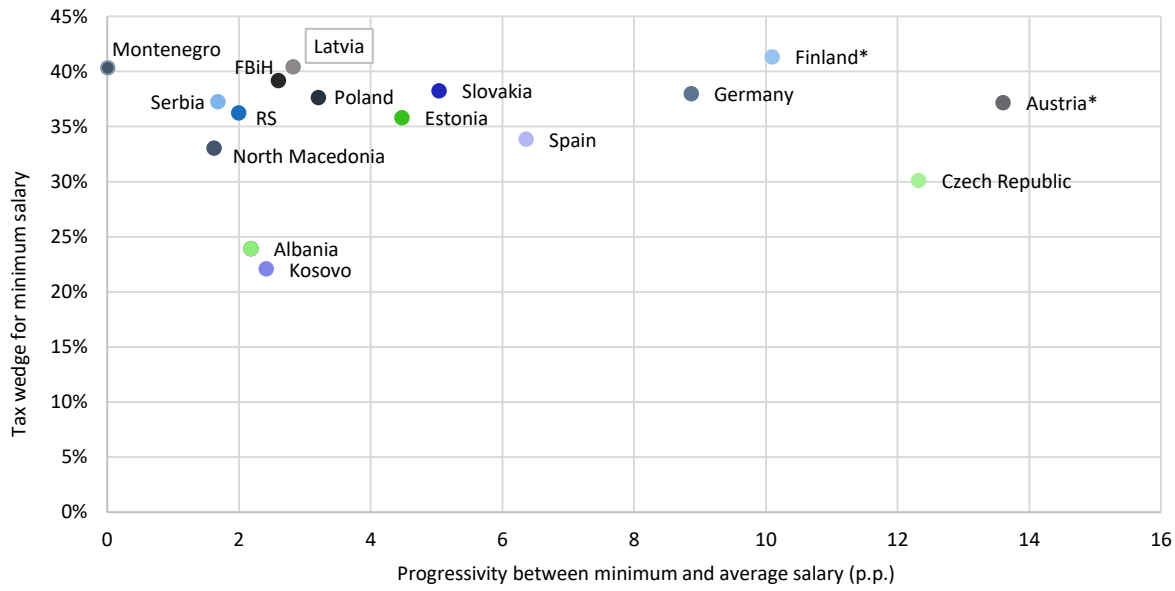
While the reasons for the substantial size of the non-SES sector are manifold and complex, this section focuses on the tax burden facing employers and employees, especially in the low-wage sections of the wage distribution. Because the natural "zone" for the formalization of informal and semi-formal employment is around the amount of the minimum wage, a high tax burden on minimum wages implies a high cost of formalization – and thereby discourages it. Looking at the problem from a more general angle, it is worth asking what the opportunity costs are of working as a formal employee, or of investing in formal employment at around the minimum wage or within the entire low-wage sector. Again, if these costs are relatively high, then workers may be less willing to enter the labor force, to work more hours, or to move from informal to formal jobs. Firms, on the other hand, may be less willing to invest in such sectors and to expand employment.

A full analysis of formalization costs requires the exploration not only of tax wedges and marginal effective tax rates, but also of the potential disincentives to formalization that stem from features of

social benefit systems. Koettl and Weber (2012) introduced an innovative measurement called the formalization tax rate (FTR), which measures disincentives that stem not only from labor taxation, but also from the withdrawal of benefits due to formalization. Koettl examined the FTR for Serbia (Koettl, 2012a) and Montenegro (Koettl, 2012b), and in both countries he found very high FTR, even exceeding 100 percent (implying net income loss) at wage levels of below 20 percent or 25 percent of the average wage. This result is largely driven by two facets of the tax-benefit systems in Montenegro and Serbia that are shared by virtually all of the countries in the region. The first is the existence of a minimum social security contribution base, typically set at around or slightly below the minimum wage; this makes formal part-time low-wage work costly for both employers and employees. The second facet is related to the sudden withdrawal of income-tested social assistance benefits once a certain (typically very low) threshold is passed. This lack of economic viability effectively excludes a substantial part of the Montenegrin and Serbian working-age population from formal employment and social security coverage. In this latter sense, informality and inactivity are predominantly a matter of exclusion, rather than voluntary exit (Koettl, 2012a; Koettl, 2012b). Still, it is worth noting that the disincentives caused by the withdrawal of social benefits are, in a way, self-limiting, precisely because these benefits – which target the poor – are rather parsimonious in the region, both at the level of the individual and as a share of GDP.

Returning to the issue of labor taxation alone, the vertical axis of Figure 13 presents the tax wedge at the level of the minimum wage for the Western Balkan countries and for a number of EU countries; the horizontal axis shows the degree of progressivity of labor taxation, measured in percentage point differences between the minimum wage and the average wage in a country.

Figure 13 / Tax wedge of minimum wage and progressivity between minimum and average wage



* Does not have minimum wage.
Source: Author's calculations.

The figure shows that at the minimum-wage level, three Western Balkan countries have comparatively very high tax wedges for a hypothetical single worker without dependents – Montenegro, Serbia, and Bosnia and Herzegovina. North Macedonia has a moderate tax wedge, while Kosovo and Albania have low tax wedges at that level.

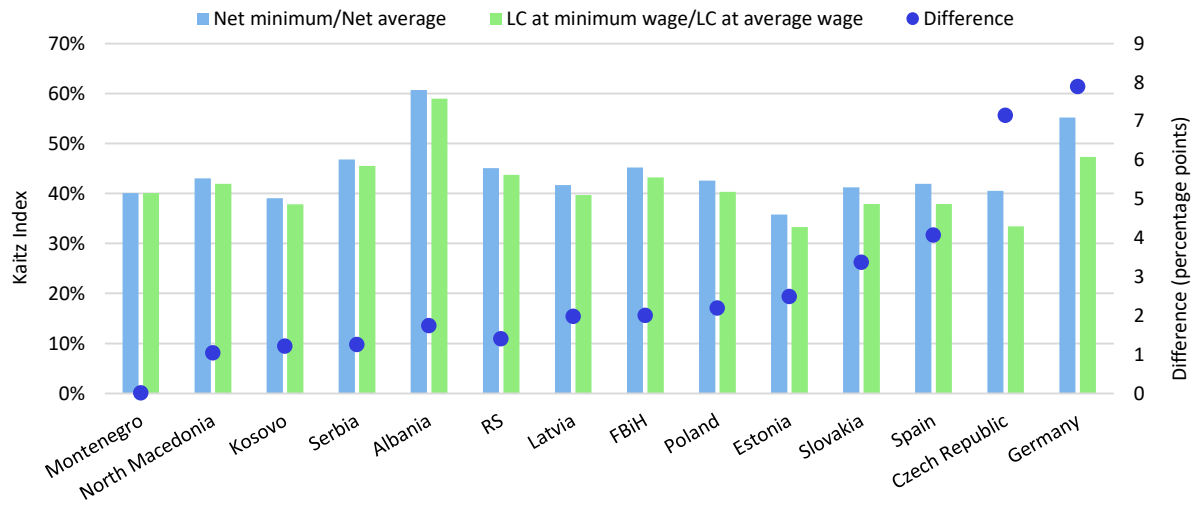
It should again be emphasized here that single-worker tax wedges in the Western Balkans underestimate the average tax burden facing "real" workers because there are no tax-free family allowances in five of the six countries and very low ones in the sixth (Bosnia and Herzegovina). Thus, at a given single worker's tax wedge, an empirical tax wedge for the worker in an average family situation (either cross-sectionally or over a working lifetime) is substantially lower in all European countries outside the Western Balkans.

In Figure 13 above, all the Western Balkan countries are readily distinguished from the other countries by their concentration on the far left of the diagram. This is due to the invariably low degree of progressivity within the chosen range of the wage distribution – from non-existent in Montenegro, to around 2 percentage points in Bosnia and Herzegovina. In other words, relative to other European countries shown in the diagram, the Western Balkan countries have a higher tax wedge at the minimum wage than at the average wage.

A less-explored consequence of the lack of (or very low) progressivity within the minimum-to-average wage section of the wage distribution is the double disadvantage that low-wage earners face. While take-home minimum wages in high-wedge countries of the Western Balkans are only moderately generous for workers (relative to average wages), they are quite costly from the labor cost perspective of employers. Thus, prospective employers may be less motivated to hire them in the first place.

Figure 14 illustrates this point by presenting two measures of the "Kaitz index," the ratio of the minimum wage to the average wage. The first series in the graph represents the ratio of the minimum net wage to the average net wage (after taxes and deductions), while the second series presents the ratio of labor cost at the minimum-wage level to labor costs at the average-wage level. The first ratio can be interpreted as the "net" version of the Kaitz index, while the second can be seen as the "labor cost" version of the Kaitz index. The difference between the two indices is presented in percentage points for each jurisdiction, and the observations are ordered in the graph according to this metric.

Figure 14 / Two versions of the Kaitz index: net wage versus labor cost



Source: For the Western Balkan countries – author's calculations based on national legislation regulating personal income tax and social security contributions. For other countries – Eurostat and Taxing Wages, OECD.

The first series of Figure 14 (the "net" Kaitz index) indicates the supply-side motivation for a minimum-wage earner in a country – the percentage of the average disposable wage this type of worker takes home, compared with his or her peers elsewhere in Europe. The second series ("labor cost" Kaitz index) indicates the labor cost considerations of firms employing low-wage labor – the ratio of labor costs at the minimum-wage level to labor costs at the average wage level or, put differently, the percentage of labor costs at the average wage that needs to be paid for a minimum-wage worker, compared to a firm's competitors elsewhere in Europe.

The figure shows that the difference between the two ratios for all Western Balkan countries is marginal, ranging from 0 to 2 percentage points. The opposite situation can be observed for non-Western Balkan countries: each of the comparison countries shown has a difference between the two ratios of more than 2 percentage points, right up to Germany, where the difference is around 8 percentage points. Montenegro (with no progressivity at all) is an example of a country where, despite the low level of the minimum wage (the third lowest net minimum to mean ratio), labor costs at the same gross wage level are substantial, ranging somewhere in the middle of the comparison countries.

Despite its low progressivity, Kosovo appears to be relatively problem free because, at the level of the minimum gross wage, both the net minimum wage and labor costs are the lowest of the Western Balkan countries. The situation is the opposite in Albania: both ratios are the highest of any of the countries shown – Western Balkan and comparison countries alike.

Albania's outlier position invokes the notion of minimum-wage "bite," traditionally conflated with the notion of the Kaitz index, especially in the version where the ratio of the statutory minimum wage to the median (or average) wage is corrected for the coverage (compliance) rate of the minimum wage. In a standard analysis, if the minimum wage is set too high (as appears to be the case in Albania in 2014), then the labor market outcomes of large portions of low-wage workers might be affected in various ways – from non-compliance in the formal sector (resulting in formal workers receiving less than the minimum wage) to higher levels of informal employment, and unemployment (Garnero et al., 2013).

The lack of progressivity in labor income tax regimes in the region puts minimum- (and low-) wage workers at a relative disadvantage in terms of hiring, and partially undermines the "generosity" of minimum-wage policies. For example, while in both Montenegro and the Czech Republic a minimum-wage worker's net pay is around 40 percent of that of an average-wage worker, the cost to a firm of hiring a minimum-wage worker in the Czech Republic is only 33 percent of the cost of hiring an average-wage worker, whereas in Montenegro the figure is 40 percent. Therefore, at similar levels of minimum-wage "generosity," firms in the Czech Republic have greater incentive to formally employ minimum-wage workers than do firms in Montenegro.

5. Policy dilemmas and possible directions

In the preceding sections, the following was established. First, the overall level of labor taxes is too high in three out of the six Western Balkan economies (Serbia, Montenegro, and Bosnia and Herzegovina) – and also to some degree in a fourth economy (North Macedonia). Second, the structure of labor taxes (the relative shares of personal income tax and social security contributions

in total labor taxes) is tilted heavily toward contributions in almost all countries. Third, the progressivity of personal income tax (already limited by the small weight of PIT in total non-wage labor costs) is non-existent or very modest in all countries, except Albania. All these features taken together leave a negative mark on the relative position of low-wage industries and low-wage workers, especially in high-wedge countries.

The current structure of labor taxes has its roots both in the socialist past of the region's countries and in the historical context in which post-socialist reforms took place. In former socialist Yugoslavia, pre-tax income inequality was relatively low, and progressive taxes were not perceived to be required to redistribute income (as in market economies), and social contributions were relied upon to finance a series of social benefits, such as pensions, health, unemployment, and housing. In Albania, wage control was more direct, and again there was little ideological justification for progressive taxation. In addition, the post-socialist reforms of labor taxation in the Western Balkans coincided with, and represented an integral part of, the "flat tax revolution" that swept Central and Eastern Europe in the 1990s and 2000s, and that has slowly started to retreat only in the course of this decade. On a less ideological note, as less-appealing latecomers to transition, and as riskier investment destinations, countries of the Western Balkans attempted to attract foreign capital by offering very low (at times single-digit) headline profit and personal income tax rates.

On the other hand, fiscal concerns and the need to finance pensions amid shrinking retiree–employee ratios have required high social security contribution rates. In effect, as has been shown, low PIT rates, coupled with high SSC rates and other specific rules (such as minimum mandatory social security contributions), have created high tax wedges that (a) are incapable of incentivizing investment, especially in low-wage sectors and firms, and (b) do not encourage formalization of informal employees and businesses. The interplay between the rising number of pensioners and the mostly stagnant employment has led to further pressure to increase pension contribution rates and/or to reform pension systems in order to enhance sustainability. Currently, as seen in Table 5, none of the contributory pension systems can be financed through contributions alone.[27]

Table 5 / Pensions – share of pensions in GDP and budgetary transfers to pension funds as % of GDP

	Share of pensions in GDP	Budgetary transfers as % of GDP	Year
Serbia	13.00%	4.20%	2013
Montenegro	10.70%	3.30%	2015
Bosnia and Herzegovina - FBiH	9.96%	1.20%	2013
Bosnia and Herzegovina - RS	10.50%	1.70%	2013
Albania	6.00%	2.33%	2015
North Macedonia	10.00%	4.50%	2016

Source: Serbia –World Bank, 2015. Montenegro –World Bank, 2017. FBiH and RS - http://www.finconsult.ba/dokumenti/fojnica2015/pdf/Zijad_Krnjic.pdf. Albania - For budgetary transfers and expenditures for pensions - Hado, A. et al. (2015). For GDP – World Bank database. North Macedonia – Petreski, B. and Gacov, P. (2018).

[27] Kosovo is not included in the list because its pension system consists of a basic non-contributory pension, a fully funded defined contributions pillar, and a series of special benefits funded by general revenues. Although there are no budgetary transfers to cover pension fund deficits, the cost of the "ex-contributory" regime (which pays pensions to those who contributed under the old Yugoslav regime and is funded by general revenues) could be interpreted as a budgetary transfer for "contributory" pension benefits. The cost of this benefit was 1.5 percent of GDP in 2016, while total pension costs were 4.2 percent of GDP the same year.

In effect, the Western Balkan countries have, in recent years (and with the partial exception of Albania and North Macedonia), largely ignored the high level and unbalanced structure of non-wage labor costs, or have opted for fine-tuning measures that have scratched the surface of the problem (as presented in more detail in Section 2). Serbia, for example, has further painted itself into a corner by increasing the combined pension contribution rate from 22 percent to 24 percent and then to 26 percent in two revenue-neutral moves, first by reducing the PIT rate by 2 percentage points, and then by reducing the health insurance rate by 2 percentage points.

Instead, in order to improve their – at best – sluggish labor markets, the countries have opted for various other policy interventions. In an effort to improve the demand side of the labor market, Serbia (in 2014) and Bosnia and Herzegovina (in 2015) reformed their labor legislation to enhance flexibility. Montenegro is presently preparing a similar reform. On the other hand, Albania has chosen a different direction, amending the Labor Law in 2017 to widen workers' rights and to accommodate the requirements of European integration in the area of social policy and employment.

More recently, with certain improvements in quantitative labor market indicators, and with a generally more favorable macroeconomic situation, regional policymakers have started to pay attention to supply-side problems of stagnant wages, a shrinking working-age population (except in Kosovo and Albania), and increased emigration rates. A common impulse has been to increase the minimum wage, sometimes after several years of nominal stagnation and real decline. In recent years, this policy has been implemented most aggressively in Albania, North Macedonia, and Serbia, as seen in Table 6.

Table 6 / Gross minimum wage in EUR

	2014	2015	2016	2017	2018
Albania	157	157	160	181	181
Federation BiH	280	280	311	311	311
Republika Srpska	295	295	295	317	337
North Macedonia	214	219	239	240	282
Kosovo	170	170	170	170	170
Montenegro	288	288	288	288	288
Serbia	235	235	235	253	285

Source: World Bank (2018), Eurostat and national statistics.

Trade unions (naturally) favor a policy of increasing the minimum wage, but this cannot occur unless approved by the government. Unsurprisingly, finance ministries often look favorably on trade union initiatives because they see an increase in the minimum wage as a way of boosting labor tax revenues and reducing envelope wages.

Still, the strategy of minimum-wage increases has its natural limits. After a certain threshold (and all other things being equal), any further increase in the minimum wage inevitably crowds out low-wage employment and low-wage industries. A recent empirical study (Petreski and Mojsoska-Blazevski, 2018) found that the 2017 minimum-wage increase had positive, significant effects on wages in North Macedonia without negatively affecting employment (partly thanks to temporary government subsidies to low-wage industries in order to facilitate the transition to uniform national minimum wage that replaced sectorally differentiated minimum wages in 2017) and that its main

beneficiaries were low-wage workers. However, based on scenario analysis, the authors warn that any further arbitrary increase in the minimum wage level above the productivity growth (or GDP growth) may have a harmful effect on employment.

A comparison of the two main reform directions applied in recent years in the Western Balkans (and intended to improve the labor market situation) along with the hypothetical reform of labor taxation systems show that the latter has some clear advantages. Both the "flexibility-enhancing" and the "minimum wage-increasing" reforms are, in principle, one-sided, zero-sum game reforms, and can bring benefits only if they help to restore a healthy balance in the labor market. However, for some time both the employment legislation index and the Kaitz index throughout the region have been well within standard international values, indicating no major institutional disruption. Especially in labor legislation reforms, monetary gains for employers almost always imply monetary (and non-monetary) losses for employees. In the long run, such reform may turn into a *negative*-sum game if it results in fewer employer–employee matches due to the withdrawal of members of the labor force from the formal labor market or to their emigration.

On the other hand, this analysis confirms long-standing findings that the labor taxation system in the region – and especially among the high-wedge countries – is far from optimal. Nevertheless, the reform of labor taxation has intrinsic win-win (positive-sum game) properties for both employers and employees. This is not just the case in revenue-negative reforms. It is well established that, under not so restrictive conditions, this should also be true of revenue-neutral tax reforms. In Pissarides' (1998) theoretical elaboration, changes in the structure of taxation that are revenue neutral can often have a larger impact on employment than a general tax cut that substantially reduces overall tax revenue. In bargaining and search models – which appear to be a good proxy for the regional labor markets – a more progressive labor tax shifts the wage-setting (labor supply) function to the right, with a large and positive impact on employment.

However, given the dominance of intrinsically proportional SSCs in the current structure of labor tax revenues, to sufficiently increase progressivity to produce the desired effect on the employment and/or wages of low-wage workers would mean readjusting the shares of PIT and SSC in total labor tax revenues (by increasing headline PIT rates and reducing SSC rates) and at the same time introducing explicit progressivity of personal income tax. Naturally, this may generate widespread concern, in the first place among current and future pensioners, and may hamper the political viability of labor taxation reform. The best possible avenue for policymakers and stakeholders would be to initiate an informed and honest debate about the key features of social protection, and more specifically pension systems. There are strong indications that these systems are in secular crisis and that they are neither intra- nor inter-generationally fair (World Bank, 2015). Undertaking simultaneously a major reform of the entire system of labor taxation and social insurance might be the most promising avenue for the revitalization of regional labor markets.

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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, North Macedonia, Montenegro, 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 national statistical offices of the six Western Balkan countries and Eurostat, with the objective of harmonizing data as much as possible across countries. The data have been collected in 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://www.seejobsgateway.net/.

This database covers a unique and detailed set of labor market indicators based on LFS data for the Western Balkan countries. The dataset is harmonized across indicators, age groups and educational attainment. Overall, the database covers four parts: (i) Key economic indicators, (ii) Labor market indicators, (iii) Labor market data on a sub-national level 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, 3 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 to alert and symbolize if the data are less accurate or inaccurate and should allow for a careful interpretation of the data.

In the second round of data collection (2018) the existing dataset has been enlarged by the following indicators:

1) New labor market indicators on self-employment, part-time employment and temporary employment by gender, age and education, NEETs (young people neither in employment nor in education and training); additionally, new age groups (20-64, 25-29) were collected for all existing labor market data. The existing datasets on long-term unemployment and informal employment by gender and age are now available also by an educational breakdown (annual data).

2) New data on labor income represented by average monthly gross wages, monthly gross minimum wages and unit labor costs.

Major breaks in series:
The LFS in the Western Balkans have steadily improved and are being harmonized with EU and ILO definitions, implying that breaks in the time series are unavoidable. Most of the breaks in the series occur for any of the following reasons: change in survey design, change in survey questionnaire, change in survey frequency, revisions of the data series based on updated population census results for 2011, and reclassification of educational attainment. Specifically, the following changes affect the comparability over time and across countries for the data series:

- *Introduction of a continuous quarterly survey producing quarterly results:* Albania from 2012 (before, the survey was carried out once a year – 2010: Sept-Oct, 2011: July-Sept), 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 Bosnia and Herzegovina the survey is still carried out once a year in April. In Kosovo the survey is 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 2011:* Albania and Montenegro from 2011 (data for 2010 are not fully comparable), Serbia from 2013 (low impact on growth rates in comparison to the previous year). Amendment: In Bosnia and Herzegovina the 2013 census is not yet applied; in North Macedonia the 2002 census is applied. *Educational attainment:* Indicators showing the 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 are described in the metadata.

Regarding average monthly gross wages, breaks may occur when the survey behind has changed or the data are taken from a new or different survey. This is the case in Albania (data from General Directorate of Taxation from 2014, Structural Business Statistics data before), in Croatia (from 2016 data are based on tax records; prior to that data are based on a monthly survey covering 70 percent of persons in employment) and in Serbia (from 2018 tax administration data, before 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 the survey coverage (this is the case for Albania).

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

Western Balkans-6 aggregate:
This country grouping is the sum of the six countries only when data for all these countries are available. Time series therefore start from 2012 (because data for Kosovo are not available prior to this).

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 2010 reference prices, real growth in %.
Labor productivity: GDP at 2010 reference prices per person employed (LFS), growth in %.
Inflation: Consumer prices 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.

Labor force: employed and unemployed persons.

Employment rate: employed persons in % of working-age population of the respective gender, age and education group.

Share of self-employed: self-employed in % of total employment of the respective gender, age and education group.

Share of part-time employment: part-time employed in % of total employment of the respective gender, age and education group.

Share of temporary employment: temporary employees in % of total employees of the respective gender, age and education group.

Activity rate: labor force in % of working-age population of the respective gender and age group.

Unemployment rate: unemployed persons in % of labor force of the respective gender, age and education group.

NEET rate: Young people neither in employment nor education and training (NEET) in % of young population of the respective gender and age group.

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

Long-term unemployment rate: long-term unemployed in % of labor force.

Share of long-term unemployment: long-term unemployed in % of total unemployed.

Data on earnings and unit labor costs:

Sources: Data on average monthly gross 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 gross wages: wages per employee per month on a gross basis (before deduction of income tax and social security contributions). Gross wages comprise the basic wage and all kinds of additional payments (bonuses, over-time 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 with 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 January 1 of the respective year. The metadata indicate since when these minimum wages are 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 of the end of the previous month. To remove the effect of differences in price levels between the countries, the minimum wages are converted with Purchasing Power Parities (PPPs) for household final consumption expenditure in each country.

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

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

Selected economic indicators

annual growth in %

Albania	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018 Q1**	**2018 Q2**
GDP, real	3.7	1.4	1.0	1.8	2.2	3.4	3.8	4.4	4.2
Employment aged 15+	.	-1.8	-10.2	1.3	4.8	6.5	3.3	4.9	3.3
Labor productivity	.	3.2	12.5	0.5	-2.4	-3.0	0.6	-0.5	0.9
Inflation	3.6	2.0	1.9	1.6	1.9	1.3	2.0	1.9	2.2
Monthly gross wages per employee, nominal	-3.6	2.9	-3.2	0.9	2.8	-2.1	8.7	4.2	2.5
Monthly gross wages per employee, real	-7.0	0.9	-5.0	-0.7	0.9	-3.4	6.6	2.3	0.3
Unit labor costs	.	-0.3	-13.9	0.4	5.4	0.9	8.1	.	.

Bosnia and Herzegovina	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	0.9	-0.8	2.4	1.1	3.1	3.1	3.2	3.6	3.6
Employment aged 15+	.	-0.3	1.0	-1.2	1.2	-2.5	1.8	.	0.8
Labor productivity	.	-0.5	1.4	2.3	1.9	5.8	1.3	.	2.7
Inflation	2.1	2.1	-0.1	-0.9	-1.0	-1.6	0.8	0.8	1.4
Monthly gross wages per employee, nominal	1.1	1.5	0.1	-0.1	0.0	0.9	1.6	2.1	2.8
Monthly gross wages per employee, real	-1.0	-0.5	0.2	0.8	1.0	2.0	0.4	1.4	1.3
Unit labor costs	.	2.1	-1.3	-2.4	-1.9	-4.6	0.3	.	.

Kosovo	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	3.3	2.8	3.4	1.2	4.1	4.1	3.7	3.5	4.7
Employment aged 15+	.	.	12.3	-4.6	-8.0	11.7	7.7	-1.7	-4.5
Labor productivity	.	.	-7.9	6.1	13.2	-6.8	-3.7	5.4	9.6
Inflation	3.5	2.5	1.8	0.4	-0.5	0.3	1.5	0.0	0.7
Monthly gross wages per employee, nominal	.	.	3.0	8.6	5.8	1.8	-1.5	.	.
Monthly gross wages per employee, real	.	.	1.2	8.1	6.3	1.5	-1.5	.	.
Unit labor costs	.	.	11.8	2.3	-6.5	9.2	2.3	.	.

North Macedonia	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	3.4	-0.5	2.9	3.6	3.9	2.8	0.2	0.9	3.0
Employment aged 15+	.	0.8	4.3	1.7	2.3	2.5	2.4	2.2	2.1
Labor productivity	.	-1.3	-1.4	1.9	1.5	0.4	-2.1	-1.3	0.9
Inflation	1.6	3.3	2.8	-0.3	-0.3	-0.2	1.4	1.7	1.5
Monthly gross wages per employee, nominal	1.0	0.2	1.2	1.0	2.7	2.0	2.6	4.7	6.2
Monthly gross wages per employee, real	-0.6	-3.0	-1.6	1.3	3.0	2.2	1.2	3.0	4.6
Unit labor costs	.	1.5	2.6	-0.9	1.2	1.7	4.8	.	.

Montenegro	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	2.7	-2.7	3.5	1.8	3.4	2.9	4.7	4.5	4.9
Employment aged 15+	.	2.6	0.4	7.1	2.5	1.1	2.3	1.0	3.3
Labor productivity	.	-5.2	3.1	-5.0	0.9	1.8	2.4	3.5	1.6
Inflation	0.5	4.0	1.8	-0.5	1.4	0.1	2.8	3.7	3.6
Monthly gross wages per employee, nominal	11.2	0.7	-0.1	-0.4	0.3	3.6	1.9	-0.1	0.0
Monthly gross wages per employee, real	10.6	-3.2	-1.9	0.1	-1.1	3.5	-1.1	-3.7	-3.5
Unit labor costs	.	6.2	-3.1	4.8	-0.6	1.8	-0.5	.	.

Serbia	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	0.6	-1.0	2.6	-1.8	0.8	3.3	2.0	4.8	4.9
Employment aged 15+	.	-1.2	3.5	4.7	0.6	5.6	2.8	1.4	0.5
Labor productivity	.	0.1	-0.9	-6.3	0.2	-2.2	-0.7	3.4	4.3
Inflation	6.1	7.3	7.7	2.1	1.4	1.1	3.0	1.6	1.8
Monthly gross wages per employee, nominal	7.5	8.9	5.7	1.2	-0.5	3.8	3.9	5.1	5.7
Monthly gross wages per employee, real	0.7	1.0	-1.9	-1.7	-2.4	2.6	0.9	3.5	3.8
Unit labor costs	.	8.8	6.6	7.9	-0.6	6.1	4.7	.	.

Western Balkans-6	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	1.7	-0.4	2.5	0.3	2.1	3.3	2.5	3.9	4.3
Employment aged 15+	.	.	0.7	2.3	1.2	4.4	2.9	.	1.1
Labor productivity	.	.	1.7	-2.0	0.9	-1.1	-0.4	.	3.2
Inflation	4.1	4.7	4.2	1.0	0.7	0.4	2.2	1.4	1.8
Monthly gross wages per employee, EUR nominal	.	.	3.6	-0.3	-0.7	1.0	4.5	.	.
Monthly gross wages per employee, EUR real	.	.	-0.7	-1.3	-1.4	0.5	2.2	.	.
Unit labor costs, EUR adjusted	.	.	1.8	1.7	-1.6	2.1	4.9	.	.

EU peer countries

Austria	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	1.8	0.7	0.0	0.7	1.1	2.0	2.6	3.7	2.7
Employment aged 15-74	.	0.8	0.5	0.1	0.9	1.7	1.0	1.7	1.3
Labor productivity	.	-0.1	-0.5	0.5	0.3	0.3	1.6	2.0	1.4
Inflation (harmonized CPI)	1.7	2.6	2.1	1.5	0.8	1.0	2.2	2.0	2.1
Monthly gross wages per employee, nominal	1.1	2.7	2.1	1.8	2.1	2.4	1.5	2.2	2.5
Monthly gross wages per employee, real	-0.6	0.1	0.0	0.3	1.3	1.5	-0.2	0.2	0.3
Unit labor costs	.	2.8	2.6	1.2	1.8	2.0	0.0	.	.
Bulgaria	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	1.3	0.0	0.5	1.8	3.5	3.9	3.8	3.5	3.2
Employment aged 15-74	.	-1.1	0.0	1.6	1.7	-0.5	4.4	2.0	-0.4
Labor productivity	.	1.1	0.5	0.3	1.7	4.4	-0.6	1.5	3.7
Inflation (harmonized CPI)	3.0	2.4	0.4	-1.6	-1.1	-1.3	1.2	1.6	2.4
Monthly gross wages per employee, nominal	6.4	6.6	6.0	6.0	6.8	8.0	11.8	7.1	8.1
Monthly gross wages per employee, real	3.3	4.1	5.6	7.7	8.0	9.4	10.5	5.4	5.6
Unit labor costs	.	5.4	5.5	5.7	5.0	3.4	12.4	.	.
Croatia	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	-1.5	-2.3	-0.5	-0.1	2.4	3.5	2.9	2.5	2.9
Employment aged 15-74	.	-3.6	-2.6	2.9	1.3	0.3	2.2	4.5	2.2
Labor productivity	.	1.3	2.1	-2.9	1.1	3.2	0.7	-1.9	0.7
Inflation (harmonized CPI)	1.1	3.4	2.3	0.2	-0.3	-0.6	1.3	1.1	1.8
Monthly gross wages per employee, nominal	-0.4	1.0	0.8	0.2	1.3	1.9	3.9	4.8	5.9
Monthly gross wages per employee, real	-1.5	-2.3	-1.5	0.0	1.6	2.5	2.6	3.7	4.0
Unit labor costs	.	-0.3	-1.3	3.1	0.2	-1.3	3.2	.	.
Hungary	**2010**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**1Q 2018**	**2Q 2018**
GDP, real	0.7	-1.6	2.1	4.2	3.5	2.3	4.1	4.5	4.9
Employment aged 15-74	.	1.8	1.7	5.3	2.7	3.4	1.6	1.5	1.2
Labor productivity	.	-3.4	0.4	-1.1	0.8	-1.0	2.5	2.9	3.6
Inflation (harmonized CPI)	4.7	5.7	1.7	0.0	0.1	0.4	2.4	2.0	2.8
Monthly gross wages per employee, nominal	1.3	4.7	3.4	3.0	4.3	6.1	12.9	12.2	11.3
Monthly gross wages per employee, real	-3.2	-1.0	1.7	3.0	4.2	5.7	10.2	10.0	8.3
Unit labor costs	.	8.3	3.0	4.1	3.4	7.3	10.1	.	.

Notes: For country-specific methodological notes on employment and wages see footnotes to the following tables. The figure for Albanian employment growth in 2011 disregards the break due to census 2011, however the growth rate seems to be plausible.
Western Balkans-6: Labor market data reflect the sum of the six countries only when data for all countries are available. 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

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	2,913	2,900	2,895	2,889	2,881	2,876	2,873	.	.
Working-age population aged 15+ (1,000)	2,459	2,297	2,322	2,340	2,354	2,374	2,376	2,363	2,363
Employment aged 15+ (1,000)	1,167	1,140	1,024	1,037	1,087	1,157	1,195	1,226	1,228
Employment rate (% population aged 15+)	47.5	49.6	44.1	44.3	46.2	48.7	50.3	51.9	52.0
Employment rate (% population aged 15-64)	53.5	55.9	49.9	50.5	52.9	55.9	57.4	59.2	59.2
Employment rate (% population aged 20-64)	60.3	62.4	56.7	56.6	59.3	62.1	63.9	65.5	65.3
Employment rate (% population aged 15-24)	23.4	25.8	19.0	17.7	18.9	20.2	21.6	22.8	25.6
Employment rate (% population aged 25-29)	59.4	61.7	54.8	53.2	55.5	59.0	59.4	61.5	62.3
Employment rate (% population aged 25-54)	68.7	68.9	63.9	64.6	67.5	69.7	71.1	73.9	73.1
Employment rate (% population aged 55-64)	48.3	56.3	51.1	51.2	53.6	54.8	55.5	59.3	58.5
Employment rate for low skilled 15-64 (ISCED 0-2)	50.9	52.7	45.3	46.7	50.2	52.5	53.0	56.1	55.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	52.7	57.3	50.6	49.9	51.8	55.8	57.9	58.8	59.4
Employment rate for high skilled 15-64 (ISCED 5-8)	71.7	67.1	67.1	66.5	64.4	66.6	69.1	68.1	68.4
Self-employed (% of total employment)	30.3	26.9	25.8	26.0	29.2	34.9	35.8	34.5	34.7
Part-time employment (% of total employment)	22.5	22.2	24.3	27.5	26.6	24.3	20.7	20.4	18.6
Temporary employment (% of total employees)	16.9	10.9	12.6	13.7	11.8	12.4	12.3	10.8	9.7
Activity rate (% population aged 15+)	55.2	57.3	52.4	53.7	55.7	57.5	58.3	59.3	59.3
Activity rate (% population aged 15-64)	62.3	64.9	59.6	61.5	64.2	66.2	66.8	68.0	68.0
Activity rate (% population aged 15-24)	33.7	36.7	27.6	29.0	31.3	31.8	31.8	32.8	35.1
Activity rate (% population aged 25-54)	77.8	78.4	75.5	76.7	79.7	80.7	81.3	83.1	82.7
Activity rate (% population aged 55-64)	52.6	60.7	56.6	58.1	60.2	61.4	61.3	65.3	64.0
Unemployment aged 15+ (1,000)	191	176	194	220	224	208	190	175	174
Unemployment rate (% labor force 15+)	14.0	13.4	15.9	17.5	17.1	15.2	13.7	12.5	12.4
Youth unemployment rate (% labor force 15-24)	30.5	29.8	31.4	39.0	39.8	36.5	31.9	30.5	27.3
NEET rate (% population aged 15-24)	29.4	27.4	30.8	30.9	29.6	27.0	25.9	.	.
Long-term unemployment rate (% labor force 15+)	10.5	10.3	11.5	11.2	11.3	10.1	8.9	8.1	8.4
Share of long-term unemployed (% of total)	74.9	77.1	72.4	64.3	66.0	66.2	64.8	65.3	67.6
Unemployment rate, low educated 15+ (ISCED 0-2)	12.9	11.7	14.1	14.5	13.5	12.7	12.3	10.4	10.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	15.7	14.8	18.9	21.3	20.4	17.5	15.5	14.0	14.3
Unemployment rate, high educated 15+ (ISCED 5-8)	13.7	16.0	14.9	17.2	19.1	16.9	13.7	14.1	14.0
Male									
Total population (1,000)	1,458	1,460	1,461	1,461	1,460	1,456	1,446	.	.
Working-age population aged 15+ (1,000)	1,198	1,139	1,110	1,140	1,164	1,189	1,190	1,169	1,168
Employment aged 15+ (1,000)	670	637	563	586	621	650	679	688	686
Employment rate (% population aged 15+)	55.9	55.9	50.7	51.4	53.3	54.7	57.1	58.9	58.7
Employment rate (% population aged 15-64)	63.1	62.2	57.3	58.0	60.5	61.9	64.3	66.5	66.3
Employment rate (% population aged 20-64)	71.5	70.1	64.8	65.2	68.1	69.4	72.1	74.1	73.5
Employment rate (% population aged 15-24)	28.1	29.9	24.2	21.4	23.8	23.1	24.9	27.2	30.5
Employment rate (% population aged 25-29)	69.1	67.0	59.7	59.6	63.7	65.4	69.6	71.0	73.4
Employment rate (% population aged 25-54)	79.9	76.5	71.6	72.7	75.5	76.3	79.0	81.4	80.2
Employment rate (% population aged 55-64)	66.6	68.3	62.2	64.7	66.9	67.1	69.1	72.1	70.7
Employment rate for low skilled 15-64 (ISCED 0-2)	60.2	57.2	51.8	53.0	55.5	57.2	58.7	62.3	60.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	64.4	66.2	60.3	60.0	62.4	64.9	67.6	68.2	69.6
Employment rate for high skilled 15-64 (ISCED 5-8)	74.9	71.7	70.6	70.6	71.4	69.4	73.2	73.7	73.5
Self-employed (% of total employment)	38.6	34.2	32.4	32.8	37.8	42.0	42.6	42.4	42.2
Part-time employment (% of total employment)	15.1	18.2	19.2	21.3	22.0	21.0	17.0	16.6	14.7
Temporary employment (% of total employees)	21.4	13.8	16.1	18.0	14.8	15.5	15.8	13.9	12.9
Activity rate (% population aged 15+)	64.0	65.5	61.7	63.5	64.3	65.0	66.8	67.4	67.4
Activity rate (% population aged 15-64)	72.3	73.4	70.2	72.2	73.4	74.1	75.8	76.6	76.6
Activity rate (% population aged 15-24)	40.0	44.3	36.6	37.2	39.2	36.9	37.8	39.4	43.8
Activity rate (% population aged 25-54)	88.8	87.7	86.4	87.4	88.6	88.7	90.9	91.3	90.4
Activity rate (% population aged 55-64)	71.7	74.5	70.2	74.9	76.0	76.3	77.4	80.2	77.7
Unemployment aged 15+ (1,000)	97	109	122	139	128	123	116	99	101
Unemployment rate (% labor force 15+)	12.6	14.6	17.8	19.2	17.1	15.9	14.6	12.6	12.9
Youth unemployment rate (% labor force 15-24)	29.6	32.6	33.8	42.5	39.2	37.4	34.1	31.0	30.2
NEET rate (% population aged 15-24)	25.5	25.8	29.7	29.6	28.2	26.8	24.7	.	.
Long-term unemployment rate (% labor force 15+)	9.3	10.9	12.4	11.7	11.2	10.3	9.2	8.0	8.6
Share of long-term unemployed (% of total)	73.9	74.8	69.7	61.0	65.8	64.9	63.3	63.4	66.9
Unemployment rate, low educated 15+ (ISCED 0-2)	12.0	14.3	17.3	17.8	15.4	14.6	14.3	11.2	11.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	13.3	15.6	19.8	21.6	19.0	17.1	15.3	14.2	14.4
Unemployment rate, high educated 15+ (ISCED 5-8)	13.1	12.4	13.5	16.0	16.4	16.2	13.5	11.8	12.0

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	1,455	1,441	1,434	1,428	1,421	1,420	1,427	.	.
Working-age population aged 15+ (1,000)	1,261	1,157	1,212	1,199	1,190	1,186	1,187	1,194	1,195
Employment aged 15+ (1,000)	497	503	461	451	466	507	516	538	542
Employment rate (% population aged 15+)	39.5	43.5	38.0	37.6	39.2	42.8	43.5	45.0	45.4
Employment rate (% population aged 15-64)	44.5	49.6	43.1	43.4	45.5	49.7	50.3	51.9	52.2
Employment rate (% population aged 20-64)	49.8	54.9	49.3	48.5	50.7	55.0	55.6	57.2	57.3
Employment rate (% population aged 15-24)	18.6	20.9	14.1	13.9	13.4	16.8	17.7	18.2	20.2
Employment rate (% population aged 25-29)	52.0	55.7	49.8	46.3	46.3	51.8	48.8	52.1	51.5
Employment rate (% population aged 25-54)	58.6	62.2	57.3	57.2	60.1	63.4	63.4	66.7	66.4
Employment rate (% population aged 55-64)	30.7	42.9	40.0	37.3	39.2	42.0	41.7	46.8	46.4
Employment rate for low skilled 15-64 (ISCED 0-2)	42.8	48.7	40.1	41.3	45.3	48.3	47.8	50.6	51.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	39.9	46.5	39.4	37.9	38.8	44.3	45.4	46.5	46.1
Employment rate for high skilled 15-64 (ISCED 5-8)	69.1	62.9	64.2	63.1	58.9	64.4	65.8	64.1	65.0
Self-employed (% of total employment)	19.1	17.7	17.6	17.2	17.6	25.7	26.8	24.4	25.1
Part-time employment (% of total employment)	32.5	27.4	30.5	35.4	32.6	28.5	25.5	25.3	23.6
Temporary employment (% of total employees)	9.0	3.9	7.8	7.9	8.1	8.8	8.0	7.1	6.0
Activity rate (% population aged 15+)	46.9	49.2	44.0	44.4	47.2	49.9	49.8	51.3	51.4
Activity rate (% population aged 15-64)	52.9	56.4	50.1	51.3	55.1	58.3	57.7	59.5	59.5
Activity rate (% population aged 15-24)	27.2	27.6	19.4	20.5	22.7	25.8	24.5	25.9	25.9
Activity rate (% population aged 25-54)	67.9	70.2	66.1	66.9	71.6	73.1	72.2	75.3	75.3
Activity rate (% population aged 55-64)	34.2	45.5	42.9	40.8	43.1	45.8	45.2	50.7	50.6
Unemployment aged 15+ (1,000)	94	67	72	81	96	85	74	75	73
Unemployment rate (% labor force 15+)	15.9	11.7	13.5	15.2	17.1	14.4	12.6	12.3	11.8
Youth unemployment rate (% labor force 15-24)	31.7	24.3	27.3	32.6	40.8	34.9	27.7	29.6	21.9
NEET rate (% population aged 15-24)	33.4	29.4	31.9	32.2	31.1	27.1	27.3	.	.
Long-term unemployment rate (% labor force 15+)	12.1	9.5	10.4	10.7	11.3	9.8	8.4	8.3	8.1
Share of long-term unemployed (% of total)	76.0	80.9	76.9	70.1	66.2	68.2	67.1	67.8	68.7
Unemployment rate, low educated 15+ (ISCED 0-2)	14.1	8.6	10.5	10.4	11.2	10.5	9.9	9.5	8.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	19.7	13.3	17.2	20.7	23.0	18.3	16.0	13.6	14.1
Unemployment rate, high educated 15+ (ISCED 5-8)	14.2	19.5	16.2	18.2	21.5	17.6	13.8	16.0	15.4

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	34,767	37,534	36,332	45,539	46,829	45,845	49,840	49,145	50,392
nominal annual growth in %	-3.6	2.9	-3.2	0.9	2.8	-2.1	8.7	4.2	2.5
real annual growth in % (CPI deflated)	-7.0	0.9	-5.0	-0.7	0.9	-3.4	6.6	2.3	0.3
Average monthly gross wages, EUR	252	270	259	325	335	334	372	371	396
Average monthly gross wages, EUR (PPP)	602	650	605	783	824	773	843	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	18,000	20,000	21,000	22,000	22,000	22,000	22,000	.	.
Monthly gross minimum wages, EUR (ER)	130	144	150	157	157	160	163	.	.
Monthly gross minimum wages, EUR (PPP)	260	304	311	327	347	326	329	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	-0.3	-13.9	0.4	5.4	0.9	8.1	.	.
ULC, EUR in %	.	0.6	-14.7	0.6	5.6	2.6	10.7	.	.

Notes: In 2010 and 2011 the labor force survey was carried out once a year (2010: Sept-Oct, 2011: July-Sept), continuous quarterly survey thereafter. For LFS data census 2011 is applied from 2011, data 2010 are therefore not fully comparable. The education groups refer to ISCED 1997.

Annual average monthly gross wages refer to General Directorate of Taxation from 2014, Structural Business Statistics (SBS) before. Growth rate in 2014 refers to SBS data. Quarterly data refer to the public sector only. Minimum wages are in effect since July 1 of the respective previous year.

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

Bosnia and Herzegovina: Labor market indicators

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	3,843	3,836	3,832	3,827	3,819	3,816	3,809	.	.
Working-age population aged 15+ (1,000)	2,597	2,566	2,598	2,565	2,579	2,489	2,407	.	2,396
Employment aged 15+ (1,000)	843	814	822	812	822	801	816	.	822
Employment rate (% population aged 15+)	32.5	31.7	31.6	31.7	31.9	32.2	33.9	.	34.3
Employment rate (% population aged 15-64)	39.0	38.5	38.5	39.0	39.2	40.2	43.0	.	44.0
Employment rate (% population aged 20-64)	42.8	42.5	42.8	43.2	43.2	44.2	46.6	.	47.7
Employment rate (% population aged 15-24)	14.0	10.8	11.6	10.9	12.1	13.8	17.6	.	19.7
Employment rate (% population aged 25-29)	46.5	44.5	44.5	45.1	45.5	45.6	50.9	.	54.8
Employment rate (% population aged 25-54)	51.0	51.2	51.4	52.5	52.4	53.6	56.4	.	57.8
Employment rate (% population aged 55-64)	26.8	27.2	27.7	28.5	28.2	29.7	32.5	.	32.6
Employment rate for low skilled 15-64 (ISCED 0-2)	20.8	20.8	20.3	18.4	20.1	20.2	22.5	.	20.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	45.6	44.4	43.8	45.5	44.4	45.3	48.0	.	49.9
Employment rate for high skilled 15-64 (ISCED 5-8)	70.5	69.2	69.8	68.0	68.6	66.7	70.5	.	71.4
Self-employed (% of total employment)	20.8	22.7	20.7	19.1	20.7	21.1	20.6	.	17.6
Part-time employment (% of total employment)	10.4	15.7	9.6	7.8	7.2	6.8	9.1	.	7.0
Temporary employment (% of total employees)	13.6	13.5	14.5	14.9	16.1	16.8	18.4	.	17.5
Activity rate (% population aged 15+)	44.6	44.0	43.6	43.7	44.1	43.1	42.6	.	42.1
Activity rate (% population aged 15-64)	54.0	53.9	53.5	54.2	54.6	54.2	54.5	.	54.2
Activity rate (% population aged 15-24)	33.0	29.4	28.3	29.3	32.2	30.2	32.5	.	32.3
Activity rate (% population aged 25-54)	67.8	68.9	69.1	70.8	70.3	70.4	70.3	.	70.4
Activity rate (% population aged 55-64)	31.3	32.1	33.1	32.8	33.1	35.2	36.6	.	36.5
Unemployment aged 15+ (1,000)	315	317	311	308	315	273	211	.	185
Unemployment rate (% labor force 15+)	27.2	28.0	27.5	27.5	27.7	25.4	20.5	.	18.4
Youth unemployment rate (% labor force 15-24)	57.5	63.1	59.1	62.7	62.3	54.3	45.8	.	38.8
NEET rate (% population aged 15-24)	28.0	28.4	25.8	26.1	27.7	26.4	24.3	.	.
Long-term unemployment rate (% labor force 15+)	22.3	23.0	22.8	23.3	22.6	21.6	16.9	.	15.2
Share of long-term unemployed (% of total)	82.0	82.0	83.1	84.8	81.7	85.0	82.1	.	82.3
Unemployment rate, low educated 15+ (ISCED 0-2)	28.0	26.9	28.2	30.2	27.3	25.6	(18.2)	.	18.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	29.3	30.6	30.0	28.9	30.0	26.6	22.3	.	19.2
Unemployment rate, high educated 15+ (ISCED 5-8)	15.6	17.9	16.9	19.3	18.4	20.3	15.5	.	15.1
Male									
Total population (1,000)	1,878	1,874	1,872	1,870	1,866	1,864	1,861	.	.
Working-age population aged 15+ (1,000)	1,260	1,238	1,268	1,242	1,259	1,208	1,177	.	1,169
Employment aged 15+ (1,000)	531	514	515	511	515	514	509	.	515
Employment rate (% population aged 15+)	42.2	41.5	40.6	41.2	40.9	42.5	43.2	.	44.1
Employment rate (% population aged 15-64)	49.6	49.0	48.0	48.9	48.8	51.1	53.3	.	54.7
Employment rate (% population aged 20-64)	54.6	54.2	53.3	54.6	53.9	56.4	58.1	.	59.5
Employment rate (% population aged 15-24)	17.8	14.1	14.9	13.5	15.8	18.3	22.8	.	26.1
Employment rate (% population aged 25-29)	55.9	52.9	52.2	51.3	52.3	54.4	58.6	.	64.4
Employment rate (% population aged 25-54)	63.8	64.0	63.4	64.9	64.6	67.3	69.3	.	70.7
Employment rate (% population aged 55-64)	36.9	37.2	36.4	38.9	37.3	40.4	42.2	.	42.3
Employment rate for low skilled 15-64 (ISCED 0-2)	31.9	31.3	30.4	27.7	30.9	30.9	32.8	.	32.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	53.6	53.0	51.4	53.8	52.2	54.8	56.4	.	58.9
Employment rate for high skilled 15-64 (ISCED 5-8)	74.0	72.6	72.1	70.2	70.1	71.0	76.8	.	74.0
Self-employed (% of total employment)	23.2	25.1	24.0	21.8	23.9	23.6	22.6	.	19.6
Part-time employment (% of total employment)	8.8	14.8	9.0	7.0	6.6	5.7	8.4	.	6.0
Temporary employment (% of total employees)	14.9	15.6	15.5	15.9	16.3	17.9	19.7	.	18.6
Activity rate (% population aged 15+)	56.7	56.4	55.3	55.0	55.1	54.9	53.3	.	53.2
Activity rate (% population aged 15-64)	67.1	67.0	65.7	65.9	66.2	66.2	66.1	.	66.4
Activity rate (% population aged 15-24)	39.7	37.7	36.3	34.6	38.9	38.1	40.2	.	40.4
Activity rate (% population aged 25-54)	82.7	83.3	83.0	84.1	83.8	83.8	83.8	.	84.2
Activity rate (% population aged 55-64)	44.3	44.5	44.4	45.3	44.0	48.2	47.5	.	47.9
Unemployment aged 15+ (1,000)	183	184	186	172	179	149	118	.	107
Unemployment rate (% labor force 15+)	25.6	26.4	26.5	25.2	25.8	22.5	18.9	.	17.2
Youth unemployment rate (% labor force 15-24)	55.1	62.6	59.1	61.0	59.5	52.0	43.1	.	35.4
NEET rate (% population aged 15-24)	28.1	30.5	27.4	27.9	29.2	28.0	24.5	.	.
Long-term unemployment rate (% labor force 15+)	20.6	21.4	21.7	21.4	21.1	19.2	15.3	.	14.0
Share of long-term unemployed (% of total)	80.4	81.3	81.9	85.0	81.8	85.1	81.0	.	81.4
Unemployment rate, low educated 15+ (ISCED 0-2)	28.6	27.9	29.0	27.9	27.0	24.1	(16.4)	.	(19.1)
Unemployment rate, medium educated 15+ (ISCED 3-4)	26.7	27.9	28.3	26.3	27.2	23.6	20.8	.	17.5
Unemployment rate, high educated 15+ (ISCED 5-8)	(13.0)	14.5	(14.3)	16.2	(15.9)	(14.8)	(11.0)	.	(13.4)

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	1,966	1,962	1,960	1,958	1,953	1,952	1,948	.	.
Working-age population aged 15+ (1,000)	1,337	1,328	1,330	1,324	1,320	1,281	1,230	.	1,227
Employment aged 15+ (1,000)	311	300	307	301	307	288	307	.	307
Employment rate (% population aged 15+)	23.3	22.6	23.0	22.7	23.2	22.4	24.9	.	25.0
Employment rate (% population aged 15-64)	28.6	28.1	28.9	28.9	29.5	29.1	32.5	.	33.0
Employment rate (% population aged 20-64)	31.2	31.1	32.2	31.9	32.4	32.0	35.1	.	35.8
Employment rate (% population aged 15-24)	10.0	7.5	7.9	8.1	8.0	(8.7)	(11.4)	.	(12.6)
Employment rate (% population aged 25-29)	35.9	34.7	35.4	38.0	37.2	35.3	41.7	.	41.5
Employment rate (% population aged 25-54)	38.0	38.2	39.2	39.7	40.0	39.8	43.4	.	44.5
Employment rate (% population aged 55-64)	17.9	18.3	19.7	19.3	19.8	19.4	23.5	.	23.7
Employment rate for low skilled 15-64 (ISCED 0-2)	14.1	14.4	13.7	12.6	13.3	13.6	16.2	.	13.5
Employment rate for medium skilled 15-64 (ISCED 3-4)	34.9	32.9	33.7	34.3	34.0	32.8	37.0	.	38.2
Employment rate for high skilled 15-64 (ISCED 5-8)	67.1	66.0	67.4	65.9	67.3	62.7	64.7	.	69.0
Self-employed (% of total employment)	16.8	18.6	15.2	14.4	15.2	16.5	17.4	.	14.3
Part-time employment (% of total employment)	13.1	17.2	10.7	9.2	8.0	8.8	10.1	.	8.7
Temporary employment (% of total employees)	11.4	9.8	12.7	13.1	15.7	15.0	16.2	.	15.7
Activity rate (% population aged 15+)	33.2	32.6	32.5	33.0	33.5	32.1	32.4	.	31.4
Activity rate (% population aged 15-64)	41.1	41.0	41.0	42.4	42.9	41.9	42.7	.	41.8
Activity rate (% population aged 15-24)	25.9	20.9	19.4	23.3	24.5	21.3	23.4	.	23.1
Activity rate (% population aged 25-54)	52.9	54.3	54.8	57.1	56.6	56.8	56.5	.	56.1
Activity rate (% population aged 55-64)	19.9	21.1	22.9	21.9	22.9	22.9	26.5	.	25.9
Unemployment aged 15+ (1,000)	133	133	125	136	136	124	92	.	78
Unemployment rate (% labor force 15+)	29.9	30.7	29.0	31.2	30.7	30.0	23.1	.	20.3
Youth unemployment rate (% labor force 15-24)	61.3	64.0	59.2	65.4	67.3	58.9	51.4	.	(45.5)
NEET rate (% population aged 15-24)	28.0	26.2	24.1	24.0	26.0	24.7	24.0	.	.
Long-term unemployment rate (% labor force 15+)	25.1	25.4	24.6	26.4	25.1	25.5	19.3	.	17.0
Share of long-term unemployed (% of total)	84.1	82.8	84.8	84.7	81.6	85.0	83.6	.	83.6
Unemployment rate, low educated 15+ (ISCED 0-2)	27.4	25.5	27.0	33.1	27.8	27.5	(20.3)	.	(17.5)
Unemployment rate, medium educated 15+ (ISCED 3-4)	34.1	35.8	33.2	33.9	35.0	32.6	25.2	.	22.3
Unemployment rate, high educated 15+ (ISCED 5-8)	18.3	21.2	19.6	22.2	20.9	25.5	(19.9)	.	(16.7)

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	1,217	1,290	1,291	1,290	1,289	1,301	1,321	1,340	1,356
nominal annual growth in %	1.1	1.5	0.1	-0.1	0.0	0.9	1.6	2.1	2.8
real annual growth in % (CPI deflated)	-1.0	-0.5	0.2	0.8	1.0	2.0	0.4	1.4	1.3
Average monthly gross wages, EUR	622	660	660	659	659	665	676	685	693
Average monthly gross wages, EUR (PPP)	1,271	1,381	1,383	1,383	1,396	1,374	1,369	.	.
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	-1.9	-4.6	0.3	.	.
ULC, EUR in %	.	2.1	-1.3	-2.4	-1.9	-4.6	0.3	.	.

Notes: The labor force survey is conducted once a year in April, data are allocated to the second quarter of each year. For LFS and population data census 2013 is not yet applied. Education groups refer to ISCED 1997 until 2014, ISCED 2011 from 2015.
Monthly gross minimum wages are available for the three entities separately but not for the whole territory.

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

Kosovo: Labor market indicators

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	1,775	1,807	1,818	1,813	1,788	1,778	1,791	.	.
Working-age population aged 15+ (1,000)	.	1,213	1,250	1,277	1,262	1,276	1,310	1,358	1,353
Employment aged 15+ (1,000)	.	303	340	324	298	333	359	344	344
Employment rate (% population aged 15+)	.	25.0	27.2	25.4	23.6	26.1	27.4	25.3	25.4
Employment rate (% population aged 15-64)	.	26.6	29.2	27.5	25.8	28.7	30.5	29.2	29.0
Employment rate (% population aged 20-64)	.	31.0	34.0	32.1	29.9	33.1	35.2	34.1	33.7
Employment rate (% population aged 15-24)	.	10.1	10.2	9.1	8.7	10.2	11.4	9.0	9.7
Employment rate (% population aged 25-29)	.	29.1	32.2	30.0	27.8	31.4	32.6	29.2	30.6
Employment rate (% population aged 25-54)	.	34.7	38.1	36.2	33.8	37.4	39.1	38.3	37.6
Employment rate (% population aged 55-64)	.	29.1	33.5	31.9	28.9	31.6	34.7	32.0	33.3
Employment rate for low skilled 15-64 (ISCED 0-2)	.	9.7	12.5	11.5	9.9	13.6	13.5	9.7	9.5
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	37.2	38.5	35.4	32.0	33.8	37.0	36.7	35.6
Employment rate for high skilled 15-64 (ISCED 5-8)	.	60.6	64.9	58.9	53.3	56.3	56.3	68.1	66.3
Self-employed (% of total employment)	.	19.6	22.8	23.2	21.2	22.4	23.6	21.6	21.3
Part-time employment (% of total employment)	.	11.2	12.1	8.2	5.3	6.0	5.9	4.2	3.7
Temporary employment (% of total employees)	.	72.9	68.8	71.5	72.0	70.6	70.1	79.7	79.5
Activity rate (% population aged 15+)	.	35.8	38.6	39.1	35.1	36.0	39.3	34.4	35.9
Activity rate (% population aged 15-64)	.	38.2	41.5	42.5	38.4	39.6	43.8	39.7	41.0
Activity rate (% population aged 15-24)	.	22.3	23.0	23.3	20.4	21.5	24.0	19.6	21.5
Activity rate (% population aged 25-54)	.	47.5	51.8	53.3	48.6	49.5	54.7	50.4	51.8
Activity rate (% population aged 55-64)	.	32.0	37.3	37.6	33.1	35.9	39.0	35.4	36.5
Unemployment aged 15+ (1,000)	.	132	142	175	145	126	156	123	142
Unemployment rate (% labor force 15+)	.	30.3	29.5	35.0	32.7	27.4	30.3	26.4	29.2
Youth unemployment rate (% labor force 15-24)	.	54.7	55.7	60.9	57.6	52.3	52.6	53.9	54.9
NEET rate (% population aged 15-24)	.	33.7	34.9	29.6	30.9	29.5	25.9	.	.
Long-term unemployment rate (% labor force 15+)	.	18.0	19.7	24.7	23.6	18.0	21.7	16.6	17.7
Share of long-term unemployed (% of total)	.	59.4	66.9	70.5	72.1	65.5	71.6	63.1	60.5
Unemployment rate, low educated 15+ (ISCED 0-2)	.	43.9	39.9	45.8	46.6	32.2	34.9	34.8	38.7
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	29.1	29.1	35.4	32.6	28.9	30.6	28.3	31.1
Unemployment rate, high educated 15+ (ISCED 5-8)	.	17.6	16.8	20.6	19.9	18.5	25.8	15.1	18.0
Male									
Total population (1,000)	900	910	915	912	895	885	889	.	.
Population aged 15+ (1,000)	.	637	639	653	651	658	672	689	690
Employment aged 15+ (1,000)	.	240	263	250	231	259	284	274	272
Employment rate (% population aged 15+)	.	37.7	41.1	38.2	35.6	39.3	42.2	39.8	39.4
Employment rate (% population aged 15-64)	.	40.7	44.6	41.9	39.2	43.6	47.2	45.8	45.1
Employment rate (% population aged 20-64)	.	47.5	52.1	48.9	45.4	50.5	54.6	54.1	52.8
Employment rate (% population aged 15-24)	.	14.7	15.3	13.6	13.0	15.4	16.9	13.0	14.1
Employment rate (% population aged 25-29)	.	42.3	46.1	43.7	38.8	44.2	48.3	42.6	43.3
Employment rate (% population aged 25-54)	.	53.9	59.0	56.0	51.5	57.1	61.8	61.9	60.0
Employment rate (% population aged 55-64)	.	45.9	51.5	48.0	46.1	50.8	53.1	51.8	52.5
Employment rate for low skilled 15-64 (ISCED 0-2)	.	21.5	26.0	24.7	21.0	28.5	29.8	21.5	20.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	46.7	50.3	46.3	42.9	45.9	51.0	51.4	50.1
Employment rate for high skilled 15-64 (ISCED 5-8)	.	69.9	71.8	66.0	61.3	64.5	65.1	75.2	76.1
Self-employed (% of total employment)	.	22.5	25.9	26.2	23.3	24.6	26.3	23.5	23.4
Part-time employment (% of total employment)	.	11.3	11.4	7.6	4.7	4.4	5.2	4.0	3.5
Temporary employment (% of total employees)	.	73.0	68.9	71.6	73.9	71.0	72.1	81.6	81.3
Activity rate (% population aged 15+)	.	52.0	56.0	56.9	51.9	53.2	59.0	53.6	55.4
Activity rate (% population aged 15-64)	.	56.2	60.9	62.5	57.4	59.0	66.1	61.8	63.5
Activity rate (% population aged 15-24)	.	30.1	30.8	30.9	28.4	29.1	32.7	26.3	29.2
Activity rate (% population aged 25-54)	.	71.3	77.6	80.6	73.5	75.1	85.1	81.4	83.0
Activity rate (% population aged 55-64)	.	51.2	57.8	57.3	53.2	58.3	60.4	58.1	58.4
Unemployment aged 15+ (1,000)	.	91	95	122	106	91	113	95	110
Unemployment rate (% labor force 15+)	.	27.5	26.5	32.9	31.5	26.1	28.4	25.7	28.8
Youth unemployment rate (% labor force 15-24)	.	51.2	50.2	56.1	54.1	47.1	48.2	50.5	51.6
NEET rate (% population aged 15-24)	.	29.6	29.9	26.0	27.7	25.9	22.1	.	.
Long-term unemployment rate (% labor force 15+)	.	16.1	18.1	22.6	22.4	17.1	20.7	16.8	18.0
Share of long-term unemployed (% of total)	.	58.5	68.3	68.8	70.9	65.7	72.6	65.5	62.6
Unemployment rate, low educated 15+ (ISCED 0-2)	.	39.8	37.2	44.8	48.5	34.2	37.1	36.8	41.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	26.8	25.5	32.4	30.6	27.1	28.2	26.1	29.3
Unemployment rate, high educated 15+ (ISCED 5-8)	.	12.7	14.2	16.1	14.6	12.0	19.5	14.8	16.2

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	875	897	903	901	893	892	902	.	.
Working-age population aged 15+ (1,000)	.	576	611	624	611	617	638	669	663
Employment aged 15+ (1,000)	.	63	77	75	67	74	76	70	72
Employment rate (% population aged 15+)	.	10.9	12.7	12.0	11.0	12.0	11.8	10.4	10.8
Employment rate (% population aged 15-64)	.	11.4	13.4	12.9	11.9	13.1	13.1	12.0	12.3
Employment rate (% population aged 20-64)	.	13.4	15.6	15.0	13.7	15.1	15.1	13.9	14.2
Employment rate (% population aged 15-24)	.	4.9	4.6	4.2	3.8	4.5	5.3	4.4	4.7
Employment rate (% population aged 25-29)	.	14.6	16.5	14.6	14.8	15.7	14.2	13.3	16.1
Employment rate (% population aged 25-54)	.	14.9	17.6	16.8	16.0	17.7	16.7	15.3	15.6
Employment rate (% population aged 55-64)	.	9.8	14.1	15.0	10.6	11.0	13.5	12.3	13.6
Employment rate for low skilled 15-64 (ISCED 0-2)	.	2.6	4.7	4.1	3.7	5.0	4.4	3.1	3.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	20.1	19.2	17.4	14.3	14.7	14.3	13.2	13.1
Employment rate for high skilled 15-64 (ISCED 5-8)	.	45.8	54.7	49.8	43.2	45.7	45.8	58.1	53.7
Self-employed (% of total employment)	.	8.2	12.4	13.1	13.7	14.7	13.7	13.9	13.5
Part-time employment (% of total employment)	.	10.7	14.6	10.2	7.5	11.5	8.3	5.2	4.4
Temporary employment (% of total employees)	.	72.5	68.6	71.3	66.5	69.3	63.7	73.1	73.5
Activity rate (% population aged 15+)	.	18.0	20.4	20.5	17.3	17.7	18.6	14.6	15.6
Activity rate (% population aged 15-64)	.	18.9	21.8	22.0	18.7	19.3	20.6	16.9	17.8
Activity rate (% population aged 15-24)	.	13.3	14.6	15.0	11.5	12.9	14.5	11.8	12.9
Activity rate (% population aged 25-54)	.	23.0	26.4	26.4	23.5	23.8	24.8	20.0	20.9
Activity rate (% population aged 55-64)	.	10.0	15.3	16.9	11.7	11.8	14.4	12.7	14.1
Unemployment aged 15+ (1,000)	.	41	48	53	38	35	43	28	32
Unemployment rate (% labor force 15+)	.	39.3	38.1	41.4	36.4	31.7	36.5	28.8	30.6
Youth unemployment rate (% labor force 15-24)	.	63.5	68.4	71.7	67.2	65.4	63.5	62.7	63.2
NEET rate (% population aged 15-24)	.	38.4	40.3	33.4	34.5	33.6	30.3	.	.
Long-term unemployment rate (% labor force 15+)	.	24.2	24.5	30.8	27.4	20.6	25.2	15.9	16.4
Share of long-term unemployed (% of total)	.	61.5	64.2	74.5	75.3	64.9	68.9	55.1	53.4
Unemployment rate, low educated 15+ (ISCED 0-2)	.	57.8	47.1	49.0	39.3	24.9	24.7	25.9	22.9
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	37.5	41.2	45.9	41.0	36.7	41.8	39.7	40.6
Unemployment rate, high educated 15+ (ISCED 5-8)	.	27.5	21.4	27.3	28.1	28.3	34.7	15.7	21.0

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	.	431	444	482	510	519	511	.	.
nominal annual growth in %	.	.	3.0	8.6	5.8	1.8	-1.5	.	.
real annual growth in % (CPI deflated)	.	.	1.2	8.1	6.3	1.5	-1.5	.	.
Average monthly gross wages, EUR	.	431	444	482	510	519	511	.	.
Average monthly gross wages, EUR (PPP)	.	993	992	1,065	1,159	1,151	1,123	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	170	170	170	170	170	170	.	.
Monthly gross minimum wages, EUR (ER)	.	170	170	170	170	170	170	.	.
Monthly gross minimum wages, EUR (PPP)	.	338	328	333	343	335	326	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	.	11.8	2.3	-6.5	9.2	2.3	.	.
ULC, EUR in %	.	.	11.8	2.3	-6.5	9.2	2.3	.	.

Notes: Data are based on a continuous quarterly survey, but are only available on an annual basis in 2012-2015 (allocated to the fourth quarter of each year). The dataset for Kosovo excludes persons without any school education and therefore slightly deviates from the officially published data in the LFS publications. Census 2011 is applied throughout. Education groups refer to ISCED 1997.
Minimum wages presented here 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 January 1, 2011.

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

North Macedonia: Labor market indicators

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	2,055	2,061	2,064	2,067	2,070	2,072	2,075	.	.
Working-age population aged 15+ (1,000)	1,649	1,670	1,672	1,673	1,677	1,679	1,680	1,682	1,683
Employment aged 15+ (1,000)	638	651	679	690	706	724	741	750	755
Employment rate (% population aged 15+)	38.7	39.0	40.6	41.2	42.1	43.1	44.1	44.6	44.9
Employment rate (% population aged 15-64)	43.5	44.0	46.0	46.9	47.8	49.1	50.5	50.9	51.3
Employment rate (% population aged 20-64)	48.1	48.2	50.3	51.3	51.9	53.3	54.8	55.1	55.7
Employment rate (% population aged 15-24)	15.4	15.5	16.2	15.2	17.3	16.2	17.5	17.5	17.0
Employment rate (% population aged 25-29)	47.8	45.7	45.9	48.2	47.3	49.6	51.5	54.3	53.8
Employment rate (% population aged 25-54)	55.8	55.8	57.9	59.3	59.4	61.2	62.7	63.3	63.4
Employment rate (% population aged 55-64)	34.2	35.4	37.9	38.6	40.1	40.7	41.4	40.6	43.0
Employment rate for low skilled 15-64 (ISCED 0-2)	26.6	25.7	28.4	29.9	28.9	27.3	28.4	27.9	28.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	49.9	50.1	52.4	52.5	53.6	55.4	56.4	56.7	57.3
Employment rate for high skilled 15-64 (ISCED 5-8)	70.7	68.1	67.5	69.1	72.0	72.4	73.7	74.4	73.8
Self-employed (% of total employment)	13.1	13.6	14.5	14.0	13.9	13.2	12.9	12.2	14.3
Part-time employment (% of total employment)	5.9	6.4	4.6	5.9	4.4	5.0	4.2	3.6	3.8
Temporary employment (% of total employees)	16.5	13.7	14.0	15.4	12.6	13.6	14.0	13.5	16.1
Activity rate (% population aged 15+)	56.9	56.5	57.2	57.3	57.0	56.5	56.8	56.9	56.9
Activity rate (% population aged 15-64)	64.2	63.9	64.9	65.3	64.9	64.5	65.3	65.1	65.3
Activity rate (% population aged 15-24)	33.3	33.6	33.6	32.4	32.8	31.3	32.8	31.4	32.4
Activity rate (% population aged 25-54)	79.4	78.5	79.2	80.0	78.8	78.7	79.1	79.6	78.4
Activity rate (% population aged 55-64)	47.4	47.2	49.9	49.9	50.6	49.4	49.7	48.0	51.8
Unemployment aged 15+ (1,000)	300	293	277	269	249	225	214	207	202
Unemployment rate (% labor force 15+)	32.0	31.0	29.0	28.0	26.1	23.7	22.4	21.6	21.1
Youth unemployment rate (% labor force 15-24)	53.7	53.9	51.9	53.1	47.3	48.2	46.7	44.3	47.6
NEET rate (% population aged 15-24)	25.5	24.8	24.2	25.2	24.7	24.3	24.9	.	.
Long-term unemployment rate (% labor force 15+)	26.7	25.5	23.9	23.4	21.3	19.2	17.4	15.3	15.4
Share of long-term unemployed (% of total)	83.3	82.1	82.5	83.4	81.6	80.9	77.9	70.7	73.0
Unemployment rate, low educated 15+ (ISCED 0-2)	38.9	37.7	34.2	32.1	29.7	29.1	26.5	26.4	25.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	32.1	31.4	28.7	28.3	26.6	23.7	22.6	21.5	20.9
Unemployment rate, high educated 15+ (ISCED 5-8)	21.8	22.4	23.5	22.5	21.1	19.4	18.7	18.2	18.3
Male									
Total population (1,000)	1,030	1,033	1,034	1,036	1,037	1,038	1,039	.	.
Working-age population aged 15+ (1,000)	824	835	837	837	839	840	841	842	842
Employment aged 15+ (1,000)	392	393	408	420	424	440	450	447	456
Employment rate (% population aged 15+)	47.5	47.1	48.7	50.1	50.5	52.3	53.6	53.1	54.2
Employment rate (% population aged 15-64)	52.8	52.4	54.5	56.1	56.6	58.6	60.5	59.6	61.0
Employment rate (% population aged 20-64)	58.4	57.5	59.7	61.6	61.5	63.7	65.6	64.6	66.3
Employment rate (% population aged 15-24)	19.5	18.1	18.9	18.9	20.2	20.4	22.6	21.7	20.5
Employment rate (% population aged 25-29)	56.0	50.9	52.3	57.1	53.8	56.7	61.1	62.4	61.5
Employment rate (% population aged 25-54)	66.1	65.4	67.4	69.8	69.1	71.2	73.2	72.3	73.6
Employment rate (% population aged 55-64)	46.7	46.6	49.4	50.3	52.2	55.0	54.5	52.8	57.4
Employment rate for low skilled 15-64 (ISCED 0-2)	39.6	37.8	41.9	44.3	42.2	42.6	43.3	41.4	44.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	55.6	55.4	57.3	58.6	59.7	61.9	63.5	62.7	63.5
Employment rate for high skilled 15-64 (ISCED 5-8)	74.0	72.1	71.4	72.8	74.8	75.7	78.3	77.5	79.0
Self-employed (% of total employment)	18.2	18.2	19.2	19.4	18.9	17.2	17.3	16.7	19.1
Part-time employment (% of total employment)	5.0	5.9	4.4	6.5	4.3	4.6	4.1	3.7	4.0
Temporary employment (% of total employees)	18.6	14.8	14.6	16.9	13.8	14.8	15.2	14.8	17.7
Activity rate (% population aged 15+)	69.8	68.7	68.5	69.3	68.9	69.2	69.3	68.7	69.2
Activity rate (% population aged 15-64)	77.7	76.6	76.8	77.7	77.5	77.8	78.4	77.4	78.2
Activity rate (% population aged 15-24)	42.2	40.5	39.9	39.3	40.1	39.2	41.7	39.9	41.2
Activity rate (% population aged 25-54)	93.3	92.2	91.9	93.2	91.8	92.1	92.4	91.6	91.0
Activity rate (% population aged 55-64)	65.6	63.9	65.7	66.8	67.4	68.1	67.0	64.7	70.4
Unemployment aged 15+ (1,000)	183	180	166	160	155	142	133	131	127
Unemployment rate (% labor force 15+)	31.9	31.5	29.0	27.6	26.7	24.4	22.7	22.7	21.7
Youth unemployment rate (% labor force 15-24)	53.9	55.2	52.5	52.0	49.7	47.9	45.7	45.7	50.1
NEET rate (% population aged 15-24)	25.1	25.3	23.3	23.6	24.5	23.6	23.9	.	.
Long-term unemployment rate (% labor force 15+)	26.7	26.1	24.0	23.1	22.1	20.1	17.6	15.3	15.7
Share of long-term unemployed (% of total)	83.7	83.0	82.7	83.6	82.5	82.5	77.5	67.7	72.5
Unemployment rate, low educated 15+ (ISCED 0-2)	40.0	40.6	35.3	32.8	31.2	30.3	29.3	29.4	28.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	31.3	31.0	28.6	27.4	27.0	24.2	22.7	22.4	21.6
Unemployment rate, high educated 15+ (ISCED 5-8)	18.9	18.7	19.8	20.0	19.3	17.6	15.4	16.4	14.8

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	1,025	1,029	1,030	1,032	1,033	1,034	1,036	.	.
Working-age population aged 15+ (1,000)	824	835	835	836	838	839	839	840	840
Employment aged 15+ (1,000)	246	257	271	271	282	284	290	303	299
Employment rate (% population aged 15+)	29.8	30.8	32.5	32.4	33.7	33.8	34.6	36.0	35.5
Employment rate (% population aged 15-64)	34.0	35.3	37.3	37.4	38.8	39.2	40.3	41.9	41.3
Employment rate (% population aged 20-64)	37.5	38.7	40.7	40.8	42.1	42.5	43.7	45.4	44.8
Employment rate (% population aged 15-24)	11.2	12.6	13.3	11.3	14.2	11.8	12.0	13.0	13.2
Employment rate (% population aged 25-29)	39.2	40.2	39.2	38.9	40.6	42.2	41.3	45.8	45.7
Employment rate (% population aged 25-54)	45.1	45.8	48.0	48.5	49.3	50.9	51.8	53.9	52.8
Employment rate (% population aged 55-64)	22.4	24.5	26.6	27.1	28.3	26.6	28.5	28.5	28.8
Employment rate for low skilled 15-64 (ISCED 0-2)	16.8	16.6	18.0	18.5	18.4	15.5	17.3	17.9	17.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	42.4	43.1	45.8	44.4	45.3	46.6	46.6	48.6	48.9
Employment rate for high skilled 15-64 (ISCED 5-8)	67.2	64.2	64.1	66.0	69.6	69.6	69.9	71.7	69.5
Self-employed (% of total employment)	4.9	6.5	7.4	5.6	6.4	6.9	6.0	5.6	7.1
Part-time employment (% of total employment)	7.4	7.2	5.0	5.0	4.7	5.7	4.5	3.5	3.4
Temporary employment (% of total employees)	13.4	12.2	13.2	13.3	11.0	11.8	12.3	11.8	13.8
Activity rate (% population aged 15+)	44.0	44.3	45.8	45.3	44.9	43.8	44.3	45.1	44.6
Activity rate (% population aged 15-64)	50.4	50.8	52.7	52.5	52.0	50.8	51.7	52.5	52.0
Activity rate (% population aged 15-24)	24.0	26.2	27.1	25.1	25.1	23.0	23.4	22.3	23.1
Activity rate (% population aged 25-54)	65.0	64.4	66.0	66.4	65.3	64.8	65.3	67.1	65.5
Activity rate (% population aged 55-64)	30.2	31.2	34.5	33.5	34.2	31.0	32.6	31.4	33.4
Unemployment aged 15+ (1,000)	117	112	111	108	94	83	81	76	76
Unemployment rate (% labor force 15+)	32.2	30.3	29.0	28.6	25.1	22.7	21.8	20.0	20.2
Youth unemployment rate (% labor force 15-24)	53.3	51.8	51.0	55.0	43.3	48.8	48.6	41.6	42.8
NEET rate (% population aged 15-24)	25.9	24.2	25.2	26.8	24.9	25.1	25.9	.	.
Long-term unemployment rate (% labor force 15+)	26.7	24.5	23.8	23.8	20.1	17.8	17.2	15.2	15.0
Share of long-term unemployed (% of total)	82.7	80.7	82.2	83.1	80.2	78.2	78.6	75.9	73.9
Unemployment rate, low educated 15+ (ISCED 0-2)	36.7	32.2	32.1	30.9	26.8	26.3	20.7	20.6	19.7
Unemployment rate, medium educated 15+ (ISCED 3-4)	33.4	31.9	28.9	29.8	25.9	22.7	22.3	19.9	19.7
Unemployment rate, high educated 15+ (ISCED 5-8)	24.8	26.0	26.7	24.6	22.5	21.0	21.7	20.0	21.4

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	30,226	30,670	31,025	31,325	32,171	32,821	33,688	34,661	35,543
nominal annual growth in %	1.0	0.2	1.2	1.0	2.7	2.0	2.6	4.7	6.2
real annual growth in % (CPI deflated)	-0.6	-3.0	-1.6	1.3	3.0	2.2	1.2	3.0	4.6
Average monthly gross wages, EUR	491	498	504	508	522	533	547	563	578
Average monthly gross wages, EUR (PPP)	1,235	1,220	1,193	1,216	1,244	1,237	1,229	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	12,266	12,268	13,140	13,482	14,739	14,739	.	.
Monthly gross minimum wages, EUR (ER)	.	199	199	214	219	239	240	.	.
Monthly gross minimum wages, EUR (PPP)	.	419	419	459	484	520	500	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	1.5	2.6	-0.9	1.2	1.7	4.8	.	.
ULC, EUR in %	.	1.5	2.5	-1.0	1.2	1.7	4.9	.	.

Notes: Data are based on a continuous quarterly survey. Census 2002 is applied throughout. Education groups refer to ISCED 2011.
Minimum wages are in effect since January 1 of each year.

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

Montenegro: Labor market indicators

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	619	621	621	622	622	622	622	.	.
Working-age population aged 15+ (1,000)	520	501	501	501	501	500	500	500	500
Employment aged 15+ (1,000)	209	201	202	216	222	224	229	225	240
Employment rate (% population aged 15+)	40.3	40.1	40.3	43.2	44.3	44.9	45.9	45.0	48.1
Employment rate (% population aged 15-64)	47.6	47.0	47.4	50.4	51.4	52.0	53.1	51.9	55.6
Employment rate (% population aged 20-64)	52.9	52.2	52.6	55.6	56.7	57.1	58.2	57.4	60.5
Employment rate (% population aged 15-24)	13.7	13.5	13.5	18.8	18.8	21.0	21.3	19.1	27.4
Employment rate (% population aged 25-29)	54.0	53.1	56.0	58.4	59.8	61.5	61.1	55.4	58.5
Employment rate (% population aged 25-54)	62.7	60.9	61.2	64.6	65.6	65.4	66.3	65.1	67.1
Employment rate (% population aged 55-64)	36.2	37.6	38.7	38.7	40.0	41.2	43.7	43.9	48.0
Employment rate for low skilled 15-64 (ISCED 0-2)	19.7	14.8	14.0	16.6	19.4	22.2	24.4	22.5	30.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	50.4	50.0	49.4	52.6	53.0	52.9	54.0	53.0	56.1
Employment rate for high skilled 15-64 (ISCED 5-8)	75.8	75.8	78.9	77.6	78.2	77.1	77.7	76.6	79.9
Self-employed (% of total employment)	15.3	16.1	14.8	16.8	18.4	19.2	19.1	18.8	19.4
Part-time employment (% of total employment)	5.0	4.5	3.3	6.3	6.0	4.9	5.9	6.7	5.8
Temporary employment (% of total employees)	18.3	21.2	26.0	27.4	30.2	33.8	30.3	29.8	34.6
Activity rate (% population aged 15+)	50.1	50.0	50.1	52.7	53.7	54.5	54.7	53.6	56.2
Activity rate (% population aged 15-64)	59.3	58.7	58.9	61.6	62.6	63.4	63.5	62.2	65.2
Activity rate (% population aged 15-24)	25.1	24.0	23.2	29.2	30.2	32.7	31.2	28.2	36.0
Activity rate (% population aged 25-54)	76.6	75.3	75.4	77.9	78.5	78.9	78.9	77.4	78.7
Activity rate (% population aged 55-64)	40.1	41.3	43.3	43.4	44.9	45.0	47.0	48.3	51.4
Unemployment aged 15+ (1,000)	51	49	49	47	47	48	44	43	40
Unemployment rate (% labor force 15+)	19.7	19.7	19.5	18.0	17.5	17.7	16.1	16.2	14.4
Youth unemployment rate (% labor force 15-24)	45.5	43.7	41.6	35.8	37.6	35.9	31.7	32.2	23.9
NEET rate (% population aged 15-24)	19.6	16.9	17.9	17.7	19.1	18.4	16.7	.	.
Long-term unemployment rate (% labor force 15+)	15.5	15.6	16.0	13.9	13.5	13.4	12.4	12.2	10.5
Share of long-term unemployed (% of total)	78.8	79.1	82.3	77.5	76.8	75.6	77.5	75.8	72.7
Unemployment rate, low educated 15+ (ISCED 0-2)	25.9	35.9	41.5	31.8	28.1	24.2	21.8	23.0	17.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	21.0	20.9	20.6	19.7	19.2	19.5	17.5	17.8	15.9
Unemployment rate, high educated 15+ (ISCED 5-8)	12.3	10.9	9.8	9.9	10.3	11.9	10.9	10.4	9.8
Male									
Total population (1,000)	306	307	307	307	308	308	308	.	.
Working-age population aged 15+ (1,000)	253	244	244	244	244	244	244	244	244
Employment aged 15+ (1,000)	119	112	111	119	121	123	129	125	136
Employment rate (% population aged 15+)	47.1	45.9	45.4	48.9	49.4	50.5	52.6	51.0	55.8
Employment rate (% population aged 15-64)	54.3	52.4	51.9	55.5	56.0	57.3	59.4	57.4	62.7
Employment rate (% population aged 20-64)	60.7	58.4	57.8	61.4	61.9	63.0	65.2	63.8	68.5
Employment rate (% population aged 15-24)	16.2	14.1	14.8	21.5	19.9	22.6	23.9	20.1	30.1
Employment rate (% population aged 25-29)	58.5	56.0	57.1	60.0	61.9	64.5	62.6	59.8	66.2
Employment rate (% population aged 25-54)	69.9	66.6	65.7	69.5	70.5	71.3	73.5	71.7	75.6
Employment rate (% population aged 55-64)	48.3	49.2	48.5	48.3	48.2	49.6	52.8	51.9	56.4
Employment rate for low skilled 15-64 (ISCED 0-2)	27.9	19.0	18.7	22.4	24.5	29.1	33.6	29.1	40.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	56.9	55.2	54.4	58.5	57.7	58.6	61.2	59.5	64.4
Employment rate for high skilled 15-64 (ISCED 5-8)	76.7	77.5	78.8	77.5	78.7	77.8	78.8	77.8	80.4
Self-employed (% of total employment)	20.2	20.8	19.2	21.3	23.5	24.6	25.0	25.8	26.1
Part-time employment (% of total employment)	5.3	4.6	3.9	6.7	5.7	5.4	5.9	7.3	6.9
Temporary employment (% of total employees)	18.3	20.6	25.9	28.6	28.9	35.4	31.6	32.0	37.7
Activity rate (% population aged 15+)	58.1	56.9	56.8	59.5	60.1	61.8	62.2	60.9	65.0
Activity rate (% population aged 15-64)	67.1	65.1	65.1	67.7	68.3	70.2	70.5	68.9	73.3
Activity rate (% population aged 15-24)	29.1	26.1	26.3	33.7	33.2	35.7	34.4	31.2	41.7
Activity rate (% population aged 25-54)	84.2	81.6	81.4	83.4	84.2	86.4	86.5	85.0	87.6
Activity rate (% population aged 55-64)	54.6	54.4	54.6	54.6	54.4	54.6	57.2	57.3	61.0
Unemployment aged 15+ (1,000)	28	27	28	26	26	28	23	24	22
Unemployment rate (% labor force 15+)	18.9	19.3	20.1	17.8	17.7	18.2	15.4	16.3	14.1
Youth unemployment rate (% labor force 15-24)	44.4	46.1	43.8	36.0	39.9	36.9	30.7	35.6	27.8
NEET rate (% population aged 15-24)	19.7	17.2	19.3	18.9	19.9	18.7	16.3	.	.
Long-term unemployment rate (% labor force 15+)	14.9	15.2	16.8	13.8	13.6	13.8	12.2	12.5	10.4
Share of long-term unemployed (% of total)	78.5	79.1	84.0	77.7	76.7	75.8	79.1	76.9	73.9
Unemployment rate, low educated 15+ (ISCED 0-2)	23.7	33.6	39.8	31.0	26.3	24.9	19.1	20.6	13.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	20.3	20.4	20.8	18.8	19.4	19.4	16.4	17.7	15.7
Unemployment rate, high educated 15+ (ISCED 5-8)	10.8	10.6	10.3	10.0	9.8	12.4	10.5	10.7	9.4

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	314	314	314	314	315	315	315	.	.
Working-age population aged 15+ (1,000)	267	257	257	256	256	256	256	256	256
Employment aged 15+ (1,000)	90	89	91	97	101	101	101	100	104
Employment rate (% population aged 15+)	33.8	34.6	35.4	37.8	39.4	39.4	39.4	39.3	40.7
Employment rate (% population aged 15-64)	41.0	41.6	42.8	45.3	46.9	46.8	46.8	46.5	48.4
Employment rate (% population aged 20-64)	45.4	46.0	47.5	49.7	51.5	51.3	51.4	51.1	52.6
Employment rate (% population aged 15-24)	11.0	12.9	12.2	15.8	17.7	19.3	18.6	18.1	24.5
Employment rate (% population aged 25-29)	49.6	50.1	54.9	56.8	57.7	58.3	59.4	51.0	49.3
Employment rate (% population aged 25-54)	55.6	55.3	56.8	59.6	60.6	59.5	59.2	58.5	58.5
Employment rate (% population aged 55-64)	25.2	26.7	29.4	29.7	32.3	33.2	35.1	36.3	40.1
Employment rate for low skilled 15-64 (ISCED 0-2)	13.2	11.5	10.1	11.8	15.4	16.9	16.7	16.8	20.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	43.3	44.4	44.0	46.1	47.5	46.2	45.6	45.7	46.5
Employment rate for high skilled 15-64 (ISCED 5-8)	74.9	74.1	79.0	77.7	77.8	76.5	76.9	75.5	79.6
Self-employed (% of total employment)	8.8	10.1	9.3	11.3	12.3	12.6	11.4	10.1	10.6
Part-time employment (% of total employment)	4.5	4.5	2.6	5.7	6.4	4.4	5.9	6.0	4.3
Temporary employment (% of total employees)	18.2	21.7	26.1	26.1	31.5	32.1	28.8	27.5	31.2
Activity rate (% population aged 15+)	42.6	43.4	43.6	46.2	47.6	47.6	47.5	46.7	47.7
Activity rate (% population aged 15-64)	51.7	52.3	52.8	55.4	56.9	56.6	56.5	55.5	57.0
Activity rate (% population aged 15-24)	20.8	21.7	19.8	24.4	27.0	29.5	27.8	25.0	29.9
Activity rate (% population aged 25-54)	69.0	69.1	69.5	72.4	72.8	71.4	71.3	69.8	69.9
Activity rate (% population aged 55-64)	27.0	29.1	32.8	32.9	35.9	35.9	37.5	39.9	42.4
Unemployment aged 15+ (1,000)	23	23	21	22	21	21	21	19	18
Unemployment rate (% labor force 15+)	20.6	20.3	18.8	18.2	17.3	17.1	16.9	16.0	14.8
Youth unemployment rate (% labor force 15-24)	47.1	40.7	38.5	35.4	34.5	34.6	33.1	27.8	18.1
NEET rate (% population aged 15-24)	19.4	16.6	16.3	16.4	18.3	18.0	17.1	.	.
Long-term unemployment rate (% labor force 15+)	16.3	16.1	15.1	14.1	13.3	12.8	12.8	11.9	10.5
Share of long-term unemployed (% of total)	79.1	79.1	79.9	77.3	76.9	75.2	75.5	74.4	71.2
Unemployment rate, low educated 15+ (ISCED 0-2)	29.5	38.8	43.8	33.0	30.0	23.3	25.7	26.0	22.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	22.1	21.6	20.4	21.1	19.0	19.6	19.1	17.9	16.3
Unemployment rate, high educated 15+ (ISCED 5-8)	13.6	11.3	9.4	9.9	10.6	11.4	11.3	10.1	10.1

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	715	727	726	723	725	751	765	765	767
nominal annual growth in %	11.2	0.7	-0.1	-0.4	0.3	3.6	1.9	-0.1	0.0
real annual growth in % (CPI deflated)	10.6	-3.2	-1.9	0.1	-1.1	3.5	-1.1	-3.7	-3.5
Average monthly gross wages, EUR	715	727	726	723	725	751	765	765	767
Average monthly gross wages, EUR (PPP)	1,479	1,486	1,465	1,473	1,515	1,536	1,513	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	.	.	288	288	288	288	.	.
Monthly gross minimum wages, EUR (ER)	.	.	.	288	288	288	288	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	.	528	546	536	518	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	6.2	-3.1	4.8	-0.6	1.8	-0.5	.	.
ULC, EUR in %	.	6.2	-3.1	4.8	-0.6	1.8	-0.5	.	.

Notes: Data are based on a continuous quarterly survey. For LFS data census 2011 is applied from 2011, data 2010 are therefore not fully comparable. Education groups refer to ISCED 1997 until 2012, ISCED 2011 from 2013.
Minimum wages are in effect since March 21, 2013.

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

Serbia: Labor market indicators

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	7,291	7,201	7,167	7,132	7,095	7,058	7,021	.	.
Working-age population aged 15+ (1,000)	6,335	6,268	6,121	6,099	6,060	6,018	5,985	5,967	5,959
Employment aged 15+ (1,000)	2,538	2,362	2,444	2,559	2,574	2,719	2,795	2,688	2,897
Employment rate (% population aged 15+)	40.1	37.7	39.9	42.0	42.5	45.2	46.7	45.1	48.6
Employment rate (% population aged 15-64)	48.2	46.4	48.5	50.7	52.0	55.2	57.3	55.6	60.0
Employment rate (% population aged 20-64)	52.4	50.0	52.3	54.7	55.9	59.1	61.4	59.7	64.3
Employment rate (% population aged 15-24)	15.4	14.7	14.7	14.9	16.6	19.7	20.9	18.5	21.5
Employment rate (% population aged 25-29)	48.8	50.7	49.2	52.4	53.5	56.2	58.9	58.2	63.1
Employment rate (% population aged 25-54)	63.7	61.7	63.3	65.9	67.1	69.2	71.3	70.1	74.5
Employment rate (% population aged 55-64)	33.6	32.3	35.1	36.7	37.3	42.7	45.5	42.5	47.6
Employment rate for low skilled 15-64 (ISCED 0-2)	32.0	30.4	32.3	32.9	33.9	37.3	38.2	33.4	38.5
Employment rate for medium skilled 15-64 (ISCED 3-4)	50.7	47.9	50.5	52.3	53.3	56.5	58.7	57.2	62.1
Employment rate for high skilled 15-64 (ISCED 5-8)	70.3	67.5	66.9	70.1	70.9	72.5	75.7	76.1	77.5
Self-employed (% of total employment)	23.8	22.4	24.1	23.4	22.0	23.7	24.8	22.0	22.4
Part-time employment (% of total employment)	8.6	7.8	10.5	12.2	11.8	13.0	12.5	11.0	10.9
Temporary employment (% of total employees)	11.9	14.6	16.1	18.8	21.8	23.7	22.8	22.0	22.6
Activity rate (% population aged 15+)	49.8	49.7	51.5	51.9	51.6	53.3	54.0	52.9	55.2
Activity rate (% population aged 15-64)	60.4	61.6	63.2	63.3	63.6	65.6	66.7	65.8	68.5
Activity rate (% population aged 15-24)	28.7	30.2	29.3	28.5	29.2	30.3	30.6	28.3	29.7
Activity rate (% population aged 25-54)	78.3	80.2	81.1	81.1	81.0	82.0	82.5	82.3	84.6
Activity rate (% population aged 55-64)	38.3	39.3	41.7	41.9	42.1	46.9	49.5	47.3	52.3
Unemployment aged 15+ (1,000)	615	755	708	608	552	489	435	469	392
Unemployment rate (% labor force 15+)	19.5	24.2	22.5	19.2	17.7	15.3	13.5	14.8	11.9
Youth unemployment rate (% labor force 15-24)	46.5	51.4	49.9	47.5	43.2	34.9	31.9	34.6	27.5
NEET rate (% population aged 15-24)	21.4	21.9	20.0	20.4	19.9	17.7	17.2	.	.
Long-term unemployment rate (% labor force 15+)	13.3	18.7	16.9	12.8	11.3	9.9	8.2	8.8	7.4
Share of long-term unemployed (% of total)	68.4	77.1	75.1	66.9	64.0	65.1	60.5	59.3	62.1
Unemployment rate, low educated 15+ (ISCED 0-2)	16.2	23.4	20.6	17.3	15.0	12.4	11.0	15.0	10.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	22.5	26.8	24.5	21.2	19.4	16.7	14.8	16.0	13.0
Unemployment rate, high educated 15+ (ISCED 5-8)	13.4	17.3	18.6	15.4	15.3	13.9	12.2	12.3	10.5
Male									
Total population (1,000)	3,546	3,507	3,490	3,473	3,455	3,438	3,420	.	.
Working-age population aged 15+ (1,000)	3,046	3,028	2,956	2,941	2,922	2,902	2,886	2,878	2,874
Employment aged 15+ (1,000)	1,457	1,373	1,413	1,457	1,466	1,532	1,565	1,518	1,621
Employment rate (% population aged 15+)	47.8	45.3	47.8	49.5	50.2	52.8	54.2	52.7	56.4
Employment rate (% population aged 15-64)	55.6	53.6	56.2	57.7	59.1	61.9	63.9	62.5	66.8
Employment rate (% population aged 20-64)	60.3	57.8	60.6	62.3	63.6	66.3	68.5	67.2	71.7
Employment rate (% population aged 15-24)	19.0	19.6	19.3	19.0	21.2	24.9	26.1	22.6	26.3
Employment rate (% population aged 25-29)	55.4	56.3	57.1	58.4	59.3	61.7	64.8	65.2	69.5
Employment rate (% population aged 25-54)	71.0	68.3	70.9	72.4	73.3	74.8	76.8	76.2	80.2
Employment rate (% population aged 55-64)	44.7	43.1	45.8	47.7	48.9	53.8	55.9	53.6	59.0
Employment rate for low skilled 15-64 (ISCED 0-2)	42.2	39.8	41.3	41.7	42.3	44.3	45.9	40.5	46.5
Employment rate for medium skilled 15-64 (ISCED 3-4)	58.2	55.1	58.5	59.5	61.0	64.2	65.8	65.2	69.0
Employment rate for high skilled 15-64 (ISCED 5-8)	69.2	69.8	69.9	73.6	74.3	75.8	79.0	79.6	82.5
Self-employed (% of total employment)	30.0	28.7	30.9	30.8	29.9	31.0	30.9	28.1	27.9
Part-time employment (% of total employment)	8.1	7.2	10.0	11.6	11.2	12.0	11.6	10.2	10.1
Temporary employment (% of total employees)	12.9	16.2	17.3	20.0	23.2	25.8	23.9	22.8	23.7
Activity rate (% population aged 15+)	58.6	59.0	60.4	60.7	60.3	61.8	62.2	61.4	63.6
Activity rate (% population aged 15-64)	68.8	70.3	71.6	71.3	71.6	73.1	73.8	73.3	75.8
Activity rate (% population aged 15-24)	35.2	37.9	35.3	35.3	35.4	36.8	36.8	34.0	35.7
Activity rate (% population aged 25-54)	85.4	87.1	88.3	87.4	87.3	87.7	88.1	88.2	90.1
Activity rate (% population aged 55-64)	51.7	53.1	55.4	55.2	55.9	59.6	61.4	60.5	65.1
Unemployment aged 15+ (1,000)	329	414	372	327	296	262	230	248	207
Unemployment rate (% labor force 15+)	18.4	23.2	20.8	18.3	16.8	14.6	12.8	14.1	11.3
Youth unemployment rate (% labor force 15-24)	45.9	48.3	45.2	46.1	40.1	32.2	29.2	33.4	26.4
NEET rate (% population aged 15-24)	23.4	22.3	20.0	21.0	20.2	17.2	17.1	.	.
Long-term unemployment rate (% labor force 15+)	12.3	17.6	15.4	12.0	10.6	9.5	7.9	8.3	7.1
Share of long-term unemployed (% of total)	66.9	76.0	74.2	65.7	63.0	65.1	61.4	59.3	62.3
Unemployment rate, low educated 15+ (ISCED 0-2)	15.2	22.9	19.5	16.9	15.8	13.6	11.1	16.6	10.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	20.7	25.3	22.2	20.1	17.9	15.4	13.9	14.5	12.8
Unemployment rate, high educated 15+ (ISCED 5-8)	13.4	15.8	17.5	13.7	14.1	12.8	11.0	11.0	7.6

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	3,745	3,695	3,677	3,659	3,640	3,621	3,601	.	.
Working-age population aged 15+ (1,000)	3,289	3,240	3,166	3,158	3,138	3,115	3,098	3,089	3,085
Employment aged 15+ (1,000)	1,081	989	1,031	1,102	1,108	1,188	1,230	1,171	1,276
Employment rate (% population aged 15+)	32.9	30.5	32.6	34.9	35.3	38.1	39.7	37.9	41.4
Employment rate (% population aged 15-64)	40.9	39.0	40.9	43.7	44.9	48.4	50.8	48.7	53.2
Employment rate (% population aged 20-64)	44.6	42.2	44.1	47.1	48.2	51.9	54.4	52.3	57.0
Employment rate (% population aged 15-24)	11.6	9.5	9.7	10.6	11.7	14.2	15.3	14.1	16.5
Employment rate (% population aged 25-29)	41.3	44.1	41.3	46.1	47.5	50.4	52.7	50.9	56.3
Employment rate (% population aged 25-54)	56.5	54.9	55.8	59.5	60.9	63.6	65.7	63.8	68.7
Employment rate (% population aged 55-64)	22.9	22.0	25.1	26.6	26.6	32.5	36.0	32.5	37.3
Employment rate for low skilled 15-64 (ISCED 0-2)	23.9	22.7	24.9	25.8	26.7	31.4	31.7	27.3	31.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	42.0	39.6	41.4	44.0	44.4	47.5	50.4	47.9	54.0
Employment rate for high skilled 15-64 (ISCED 5-8)	71.1	65.6	64.3	67.4	68.3	70.0	73.2	73.5	73.8
Self-employed (% of total employment)	15.3	13.6	14.9	13.7	11.6	14.1	17.0	14.0	15.4
Part-time employment (% of total employment)	9.3	8.5	11.1	13.0	12.7	14.2	13.6	12.1	12.0
Temporary employment (% of total employees)	10.6	12.6	14.7	17.4	20.2	21.4	21.6	21.0	21.3
Activity rate (% population aged 15+)	41.6	41.1	43.2	43.8	43.5	45.4	46.3	45.0	47.3
Activity rate (% population aged 15-64)	52.2	52.9	54.8	55.3	55.6	58.1	59.6	58.3	61.3
Activity rate (% population aged 15-24)	22.0	22.0	22.9	21.3	22.6	23.4	24.1	22.2	23.3
Activity rate (% population aged 25-54)	71.3	73.2	73.9	74.8	74.6	76.1	76.9	76.4	78.9
Activity rate (% population aged 55-64)	25.5	26.0	28.8	29.6	29.5	35.2	38.5	35.4	40.6
Unemployment aged 15+ (1,000)	285	341	336	281	256	228	205	220	184
Unemployment rate (% labor force 15+)	20.9	25.6	24.6	20.3	18.8	16.1	14.3	15.8	12.6
Youth unemployment rate (% labor force 15-24)	47.5	57.0	57.5	50.0	48.2	39.5	36.3	36.5	29.2
NEET rate (% population aged 15-24)	19.3	21.5	19.9	19.9	19.6	18.3	17.3	.	.
Long-term unemployment rate (% labor force 15+)	14.6	20.1	18.7	13.9	12.2	10.5	8.5	9.4	7.8
Share of long-term unemployed (% of total)	70.1	78.4	76.2	68.2	65.2	65.1	59.5	59.3	61.7
Unemployment rate, low educated 15+ (ISCED 0-2)	17.6	24.3	22.0	17.9	13.9	11.1	10.9	12.9	9.7
Unemployment rate, medium educated 15+ (ISCED 3-4)	25.4	29.3	28.0	23.0	21.6	18.6	16.0	18.4	13.4
Unemployment rate, high educated 15+ (ISCED 5-8)	13.5	18.6	19.5	16.8	16.4	14.8	13.3	13.3	12.8

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	47,450	57,430	60,708	61,426	61,145	63,474	65,976	67,851	68,544
nominal annual growth in %	7.5	8.9	5.7	1.2	-0.5	3.8	3.9	5.1	5.7
real annual growth in % (CPI deflated)	0.7	1.0	-1.9	-1.7	-2.4	2.6	0.9	3.5	3.8
Average monthly gross wages, EUR	460	508	537	524	506	516	544	573	580
Average monthly gross wages, EUR (PPP)	1,042	1,143	1,134	1,138	1,128	1,126	1,130	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	21,323	24,067	27,206	26,976	28,431	28,403	30,613	.	.
Monthly gross minimum wages, EUR (ER)	222	230	239	235	235	234	248	.	.
Monthly gross minimum wages, EUR (PPP)	411	430	458	455	488	468	486	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	8.8	6.6	7.9	-0.6	6.1	4.7	.	.
ULC, EUR in %	.	-2.0	6.6	4.1	-3.5	4.1	6.2	.	.

Notes: Between 2010 and 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 data based on a continuous quarterly survey. From 2014 onwards, further adjustments according to EU guidelines. For better comparability, the data 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. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.

From 2018 average monthly gross wage based on tax administration data,, before on wage survey data supplemented by tax administration data. The minimum wage in 2010 was in effect from January 2010, in 2011 from November 2010, in 2012 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

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	18,497	18,427	18,397	18,350	18,276	18,223	18,191	.	.
Working-age population aged 15+ (1,000)	.	14,515	14,465	14,455	14,432	14,335	14,258	.	14,254
Employment aged 15+ (1,000)	.	5,471	5,510	5,639	5,708	5,959	6,134	.	6,286
Employment rate (% population aged 15+)	.	37.7	38.1	39.0	39.6	41.6	43.0	.	44.1
Employment rate (% population aged 15-64)	.	44.4	44.8	45.9	46.9	49.3	51.3	.	52.9
Employment rate (% population aged 20-64)	.	48.8	49.5	50.6	51.4	53.9	56.0	.	57.6
Employment rate (% population aged 15-24)	.	15.6	14.6	14.2	15.3	17.1	18.7	.	20.0
Employment rate (% population aged 25-29)	.	48.0	47.3	48.6	49.1	51.6	53.9	.	56.7
Employment rate (% population aged 25-54)	.	57.6	58.2	59.7	60.4	62.6	64.6	.	66.3
Employment rate (% population aged 55-64)	.	35.3	36.4	37.3	38.1	41.1	43.2	.	44.9
Employment rate for low skilled 15-64 (ISCED 0-2)	.	30.9	30.2	30.5	31.8	34.1	35.2	.	35.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	47.8	48.4	49.3	49.5	51.9	54.1	.	56.1
Employment rate for high skilled 15-64 (ISCED 5-8)	.	67.7	67.8	68.8	68.8	70.0	72.4	.	74.2
Self-employed (% of total employment)	.	21.9	22.3	21.8	22.0	24.0	24.7	.	23.0
Part-time employment (% of total employment)	.	11.9	12.0	13.2	12.5	12.7	12.0	.	10.4
Temporary employment (% of total employees)	.	17.9	19.0	20.6	21.6	23.1	22.8	.	23.2
Activity rate (% population aged 15+)	.	49.5	49.7	50.3	50.2	51.1	51.8	.	52.1
Activity rate (% population aged 15-64)	.	58.8	58.9	59.6	59.8	61.0	62.2	.	62.8
Activity rate (% population aged 15-24)	.	30.4	28.2	28.5	29.4	29.5	30.4	.	30.5
Activity rate (% population aged 25-54)	.	74.5	74.9	75.7	75.5	76.3	77.2	.	77.8
Activity rate (% population aged 55-64)	.	41.8	43.0	43.2	43.8	46.4	48.0	.	49.9
Unemployment aged 15+ (1,000)	.	1,721	1,682	1,628	1,532	1,369	1,250	.	1,136
Unemployment rate (% labor force 15+)	.	23.9	23.4	22.4	21.2	18.7	16.9	.	15.3
Youth unemployment rate (% labor force 15-24)	.	48.6	48.3	50.2	47.7	42.1	38.6	.	34.6
NEET rate (% population aged 15-24)	.	25.9	25.7	25.3	25.3	23.5	22.3	.	.
Long-term unemployment rate (% labor force 15+)	.	18.6	18.0	16.4	15.2	13.5	11.8	.	10.5
Share of long-term unemployed (% of total)	.	77.5	77.0	73.4	72.0	72.2	69.8	.	68.4
Unemployment rate, low educated 15+ (ISCED 0-2)	.	22.6	22.6	21.9	19.8	17.1	(15.5)	.	14.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	26.6	25.6	24.5	23.3	20.4	18.5	.	16.7
Unemployment rate, high educated 15+ (ISCED 5-8)	.	17.7	18.0	17.1	17.1	16.0	14.6	.	13.0
Male									
Total population (1,000)	9,118	9,090	9,079	9,059	9,020	8,989	8,962	.	.
Working-age population aged 15+ (1,000)	.	7,122	7,055	7,058	7,079	7,042	7,010	.	6,987
Employment aged 15+ (1,000)	.	3,269	3,273	3,342	3,378	3,517	3,615	.	3,687
Employment rate (% population aged 15+)	.	45.9	46.4	47.4	47.7	49.9	51.6	.	52.8
Employment rate (% population aged 15-64)	.	52.8	53.4	54.4	55.2	57.7	60.0	.	61.6
Employment rate (% population aged 20-64)	.	58.1	59.0	60.1	60.6	63.2	65.6	.	67.4
Employment rate (% population aged 15-24)	.	19.8	18.7	17.8	19.5	21.4	23.4	.	24.7
Employment rate (% population aged 25-29)	.	54.8	54.8	55.7	55.8	58.6	62.2	.	65.3
Employment rate (% population aged 25-54)	.	66.9	67.9	69.1	69.4	71.6	74.0	.	75.7
Employment rate (% population aged 55-64)	.	46.8	47.4	49.0	50.0	53.2	54.8	.	56.9
Employment rate for low skilled 15-64 (ISCED 0-2)	.	40.6	40.3	40.7	41.7	44.1	45.7	.	45.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	55.2	56.2	57.0	57.3	60.1	62.2	.	64.4
Employment rate for high skilled 15-64 (ISCED 5-8)	.	71.1	71.1	72.2	72.5	73.3	76.4	.	79.0
Self-employed (% of total employment)	.	27.2	27.8	27.7	28.4	29.6	29.7	.	27.9
Part-time employment (% of total employment)	.	10.6	10.6	11.5	11.0	11.1	10.5	.	9.0
Temporary employment (% of total employees)	.	20.5	21.1	22.9	23.7	25.6	25.2	.	25.9
Activity rate (% population aged 15+)	.	60.0	60.1	60.8	60.3	61.2	62.0	.	62.4
Activity rate (% population aged 15-64)	.	69.5	69.7	70.3	70.2	71.2	72.6	.	73.4
Activity rate (% population aged 15-24)	.	38.0	35.3	35.3	36.3	36.1	37.4	.	37.9
Activity rate (% population aged 25-54)	.	85.5	86.3	86.8	86.1	86.6	88.2	.	88.6
Activity rate (% population aged 55-64)	.	56.2	56.9	57.8	58.2	60.8	61.6	.	63.7
Unemployment aged 15+ (1,000)	.	1,006	969	946	890	794	734	.	675
Unemployment rate (% labor force 15+)	.	23.5	22.8	22.1	20.9	18.4	16.9	.	15.5
Youth unemployment rate (% labor force 15-24)	.	48.0	46.9	49.5	46.3	40.7	37.3	.	34.9
NEET rate (% population aged 15-24)	.	25.5	25.0	24.9	25.0	23.0	21.4	.	.
Long-term unemployment rate (% labor force 15+)	.	18.0	17.4	15.9	15.0	13.3	11.8	.	10.6
Share of long-term unemployed (% of total)	.	76.6	76.3	72.3	71.9	72.4	70.0	.	68.4
Unemployment rate, low educated 15+ (ISCED 0-2)	.	24.4	24.0	23.3	21.7	19.0	(17.3)	.	(16.3)
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	25.3	24.2	23.4	22.1	19.5	17.9	.	16.6
Unemployment rate, high educated 15+ (ISCED 5-8)	.	15.1	(16.2)	15.2	(15.2)	(14.2)	(12.7)	.	(10.7)

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female								.	.
Total population (1,000)	9,379	9,337	9,318	9,291	9,255	9,234	9,229	.	.
Working-age population aged 15+ (1,000)	.	7,393	7,410	7,397	7,353	7,294	7,248	.	7,266
Employment aged 15+ (1,000)	.	2,201	2,238	2,297	2,331	2,442	2,519	.	2,599
Employment rate (% population aged 15+)	.	29.8	30.2	31.1	31.7	33.5	34.8	.	35.8
Employment rate (% population aged 15-64)	.	36.0	36.3	37.5	38.5	40.8	42.6	.	44.1
Employment rate (% population aged 20-64)	.	39.5	40.1	41.2	42.2	44.6	46.4	.	47.9
Employment rate (% population aged 15-24)	.	11.1	10.2	10.2	10.9	(12.3)	(13.4)	.	(14.9)
Employment rate (% population aged 25-29)	.	40.2	39.4	40.9	41.6	43.9	44.9	.	47.4
Employment rate (% population aged 25-54)	.	48.4	48.6	50.3	51.5	53.6	55.1	.	57.0
Employment rate (% population aged 55-64)	.	24.1	26.0	26.2	26.7	29.5	32.2	.	33.7
Employment rate for low skilled 15-64 (ISCED 0-2)	.	23.5	22.7	22.7	24.1	26.4	27.0	.	27.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	38.5	38.7	39.6	39.7	41.5	43.8	.	45.8
Employment rate for high skilled 15-64 (ISCED 5-8)	.	64.5	64.9	65.9	65.8	67.2	69.1	.	70.3
Self-employed (% of total employment)	.	14.1	14.3	13.4	12.7	15.9	17.5	.	16.1
Part-time employment (% of total employment)	.	13.8	14.1	15.6	14.7	15.1	14.1	.	12.5
Temporary employment (% of total employees)	.	13.3	16.2	17.6	18.9	19.8	19.6	.	19.6
Activity rate (% population aged 15+)	.	39.5	39.8	40.3	40.4	41.4	41.9	.	42.1
Activity rate (% population aged 15-64)	.	48.0	48.1	48.9	49.4	50.7	51.6	.	52.2
Activity rate (% population aged 15-24)	.	22.2	20.8	21.1	21.8	22.2	22.6	.	22.5
Activity rate (% population aged 25-54)	.	63.5	63.7	64.7	65.0	65.9	66.2	.	67.0
Activity rate (% population aged 55-64)	.	27.8	29.7	29.5	30.0	32.6	35.0	.	36.8
Unemployment aged 15+ (1,000)	.	715	713	681	642	575	516	.	461
Unemployment rate (% labor force 15+)	.	24.5	24.2	22.9	21.6	19.1	17.0	.	15.1
Youth unemployment rate (% labor force 15-24)	.	49.8	50.9	51.5	50.3	44.6	40.9	.	(33.9)
NEET rate (% population aged 15-24)	.	26.2	26.6	25.8	25.7	24.1	23.3	.	.
Long-term unemployment rate (% labor force 15+)	.	19.3	18.8	17.1	15.5	13.7	11.8	.	10.3
Share of long-term unemployed (% of total)	.	78.9	78.0	74.9	72.0	72.1	69.3	.	68.3
Unemployment rate, low educated 15+ (ISCED 0-2)	.	20.0	20.8	19.9	16.9	14.5	(13.0)	.	(11.3)
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	28.8	28.1	26.4	25.3	22.1	19.4	.	16.8
Unemployment rate, high educated 15+ (ISCED 5-8)	.	20.2	19.6	18.8	18.8	17.7	(16.3)	.	(15.1)

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	.	.	.	.	.	.	.	.	.
nominal annual growth in %	.	.	.	.	.	.	.	.	.
real annual growth in % (CPI deflated)	.	.	.	.	.	.	.	.	.
Average monthly gross wages, EUR	.	483	501	510	506	511	534	.	.
Average monthly gross wages, EUR (PPP)	.	1,087	1,082	1,125	1,135	1,117	1,134	.	.
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 %	.	.	.	.	.	.	.	.	.
ULC, EUR in %	.	.	1.8	1.7	-1.6	2.1	4.9	.	.

Notes: Labor market data for the Western Balkans are the sum of six countries only when data for all these countries are available. Annual time series therefore start from 2012 (because data for Kosovo are not available prior to this), quarterly data are available for the second quarter only (because Bosnia and Herzegovina reports only once a year in April, allocated to the second quarter).
Average monthly gross wage data for the Western Balkans 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

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	8,363	8,430	8,480	8,546	8,643	8,737	8797.6	.	.
Working-age population aged 15+ (1,000)	6,369	6,440	6,486	6,527	6,555	6,612	6,615	6,621	6,629
Employment aged 15+ (1,000)	4,004	4,071	4,092	4,098	4,133	4,204	4,245	4,236	4,301
Employment rate (% population aged 15+)	62.9	63.2	63.1	62.8	63.1	63.6	64.2	64.0	64.9
Employment rate (% population aged 15-64)	70.8	71.4	71.4	71.1	71.1	71.5	72.2	72.0	73.0
Employment rate (% population aged 20-64)	73.9	74.4	74.6	74.2	74.3	74.8	75.4	75.2	76.3
Employment rate (% population aged 15-24)	52.8	53.7	53.1	52.1	51.4	51.0	50.6	48.7	50.1
Employment rate (% population aged 25-29)	79.4	81.4	80.4	79.2	80.2	80.9	80.4	79.9	81.2
Employment rate (% population aged 25-54)	83.3	84.3	84.0	83.4	83.5	83.6	84.1	83.7	85.0
Employment rate (% population aged 55-64)	41.2	41.6	43.8	45.1	46.3	49.2	51.3	53.4	53.4
Employment rate for low skilled 15-64 (ISCED 0-2)	48.3	48.3	47.3	47.5	47.2	47.3	46.9	47.5	47.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	75.7	75.8	76.2	73.8	73.5	73.8	74.5	73.8	75.7
Employment rate for high skilled 15-64 (ISCED 5-8)	84.6	86.2	85.3	83.3	83.3	84.0	84.6	84.2	84.8
Self-employed (% of total employment)	11.6	11.1	11.3	11.2	11.3	11.1	10.9	10.9	10.7
Part-time employment (% of total employment)	25.1	25.8	26.7	27.7	28.0	28.5	28.6	29.1	28.0
Temporary employment (% of total employees)	9.4	9.3	9.2	9.1	9.1	9.0	9.2	8.7	8.8
Activity rate (% population aged 15+)	66.1	66.5	66.7	66.5	66.9	67.7	67.9	67.5	68.0
Activity rate (% population aged 15-64)	74.4	75.1	75.5	75.4	75.5	76.2	76.4	76.0	76.6
Activity rate (% population aged 15-24)	58.3	59.2	58.8	58.0	57.4	57.5	56.1	54.2	55.1
Activity rate (% population aged 25-54)	87.1	88.1	88.3	88.0	88.0	88.4	88.7	88.0	88.7
Activity rate (% population aged 55-64)	42.2	43.1	45.5	46.9	48.6	51.7	53.6	55.4	55.6
Unemployment aged 15+ (1,000)	203	209	231	245	252	270	248	235	208
Unemployment rate (% labor force 15+)	4.8	4.9	5.4	5.6	5.7	6.0	5.5	5.3	4.6
Youth unemployment rate (% labor force 15-24)	9.5	9.4	9.7	10.3	10.6	11.2	9.8	10.2	9.1
NEET rate (% population aged 15-24)	7.4	6.8	7.3	7.7	7.5	7.7	6.5	.	.
Long-term unemployment rate (% labor force 15+)	1.2	1.2	1.3	1.5	1.7	1.9	1.8	1.7	1.4
Share of long-term unemployed (% of total)	25.4	24.9	24.6	27.2	29.2	32.3	33.4	32.0	30.7
Unemployment rate, low educated 15+ (ISCED 0-2)	9.2	9.8	10.3	11.4	11.2	12.7	13.0	11.0	11.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.4	4.4	4.7	5.0	5.4	5.8	5.1	4.9	3.9
Unemployment rate, high educated 15+ (ISCED 5-8)	2.5	2.4	3.5	4.0	3.9	3.6	3.2	3.6	3.1
Male									
Total population (1,000)	4,073	4,111	4,139	4,178	4,236	4,292	4,326	.	.
Working-age population aged 15+ (1,000)	3,139	3,174	3,198	3,221	3,242	3,282	3,279	3,279	3,284
Employment aged 15+ (1,000)	2,139	2,163	2,171	2,164	2,183	2,223	2,244	2,233	2,292
Employment rate (% population aged 15+)	68.1	68.2	67.9	67.2	67.3	67.7	68.4	68.1	69.8
Employment rate (% population aged 15-64)	76.0	76.2	76.0	75.3	75.1	75.4	76.2	75.8	77.7
Employment rate (% population aged 20-64)	79.0	79.3	79.1	78.3	78.4	78.7	79.4	79.0	81.1
Employment rate (% population aged 15-24)	56.6	57.1	56.4	54.3	54.0	52.9	52.1	50.4	53.5
Employment rate (% population aged 25-29)	82.9	84.1	82.2	81.3	81.6	82.1	81.5	82.2	84.4
Employment rate (% population aged 25-54)	87.7	88.3	87.5	86.6	86.6	86.6	87.2	86.4	88.3
Employment rate (% population aged 55-64)	49.9	50.2	52.8	54.3	54.1	57.6	60.1	62.3	63.1
Employment rate for low skilled 15-64 (ISCED 0-2)	53.9	53.5	52.0	51.7	51.5	51.7	51.2	50.9	52.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	79.3	79.2	79.7	77.5	76.7	77.1	78.0	77.4	80.1
Employment rate for high skilled 15-64 (ISCED 5-8)	88.4	89.4	88.1	85.4	85.8	86.2	87.3	86.7	87.6
Self-employed (% of total employment)	14.1	13.5	13.7	13.7	13.7	13.6	13.3	13.4	13.0
Part-time employment (% of total employment)	8.9	8.9	10.0	10.6	10.8	11.5	11.6	12.2	10.8
Temporary employment (% of total employees)	9.8	9.3	9.4	9.2	9.1	8.9	9.2	8.6	8.4
Activity rate (% population aged 15+)	71.7	71.7	71.7	71.4	71.7	72.4	72.7	72.2	73.4
Activity rate (% population aged 15-64)	80.0	80.2	80.4	80.0	80.1	80.7	81.0	80.4	81.7
Activity rate (% population aged 15-24)	62.6	63.1	62.3	60.7	60.7	60.2	58.4	56.6	58.4
Activity rate (% population aged 25-54)	91.9	92.3	92.1	91.5	91.6	91.8	92.3	91.2	92.5
Activity rate (% population aged 55-64)	51.4	52.3	55.1	56.8	57.4	61.2	63.0	64.9	65.9
Unemployment aged 15+ (1,000)	113	113	124	135	142	153	142	134	117
Unemployment rate (% labor force 15+)	5.0	5.0	5.4	5.9	6.1	6.5	5.9	5.7	4.9
Youth unemployment rate (% labor force 15-24)	9.6	9.5	9.4	10.6	11.1	12.1	10.8	11.1	8.4
NEET rate (% population aged 15-24)	7.2	6.6	7.2	8.0	7.7	8.0	7.0	.	.
Long-term unemployment rate (% labor force 15+)	1.4	1.3	1.4	1.7	1.9	2.2	2.0	1.8	1.5
Share of long-term unemployed (% of total)	27.9	26.0	25.9	28.2	31.8	34.3	33.7	32.2	30.1
Unemployment rate, low educated 15+ (ISCED 0-2)	10.6	11.0	11.6	13.0	12.9	14.7	15.0	13.2	13.8
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.6	4.6	4.9	5.3	5.8	6.1	5.5	5.1	3.9
Unemployment rate, high educated 15+ (ISCED 5-8)	2.3	2.0	2.9	3.8	4.0	3.8	3.1	3.8	3.1

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	4,291	4,319	4,340	4,368	4,406	4,444	4,472	.	.
Working-age population aged 15+ (1,000)	3,230	3,266	3,288	3,306	3,313	3,330	3,336	3,342	3,344
Employment aged 15+ (1,000)	1,865	1,909	1,921	1,934	1,950	1,981	2,001	2,003	2,009
Employment rate (% population aged 15+)	57.7	58.4	58.4	58.5	58.9	59.5	60.0	59.9	60.1
Employment rate (% population aged 15-64)	65.7	66.7	66.9	66.9	67.1	67.7	68.2	68.2	68.3
Employment rate (% population aged 20-64)	68.8	69.6	70.0	70.1	70.2	70.9	71.4	71.4	71.6
Employment rate (% population aged 15-24)	48.9	50.3	49.7	49.9	48.7	49.0	49.0	47.0	46.6
Employment rate (% population aged 25-29)	75.9	78.6	78.8	77.2	78.7	79.8	79.2	77.6	77.9
Employment rate (% population aged 25-54)	78.9	80.4	80.5	80.3	80.3	80.6	81.0	81.0	81.7
Employment rate (% population aged 55-64)	33.0	33.5	35.2	36.4	38.8	41.1	42.8	44.8	44.0
Employment rate for low skilled 15-64 (ISCED 0-2)	44.3	44.5	43.9	44.3	44.1	43.8	43.4	44.6	44.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	71.9	72.2	72.6	69.8	69.9	70.1	70.6	70.0	71.0
Employment rate for high skilled 15-64 (ISCED 5-8)	80.1	82.5	82.1	81.3	80.7	81.8	82.0	81.6	81.8
Self-employed (% of total employment)	8.8	8.4	8.6	8.5	8.6	8.4	8.2	8.2	8.1
Part-time employment (% of total employment)	43.7	45.0	45.5	46.8	47.3	47.6	47.6	47.9	47.6
Temporary employment (% of total employees)	8.9	9.3	9.0	9.1	9.0	9.1	9.2	8.8	9.2
Activity rate (% population aged 15+)	60.5	61.4	61.7	61.8	62.2	63.0	63.2	63.0	62.8
Activity rate (% population aged 15-64)	68.9	70.1	70.7	70.8	70.9	71.7	71.8	71.6	71.5
Activity rate (% population aged 15-24)	54.0	55.4	55.3	55.4	54.1	54.6	53.7	51.7	51.7
Activity rate (% population aged 25-54)	82.4	84.0	84.5	84.5	84.4	84.9	85.0	84.8	84.8
Activity rate (% population aged 55-64)	33.6	34.5	36.4	37.5	40.2	42.7	44.5	46.3	45.7
Unemployment aged 15+ (1,000)	91	96	108	110	110	117	106	101	91
Unemployment rate (% labor force 15+)	4.6	4.8	5.3	5.4	5.3	5.6	5.0	4.8	4.3
Youth unemployment rate (% labor force 15-24)	9.4	9.2	10.0	9.9	10.0	10.2	8.7	9.2	9.9
NEET rate (% population aged 15-24)	7.7	7.0	7.4	7.4	7.3	7.4	6.0	.	.
Long-term unemployment rate (% labor force 15+)	1.0	1.1	1.2	1.4	1.4	1.7	1.7	1.5	1.4
Share of long-term unemployed (% of total)	22.4	23.7	23.1	25.9	25.9	29.7	33.1	31.8	31.4
Unemployment rate, low educated 15+ (ISCED 0-2)	8.0	8.8	9.3	10.0	9.6	10.9	11.1	8.9	8.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.1	4.2	4.6	4.7	5.0	5.4	4.5	4.6	4.0
Unemployment rate, high educated 15+ (ISCED 5-8)	2.8	2.8	4.2	4.2	3.7	3.4	3.2	3.4	3.0

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	2,709	2,839	2,899	2,950	3,010	3,082	3,128	3,121	3,288
nominal annual growth in %	1.1	2.7	2.1	1.8	2.1	2.4	1.5	2.2	2.5
real annual growth in % (HICP deflated)	-0.6	0.1	0.0	0.3	1.3	1.5	-0.2	0.2	0.3
Average monthly gross wages, EUR	2,709	2,839	2,899	2,950	3,010	3,082	3,128	3,121	3,288
Average monthly gross wages, EUR (PPP)	2,461	2,637	2,672	2,722	2,832	2,840	2,830	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (ER)	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	.	.	.	.dissem	.	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	2.8	2.6	1.2	1.8	2.0	0.0	.	.
ULC, EUR in %	.	2.8	2.6	1.2	1.8	2.0	0.0	.	.

Notes: Data are based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 (based on registration) is applied throughout. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.
Average monthly gross wages refer to National Accounts concept (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

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	7,396	7,306	7,265	7,224	7,178	7,128	7,076	.	.
Working-age population aged 15+ (1,000)	5,827	5,698	5,649	5,609	5,563	5,510	5,455	5,410	5,403
Employment aged 15+ (1,000)	3,073	2,931	2,932	2,978	3,029	3,014	3,146	3,095	3,154
Employment rate (% population aged 15+)	52.7	51.4	51.9	53.1	54.4	54.7	57.7	57.2	58.4
Employment rate (% population aged 15-64)	59.8	58.8	59.5	61.0	62.9	63.4	66.9	66.5	67.9
Employment rate (% population aged 20-64)	64.7	63.0	63.5	65.1	67.1	67.7	71.3	71.1	72.6
Employment rate (% population aged 15-24)	24.3	21.9	21.2	20.7	20.3	19.8	22.9	19.9	20.6
Employment rate (% population aged 25-29)	66.7	63.7	61.4	64.2	66.6	64.7	69.0	69.4	69.5
Employment rate (% population aged 25-54)	75.1	73.1	73.3	74.5	76.1	76.2	79.4	79.0	80.3
Employment rate (% population aged 55-64)	44.9	45.7	47.4	50.0	53.0	54.5	58.2	58.8	61.0
Employment rate for low skilled 15-64 (ISCED 0-2)	29.7	27.4	27.8	29.7	29.6	29.6	33.4	32.1	35.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	65.3	63.4	63.6	65.2	67.2	67.8	71.7	71.5	72.5
Employment rate for high skilled 15-64 (ISCED 5-8)	82.7	81.1	80.7	81.7	84.0	84.2	85.5	85.2	85.9
Self-employed (% of total employment)	11.5	10.7	11.4	11.8	11.4	11.1	11.1	11.0	11.0
Part-time employment (% of total employment)	2.4	2.4	2.6	2.6	2.4	2.2	2.4	2.2	2.0
Temporary employment (% of total employees)	4.5	4.5	5.6	5.3	4.4	4.2	4.5	3.6	4.2
Activity rate (% population aged 15+)	58.8	58.6	59.6	59.9	59.9	59.2	61.5	60.7	61.7
Activity rate (% population aged 15-64)	66.7	67.1	68.4	69.0	69.3	68.7	71.3	70.6	71.8
Activity rate (% population aged 15-24)	31.2	30.4	29.6	27.2	26.0	23.9	26.3	22.6	24.2
Activity rate (% population aged 25-54)	82.9	82.3	83.1	83.3	83.2	82.0	84.3	83.6	84.7
Activity rate (% population aged 55-64)	49.3	51.1	54.1	56.6	58.0	58.8	61.8	62.3	63.9
Unemployment aged 15+ (1,000)	352	410	436	385	305	247	207	189	182
Unemployment rate (% labor force 15+)	10.3	12.3	13.0	11.4	9.2	7.6	6.2	5.7	5.5
Youth unemployment rate (% labor force 15-24)	21.9	28.1	28.4	23.8	21.7	17.2	12.9	11.8	15.2
NEET rate (% population aged 15-24)	21.0	21.5	21.6	20.2	19.3	18.2	15.3	.	.
Long-term unemployment rate (% labor force 15+)	4.7	6.8	7.4	6.9	5.6	4.5	3.4	3.0	3.2
Share of long-term unemployed (% of total)	46.1	55.2	57.3	60.4	61.2	59.1	55.0	52.4	58.3
Unemployment rate, low educated 15+ (ISCED 0-2)	22.7	28.0	29.9	28.3	25.1	22.2	18.1	18.3	16.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	9.7	11.7	12.3	10.7	8.3	6.7	5.3	4.9	4.8
Unemployment rate, high educated 15+ (ISCED 5-8)	4.6	5.8	6.4	5.1	4.0	3.4	3.0	2.5	2.4
Male									
Total population (1,000)	3,601	3,556	3,535	3,513	3,490	3,464	3,436	.	.
Working-age population aged 15+ (1,000)	2,869	2,808	2,785	2,766	2,743	2,717	2,689	2,667	2,663
Employment aged 15+ (1,000)	1,638	1,540	1,545	1,575	1,606	1,606	1,680	1,653	1,676
Employment rate (% population aged 15+)	57.1	54.8	55.5	56.9	58.5	59.1	62.5	62.0	62.9
Employment rate (% population aged 15-64)	63.3	61.3	62.1	63.9	65.9	66.7	70.6	70.1	71.2
Employment rate (% population aged 20-64)	68.6	65.8	66.4	68.1	70.4	71.3	75.3	75.0	76.1
Employment rate (% population aged 15-24)	27.3	24.9	24.0	24.0	24.0	23.1	26.5	24.1	24.3
Employment rate (% population aged 25-29)	71.9	68.6	67.0	69.4	71.5	71.7	77.7	75.9	78.0
Employment rate (% population aged 25-54)	77.6	74.3	75.0	76.4	78.5	79.2	82.8	82.0	83.3
Employment rate (% population aged 55-64)	51.3	50.8	51.9	54.5	56.8	58.3	62.5	63.6	64.9
Employment rate for low skilled 15-64 (ISCED 0-2)	34.5	31.2	31.7	34.3	34.6	35.4	40.1	38.8	41.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	70.0	66.9	67.2	69.1	71.5	72.3	76.2	75.8	76.4
Employment rate for high skilled 15-64 (ISCED 5-8)	85.3	82.9	83.1	84.5	86.7	86.7	87.9	88.3	89.4
Self-employed (% of total employment)	14.0	13.5	14.4	14.9	14.4	13.7	13.8	13.7	13.9
Part-time employment (% of total employment)	2.1	2.1	2.1	2.3	2.0	1.9	2.1	2.0	1.7
Temporary employment (% of total employees)	5.0	4.9	6.2	5.7	4.8	4.5	5.0	4.2	4.3
Activity rate (% population aged 15+)	64.1	63.4	64.4	64.9	64.9	64.3	66.7	66.2	67.1
Activity rate (% population aged 15-64)	71.1	71.0	72.2	72.9	73.2	72.7	75.4	74.9	75.9
Activity rate (% population aged 15-24)	35.5	35.3	34.3	31.5	30.5	28.0	30.5	27.2	29.1
Activity rate (% population aged 25-54)	86.1	84.8	85.7	86.2	86.4	85.7	88.0	87.3	88.3
Activity rate (% population aged 55-64)	56.6	57.3	59.9	62.5	62.7	63.4	66.8	68.2	68.6
Unemployment aged 15+ (1,000)	200	241	250	222	174	142	114	112	110
Unemployment rate (% labor force 15+)	10.9	13.5	13.9	12.3	9.8	8.1	6.4	6.3	6.1
Youth unemployment rate (% labor force 15-24)	23.2	29.5	30.2	23.8	21.2	17.4	13.3	11.3	16.5
NEET rate (% population aged 15-24)	20.3	21.6	22.1	19.2	18.6	17.1	13.6	.	.
Long-term unemployment rate (% labor force 15+)	5.0	7.7	8.1	7.7	6.1	4.8	3.6	3.5	3.7
Share of long-term unemployed (% of total)	46.0	56.7	58.3	62.4	62.4	59.2	56.5	54.8	60.6
Unemployment rate, low educated 15+ (ISCED 0-2)	22.4	28.2	30.3	28.5	24.3	21.4	16.4	16.9	15.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	9.9	12.6	12.8	10.8	8.5	6.8	5.3	5.4	5.3
Unemployment rate, high educated 15+ (ISCED 5-8)	4.6	6.3	6.5	5.5	4.0	3.5	3.3	2.7	2.6

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	3,794	3,750	3,730	3,710	3,688	3,664	3,640	.	.
Working-age population aged 15+ (1,000)	2,958	2,890	2,865	2,843	2,820	2,794	2,766	2,744	2,740
Employment aged 15+ (1,000)	1,435	1,392	1,388	1,403	1,423	1,408	1,466	1,442	1,478
Employment rate (% population aged 15+)	48.5	48.2	48.4	49.4	50.5	50.4	53.0	52.6	53.9
Employment rate (% population aged 15-64)	56.2	56.3	56.8	58.2	59.8	60.0	63.1	62.8	64.4
Employment rate (% population aged 20-64)	60.8	60.2	60.7	62.0	63.8	64.0	67.3	67.1	68.9
Employment rate (% population aged 15-24)	21.2	18.7	18.4	17.3	16.5	16.3	19.1	15.5	16.6
Employment rate (% population aged 25-29)	61.1	58.5	55.4	58.8	61.4	57.2	59.9	62.6	60.5
Employment rate (% population aged 25-54)	72.5	71.8	71.5	72.5	73.6	73.0	75.8	75.9	77.1
Employment rate (% population aged 55-64)	39.2	41.3	43.4	46.0	49.5	51.0	54.3	54.5	57.5
Employment rate for low skilled 15-64 (ISCED 0-2)	24.8	23.6	23.7	24.8	24.2	23.4	26.2	25.0	27.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	59.7	59.2	59.2	60.3	61.9	62.3	66.1	66.2	67.9
Employment rate for high skilled 15-64 (ISCED 5-8)	81.2	80.0	79.1	79.9	82.3	82.6	83.9	83.3	83.5
Self-employed (% of total employment)	8.6	7.6	8.1	8.3	7.9	8.1	7.9	7.9	7.6
Part-time employment (% of total employment)	2.6	2.7	3.2	3.0	2.8	2.5	2.7	2.4	2.4
Temporary employment (% of total employees)	4.0	4.0	5.1	4.9	4.1	3.7	4.0	2.9	4.1
Activity rate (% population aged 15+)	53.7	54.0	54.9	55.1	55.1	54.2	56.4	55.4	56.6
Activity rate (% population aged 15-64)	62.2	63.2	64.5	65.0	65.4	64.6	67.1	66.2	67.6
Activity rate (% population aged 15-24)	26.6	25.3	24.7	22.6	21.2	19.6	21.8	17.8	19.1
Activity rate (% population aged 25-54)	79.6	79.8	80.3	80.2	79.8	78.2	80.5	79.8	80.9
Activity rate (% population aged 55-64)	42.9	45.5	49.0	51.4	53.8	54.6	57.3	57.0	59.5
Unemployment aged 15+ (1,000)	153	169	187	163	131	106	93	77	72
Unemployment rate (% labor force 15+)	9.6	10.8	11.8	10.4	8.4	7.0	6.0	5.1	4.7
Youth unemployment rate (% labor force 15-24)	20.1	26.0	25.7	23.7	22.2	17.0	12.5	(12.8)	(12.9)
NEET rate (% population aged 15-24)	21.8	21.5	21.1	21.4	20.0	19.4	17.2	.	.
Long-term unemployment rate (% labor force 15+)	4.4	5.7	6.6	6.0	5.0	4.1	3.2	2.5	2.6
Share of long-term unemployed (% of total)	46.2	53.0	55.9	57.6	59.6	58.9	53.1	49.1	54.8
Unemployment rate, low educated 15+ (ISCED 0-2)	23.1	27.7	29.3	28.1	26.3	23.5	20.7	20.4	17.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	9.5	10.4	11.7	10.4	8.0	6.6	5.3	4.1	4.0
Unemployment rate, high educated 15+ (ISCED 5-8)	4.5	5.5	6.4	4.8	3.9	3.3	2.9	2.5	2.3

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	648	731	775	822	878	948	1,060	1,077	1,125
nominal annual growth in %	6.4	6.6	6.0	6.0	6.8	8.0	11.8	7.1	8.1
real annual growth in % (HICP deflated)	3.3	4.1	5.6	7.7	8.0	9.4	10.5	5.4	5.6
Average monthly gross wages, EUR	331	374	396	420	449	485	542	551	575
Average monthly gross wages, EUR (PPP)	733	798	837	916	972	1,019	1,098	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	240	270	310	340	360	420	460	.	.
Monthly gross minimum wages, EUR (ER)	123	138	159	174	184	215	235	.	.
Monthly gross minimum wages, EUR (PPP)	236	275	321	367	394	450	474	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	5.4	5.5	5.7	5.0	3.4	12.4	.	.
ULC, EUR in %	.	5.4	5.5	5.7	5.0	3.4	12.4	.	.

Notes: Data are based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 is applied throughout. 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

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	4,296	4,269	4,254	4,236	4,208	4,172	4,130	.	.
Working-age population aged 15+ (1,000)	3,298	3,271	3,258	3,243	3,210	3,185	3,162	3,149	3,144
Employment aged 15+ (1,000)	1,683	1,558	1,518	1,562	1,582	1,587	1,623	1,613	1,667
Employment rate (% population aged 15+)	51.0	47.6	46.6	48.2	49.3	49.8	51.3	51.2	53.0
Employment rate (% population aged 15-64)	57.4	53.5	52.5	54.6	56.0	56.9	58.9	59.0	61.1
Employment rate (% population aged 20-64)	62.1	58.1	57.2	59.2	60.6	61.4	63.6	63.6	65.8
Employment rate (% population aged 15-24)	24.3	17.4	14.9	18.3	19.1	25.6	25.9	23.1	25.2
Employment rate (% population aged 25-29)	68.3	61.8	61.5	64.5	66.0	66.2	68.7	70.6	73.6
Employment rate (% population aged 25-54)	72.6	69.2	68.3	71.2	72.3	72.4	74.9	75.9	77.6
Employment rate (% population aged 55-64)	39.1	37.5	37.8	36.2	39.2	38.1	40.4	40.1	43.4
Employment rate for low skilled 15-64 (ISCED 0-2)	35.2	29.5	27.5	26.7	28.0	27.4	24.4	23.1	26.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	60.9	56.7	55.5	57.0	58.0	59.5	62.6	62.7	64.6
Employment rate for high skilled 15-64 (ISCED 5-8)	80.2	76.5	75.7	78.4	78.7	79.7	81.5	79.9	81.7
Self-employed (% of total employment)	19.0	17.1	16.2	14.0	13.6	12.4	11.0	11.2	11.1
Part-time employment (% of total employment)	8.3	6.7	6.2	6.0	6.8	6.4	5.5	5.5	5.1
Temporary employment (% of total employees)	12.8	13.3	14.5	16.9	20.3	22.2	20.7	19.4	20.4
Activity rate (% population aged 15+)	57.8	56.7	56.3	58.2	58.8	57.4	57.8	57.1	57.4
Activity rate (% population aged 15-64)	65.1	63.9	63.7	66.1	66.9	65.6	66.4	65.9	66.1
Activity rate (% population aged 15-24)	35.8	30.1	29.9	33.6	33.2	37.2	35.7	32.2	31.9
Activity rate (% population aged 25-54)	80.8	80.9	80.8	84.1	84.5	82.0	83.3	84.1	83.3
Activity rate (% population aged 55-64)	41.8	41.8	41.9	41.0	44.3	42.2	43.6	42.0	45.3
Unemployment aged 15+ (1,000)	222	297	318	327	306	240	205	186	136
Unemployment rate (% labor force 15+)	11.7	16.0	17.3	17.3	16.2	13.1	11.2	10.4	7.6
Youth unemployment rate (% labor force 15-24)	32.4	42.1	50.0	45.5	42.3	31.3	27.4	28.2	(21.1)
NEET rate (% population aged 15-24)	15.7	16.6	19.6	19.3	18.1	16.9	15.4	.	.
Long-term unemployment rate (% labor force 15+)	6.6	10.2	11.0	10.1	10.2	6.7	4.6	3.9	3.4
Share of long-term unemployed (% of total)	56.3	63.7	63.6	58.4	63.1	50.7	41.0	38.1	44.4
Unemployment rate, low educated 15+ (ISCED 0-2)	13.0	18.6	21.5	25.7	21.5	17.4	19.8	(15.5)	(12.0)
Unemployment rate, medium educated 15+ (ISCED 3-4)	12.4	17.3	18.7	18.7	18.1	14.6	11.7	11.2	7.9
Unemployment rate, high educated 15+ (ISCED 5-8)	8.4	10.6	11.3	9.6	9.2	7.8	7.1	(6.9)	(5.4)
Male									
Total population (1,000)	2,072	2,059	2,053	2,044	2,031	2,014	1,993	.	.
Working-age population aged 15+ (1,000)	1,618	1,607	1,602	1,596	1,579	1,567	1,556	1,551	1,548
Employment aged 15+ (1,000)	916	852	818	847	854	858	880	875	897
Employment rate (% population aged 15+)	56.6	53.0	51.1	53.1	54.1	54.8	56.5	56.4	58.0
Employment rate (% population aged 15-64)	62.7	58.5	56.5	59.1	60.3	61.4	63.8	63.9	65.7
Employment rate (% population aged 20-64)	67.9	63.7	61.6	64.2	65.4	66.2	68.9	69.0	70.8
Employment rate (% population aged 15-24)	27.9	20.0	17.4	21.2	22.4	28.9	29.8	28.7	29.3
Employment rate (% population aged 25-29)	69.6	65.8	64.2	69.0	71.3	70.3	73.2	79.5	81.4
Employment rate (% population aged 25-54)	76.4	73.0	71.6	74.5	75.4	76.3	78.7	79.7	81.2
Employment rate (% population aged 55-64)	50.5	48.0	45.0	45.8	48.2	45.1	49.0	47.6	51.1
Employment rate for low skilled 15-64 (ISCED 0-2)	40.7	33.7	32.3	30.3	32.2	33.0	29.8	28.4	30.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	66.4	62.1	59.5	62.5	63.1	64.2	68.1	68.4	70.6
Employment rate for high skilled 15-64 (ISCED 5-8)	80.2	77.3	76.5	78.4	79.0	81.0	82.9	82.7	81.5
Self-employed (% of total employment)	20.9	19.7	19.2	17.4	17.3	15.7	13.3	13.4	13.0
Part-time employment (% of total employment)	6.1	5.5	5.3	4.8	5.6	5.2	4.4	4.5	(4.1)
Temporary employment (% of total employees)	11.7	13.2	14.8	16.7	20.5	22.0	20.7	19.7	20.3
Activity rate (% population aged 15+)	63.7	63.1	62.1	63.5	64.0	62.6	63.2	62.3	62.1
Activity rate (% population aged 15-64)	70.6	69.8	68.9	70.9	71.6	70.3	71.5	70.7	70.5
Activity rate (% population aged 15-24)	40.7	34.6	34.7	38.5	38.2	41.9	40.9	36.9	34.6
Activity rate (% population aged 25-54)	84.1	85.2	84.7	86.6	86.9	85.2	86.7	87.5	86.6
Activity rate (% population aged 55-64)	54.4	53.9	51.0	52.1	54.9	50.7	52.8	50.4	53.6
Unemployment aged 15+ (1,000)	114	162	176	167	157	123	105	92	64
Unemployment rate (% labor force 15+)	11.1	16.0	17.7	16.5	15.6	12.5	10.6	9.5	6.7
Youth unemployment rate (% labor force 15-24)	31.5	42.1	49.9	44.9	41.4	31.3	27.1	(22.1)	(15.3)
NEET rate (% population aged 15-24)	17.1	17.9	20.6	21.9	20.5	19.0	15.4	.	.
Long-term unemployment rate (% labor force 15+)	5.9	10.1	11.3	9.6	10.1	6.8	4.7	(3.9)	(2.9)
Share of long-term unemployed (% of total)	53.4	63.6	63.8	58.3	64.8	54.0	43.8	(41.0)	(43.3)
Unemployment rate, low educated 15+ (ISCED 0-2)	15.1	19.7	22.8	24.9	21.4	17.0	19.5	(15.0)	(12.4)
Unemployment rate, medium educated 15+ (ISCED 3-4)	11.0	16.9	18.9	17.3	16.6	13.7	10.5	10.3	6.6
Unemployment rate, high educated 15+ (ISCED 5-8)	7.8	9.9	10.5	8.9	9.2	6.8	7.3	(5.1)	(4.6)

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	2,225	2,210	2,201	2,192	2,177	2,158	2,137	.	.
Working-age population aged 15+ (1,000)	1,680	1,664	1,657	1,647	1,631	1,618	1,605	1,598	1,596
Employment aged 15+ (1,000)	767	706	700	715	728	729	743	738	770
Employment rate (% population aged 15+)	45.6	42.4	42.3	43.4	44.6	45.0	46.3	46.2	48.2
Employment rate (% population aged 15-64)	52.1	48.5	48.5	50.0	51.6	52.4	54.0	54.0	56.4
Employment rate (% population aged 20-64)	56.4	52.6	52.8	54.2	55.9	56.6	58.3	58.3	60.8
Employment rate (% population aged 15-24)	20.4	14.7	12.4	15.3	15.7	22.2	21.8	17.2	20.8
Employment rate (% population aged 25-29)	66.9	57.7	58.7	59.8	60.5	62.0	64.2	61.5	65.5
Employment rate (% population aged 25-54)	68.8	65.2	64.9	67.9	69.3	68.5	71.1	72.1	73.9
Employment rate (% population aged 55-64)	28.5	27.7	31.0	27.3	30.7	31.6	32.3	33.1	36.3
Employment rate for low skilled 15-64 (ISCED 0-2)	31.0	26.3	23.7	23.8	24.8	22.9	19.9	18.4	22.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	54.5	50.5	50.9	50.6	52.0	54.0	56.2	56.2	57.8
Employment rate for high skilled 15-64 (ISCED 5-8)	80.2	75.9	75.1	78.3	78.4	78.7	80.4	77.8	81.9
Self-employed (% of total employment)	16.7	14.0	12.8	9.9	9.3	8.4	8.3	8.6	8.8
Part-time employment (% of total employment)	10.9	8.2	7.3	7.5	8.2	7.9	6.7	6.7	6.2
Temporary employment (% of total employees)	14.1	13.4	14.1	17.2	20.1	22.5	20.8	19.2	20.6
Activity rate (% population aged 15+)	52.1	50.5	50.8	53.1	53.7	52.3	52.6	52.1	52.7
Activity rate (% population aged 15-64)	59.6	58.0	58.5	61.3	62.3	60.9	61.4	61.0	61.8
Activity rate (% population aged 15-24)	30.7	25.3	24.8	28.5	28.0	32.3	30.2	27.3	29.1
Activity rate (% population aged 25-54)	77.4	76.6	76.8	81.5	82.1	78.8	79.9	80.6	80.0
Activity rate (% population aged 55-64)	30.2	30.6	33.4	30.6	34.4	34.2	35.1	34.0	37.6
Unemployment aged 15+ (1,000)	108	135	142	160	149	117	101	94	72
Unemployment rate (% labor force 15+)	12.4	16.1	16.8	18.3	16.9	13.8	11.9	11.3	8.6
Youth unemployment rate (% labor force 15-24)	33.6	41.9	50.1	46.4	43.7	31.3	27.8	(36.9)	(28.2)
NEET rate (% population aged 15-24)	14.1	15.2	18.6	16.7	15.6	14.6	15.3	.	.
Long-term unemployment rate (% labor force 15+)	7.3	10.2	10.6	10.7	10.4	6.5	4.5	(4.0)	(3.9)
Share of long-term unemployed (% of total)	59.3	63.7	63.2	58.6	61.3	47.2	38.1	(35.3)	(45.4)
Unemployment rate, low educated 15+ (ISCED 0-2)	10.8	17.4	19.9	26.5	21.7	17.9	20.3	(16.2)	(11.4)
Unemployment rate, medium educated 15+ (ISCED 3-4)	14.5	17.9	18.5	20.6	20.0	15.9	13.4	12.5	9.7
Unemployment rate, high educated 15+ (ISCED 5-8)	8.8	11.3	11.9	10.2	9.3	8.6	7.0	(8.3)	(5.9)

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	7,679	7,875	7,939	7,953	8,055	7,752	8,055	8,367	8,515
nominal annual growth in %	-0.4	1.0	0.8	0.2	1.3	1.9	3.9	4.8	5.9
real annual growth in % (HICP deflated)	-1.5	-2.3	-1.5	0.0	1.6	2.5	2.6	3.7	4.0
Average monthly gross wages, EUR	1,053	1,047	1,048	1,042	1,058	1,029	1,079	1,125	1,151
Average monthly gross wages, EUR (PPP)	1,517	1,624	1,631	1,654	1,724	1,643	1,687	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	2,814	2,814	2,814	3,018	3,030	3,120	3,276	.	.
Monthly gross minimum wages, EUR (ER)	385	373	372	396	396	408	433	.	.
Monthly gross minimum wages, EUR (PPP)	526	544	546	601	624	632	651	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	-0.3	-1.3	3.1	0.2	-1.3	3.2	.	.
ULC, EUR in %	.	-1.4	-2.0	2.4	0.5	-0.2	4.2	.	.

Notes: Data are based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 is applied throughout. Education groups refer to ISCED 1997 until 2013, ISCED 2011 from 2014.
From 2016 average monthly gross wages are based on tax records (survey JOPPD); prior to that data are based on a monthly survey covering 70% of persons in employment.

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

Hungary: Labor market indicators

	2010	2012	2013	2014	2015	2016	2017	2018 Q1	2018 Q2
Total									
Total population (1,000)	10,000	9,920	9,893	9,866	9,843	9,814	9,788	.	.
Working-age population aged 15+ (1,000)	7,663	7,636	7,610	7,573	7,538	7,508	7,460	7,436	7,436
Employment aged 15+ (1,000)	3,732	3,827	3,893	4,101	4,211	4,352	4,421	4,435	4,475
Employment rate (% population aged 15+)	48.7	50.1	51.2	54.1	55.9	58.0	59.3	59.6	60.2
Employment rate (% population aged 15-64)	54.9	56.7	58.1	61.8	63.9	66.5	68.2	68.7	69.3
Employment rate (% population aged 20-64)	59.9	61.6	63.0	66.7	68.9	71.5	73.3	73.8	74.5
Employment rate (% population aged 15-24)	18.3	18.4	20.1	23.5	25.7	28.1	29.0	27.7	28.7
Employment rate (% population aged 25-29)	65.8	67.4	69.0	73.0	73.6	75.5	77.5	77.6	78.3
Employment rate (% population aged 25-54)	72.5	74.6	75.7	79.2	80.6	82.2	83.7	83.9	84.5
Employment rate (% population aged 55-64)	33.6	36.1	37.9	41.8	45.3	49.8	51.7	53.6	53.5
Employment rate for low skilled 15-64 (ISCED 0-2)	25.4	26.0	26.9	31.5	33.9	36.6	38.5	38.4	39.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	60.7	61.9	63.3	66.7	68.8	71.5	73.1	73.1	74.1
Employment rate for high skilled 15-64 (ISCED 5-8)	77.5	78.5	78.8	80.8	82.1	84.4	84.3	85.4	85.1
Self-employed (% of total employment)	12.0	11.3	10.9	10.6	10.6	10.4	10.1	10.2	10.1
Part-time employment (% of total employment)	5.9	7.1	6.8	6.4	6.0	5.2	4.8	4.6	4.8
Temporary employment (% of total employees)	9.8	9.5	10.9	10.8	11.4	9.7	8.8	7.5	7.7
Activity rate (% population aged 15+)	54.8	56.3	57.0	58.7	59.9	61.1	61.8	62.0	62.4
Activity rate (% population aged 15-64)	61.9	63.7	64.7	67.0	68.6	70.1	71.2	71.4	71.9
Activity rate (% population aged 15-24)	24.8	25.7	27.4	29.5	31.0	32.3	32.4	30.9	31.8
Activity rate (% population aged 25-54)	80.9	82.9	83.3	85.0	85.8	86.1	86.9	87.0	87.4
Activity rate (% population aged 55-64)	36.5	39.5	41.2	44.6	48.1	52.1	53.6	55.0	54.8
Unemployment aged 15+ (1,000)	469	473	441	343	308	235	192	178	165
Unemployment rate (% labor force 15+)	11.2	11.0	10.2	7.7	6.8	5.1	4.2	3.9	3.6
Youth unemployment rate (% labor force 15-24)	26.4	28.2	26.6	20.4	17.3	12.9	10.7	10.3	9.5
NEET rate (% population aged 15-24)	12.6	14.8	15.5	13.6	11.6	11.0	11.0	.	.
Long-term unemployment rate (% labor force 15+)	5.5	5.0	4.9	3.7	3.1	2.4	1.7	1.6	1.4
Share of long-term unemployed (% of total)	49.0	45.3	48.6	47.5	45.6	46.5	40.4	40.6	40.3
Unemployment rate, low educated 15+ (ISCED 0-2)	25.1	24.8	23.7	18.5	17.4	13.2	11.1	11.0	10.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.5	10.7	10.0	7.4	6.4	4.8	3.8	3.5	3.2
Unemployment rate, high educated 15+ (ISCED 5-8)	4.6	4.5	3.9	3.1	2.4	1.8	1.6	1.3	1.1
Male									
Total population (1,000)	4,750	4,720	4,710	4,700	4,692	4,683	4,671	.	.
Working-age population aged 15+ (1,000)	3,674	3,676	3,668	3,654	3,641	3,632	3,613	3,604	3,606
Employment aged 15+ (1,000)	1,993	2,049	2,104	2,221	2,284	2,363	2,417	2,427	2,443
Employment rate (% population aged 15+)	54.2	55.7	57.4	60.8	62.7	65.0	66.9	67.3	67.7
Employment rate (% population aged 15-64)	59.9	61.6	63.7	67.8	70.3	73.0	75.2	75.8	76.2
Employment rate (% population aged 20-64)	65.5	67.3	69.3	73.5	75.8	78.6	81.0	81.7	82.0
Employment rate (% population aged 15-24)	19.9	19.8	23.0	26.4	28.1	31.5	32.9	32.5	33.5
Employment rate (% population aged 25-29)	73.6	74.7	76.4	82.3	83.2	84.4	86.8	86.5	87.3
Employment rate (% population aged 25-54)	78.0	80.2	81.4	85.3	86.8	88.2	90.1	90.4	90.6
Employment rate (% population aged 55-64)	38.6	41.4	44.8	49.6	54.4	59.7	62.5	64.0	63.9
Employment rate for low skilled 15-64 (ISCED 0-2)	28.1	30.0	30.8	36.3	39.9	42.5	44.2	44.6	45.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	66.1	66.8	69.1	73.1	75.2	78.2	80.2	80.5	81.1
Employment rate for high skilled 15-64 (ISCED 5-8)	81.8	84.4	85.3	87.1	88.6	90.5	91.6	92.5	91.8
Self-employed (% of total employment)	15.0	14.1	13.6	13.4	13.0	12.7	11.9	12.3	12.2
Part-time employment (% of total employment)	4.0	4.7	4.5	4.5	4.4	3.5	3.1	2.8	3.2
Temporary employment (% of total employees)	10.2	10.5	11.4	11.2	11.6	9.3	8.2	6.8	7.1
Activity rate (% population aged 15+)	61.4	62.9	63.9	65.7	67.2	68.6	69.6	69.8	70.2
Activity rate (% population aged 15-64)	67.8	69.6	71.0	73.4	75.3	76.9	78.2	78.6	78.9
Activity rate (% population aged 15-24)	27.5	27.9	31.0	33.0	34.4	36.1	36.5	35.9	36.6
Activity rate (% population aged 25-54)	87.3	89.4	89.5	91.2	92.0	92.4	93.3	93.4	93.7
Activity rate (% population aged 55-64)	42.2	45.4	49.0	53.2	57.8	62.4	64.5	65.5	65.5
Unemployment aged 15+ (1,000)	262	262	239	182	162	128	96	88	88
Unemployment rate (% labor force 15+)	11.6	11.3	10.2	7.6	6.6	5.1	3.8	3.5	3.5
Youth unemployment rate (% labor force 15-24)	27.8	29.1	25.6	20.0	18.3	12.9	9.7	9.4	8.4
NEET rate (% population aged 15-24)	11.7	13.6	13.6	12.0	10.4	8.9	7.9	.	.
Long-term unemployment rate (% labor force 15+)	5.7	5.2	5.0	3.6	3.1	2.3	1.5	1.5	1.5
Share of long-term unemployed (% of total)	49.4	45.5	48.6	48.0	47.1	45.8	40.6	41.6	42.6
Unemployment rate, low educated 15+ (ISCED 0-2)	27.2	25.3	24.5	18.4	16.8	13.7	11.0	10.3	11.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.5	10.9	9.8	7.0	6.0	4.5	3.2	3.1	2.9
Unemployment rate, high educated 15+ (ISCED 5-8)	4.9	4.2	3.4	2.8	2.2	1.8	1.4	1.1	(0.8)

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Female									
Total population (1,000)	5,250	5,200	5,183	5,167	5,151	5,131	5,117	.	.
Working-age population aged 15+ (1,000)	3,989	3,960	3,942	3,919	3,897	3,876	3,848	3,832	3,830
Employment aged 15+ (1,000)	1,740	1,778	1,789	1,880	1,927	1,989	2,004	2,008	2,032
Employment rate (% population aged 15+)	43.6	44.9	45.4	48.0	49.5	51.3	52.1	52.4	53.0
Employment rate (% population aged 15-64)	50.2	51.9	52.6	55.9	57.8	60.2	61.3	61.6	62.5
Employment rate (% population aged 20-64)	54.6	56.2	56.9	60.2	62.1	64.6	65.7	66.1	67.1
Employment rate (% population aged 15-24)	16.5	17.0	17.0	20.5	23.1	24.6	24.8	22.7	23.7
Employment rate (% population aged 25-29)	57.8	59.9	61.4	63.3	63.5	66.1	67.6	68.2	68.8
Employment rate (% population aged 25-54)	67.0	69.0	70.0	73.2	74.4	76.2	77.2	77.2	78.3
Employment rate (% population aged 55-64)	29.4	31.7	32.1	35.2	37.7	41.5	42.4	44.8	44.6
Employment rate for low skilled 15-64 (ISCED 0-2)	23.3	22.6	23.7	27.3	28.7	31.5	33.7	33.0	33.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	54.7	56.5	56.8	59.6	61.6	63.9	65.0	64.8	66.1
Employment rate for high skilled 15-64 (ISCED 5-8)	74.3	74.3	74.2	76.1	77.3	80.0	78.9	80.0	80.2
Self-employed (% of total employment)	8.5	8.2	7.8	7.4	7.7	7.8	7.8	7.7	7.6
Part-time employment (% of total employment)	8.1	9.8	9.4	8.6	8.0	7.3	6.9	6.8	6.7
Temporary employment (% of total employees)	9.3	8.5	10.4	10.3	11.1	10.2	9.5	8.2	8.5
Activity rate (% population aged 15+)	48.8	50.2	50.5	52.1	53.2	54.1	54.6	54.7	55.1
Activity rate (% population aged 15-64)	56.3	58.0	58.6	60.7	62.2	63.5	64.2	64.4	64.9
Activity rate (% population aged 15-24)	22.0	23.4	23.6	25.9	27.5	28.2	28.2	25.7	26.6
Activity rate (% population aged 25-54)	74.6	76.5	77.1	78.8	79.6	79.8	80.4	80.5	81.0
Activity rate (% population aged 55-64)	31.7	34.5	34.7	37.4	39.9	43.5	44.3	46.0	45.7
Unemployment aged 15+ (1,000)	208	211	202	162	146	107	96	90	77
Unemployment rate (% labor force 15+)	10.7	10.6	10.1	7.9	7.0	5.1	4.6	4.3	3.7
Youth unemployment rate (% labor force 15-24)	24.7	27.1	27.9	20.9	15.9	12.9	12.0	11.7	11.0
NEET rate (% population aged 15-24)	13.4	16.0	17.4	15.3	12.8	13.3	14.3	.	.
Long-term unemployment rate (% labor force 15+)	5.2	4.8	4.9	3.7	3.1	2.4	1.8	1.7	1.4
Share of long-term unemployed (% of total)	48.5	45.0	48.5	46.8	44.0	47.3	40.1	39.8	37.7
Unemployment rate, low educated 15+ (ISCED 0-2)	22.8	24.4	22.7	18.7	18.1	12.7	11.3	11.9	10.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.6	10.5	10.4	7.9	6.9	5.1	4.4	4.1	3.5
Unemployment rate, high educated 15+ (ISCED 5-8)	4.3	4.7	4.3	3.4	2.6	1.8	1.8	1.5	1.4

Earnings and unit labor costs

	2010	2012	2013	2014	2015	2016	2017	1Q 2018	2Q 2018
Average monthly gross wages, NCU	202,525	223,060	230,714	237,695	247,924	263,171	297,017	316,276	332,540
nominal annual growth in %	1.3	4.7	3.4	3.0	4.3	6.1	12.9	12.2	11.3
real annual growth in % (HICP deflated)	-3.2	-1.0	1.7	3.0	4.2	5.7	10.2	10.0	8.3
Average monthly gross wages, EUR	735	771	777	770	800	845	961	1017	1049
Average monthly gross wages, EUR (PPP)	1,226	1,342	1,356	1,354	1,406	1,422	1,541	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	73,500	93,000	98,000	101,500	105,000	111,000	127,500	.	.
Monthly gross minimum wages, EUR (ER)	272	296	335	342	333	351	412	.	.
Monthly gross minimum wages, EUR (PPP)	421	531	556	568	587	593	654	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	8.3	3.0	4.1	3.4	7.3	10.1	.	.
ULC, EUR in %	.	4.6	0.4	0.1	3.0	6.8	10.9	.	.

Notes: Data are based on a continuous quarterly survey. Population aged 15+ refers to the population 15-74. Census 2011 is applied throughout. 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.

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